

Kapuas Hulu District plays a strategic role from the environment standpoint in the regional, national, and global setting. Within the regional scope of Kalimantan, the 29,842 km2 or 20.33 percent of West Kalimantan Province, has a role to provide water resources, food resources (fish), transportation routes and other services not only to West Kalimantan Province but also to East Malaysia of Sarawak.

In the national scope, this district has the highest percentage of forest area among all districts of Indonesia, which is 80.96 percent, and 56.51 percent of which is established as conservation area. While in the global scope this region has a strategic value from the environmental perspective.

Betung Kerihun is a national park located at the eastern end of this District, a tropical rain forest habitat that acts as the lungs of the world and is home to 1200 species of plants, 44 species of mammals, 301 bird species and 112 fish species. While Lake Sentarum has been designated as a wetland area by UNESCO and is the most complete freshwater ecosystem in the world with 266 fish species (208 endemic), 510 plant species (33 endemic and 10 new species), 141 species of mammals (29 endemics), and 31 species of reptiles (8 protected).

On the other hand, the economic activities that flourish in this District still rely on natural resource-based sectors and are practiced in an environmentally unfriendly manner that threatens conservation areas. These activities include small-scale mining of gold, stone and sand quarries growing in Pengkadan and Seberuang Sub-districts, resulting in water and soil damage around the mine site.

The rapidly growing fishing activity in the Kapuas River, conducted without considering the harvest season of fish with environmental destructive equipment, has resulted in overfishing. This is characterized by the smaller size of the fish being caught and the lower catch. Then, the expansion of agricultural land by local communities is done by clearing the forest. The result does not only reduce forest area, but also cause destruction of the ecosystem.

The impact of environmental degradation in Kapuas Hulu District is beginning to be visible. From year to year the frequency of floods in this region is increasing. Based on data from *BPBD* (Regional Disaster Control Agency) of Kapuas Hulu District, there are 12 subdistricts that are prone to flooding with a height of two to three meters.

In June 2016 there was a flash flood that hit the settlement in Putussibau Selatan sub-district as high as seven meters and claimed the loss of life and material. Another impact is the destruction of ecosystems and fauna habitats. For example, data from Mongabay (2013) stated that the expansion of large-scale oil palm plantations in Kapuas Hulu District had created disturbance on *Pongo pygmaeus-pygmaeus* or Orangutan habitat causing the beast to raid farmers' honey fields. This condition indicates a decline in the quality of the ecosystem in providing support to human activities within its boundary.

Environmental protection in Kapuas Hulu District should not only take into consideration the ecological role and function of the region, but also consider local economic development. A total of 24,260 people or 10.03 percent of the population in Kapuas Hulu District are included in poverty category (BPS West Kalimantan Province, 2016) with the dominance of poverty in agricultural workers.

In addition, the level of HDI in this district is also relatively low compared to other districts in West Kalimantan Province. BPS (Central Bureau of Statistic) West Kalimantan Province (2016) recorded HDI in Kapuas Hulu District is the fourth lowest in West Kalimantan Province, which amounts to 63.73 percent. Related to this, environmental protection must be able to encourage the improvement of the welfare of local communities.

The agropolitan green concept is seen as a solution for Kapuas Hulu District to develop its local economic activities without damaging the environment. Green agropolitan is an integration between the concept of green economy, green agriculture, and agropolitan. This concept can be defined as the development of environmental friendly agricultural sector based on environmental carrying capacity. For sure the concept is implemented by integrating the development of a hierarchical area between agricultural and non-agricultural activities with adequate infrastructure.

The development of green agropolitan in Kapuas Hulu District is needed to improve the efficiency of resource utilization which is the main base of economic activity in this region. Economic activity that is currently dominated by large companies, through green agropolitan is expected to increase the growth of local economy and the absorption of local labor. Thus, the welfare of local communities also increases.

Green agropolitan is expected to increase added value in local Kapuas Hulu commodities through environmental friendly innovation. In addition, the green agropolitan is also considered capable of protecting and maintaining the strategic function of the environment of Kapuas Hulu District.

