# Study of Subsistence Farming of Suku Anak Dalam (SAD) Isolated Communities in in Sarolangun District Jambi Province

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Research objectives: (1) Study of primitive farming with shifting cultivation (2) Study of intensive subsistence farming with permanent residence, (3) Analyze subsistence farming and household income of isolated community farmers with permanent residence and moving. Research data sourced from primary data and secondary data. Primary data comes from direct interviews with Suku Anak Dalam (SAD) respondents guided by questionnaires and Focus Group Discussion (FGDs). The sampling method used is Stratified Random Sampling based on the strata of the way of life with a permanent residence and a moving place of residence. The sampling technique is snowball sampling. This research was conducted based on phenomenology to reveal the farming life of SAD by using a descriptive qualitative research design. The results of the study show (1) The SAD community has changed by living permanently by farming oil palm and rubber and from time to time moving around by entering the forest. SAD people have a way of living in groups with regional boundaries, with their way of living, dress, way of survival, and their culture is typical of SAD. (2) The main sources of income are from (a) intensive subsistence farming (62.76%): oil palm and rubber and (b) primitive and traditional subsistence farming (36.28%) by taking forest products in the form of resin, rattan, fruit tempayang and 0.96% hunting (pigs) in the forest. (3) Household income from various income sources is 155,147,343.92 IDR per farmer household per year.

#### 1. Introduction

Indonesia is an archipelagic country that has many diverse ethnic groups and races with their own characteristics and uniqueness. An ethnic group is a group of people who are united in culture, the characteristics of a citizenship based on the same race, language and religion. The results of the September 2020 Population Census, Indonesia's population is 270.20 million people, an increase of 32.56 million people compared to the results of the 2010 Population Census With Indonesia's land area of 1.9 million km², Indonesia's population density is 141 people per km² consisting of 1,340 ethnic groups and living on 17,000 islands. (BPS, 2020). The Suku Anak Dalam (SAD) community is one of the tribes in Indonesia which is grouped into isolated communities. The Suku Anak Dalam community, also known as Orang Rimba or Kubu Tribe, is an isolated community originating from Jambi Province.

The Suku Anak Dalam (SAD) community lives spread across seven locations and some of them are forests, namely: (1) TNBD Protected Forest Area (Bukit Barisan National Plantation), (2) BDB (Bukit Dua Belas) Protected Forest Area (3) BTP Buffer Protected Area (Bukit Tiga Puluh), (4) In the forest area of Bungo Regency, (5) In the forest area of Sarolangun Regency, (6) In the forest area of Batanghari Regency, (7) In the forest area of Batanghari Regency West Tanjung Jabung, (8) In the East Tanjung Jabung Regency in Jambi Province. The area of protected forest area of TNBD Belas is estimated to be more or less 54,780.41 hectares and with a natural resource population of 3,850 people (TNBD, 2018).

The traditional SDA community is divided into three categories. The first category is wandering or wandering, meaning that SAD people live by moving around. The Anak Dalam tribe does not farm and does not have a culture of cultivating the land. The source of livelihood for the Anak Dalam Tribe comes from forest products by hunting, gathering and gathering. Social interaction with SAD in this category is limited and closed, only through the host or landlady. The beliefs they adhere to are animism, dynamism and polutheism.

The second category, temporary residence, means that the SAD community has settled but only temporarily and for a certain time. The SAD community, began to open fields and garden, but they were not separated from hunting and gathering activities. Social interactions have begun to open up and the beliefs held by some are Muslim and Christian (Mailinar, 2013).

The SAD community has livelihood resources from around where they live, namely by hunting, gathering and gardening. However, as time progresses with technological changes, the lifestyle of some SAD people is also changing, from initially starting with hunting, gathering and collecting forest products, changing to the pattern of managing farming which is the third category. The farming business involved is rubber and oil palm farming. Apart from the palm oil and rubber plantations, it provides a steady income as well as additional income by selling forest products. This research is about subsistence farming in the isolated community of the SDA community in Sarolangan Regency, Jambi Province, with research objectives: (1) Examining primitive subsistence farming with shifting cultivation and nomadic lifestyles, (2) Examining intensive subsistence farming with a sedentary lifestyle, and (3) Analyzing differences in subsistence farming income and household income of farmers in isolated communities between sedentary lifestyles compared to sedentary lifestyles in Sarolangun Regency, Jambi Province.

#### 2. Literature Review

# Subsistence Farming

Farming businesses are classified based on their farming style and can be divided into two, namely subsistence farming and commercial farming. Subsistence farming, farming production is not sold but is for family consumption. Commercial farming, oriented towards producing for the market and making a profit and selling the produce to the market.

Subsistence farming is characterized by a small area of land, owning or renting land, labor comes from one's own family. Subsistence farming is also characterized by no commodity specialization. Farmers cultivate various commodities on the same land (Soekartawi, 2011). Meanwhile, the opposite characteristic is commercial farming. Between subsistence farming and commercial farming, there are semi-subsistence farming, transitional farming and semi-commercial farming.

