

# AGRO-PASTORAL AND PRESERVATION OF LOCAL WISDOM BONDANG FOR AGRICULTURAL SUSTAINABILITY IN ASAHAN, NORTH SUMATRA

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**Abstract.** Based on the resource potential, agropastoral is the right cultivation system implemented in Asahan. With such a system, all resources are interconnected with their benefits so that optimum production, sustainable environment, and enhancing economic and social sustainability. As with the system of plasma plantation owned by the people whose management is assisted by the company (as the core plantation). Large expanses of grass are also widely used for livestock feed. The advantage is, weeds in the field become decreased, cattle dung is also able to improve soil fertility. In this case, the agropastoral system occurs. This pattern unfortunately does not occur systematically in the palm oil fields. Usually companies and plasma prefer to focus on one commodity, that is oil palm or rubber, rather than simultaneously take care of livestock. Each region certainly has local wisdom with benefits that could be better than modern farming systems. Although Asahan since the early 20<sup>th</sup> century has been attached to the plantation, which is a modern agricultural system, but there is still local wisdom that until now encountered. One of the famous in Asahan is Bondang. Bondang is a term in Malay to refer to land. Bondang originated from the village of Silo Lama, Air Joman Subdistrict. The activity of Bondang both at start and closing in general can be seen in several stages of the process: chicken pieces; counsel from the traditional leaders about the significance of Bondang, zikr and prayer, dialogue with supernatural powers, *tepung tawar* (blessing using flour) to seeds. It's just, of course adjust in sharing point of view. Including religious viewpoints which do not allow to offer "sacrifice" for any reason, such as cutting off chicken sacrifice in a tradition of Bondang.

**Keywords:** agropastoral, local wisdom, sustainability, *bondang*, Asahan

## POTENTIAL RESOURCES

**Plantation Crops.** The plantation resources spur the growth of smallholder plantations as plasma from plantation companies (nucleus estate) so as to improve the welfare of the community around the plantation. The latest data shows the area of oil palm owned by smallholder plantations that have been used 924,520 Ha. The largest in North Sumatra Province. As for rubber commodities of smallholder plantation area of 6,718 Ha. (Anonymous, 2013). The rubber plantation owned by smallholders is not very wide because of the past two decades, the majority have experienced turnover from rubber to palm oil.

**Food Crops.** In some districts are also the center of food crops such as rice, corn, beans, and tubers. As in Rawang Panca Arga, Meranti, and surrounding areas. Data in 2013 shows the extent of harvest and production of some food crops commodities in Asahan. Rice plants 18,718 Ha with production of 103,881 tons of dry milled grain. Corn harvesting area of 2,382 Ha with production of 9,047 tons. Soybean crop, harvesting area 11 Ha with production of 9 tons. Peanuts harvest area of 130 Ha with production 146 tons. Green bean have harvested area of 117 Ha with production of 128 tons. As for tubers, cassava crops have 724 Ha harvested area with production of 20,082 tons. As well as sweet potato crops harvested area of 103 ha with 931 tons of production. (Central Bureau of Statistics of Asahan Regency, 2014).

**Livestock and Fisheries.** Livestock commodities in Asahan are relatively similar to other areas such as cattle, goats, and poultry. While the aquatic commodities, Asahan quite rich. Because, Asahan is along the east coast of North Sumatra in connect with the Straits of Malacca. The unique commodity in Asahan is a fairly large-sized shell, in contrast to the type of white shells as found in many other areas. Because of this potential, then the Kisaran as the capital city of Asahan dubbed as the City of Shells. The dominant soil type in Asahan Regency is Alluvial, subdivided into four categories, ie alluvial, clayhumus, regusol, and podzolic red yellow. There are 21 rivers that all flow to the east coast, divided into three watersheds of the Asahan watershed, Silau watershed, and Bunut watershed. The condition of the area is relatively flat. Rainfall data, since 1976 - 1991 average monthly rainfall 161.14 mm.

Based on the climatic classification of Smith Ferguson into the category of climate B (Wet). Meanwhile, according to Oldeman Climate classification, Asahan regency including climate type E1 with wet month > 200 mm ie in September, October, and November with dry month <100 mm only found in February. Water demand in Asahan is sufficient throughout the year, although the dry season still has rainy days every month. In addition, it is also supported by adequate irrigation installation. There are 15 irrigation areas, the largest in Rawang Panca Arga (3,257 Ha paddy fields) and Meranti (2,307 Ha). (Anonymous, 2011)

### CROPPING SYSTEM

Based on the potential resources that have been described, then agropastoral is appropriate cultivation system implemented in Asahan. With the system, all resources are interconnected with their benefits so that optimum production, sustainable environments, and enhancing economic and social sustainability. Agropastoral is a combination of agricultural components and components farms. Unlike agrosilvopastoral and silvopastoral, agropastoral is not included in agroforestry. The materials that are built can be integrated for each other interests cultivation of annual crops, food, fisheries, and livestock. For example, irrigation installation. The irrigation installation is built with a good system. From primary to tertiary channels that are directly related to paddy fields. The irrigation installation in Figure 2 located in Rawang Panca Arga District irrigates 3,257 Ha of paddy fields. In addition to rice fields, people also use it for other agricultural activities, that is fish farming. The type of fish selected is goldfish. Provided that it is not polluted waste, the irrigation channel is appropriate for the cultivation of carp. Goldfish want water conditions that have high enough dissolved oxygen level about 6-8 ppm. The flowing water is capable of providing the dissolved oxygen content.