The drafting of the District Strategic Area Spatial Plan (DSA SP) of Kapuas Hulu conducted by collaboration between ITB, World Wildlife Fund (WWF) and Kapuas Hulu District Government, will carry the concept of green agropolitan in seven developing subdistricts. The seven subdistricts are Empanang, Semitau, Silat Hilir, Silat Hulu, Seberuang, Hulu Gurung, and Pengkadan. One of the stages of DSA Spatial Plan preparation is the Focus Group Discussion (FGD) which is expected to collect deep data and information from various stakeholders at sub-district level in Kapuas Hulu District.

The FGD is part of the preparation of DSA Spatial Plan of Kapuas Hulu. Through this activity it is expected to minimize the potential for possible spatial and temporal conflicts between various economic and environmental activities. The point is the achievement of a balance between development goals and environmental conservation goals in the region.

The FGD is aimed at socializing the DSA green agropolitan Spatial Plan of Kapuas Hulu. In addition, this activity is also intended to obtain various data and in-depth information from various dimensions related to the preparation of DSA Spatial Plan and input and suggestions in the preparation of DSA Spatial Plan of Kapuas Hulu.

VISIT TO THE SEVEN SUBDISTRICTS

The sun began leaning to the west when five cars drove away at an average speed of 70 to 80 kilometers per hour along the southern access road of Putussibau on Sunday (06/08/2017). These vehicles carried the Technical Team of Agropolitan DSA of Kapuas Hulu, the ITB Expert Team, and WWF-Indonesia.



A group of ITB Expert Team with RTR KSK Agropolitan Kapuas Hulu and WWF-Indonesia RTR KSK Technical Team is crossing palm concession while conducting survey

The traffic was relatively quiet. The shade of green hills flanking the roads offered beautiful panorama. Village after village was passed. Occasionally stopped by for a moment, just to unwind while enjoying fried bananas peddled by residents on the edge of the road.

About four hours drive from Putussibau, the whole team finally arrived at Simpang Silat. As agreed, the team was split into two parts. Team One stayed at the house of the Head of Silat Hilir subdistrict, while Team Two spent the night in Murni Inn, Simpang Silat. Team One members were
Tubagus Furqon Sofhani, Hastu
Prabatmodjo, and a number of
assistants representing ITB Expert
Team. Accompanying was Sutiadi
from Spatial Planning Technical
Team of Agropolitan DSA and
WWF-Indonesia. This team was
authorized to explore five strategic
issues in Silat Hilir sub-district.

Meanwhile, Team Two was filled by Dewi Sawitri and Delik Hudalah and the assistants who were members of ITB Expert Team. Members of the Technical Team of the Agropolitan DSA incorporated in this team were C. Jimmy and WWF-Indonesia personnel as a companion. This team would start its work in Silat Hulu Subdistrict.



ITB Expert Team was having dinner with WWF-Indonesia staff while discussing strategic issues at KSK Agropolitan Kapuas Hul

Adzan maghrib (Muslim's prayer call) just reverberated. The atmosphere of the small town of Simpang Silat looked deserted. Only occasionally came the sound of vehicles going back and forth on the road that was not so wide. A moment later, Rahmat Hafiz from WWF-Indonesia announced that the group should prepare to have dinner at Bu De cantin. The eating facility was quite close to the location of the inn.

The dinner opportunity was not wasted by all members of Team Two to sharpen their mind in discussion the next day. While waiting for the evening dish to be served, the team of experts, technical team, and WWF-Indonesia gathered in one table. Rahmad Hafiz from WWF-Indonesia proposed that this team discuss the method of discussion. The choice was twofold. Would the participants be divided into two groups or just one large group.

Based on the consideration of the effectiveness and efficiency of time, it was agreed that the discussion participants, estimated to be 30 to 40, would be divided into two groups. Each group is facilitated by one lecturer and accompanied by assistants. The same is also communicated to Team One through the cellular network.

After the discussion, dinner came. Various snacks presented. Rawon rice and fried tilapia fish was sufficient as antidote for hunger along the way. Team Two finally returned to the inn to rest.

GREEN AGROPOLITAN SPIRIT

Like the atmosphere of previous discussions, stakeholders in each subdistrict were present. Officials from sub-district, village, hamlet, traditional leaders, community figures, farmer groups, business people, and NGOs attended the FGD of the Agropolitan DSA.