Wharton (1969), criteria that can be used to determine the position of a farming business: (1) Ratio between products sold and products produced. The more products the farmer sells, the more commercial it is, while the more products he eats himself, the more subsistence the farmer has. (2) The ratio between hired labor and family labor and the number of workers. The more labor is hired for farming activities, the closer it is to commercial farming, while the more unpaid labor, the more subsistence the farming is, (3) Ratio of purchased inputs. The more inputs used that must be purchased, the more commercial a farming business is, (4) The level of technology. The level of technology applied is also considered as a criterion that can be used by subsistence farmers, therefore the measures used are productive measures or simpler techniques, (5) Non-economic factors for making decisions.

Belshaw (1965), peasant society is a society whose way of life is oriented towards traditionality and whose areas are far from busy or remote. It turns out that the actions taken by farming communities usually result in poverty for other people, if these communities only produce to meet their own needs without selling their produce and producing more. The farming community is not only farmers who produce not only to meet their own needs but also farm to meet the needs of others.

Commercialization of farming is a dynamic process where the proportion of products sold and inputs purchased changes over time at the farm level (Moti et al., 2010). Commercialization also includes traditional commodities that are market oriented or targeted, due to production surpluses and farming profits (Pingali and Rosegrant, 2012). Commercialization applies to all commodities, both food crops and plantation crops and other commercial crops. Vice versa for subsistence farming (Gabremadhin and Moti, 2010).

Intensive Subsistence Farming and Primitive Subsisten Farming

Intensive subsistence farming is farming aimed at meeting household needs, managing the farming intensively by applying farming methods in accordance with cultivation rules but still using simple and traditional methods. The area of farming land is small but its use is maximum, the use of family labor is high, and modern equipment is not yet used.

Primitive farming is farming in which production is obtained to meet family needs by nomadic farming, taking forest products in the form of wood, such as wood from miranti trees, wood

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from pulai trees, wood from keruing trees, livestock grazing, and also taking non-timber forest products, such as forest honey, resin, jernang, rattan, durian, cempedak, rambutan, petai, jengkol, jelutung sap, medicinal plants, materials for traditional crafts, such as webbing, rope for tying and others.

Wahyuni, (2017) with the title Level of Commercialization of Rice Farming Households on Tidal Land. The research results show that the level of commercialization of rice farming is at a semi-commercial level, while the level of commercialization of rice farmers is in transition, namely the transition between semi-subsistence and semi-commercial and is still far from being fully commercial (pure).

Wahyuni, I., Suandi and Edison (2018), with the title Poverty alleviation model in communities peatland areas of Jambi Province. The research results show: (1) The social capital found in the research area and owned by farmer households is relatively low because they have very limited use of local associations around the community, and (2) The distribution of levels of satisfaction with fulfilling household needs is considered sufficient. This is indicated by the percentage of families in the research area who feel satisfied in meeting their daily needs, both food and non-food needs and fulfilling investment needs, which is relatively satisfactory, reaching more than 62 percent.

Research results, Wahyuni (2020), with the title Farming Performance and Arabica Coffee Supply Chain in Kerinci Regency, Jambi Province. The results of the research show that farming performance is good, this can be seen from the production, productivity and income of Liberica coffee farming which is higher than other regions in Sumetra and the Arabica coffee supply chain, product flow, price flow and information flow are running well between actors. supply chain actors.

Wahyuni and Dewi Sri Nurchaini (2021), with the research title Gender Study on Commercialization Activities of Liberika Coffee Farming on Peatlands in West Tanjung Jabung Regency. The results of the research show that Liberian coffee farming is not yet fully commercial, it is still semi-commercial. Coffee is not grown in monoculture but is mixed with two or three other plantation crops. And although there are several activities that are different between women's and men's activities, in terms of wages they receive the same for women and men for the same work.

## 3. Research Methodology

This research was conducted in Air Hitam District, Sarolangun Regency, Jambi Province. The research location was selected purposively, taking into account the areas with the most SAD households with two lifestyle patterns, namely sedentary and non-sedentary (nomadic). The villages selected were Pematang Kabau Village, Bukit Suban Village and Lubuk Jering Village. The sampling technique used was Disproportionate Stratified Random Sampling, based on the strata of life patterns of the SAD community. Respondent selection is based on side snowballing.

Research on subsistence farming in the remote Anak Dalam Tribe (SDA) community in Sarolangan Regency, Jambi Province, was analyzed using a descriptive qualitative research design with phenomenological methods, to reveal whether the farming carried out by the SAD *Nanotechnology Perceptions* Vol. 20 No. S16 (2024)

community was still primitive, at the traditional level, at the intensive subsistence level or had already been developed. commercial intensive level.

To compare intensive subsistence farming and primitive subsistence farming, whether there is a difference in income between subsistence farming income and primitive subsistence farming income or household income of Anak Tribe farmers, the formula is used:

$$\pi = R \times V \times F \times O$$

Where:

 $\pi$  = Primitive subsistence farming income.

V = Volume or average amount of forest product production per time taking forest products.

F = Frequency of taking forest products in a year.

O = Number of people involved in harvesting forest products.