Plantation culture, especially oil palm and rubber seems to be attached to the Asahan community. In Asahan, the first Indonesian oil palm plantation was established. In 1911 pioneered in the East Coast Region of Sumatra, precisely in Pulo Raja Subdistrict Asahan. The vast expanse of plantation owned by several private companies and state-owned Perkebunan Nusantara Company, contributes much to the economic needs of most Asahan people. As with the system of plasma plantation owned by the smallholder whose management is assisted by the company (as the core plantation). Large expanses of grass are also widely used for livestock feed. The advantage is, weeds in the field become decreased, cattle dung is also able to improve soil fertility. In this case, the agropastoral system occurs. This pattern unfortunately does not occur systematically in the oil fields. Usually companies and plasma prefer to focus on one commodity, that is oil palm or rubber, rather than simultaneously take care of livestock.

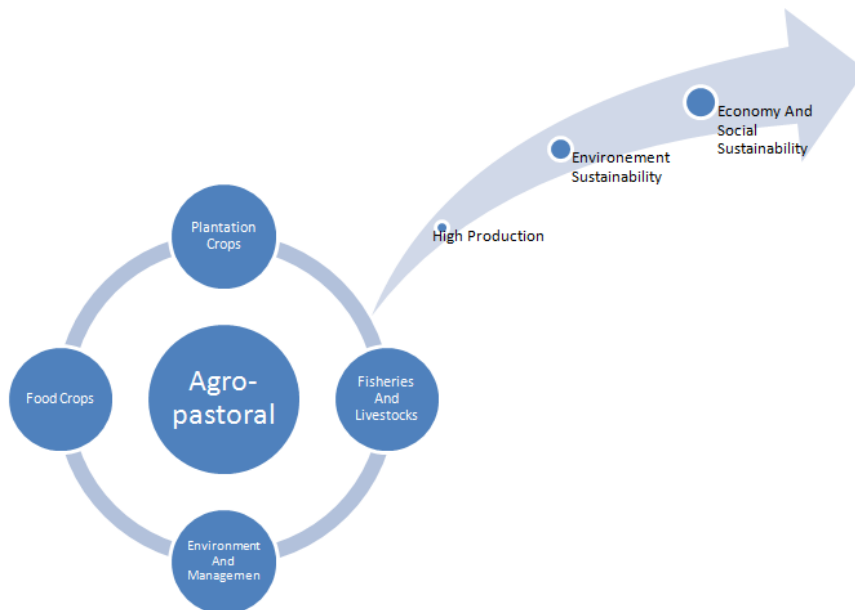


Fig. 1. Flow Chart of Agropastoral Implementation



Fig. 2. Installation of Irrigation in Rawang Panca Arga Subdistrict

### LOCAL WISDOM OF BONDANG ON AGRICULTURAL SYSTEM

Each region certainly has local wisdom with benefits that could be better than modern farming systems. Although Asahan since the early 20<sup>th</sup> century has been attached to the plantation, which is a modern agricultural system, there remains local wisdom that until now encountered. One of the famous in Asahan is Bondang.

Bondang is a term in Malay to refer to land. Bondang originated from the village of Silo Lama Air Joman Subdistrict. Bonding activity both at starting and closing in general can be seen in several stages of the process: chicken pieces; counsel from the traditional leaders about the significance of Bondang, zikr and prayer, dialogue with supernatural powers, *tepung tawar* (blessing using flower) to seeds. This activity usually begins with

slaughtering chicken brought by villagers in certain places. The blood of slaughter, the bones of food scraps and the slaughter of the slaughtered animals are placed in the place that has been designated as an offering. This activity aims to get a satisfactory harvest and avoid pest problems and so on. (Suhartono, 2005)

Unlike the farmers in general, farmers in the village of Silo Lama has its own uniqueness in carrying out farming activities. They generally still rely on the values and traditions that live and thrive in society. This activity is usually done at the time will start the planting activity (called opening of Bondang) and at the time will do harvest (closing of Bondang). The interesting about this activity is that in addition to relying on traditional wisdom, the concept of Bondang farming is quite synergistic with the effort to create a balance of the environment. In the framework of Bondang farming activities, farmers do not use any chemical substances or drugs that can cause various impacts on health and environmental damage. The cultivation of agricultural land from planting to harvest is completely done traditionally, without the use of chemicals. Therefore, as one of the traditional forms of community wisdom, Bondang tradition is essential to be saved. (Suhartono, 2005)

Some NGOs began to campaign for Bondang. Including the SINTESA foundation, which has been conducting long-term assistance and organizing activities, has tried to make the traditions of bondang as a forum for empowering and campaigning activities for the organic farming program, not only in Silo Lama Village but also in other areas. It's just, of course adjust in sharing point of view. Including religious viewpoints which do not allow to offer offerings for any reason, such as cutting off chicken offerings in a tradition of bondage. (Anonymous, 1993).

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