When the ITB Expert Team tries to absorb information on various strategic issues in KSK Agropolitan area of Kapuas Hulu

Not even one sub-district was lacking in paricipants. The passion for sharing stories and absorbing information continues to burn in their minds. Worries harboured by the villages were milling about. Issues related to physical environmental, economic, infrastructure, socio-cultural and population, as well as institutional and financing, became the main topic of discussion.

The Regional Development Planning Agency of Kapuas Hulu as well as the Technical Team of the Agropolitan DSA Spatial Plan, C Jimmy and Sutiadi gave a brief introduction. Followed by the sub-district government, who also delivered a number of directions to the participants.

In order for the forum to run effectively, the forum was divided into two groups. In line with the original plan, this arrangement was followed so that all participants can actively contribute. The ITB Expert Team consisted of Tubagus Furqon Sofhani, Hastu Prabatmodjo, Dewi Sawitri, and Delik Hudalah, run the discussion in a smooth atmosphere. Questions and answers focussed on five issues that have been targeted.

This kind of discussion succeeded in getting input from all participants. One by one was asked. Participants responded based on their knowledge. While assistants consisted of Yustina Octifanny, Vaulli Nurrahma, Nabilla Dina Adharina, Tessta Talitha, Hilda Arum Nurbayyanti, and Uly Faozyah, were busy recording the entire discussion process.

SILAT HILIR



This is the atmosphere of FGD KSK Agropolitan in Silat Hilir Subdistrict

The FGD proceeded in heated atmosphere. The village heads presented development of their villages relating to various issues. Ahmad, Head of Bukit Pen Village delivered a number of problems in the agricultural sector. "We still have land, but confused what commodities can be developed. Including fertilizer, residents still need subsidies" he said.

Another issue was bought up by Razali, Head of Perigi Village. According to him, Sinarmas Group and RAP had planted oil palm in their village. But not all areas are opened for plantations. Some areas are maintained as reserves, agriculture and customary purpose. Of several types of land, generally the area is overgrown by large trees. To change the area requires tools and funds.

"Hopefully the remaining land can be converted to other crops that can generate more income for the people. "We also have river and community fish ponds that are currently being promoted. From fish consumption to arowana" he explained.

While the Head of Desa Baru, Gusti Bulhari Djazuli explained, currently the population living in his village had reached 892 people with an area of 6,672.96 hectares. "We will draw up a village spatial plan. Map of village administration is needed to know the pattern of space, land use, and conservation of the village" he said.

Related to the above question, ITB Expert Team member, Hastu Prabatmodjo suggested that not all of the land should be planted with oil palm. "From the economic side, do not rely on just one commodity. The issue of high passion in the palm oil sector is okay, but there must be other alternatives" he said. From the environmental side,
Hastu said palm is a recalcitrant
plant and easy to grow. In contrast
to food crops. Therefore, he
regrets if there is fertile land, then
converted into non-food land.
It would be better if the palm
allotment is the remaining land.
Because later we may face food
crisis, water crisis, and energy
crisis.

Another expert team member, Tubagus Furqon Sofhani added about fertilizer subsidies. According to him the government is more focused on distributing fertilizer subsidies for food crops. As for the village layout, it is better if land ownership is established and constantly updated. In addition to pouring questions, a number of village heads also provided up-to-date information about their respective villages. Sahroji from Seberu Village said that until then there was still plenty of land that people people could use. "Frankly I question the status of the lands that are cultivated by the residents, I wonder if the lands are not part of protected forest or community forest" he explained.

According Sahroji, the village and the district had been overwhelmed by this problem. Many residents were currently farming in the area. There was also a pepper plant that could produce 5.5 tons per year. But they were difficult to control because of the unclear land status.

Similarly so with Paul from Benai Village. According to him, there were four villages in Silat Hilir that already owned spatial plan document. The villages were Benai, Perigi, Tabai, and Desa Baru. The process was assisted by the Sinarmas Group. The spatial plan also plotted which parts were suited for agriculture, housing development, and so on.

But the landuse plan was still limited to the outlines. In the future, it is hoped that there will be more research on the most appropriate land allocation. Today most of people turn to rubber, swidden agriculture and pepper plantations. Those are a few commodities developed by the people.



Participants of the FGD KSK Agropolitan were divided into two groups for the efficient use of time.