The formula for primitive subsistence farming analysis is the same as calculating subsistence farming income:

$$Pd = TR-TC$$

Where:

Pd = Subsistence Farming Income

TR = Subsistence Farming Revenue

TC = Total Subsistence Farming Costs

### 4. Result and Discussion

Description of the Isolated Community of the Anak Dalam Tribe (SAD)

The SAD or Orang Rimba people or often also called Orang Kubu are one of the isolated ethnic groups in South Sumatra, Riau Province and Jambi Province. Ecologically, the SAD community lives spread across three different areas, namely, the northern part of Jambi Province (Bukit 30 National Park Protected Forest), the southern region of Jambi Province, the Bukit Duabelas National Park Protected Forest area (the border between Jambi Province and Riau Province). The distribution of SAD communities in and around the Bukit Duabelas National Park Protected Forest area can be seen in Figure 1.

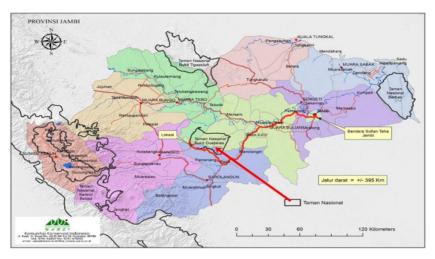


Figure 1. Map of the Distribution of the Anak Dalam Tribe (SAD) Community in the Forest Area Protected Bukit Duabelas National Park (TNBD), Jambi Province

Social Conditions of SAD Isolated Communities

# 1. Home of the Isolated Community of the Suku Anak Dalam (SAD)

The SAD community has three types of houses, namely godong houses, houses in tanoh and sudung houses. A godong house is a house made from benal wood or thatch leaves, the walls, doors and floors are made from agarwood bark or meranti wood, and the pillars are made from meranti wood. The Godong house is used by the SAD community for a period of one year or more. Houses in tanoh, namely houses whose roofs are made using meranti bark or thatch bark, the floors are made of meranti bark and do not have walls. The house in Tanoh has been used for approximately 8 months. Meanwhile, the roof of the sudung house is made of puar leaves and does not have walls or floors. Sudung houses are built and used only for one or two nights.





Figure 2. Sudung Houses

Currently, most of the SAD people's houses are not roofed with benal leaves or thatch leaves anymore, but use plastic or black plastic as roofs for their houses as a substitute for benal leaves and thatch leaves, even SAD people who live in village settlements already have houses, both permanent or semi-permanent. Activities such as cooking, gathering with family and pets (dogs) are included in this house. Apart from that, the Sarolangun Regency Government, especially in the 3 protected forest administrative areas of the Bukit Dua Belas National Park (TNBD), also provides a house building program for the SAD community.

#### 2. How to Dress in SAD Isolated Communities

The SAD community still holds strong customs regarding a very unique way of dressing, different from foreign communities in general who wear clothes as they should. The SAD community only uses a loincloth (underwear) for men, while women use a kemben (chest covering). The loincloth is clothing used by men to cover only the genital area, the loincloth is made of cloth and wrapped into a loincloth, while the kemben is an ordinary sarong used to cover the body from top to ankles and up to the chest for women who have not yet married or those who are married but do not have children. Meanwhile, for women who have children, the kemben they wear is worn from above the ankles to the waist. However, with the development of the times and the interaction between the SAD community and the outside community, most of them have and wear complete clothing like the outside community.

#### 3. Food of SAD Isolated Communities

SAD people farm in the forest by planting food crops and horticultural plants, such as: cassava, sweet potatoes and chilies to meet their daily needs. Apart from farming, SAD people also hunt to obtain food in the form of hunting animals, including: deer, mouse deer, antelope, pigs, monitor lizards, nanguy, forest mice, labi-labi, monkeys and frogs, as well as fish. Currently, many SAD communities have rubber and oil palm plantations, so buying daily staple foods is the same as outside communities. SAD people also consume fruit in protected forests, including: forest durian, cempedak, kuduk kuya, forest rambutan, Siu fruit, and others.

#### 4. Health of SAD Isolated Communities

Some SAD people treat the disease traditionally by going to a shaman. Shamans treat various diseases by concocting plants in the forest, namely: holding bedeki or besale rituals, apart from that they also use traditional medicines in the forest by mixing them. Some people seek treatment by buying medicine at the nearest drug store and some even go to the nearest health service.

## SAD Isolated Community Organization Group

SAD people live in groups and have territories or boundaries of power per group. However, even though they have their own territories, they are still allowed to earn a living in other groups' territories. Grouping of SAD communities based on region. For the Pematang Kabau Village area, there are 3 groups; Ujung Doho Group, Singosari Group and Paku Aji Group. Meanwhile, in Bukit Suban Village there are also groups, namely: Punti Kayu I Group, Punti Kayu II Group and Hot Water Group. Groups are free to live with other groups, but it is not easy to change groups because there are customary laws that regulate this.

#### **Economic Condition of SAD Isolated Communities**

The SAD community is a group of people who depend heavily on forests for their livelihoods. In maintaining their lives in the forest, the SAD people have adapted to the forest environment to meet their living needs. The sources of livelihood for the SAD community are relatively diverse according to the characteristics of the current SAD community. In general, the characteristics of the SAD community are currently grouped into three categories. First, the SAD community who are still in the protected forest area of Bukit Duabelas National Park or often known as the SAD Dalam community. Second, SAD people who wander by making temporary residences (rumah sudung) in oil palm plantation areas owned by private companies or privately owned communities in village areas near where they live. Third, the SAD community has settled and has a house and lives like village residents. The second and third categories are often referred to as the Outer SAD community.

The livelihood sources of the SAD community are very dependent on forest resources with the dominant activities being hunting, gathering and gathering. Forest areas are areas for hunting animals, catching fish using spears or nets, fruit, honey, tubers which are used for survival needs. Non-timber forest products are used for various benefits, flowers (for ritual activities), rattan, latex and resin (Agatis damara warb) for commercial purposes, as well as several types of trees for special purposes, such as tenggeris trees, situbung anak and damn tree. Forest areas can provide more varied food sources, there are still forests available to be cleared as agricultural land for food crops, so that SAD can produce food for their subsistence needs. Apart from food crops, the SAD community is also familiar with the cultivation of plantation crops such as rubber and oil palm.

The livelihood of the wandering SAD community, their sources of livelihood are relatively limited. Protein food sources partly come from hunting in the middle of oil palm plantations. The animals they often get when hunting include wild boars, other animals such as turtles, pangolins and snakes. The SAD community also has a rubber plantation in the TNBD area, apart from that the SAD community can also take fruit production from the continent. The production of the continent such as durian, kemang, embacang, mango, rambutan, petai, jengkol, benton, kudu kuya, bauh siu, siabuk, jackfruit and duku is a very important source of livelihood for the SAD community outside the world. Some of the foreign SAD communities who have wandered around have made efforts to grow crops around their homes/sudung. The plants selected in the first period of cultivation efforts were cassava, sugar cane, yam, vine tubers, taro, banana and cayenne pepper. Apart from that, in a deeper investigation into the livelihoods of the SAD Community, it was discovered that their sources of livelihood came from the practice of taking palm oil harvests that had gone through harvest rotation.

The sources of livelihood for foreign SAD communities who have settled (residential) are like those of villagers or transmigrants, by developing commercial commodities such as rubber and palm oil. Generally, their rubber and oil palm plantations are located within TNBD. Apart from rubber and oil palm cultivation, hunting is still carried out. These foreign SAD communities who have settled also have fruit trees that grow naturally or have been planted generatively. This naturally growing fruit tree owned by the SAD Community is known as continenton. The proceeds from the sale of the continentar fruit are also a source of income to support the lives of the SAD communities outside who have settled.

However, currently the three SAD community groups have their main source of livelihood from oil palm and rubber plantations, where they get the techniques for farming by watching and imitating those from outside communities who work on it.

The Cultural Condition of SAD Isolated Communities

# 1. Melangu Culture

Melangu culture or custom is a culture that if a family member of the SAD community dies, the SAD community group will leave because they think that the place is an unlucky place, apart from being able to forget the sadness that exists, the SAD community leaves the place for quite a long time. , which in ancient times could last between 10 and 12 years. However, currently the melangu period is getting shorter, namely around 1 to 2 years. This happens because the SAD community already has rubber or oil palm plantations, which if left for a long time will not be maintained and will even be harvested by other people.

#### 2. Seloko and Mantera

The lives of the SAD community are influenced by legal rules that have been implemented in the form of seloko-seloko which are strictly used as legal guidelines by tribal leaders, especially Tumenggung, in making decisions. Seloko is also used as a guide in SAD social life, such as in speaking and behaving. These traditional seloko-seloko have not disappeared and cannot be changed.

The forms of seloko include: a) A tub of gold in the atmosphere, b) A tub of tigo-spun rope, c) What is written and implied, d) Reciting the Koran on a letter, e) Lots of leaves for shelter, f) Wailing over a carcass, g) It turns out that dogs eating shit is a habit that is difficult to change. i) Wherever the earth is stepped on, that is where the sky is upheld, j) Bini sekato men and children sekato Bapak which means that in household matters a man or father has a very prominent role, k) Titian galling tenggung the country means not here and neither go there, l) Ado rimbo ado bungo, ado bungo ado dewo means where there is a forest there are flowers, there are flowers there are gods.

#### 3. Besale

Besale or Bedeki can be interpreted as sitting together to jointly ask the Almighty to be given health, peace and to be protected from danger. Besale is carried out at night led by a respected figure called a shaman. This character must have more abilities and be able to communicate with the unseen world.

#### 4. Trust

The SAD community generally believes in gods and also believes in spirits as supernatural powers. This is reflected in the seloko and mantras which have the belief in the Tunggal Dewo Oath which influences the lives of the SAD community. The SAD community has restrictions in the form of abstaining from living in villages, abstaining from tin roofs, having to live in houses whose roofs are made of forest leaves, not being allowed to raise livestock and plant certain plants because they already have kuaw (forest birds) as a substitute for chickens, antelope, deer, wild boar as a substitute. goat or buffalo. However, currently many SAD people have embraced Islam and Christianity.