SILAT HULU



Landscape Village Dangkan City, District Silat Hulu.

Silat Hulu Subdistrict
consists of 14 villages
with the majority of the
population being farmers
and planters with rubber
as dominant commodity.
Seven of the villages belong
to Agropolitan DSA Kapuas
Hulu namely Dangkan Kota,
Nanga Dangkan, Belimbing,
Nanga Ngeri, Landau Badai,
Selimu, Nanga Lungu, Entabi,
dan Perejuk.

The population still practiced the rotation farming and prepared land by burning which was contrary to government regulation. The public knew that fields that were used over and over would would loose their productivity and burning the land would increase the fertility.

In general, the land in Silat Hulu District was quite fertile, because it could be planted without fertilizer, but the farmers had not been able to utilize it to develop other commodities. This was due to low level of education and the lack of counseling programs provided by the government.

To date, the community only learned about farming and cultivating by self-taught. Falling rubber prices forced the communities to diversify agricultural commodities, attempted to plant pepper and coffee using village funds but farm extension officer never come and there was no responce from the government.

Infrastructure condition in Silat Hulu subdistrict was still relatively limited. The distance between villages that should have been reached within hours, was currently reached in days. Water transport equipment, namely speedboat, was still commonly used due to inadequate road infrastructure.



The mode of water transportation that still survives until now in the area of KSK Agropolitan Kapuas Hulu.

In fact, there was one village, namely Riam Tapang that its population must spend 1 day traveling along the 117 km road to reach the district capital in Nanga Dangkan. Water transportation can not always be used because during high rainfall or during drought the river could not be passed by speedboat.

If the rainfall was high, the river may overflow causing flooding. Usually it happened once a year with a height that could reach one meter. The clean water used by the villagers would come either from the rivers, the hills, and some from the town water company. In the village of Landau and Selimu there was a pipeline network originating from timber companies. The

community believed that timber companies brought a much lower negative impact than oil palm companies, since not all of the land was used and people could continue using the land.

The condition of education and health in all villages in Silat Hulu was still low, especially in the village of Entebi was dubbed as malnutrition bay and very minimal educational facilities. Approximately 90 percent of people in Silat Hulu still rely on the river as a place for bathing, washing clothe, toilet, and garbage disposal.

Only four villages were powered by public electric company or *PLN*. The rest used diesel power generator owned by the village and only lighted up from 18.00 to 21.00 Western Indonesia Time. Communication condition in Silat Hulu was also still bad. The phone signal was only available in Nanga Ngeri because there was a tower there.

While the economic facilities were still relatively minimal because there were no markets nor banks, there was only the village owned financial institution called BUMDes where people could deposit and borrow money. In general, the culture *gotong royong* (working toigether) in society is still running. Likewise with the barter culture that sometimes still applied in Silat Hulu District.

HULU GURUNG

Hulu Gurung is a subdistrict area where the livelihood of its citizens was dominated by farming. Some already had permanent rice fields, but most others still practiced swidden systems. Additional income besides farming was gardening. The majority of residents owned rubber plantation. Generally they owned two to three rubber plantations ranging between one and tens of hectares each.



One of the iron bridge in Nanga Tepuai, Hulu Gurung District.

Similarly, in terms of education, was quite high. The majority of residents had finished Senior High School or owned undergraduate certificate from the university. Nevertheless, Hulu Gurung still faced problem with juvenile delinquency.

Employment was very scarce. No factory was operating. While job as temporary staff was also inavailable. This condition lead to unemployment of college graduates. College graduates felt embarrassed to farm. They felt since they had been sent by their parents a great distance to have higher education in Pontianak they deserved to be employed as civil servants. It's just that such

opportunity was not available and their ideals are gone.

Responding to the issue, Furgon explained that education absorbed by the popultion unfortunately does not prepare the student to build a proper entrepreneurial attitudes, instead it prepare them to work as civil servents or employees in the oil palm companies. In fact, around his house there was a hectare of land that can be developed. If the school had not been able to change the communities' mindset, it is necessary to training and ecducation facilities to improve the skills of people. Hulu Gurung noted to have special high school in agriculture and fisheries. This new vocational school bad become

operational for the last three years.