# Community Local Wisdom as an Effort to Conservation Forest Resources

Regarding the conservation of biological natural resources, especially in the TNBD Protected Forest area, there are several local wisdoms of the SAD Community that still survive today, such as:

# 1. Sialang Tree

This is the name given to trees used as nests by honey-producing bees. In jungle language, bees are called silang and the honey produced is called silang honey. Sialang trees are forbidden to be cut down, especially those that produce honey. Cutting down damsel trees can be subject to customary sanctions. Siang trees are usually types of kempas, kedondong forest, and pulai.

#### 2. Benuaron

Benuaron is a term given by the SAD community to an area where many fruit trees grow naturally. In general, it can be interpreted as "fruit garden". Fruit is an important food source for the SAD community, so cutting down fruit trees is also prohibited and subject to customary sanctions for violators.

#### 3. Slave Touch

Sentubung Slave is a tree that is used as a birth marker for the children of the SAD community. Every time a child is born, the Jungle People will give a sign to the sentubung tree. Therefore, damaging or cutting down the sentubung of slaves is also prohibited by custom.

# 4. Traditional Spatial Planning

Apart from certain types of trees that cannot be cut. The SAD community also has a traditional spatial layout which is prohibited from being converted into gardens.

#### **Primitive Subsistence Farming**

The SAD community's lifestyle is sometimes sedentary and at other times they enter the forest to live in the forest and collect forest products. Activities carried out by carrying out activities that can be said to be primitive or traditional, are also called primitive subsistence farming activities with shifting cultivation and a nomadic lifestyle. At the time of the research, there had been a change in the life pattern system of the SAD Community, namely that there had been an agreement between the government and the SAD Community in collaborating to form a customary forest. In customary forest areas, trees cannot be cut down and used as fields, but harvesting forest products is permitted by cutting down trees. You can cut down trees but you have to follow the customary laws that apply to the SAD Community. For oil palm plantations, the SAD community has started to use new technology, just like other farmers in the same location. Communities who have settled and farmed palm oil, rubber and other food crops have started to consume food from outside the forest, with changes occurring in 2023), their livelihoods and methods of clearing land for farming will also change. In Table 1, you can see the sources of income from primitive farming or traditional farming from forest products obtained by SAD in the research area.

Table 1. Revenues from Primitive Subsistence Farming from Forest Products from SAD Isolated Communities

Isolatea Communico					
Number	Forest Products	Total Products	Price/ Unit (IDR)	Total Revenue (IDR/Year)	Number of Community Samples SAD (Person)
1	Resin (kg/year)	50.880	3.000	152.640.000,00	34
2	Jernang Rattan (stems/year)	413	1.200.000	277.920.000,00	21
3	Manau Rattan (stems/year)	20.426	8.000	163.407.567,57	10
4	Saga Rattan (stems/year)	10.865	2.500	27.162.162,16	8
5	Tempayang Fruit (kg/year)	26	53.030	1.352.424,00	33
6	Results of hunting in the forest	729	3.500	2.552.667,00	18

From Table 1, it can be seen that the SAD community can take forest products, both non-timber forest products and forest products in the form of wood and from hunting for pigs, birds, fish and other animals. Some are sold and some are consumed directly. The SAD community is part of a community that is very dependent on forest resources for its livelihood. However, the smaller the level of dependence on forests, the less the forest area, the more socio-cultural and socio-economic changes will occur in the inner tribe. Existing forests have been turned into oil palm plantations, rubber plantations and gardens for horticultural and other food crops.

The non-timber forest products taken by the SAD community were resin, jernang rattan, manau rattan and sega rattan at the time of the research, as in the following figure:





Figure 3. Damar Tree and Damar Sap





Figure 4. Jernang Rattan Tree and Jernang Rattan Fruit





Figure 5. Manau Rattan and Sega Rattan





Gambar 6. Buah Tempayang

## **Intensive Subsistence Farming**

SAD Community Groups must respond to changes that occur in their surrounding environment and cause SAD communities to be more preoccupied with matters of maintaining life rather than thinking about ways to increase knowledge or learn about changes in their environment. A portrait of changes in the lives of the SAD community can be seen in Table 2.

Table 2. Subsistence Farming and Lifestyle of SAD Community

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Nu mbe r	Eleme	Subsistence Farming and Lifestyle  Moving Around	Settled
1	Land Status	The status of the land is still in the traditional protected forest area of TNBD Park, farming by clearing the forest by cutting down trees on TNBD protected land.	O wn land status with land ownership status with a formal legal system from

			the government and there is also land purchase itself.
2	Forest Produc ts and Palm Oil and Rubber Plantat ion Produc ts	<ul> <li>As daily wage laborers transporting forest products, wage laborers for plantations belonging to village communities and laborers for oil palm and rubber plantations owned by private companies.</li> <li>Places selling forest products, places selling palm oil and rubber products.</li> <li>Gardening in protected forests, planting rice and tubers.</li> <li>Hunting for forest products in the form of pigs, birds, partridges.</li> <li>Taking forest products, forest durian, resin, honey, jernang (rattan).</li> <li>Looking for fish in the river.</li> </ul>	Cut down trees for wood to make houses, furniture and sell.      Land clearing     Sale of garden produce     Clearing and purchasing land     Activities to search for Palm Oil Loose and become daily workers at Plantation Companies.      Tapping or profit sharing workers on plantations tap the surrounding rubber.
3	Reside nce/ House	ouses are built in forests, under trees, under oil palm plantations or around rivers.  • he typical residence of the SAD community is in the form of tents with plastic, tarpaulin, palm fiber, dried tree bark. Another form is a house on stilts without walls and with walls made of dried tree bark, intertwined young bamboo sticks.	S emi- permanent houses provided by the government, building your own semi- permanent house and some also building your own house on stilts.  Permanent

			house with tempok walls and ceramic floors and combinations thereof.
4.	River or Physic al Enviro nment	<ul> <li>Rivers are used as a source of clean water, a place to catch fish, a place to bathe and wash clothes.</li> <li>Rivers are used as a means of transportation.</li> </ul>	T he existing river is polluted with pesticides, shallow and even drying up.      U npolluted rivers are used to raise fish in net ponds.
5	Social Interac tion	<ul> <li>Social interaction occurs not only between the SAD community but also the surrounding community.</li> <li>Establishing family relationships with the environment.</li> </ul>	Individual culture and consumerist culture have begun to grow.
6	Traditi onal Leader ship Structu re	The traditional title and rank system is still used in everyday social communication.	N     o longer using     traditional     leadership

The SAD community in Air Hitam District generally works looking for non-timber forest products and timber forest products, namely jernang, resin, manau rattan and sega rattan in the TNBD protected forest area, hunting and catching fish, and hunting pigs. SAD farmers also cultivate plantation commodities (oil palm and rubber) and horticulture (chilies, corn, rice).

Analysis of Farming and Household Income in SAD Isolated Communities

# Subsistence Farming Income

The land area owned by Anak Dalam Tribe (SAD) farmers who cultivate oil palm is an average of two hectares, with the largest being four hectares and the narrowest being one hectare with the total area of the respondents being 79 hectares. Meanwhile, rubber farming has an average of two hectares, the largest being 12 hectares, the narrowest being one hectare with the respondent's land area being 43 hectares. The largest ownership status of own land in the TNBD area is by purchase. The way the SAD community manages their farming, if they are in the forest, farmers do not cultivate oil palm because oil palm is outside the TNBD area. The income earned by the SAD community depends on the activities carried out throughout the year. The amount of income from intensive subsistence farming from palm oil and SAD rubber

in the research area can be seen in Table 3.

Table 3. Income from Intensive Subsistence Farming of Palm Oil and Rubber

Description	Subsistence Farming (IDR/Farmer/Year)	
	Kelapa Sawit	Karet
Farming Revenue	94.698.821,00	34.602.370,00
Farming Production Costs	10.604.228,00	2.707.711,00
Farming Income	84.094.593,00	31.894.659,00
R/C	8,93	
B/C		

From Table 3, subsistence farming income from oil palm farming is IDR 84,094,593 per farmer per year, IDR 2,841,216.08 per farmer per month or IDR 18,829,452 per hectare per year. The income obtained from rubber subsistence farming is lower than oil palm, namely IDR31,894,659.00 per farmer per year or IDR2,657,888.25 per farmer per month or IDR11,781,028 per hectare. Farming income from oil palm and rubber farming based on indicators from the Central Statistics Agency in 2007 is classified as medium income.

#### Household Income of SAD Isolated Communities

The total income of the SAD community is the total income obtained by the SAD community, both from the main income, namely generative agriculture, plus side income, namely in the form of extractive agriculture and hunting results for the SAD community who still take products from the forest. The overall average income of the SAD community from generative, extractive agriculture and hunting can be seen in Table 4.

Table 4. Income from Intensive Subsistence Farming for SAD Isolated Communities

Number	Source of Income	Total	Contribution
		(IDR/ farmer/year)	(%)
I	Intensive Subsistence Farming		
	Palm oil	84.094.593,00	54,20
	Rubber	31.894.659,00	20,56
	Total I	115.989.252,00	74,76
II Primitive Subsistence Farming/Forest Products			
	Damar	4.580.000,00	2,95
	Manau Rattan	9.150.200,00	5,90
	Sega Rattan	8.569.000,00	5,52
	Jernang Ratan	14.344.365,00	9,24
	Tempayang	1.500.950,00	0,97
	Total II	38.144.515,00	24,59

III	Hunting Results	Hunting Results			
	1) ig	1.013.576,92	0,65		
	Total III	1.013.576,92	0,65		
	Total (I+II+III)	155,147,343.92	100,00		

Based on Table 4, the average subsistence farming income obtained by the SAD community is IDR 155,147,343.92 per farmer per year or IDR. 12,928,945.33 per farmer per month. Natural resources household income in the research area based on the 2007 BPS indicators is classified as high income. Intensive subsistence farming is farming whose management is still simple and does not use new technology but whose management is intensive. Palm oil and rubber farming uses certified seeds and fertilizes in accordance with standard operational procedures. The SAD community, if they cultivate oil palm at one time, they do not cultivate rubber. Because oil palm land is in permanent residence areas and rubber farming is in plantations in the forests of the TNBD area. So if the income obtained from palm oil is no longer obtained from rubber and vice versa.