With regard to local habit in Hulu Gurung subdistrict, people were still strongly attached working with gotong royong or mutual cooperation. The construction of public facilities funded by the government, were succesfully done by way of gotong royong or mutual assistance.

Economic organization such as Village Cooperative (KUD) did not exist yet. The obstacle was lack of capital. The management could not grow because there was no payment to their service, slowly the cooperative died. On the other hand the farming group stood strong.



Location of tilapia farming in Nanga Tepuai Village, District of Hulu Gurung.

Down here private lands were abundan. Following Islamic rule some of them were given away as wakaf or give for specific purpose, such for building Surau (Muslem's prayer house) and funeral ground for the whole community, without incuring any compensation.

State land does not exist. Football field, volleyball court, were constructed in communal land, and registerred in government administration as government asset. We do not understand what a state land is. For example the protected forest, is it a state land or adat land?" Long ago we manage the forest together in conjunction with preparation of dry rice fields. But since there were regulations issued by the government there had never been any more logging. Now the site had become a forest again, the trees are big, there is a positive change. Why? Because we have wet rice fields at the foot of

the mountain, we do not disturb the forest in order to protect the wet rice fields.

The villages in Hulu Gurung rarely experience landslides. It happened just once. Floods are also rare. There is no oil palm. People reject the existence of oil palm. Many of the oil palm areas are problematic. So we automatically reject the oil palm.

Related to the institutional issues, the revolving village funds amount to about Rp700 million per village. The fund is for agricultural development, especially rice field "printing."

All of the planning of rural development comes from the community, created through community consultation. The results of the consultation become the reference for Development

Activity Plan (RKP) and Village Budget Plan (APBDes). The village fund is used for infrastructure development of about 70 percent. Our region is in urgent need of infrastructure. The rest for empowerment and training, and last for construction and training. For example, education for early age children (PAUD), ranging from physical buildings and teachers were borne by the village funds.

Traditional or adat institutions are government-recognized organization. In Hulu Gurung, this institution is growing quite well and is strongly connected to the community. Each hamlet has an adat institution headed by a punggawa or adat leader.. There are at least 15 village adat leaders. If there are four hamlets within a village, there are 60 adat institutions.

PENGKADAN



Landscape of Pengkadan District surrounded by hills.

In general, the livelihoods of the community is supported by gardening and farming, especially rubber and the majority of shifting rice cultivition. In the past the local people practiced gold mining, even now there are still some who conduct mining of gold without government permit. In addition, after the palm oil company entered and the price of rubber fell, most of the community local residents took side jobs as casual laborers in the oil palm plantations.

In general, people still use the traditional way of farming. So far the existing commodities are still not market-oriented, just to meet personal needs.

In respect of the village condition, Pengkadan has abundant land resources, which allow for the planting of new commodities such as vegetables, fruits, and other food crops. Currently the community started to pioneer in planting sahang (pepper). Some other commodities that are suitable in relation to condition of the land are cassava, corn, and wet rice (rainfed irrigation). Then there is the potential of for development of fish farming, especially in the village of Riam Panjang where almost 30 percent of people have a fish pond, where arowana and gurami are cultivated particulaly for personal consumption

However, to be able to develop agropolitan in Pengkadan there are still some obstacles to be considered. The first problem is lack of clean water especially in Pengkadan Hilir Village. Mining activities that flourish in the area have contaminated river water which is one of the sources of clean water for the community, especially in the downstream villages.

In general, water is sufficient for everyday needs but not yet able to support agricultural activities. In addition there is no irrigation that may become another obstacle. Aside from lack of knowledge and access, the supporting facilities for agricultural development are still inadequate. For clean water only three villages that have been served by public water company (*PDAM*).

From the social side, people in Pengkadan are 99 percent Muslim and have strong tradition and observe gotong royong culture, especially at hamlet level. so it can be a potential asset for development. In some villages, and communities are flexible enough and willing to develop alternative commodities, but are still constrained by problems of low capacity, lack of knowledge and not enough market experience.