Likewise, activities to take forest products, if you enter the forest to take forest and berberu products, intensive subsistence farming activities (oil palm and rubber) will die. The largest contribution to the household income of the SAD community is 74.76 percent from intensive subsistence farming. The second largest income contribution is from primitive farming income or from forest products, namely from resin, Manau rotan, Sega rotan, Jernang rotan and tempayang at 24.59 percent. The smallest source of income is from pig hunting, 0.65 percent.

#### 5. Conclusion

The SAD community at the time of the research had changed, some were living permanently in permanent and semi-permanent homes by carrying out oil palm farming and rubber farming activities. Other activities include taking forest products and living a nomadic life by wandering from place to place. The SAD people have a way of living in groups with territorial boundaries, with a way of living, a way of dressing, a way of surviving, and their culture has its own characteristics that are different from other tribes.

Farming carried out by primitive subsistence farming or traditional farming taking forest products, carrying out shifting cultivation contributes to SAD income of 24.59 percent. SAD's income comes from taking forest products in the form of resin, rattan, tempayang fruit and 0.65 percent of the SAD community's income contribution from hunting (pigs) in the forest. When SAD people are not in the forest, they cultivate oil palm or rubber or other food and horticultural crops and will live in their homes.

Intensive subsistence farming with palm oil and rubber commodities, farmers will live permanently in their houses which are permanent and semi-permanent. The main source of income is 62.76% from palm oil and rubber farming. Subsistence farming income and household income of farmers from isolated communities with sedentary and nomadic lifestyles. The household income is IDR 155,147,343.92 per year or IDR 12,928,945.33 per month.

#### References

- 1. Balint, B. (2014). Institutional factors influencing agricultural sales of the individual farmers in Romania. Studies on the Agricultural and Food Sector in Central and Eastern Europe, 25, 238-256.https://www.tandfonline.com/doi/abs/10.1080/14631370500505396
- 2. Balint, B., & Worb, P. (2006). Institutional factors and market participation by individual farmers: The case of Romania. Post-Communist Economies, 18(1), 101-121. https://www.tandfonline.com/doi/abs/10.1080/14631370500505396
- 3. Baudron, F., Homann-Kee Tui, S., Silva, J. V., Chakoma, I., Matangi, D., Nyagumbo, I., & Dube, S. (2024). Tailoring interventions through a combination of statistical typology and frontier analysis: A study of mixed crop-livestock farms in semi-arid Zimbabwe. Experimental Agriculture, 60, e23, 1–24. doi: 10.1017/S0014479723000304
- 4. Central Bureau of Statistics (BPS). (2014). Portrait of Jambi Province agricultural businesses according to subsectors. BPS Jambi Province. Jambi. https://www.bps.go.id/publication/2014/12/19/3f2a39f19ce0b08ef777c139/hasil-pencacahan-survei-pendapatan-rumah-tangga-usaha-pertanian-2013.html
- 5. Central Bureau of Statistics (BPS). (2020). Population census results 2020. Central Statistics Agency. Jakarta. https://www.bps.go.id/pressrelease/2021/01/21/1854/hasil-sensus-penduduk 2020.html
- 6. Cosme, M., Kone, A., Pommereau, F., & Gaucherel, C. (2024). Improving livelihood through crop-livestock integration: Insights from a farm trajectory model. Agricultural Systems, 219, 103949. doi: 10.1016/j.agsv.2024.103949
- 7. Ernawati, H. D., Suandi, & Wahyuni, I. (2020). Siem citrus commodity development strategy in Kerinci Regency, Jambi Province, Indonesia. Proceeding International Conference on Green Agro-Industry, 4. https://eprints.upnyk.ac.id
- 8. Gasson, R. (1986). Part-time farming strategy for survival? Sociologia Ruralis, 26(3-4), 364-376. doi: 10.1111/j.1467-9523.1986.tb00792.x
- 9. Gebremedhin, B., & Jaleta, M. (2010). Commercialization of smallholders: Is market participation enough? Contributed Paper Presented at the Joint 3rd African Association of Agricultural Economists (AAAE) and 48th Agricultural Economists Association of South Africa (AEASA) Conference, Cape Town, South Africa.
- 10. Hermansyah, P. (2019). Getting to know the jungle people at the Bukit Duabelas National Plantation, Sarolangun Jambi.
- 11. Kustati, M., Sepriyanti, N., Tabrani, Sauri. (2023). Anak Dalam Tribe in Pematang Kabau Village II Air Hitam District, Sarolangun Regency. Journal of Social Science Research, 3(2). https://j-innovative.org/index.php/Innovative/article/view/1725
- 12. Mailinar, & Nurdin, B. (2013). Religious life of the Anak Dalam tribe in Senami III Hamlet, Jebak Village, Batanghari Regency, Jambi. Journal of Social Religious Research, 28(2), 143-144. https://www.neliti.com/publications/145485/kehidupan-keagamaan-suku-anak-dalam-didusun-senami-iii-desa-jebak-kabupaten-bat
- 13. Mincyte, D. (2011). Subsistence and sustainability in post-industrial Europe: The politics of small-scale farming in Europeanising Lithuania. Sociologia Ruralis, 51(2), 101-118. doi: 10.1111/j.1467-9523.2011.00530.x
- 14. Moti, J., Berhanu, G., & Hoekstra, D. (2010). Smallholder commercialization: Processes, determinants and impact. Discussion Paper No. 18. Improving Productivity and Market Success (IPMS) of Ethiopian Farmers Project, ILRI (International Livestock Research Institute), Nairobi, Kenya. https://cgspace.cgiar.org/items/1388de1c-b778-4261-9ef1-c884317ae1a2
- 15. Muchlis, F., Lubis, D. P., Kinseng, R. A., & Tasman, A. (2016). History of marginalization Orang Rimba Bukit Dua Belas in the New Order era. Paramadita, Historical Studies Journal, 26(2). https://journal.unnes.ac.id/nju/paramita/article/view/4972/fuad\_2016
- 16. Pingali, P. L. (1997). From subsistence to commercial production systems: The transformation *Nanotechnology Perceptions* Vol. 20 No. S16 (2024)

- of Asian agriculture. American Journal of Agricultural Economics, 79(2), 628-634.
- 17. Pingali, P. L., & Rosegrant, M. W. (1995). Agricultural commercialisation and diversification: Processes and policies. Food Policy, 20(3), 171-185. https://www.sciencedirect.com/science/article/abs/pii/0306919295000124
- 18. Samsu, Rusmini, Kustati, M., Ritonga, M., Maulana, A. N., & Zulmuqim. (2022). Tumenggung leadership and educational model in leading indigenous people: Suku Anak Dalam portrait. Cogent Social Sciences, 8. https://www.tandfonline.com/doi/full/10.1080/23311886.2022.2123634#references-Section
- 19. Siregar, G., & Herwanto, W. (2015). Analysis of income elasticity of food consumption non-rice. Collection of Journals from the Agribusiness Study Program, Faculty of Agriculture, UMSU Medan Indonesia, 1(01), 167-176. http://jurnal.umsu.ac.id/index.php/kumpulandosen/article/view/558
- 20. Ulfa, M., Albayudi, & Sirait, M. (2019). Types and economic value of non-timber forest products for the Anak Dalam tribe in Bukit Duabelas National Park. Silva Tropika Journal, 3(1). https://online-journal.unja.ac.id/STP/article/view/7
- 21. Von Braun, J. (1995). Agricultural commercialization: Impacts on income and nutrition and implications for policy. Food Policy, 20(3), 187-202. https://www.sciencedirect.com/science/article/abs/pii/0306919295000135
- 22. Wahyuni, I., Minha, A. M., Mulyana, A., & Zulkifli. (2015). Study of farming commercialization household rice farmers on tidal swamp land in Jambi Province. Proceedings of the National Seminar Suboptimal Land 2015. https://adoc.pub/kajian-komersialisasi-usaha-rumah-tangga-petani-padi-pada-la.html
- 23. Wahyuni, I., Minha, A. M., Mulyana, A., & Zulkifli. (2017). The determinants of commercialization of households farmers rice tidal land in Tanjung Jabung Timur District, Jambi Province. International Journal of Scientific and Research Publications, 7(4), 357-363. https://www.ijsrp.org/research-paper-0417/ijsrp-p6453.pdf
- 24. Wahyuni, I., Saputra, A., & Effran, E. (2020). Performance of supply chain of Arabica coffee in Kerinci Regency Jambi Province Indonesia. Proceedings of the 3rd Green Development International Conference (GDIC 2020), 205. https://www.atlantis-press.com/proceedings/gdic-20/125960292
- 25. Wahyuni, I., Suandi, & Edison. (2018). Poverty alleviation model in communities peatland areas of Jambi Province. IOP Conference Series: Earth and Environmental Science, 694(1), 012015.https://iopscience.iop.org/article/10.1088/1755-1315/694/1/012015/meta
- 26. Wahyuni, I., Suandi, & Ernawati, D. (2022). Sustainable entrepreneurship development model of Liberica coffee in West Tanjung Jabung Regency. IAR Journal of Business Management, 3(2). https://iarconsortium.org/journal-info/IARJBM
- 27. Wharton Jr., C. (2017). Subsistence agriculture: Concepts and scope. In C. Wharton Jr. (Ed.), Subsistence agriculture and economic development (pp. 1-13). Chicago: Aldine Publishing Company. https://www.taylorfrancis.com/books/edit/10.4324/9781315130408/subsistence-agriculture-economic-development-ir-wharton