On the other hand there are also people who are still difficult to get out of the work in rubber, oil palm, and illegal mining. The woman organization has the potential to manage vegetables that may be developed in the future. Average community education is quite high up to Junior and Senior high school, and still has the desire to farm (to help parents)

Related to basic facilities (education, health), they are affordable but access to some villages is still is still problematic. The distance is about 7-15 kilometers for junior high. Almost 65-70 percent of people use toilet in the house, 30 percent have no toilet (do it in the river or forest). Sasan, Kerangan Panjang, and Pengkadan Hilir villages are low in aspiration (due to customs & limitations). Trash is usually burnt, dumped into the forest or into the river. Pengkadan Hilir has no electricity but electric poles have been provided. As many as 85 percent have used electric power from Public Electric Company (PLN) from the Subdistrict capital. The Permata village uses electricity from microhydro power generator.

In the village of Buak Limbang there is one hamlet (Pelam Sejahtera) that has not received electricity.

Access between villages and subdistrict capital is readily available, but not all of them are in good condition. No transport problems (coming and going fbetween the villages). The average buyer comes directly to the fields. Access to Pengkadan Hilir, however, is particularly difficult.

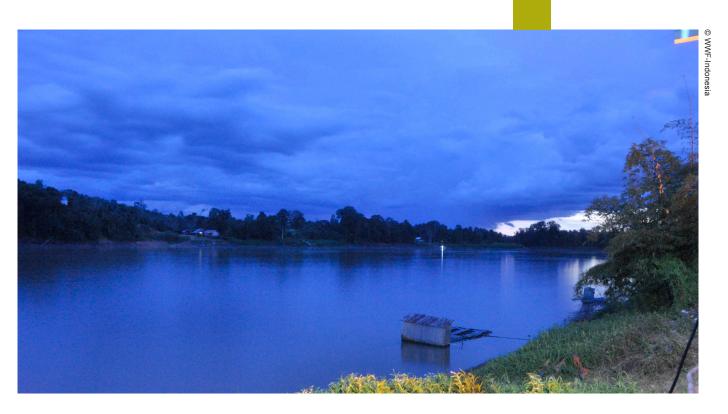
From the institutional side, there are a few gapoktan or farmer groups association but its function is reduced to basic, no production and marketing of products. Village BUMDes or village owned company is being pioneered, maybe next year it will start to run, only in Marta Dana Village that has started running.

Adat institutions are located at hamlet and village level, its function in addition to taking care of cases also fostering the community. Each village has one adat board. Household issues are also included. Other than that cases of theft, pregnancy outside of wedlock, fights, and environmental problems are theatened by penalty. Usually in the form of fines. Adat law is still adhered by the people. They are also allowed to make additional policies (kesupan) in each village. There is inter-village cooperation to determine certain rules on crossvillage issues.



ITB Expert Team Dewi Sawitri and Delik Hudalah visited Arwana fish pond in Kecamatan Pengkadan.

SEMITAU



Views of the Kapuas River in the District of Semitau, Kapuas Hulu

From the physical side of the environment, Semitau Subdistrict has high natural resources potential to be developed as a commodity with economic value. For example, suitable soil conditions for developing oil palm, rubber, and cassava commodities In addition, this sub-district is also traversed by the Kapuas River and there are lakes that have high fish potential. At present they are used as a source of raw water by the local community. Nevertheless, there are indications of degradation of surface water quality in this subdistrict due to disposal of domestic waste and palm oil processing.

In terms of human resources, most of the residents work as oil palm laborers and shifting cultivators, especially in the western part of Semitau. In the eastern part of Semitau which is the urban center of this sub-district, people have a livelihood in the tertiary sector.

In general the condition of human resources in Semitau is still low. Even in the western part of this subdistrict which lies to the west side of the Kapuas River, the quality is lower due to limited access to education and health facilities.

This low level of local community education has its implications for the low value added that local communities gain and the inability of local communities to innovate in product processing and to conduct more effective and efficient agricultural practices.

Por example, the work as oil palm laborers, generate income that is only enough for daily needs and still short of providing other needs, such as school fees. Then in the practice of rubber farming and wet rice cultivision, people also do not have adequate capacity.

This is exacerbated by the lack of local empowerment efforts in this subdistrict. Another issue related to human resources is the existence of local cultures of shifting cultivation, so that the central government policy that prohibits shifting cultivation, is disturbing the community because they are not given alternative business solutions.

The economy in Semitau Subdistrict is dominated by plantation activities, especially oil palm plantations. The oil palm plantation is felt to have a shortterm benefit to the community in terms of employment. But it can not be used as the main economic support given the decline in employment as the age of oil palm trees increases.

In addition, development of indpendent oil palm estates developed by the community is also difficult because it requires large capital and difficult to find buyers. The development of other commodities, both in wet and dry areas, is actually potential in this subdistrict. However, It is still constrained by low marketing and farming ability of the community.

In terms of infrastructure, there is an imbalance in the distribution of infrastructure facilities in Semitau Sub-district. In the western part of Semitau, which is dominated by oil palm plantation, it has poor infrastructure, such as road network, electricity network, telecommunication, education and health.

The low infrastructure in this region has implications for the difficulty of economic development and the impact on the low quality of local human resources. While in the eastern region which is the urban district of Semitau it is relatively have better infrastructure.

Furthermore, in terms of financing, oil palm companies in the District of Semitau have provided assistance to the community. For example in the case of paddy field "printing" and the provision of clean water facilities.

The fact that provision of aid which is uneven across villages can be explained in reference to how persistent those villages in requesting for CSR funding from companies. Other development funds, such as village funds, have been used by communities to build lighting (electricity), but not yet enough to be used to build road infrastructure that connects internally and between villages.

Semitau Subdistrict has already installed an institution that is related to oil palm agriculture. But it has not played an optimal role to boost the local economy in the region. Similarly, non-palm agricultural institutions, also has not played an optimal role because it is still oriented to the fulfillment of personal needs.

With regard to the institutional role of BUMDes required in the management of village funds, one BUMDes has been organized in Padung Kumang. The BUMDes plays its role in savings and loans for local residents. While in other areas new BUMDes will be formed in the future.

The financial institutions which are influential in this sub-district are the Credit Union and Kalbar Bank, which play their role in providing business capital to local communities. Indigenous institutions themselves still play major role as mediators in various problems. In relation to the expansion of oil companies, the customary law protect people's right to know and approve or disapprove the presence of oil palm in their area.

SEBERUANG

One of the major problems faced by Seberuang Subistrict is human resources.

Education quality is low.

Most only graduate from Junior High School. Those with higher education and scholars are looking for work outside. Because the work in the village is very scarse.

Seberuang already have 1 Senior High School (SMA) but there is no Technical High School (SMK). Whereas the enthusiasm of society towards SMK is high. However, a phenomenon that emerged was the Farmer's son who did not want to be a farmer anymore. The reason is, parental income does not make a prosperous family. They are looking for another job. In this case, there is still a low view on farmers, low prestige. The perspective of Seberuang people still wanting to be civil servants.

In the agricultural sector, residents acknowledge the shortage of extension (PPL) agents. The extension program is short in personnel because of so many districts to be handled and the great distance that one extension worker



One of palm oil commodity in Seberuang Sub-district.

have to cover from one subdistrict to the other.

Twenty three years have past when *wereng* pest have not been contained, despites the environment has changed drastically. If we plant rice paddy, the pest will come. In the case of pest containment and agricultural management, citizens definitely need assistance. It is encouraging that the people of Seberuang still adhere to solid foundation of gotong royong or reciprocal help.. For example, when there are road construction, construction of residential homes, and preparing of fice farms.

There is also some adat land, but the area is not too large. The scale is small. Most of the land ownership is controlled by individual person. One family usually has land over two hectares. The program of creating rice paddy acreage already started running in Seberuang, but stopped before finishing. The problem is that no adviser was appointed to appointed to help the farmers to complete mthe job.

Another problem in Seberuang is oil palm. management decision suggesting that applicants who applied for jobs other than casual laborers must own college certificate or diploma. There is a kind of rule that was originally made like pampering the home owner. But over time there are special conditions. There seems to be a scenario built to shift the local people so that workforce from Java can enter. Ithe worker who was a foreman before, now become a coolie.

Related to institutional issues, the access road built by Sinarmas has reached the public fence. There is a plasma problem also with a pattern of 8: 2 where the community could have two hectares at the beginning of the socialization of 2008. But it turns out now the results are much deeper in the shadow of society. The company breaks the promise.

Every company that enters, will issue a certificate. The certificate is then mortgaged to the bank.

Currently the community can not sell the palm. But the company's permit issued by the government. Ideally the government should facilitate a favorable agreement for the community. But community leaders have accepted, yes the community is powerless too. For self-help cultivation, it is actually more profitable. But resident are still lacking in skills, markets, and capital.

Seberuang subdistrict also notes the existence of timber companies that operate its border. Its name is PT BDK. The company's concession is quite extensive up to Silat Hulu Subdistrict. Only, they cut wood diameter above 60 centimeters. The residents admit they do not want to exploit the forest, except for limited personal needs such as building a house.

If there is an agreement between the company and the government related to reforestation or rejuvenation and others, the community do not know and do not get involved. Certainly, the policy has environmental impacts on clean water. They have applied for help to the government several time but to date have not been responded. Rubber farmers think they are abandoned by the government. When counseling is given it is not suitable for their condition. The village was given hand tractor, but soon after the hand over the equipment deteriorated and turne into unuseful junk.

A strong institution in the community is the CU. In every village there is one. There is a branch office. It provides capital assistance. The interest is two percent and decreasing every month. CU is better than the middleman. Another institution in Seberuang is a palm cooperative.

The average village fund is above Rp700 million and plus ADD fund from the central government it can reach a total of around Rp 1 billion. The fund is usually used for community empowerment, development of facilities and infrastructure, PAUD needs, health, and others.



The oldest means of worship in Sejiram Village Seberuang Sub-district.

EMPANANG

Basic infrastructure is still a scourge for residents for Empanang Subdistrict. The issue of clean water and electrical energy dominates the discussion in the physical and environmental sectors. The locals are lacking in clean water and electricity. If there is electricity, they use solar power with a house quota of 5 watts.



Condition of oil palm plantation road in Empanang District, Kapuas Hulu.

One of the triggers of the water crisis is the location of a palm factory close to the river. They dump their waste into the river. This happened in Keling Panggau Village. Despites of that people use the river for drinking and bathing. During the rainy season, factory waste will run to the river. Once the river water becomes cloudy. Never drink, take a bath is impossible. That is because the plant is placed at the upstram of the river. Many fish also died.

Around the factory are found many flies and cockroaches. The smell is less pleasant and reaches the homes of local residents. The community are confused to find where to to file their complain. Initially, the company's management assured residents that the waste will be accommodated in the pond around

the palm. However, just in a few months the waste ponds are full and flow into the river. Another effort that residents have done to get clean water is by making drilled wells. It's just the the water is not worth for consumption. Although the depth of the wells have reached almost 30 meters. The water color is yellow and turbid. People say that down there they find coal.

Finally, the residents can only collect rain water. Before there was palm, it was already accustomed to collect rain water. But now more and more are collecting rain water. Before the oil palms came, people took river water and did not not hesitate to drink it. This case has not been resolved by the oil palm company. It promised to provide training and attention to the community, but it was a

lie. Let alone providing solution to the problem of pollution, even giving small donation is difficult. For example when people ask for donation to commemorate August 17, the Proclamation Day of the country.

When the oil palm was about to open the plantation, the company promised to provide clean water, electricity, and home for the community. But until now there has been no proof. Once there was a commotion, we closed the land and the road. The companies must be protested by the community first before they oblige. The community cannot condem the oil palm completely, because they create jobs for the community. The land used for plasma is still a community land. Only the core gardens are placed in the hand of the company.

Ordinary floods come four times a year. But briefly. When the night rains, the next day flood comes. Maybe because there is nothing else that can absorb rain water. While forest and land fires usually occur during the dry season. Agriculture is also under attack of a lot of pests and grasshoppers. Wild boar is gone.

The people of Empanang live from traditional farming and small scale plantation or garden. The commodities grown in gardens are dominated by rubber and pepper. There is also cassava which is usually planted on the sidelines of rice field. Farm yields are not sold. Just for personal needs. Similarly with vegetables, the majority are grown for their own consumption. Although, there is now the initiative among the residents to sell the vegetables they grow to the palm oil employees.

In terms of employment, women usually seek additional sources of income by weaving after working in the oil palm. The price of woven products depend on type of product. Usually they are sold to Malaysia through collector merchants. Another thing that people develop is chicken raising. The obstacles are diseases. No one has given counseling how to raise chicken properly. So, breeding is only the will of the personal resident. Even if the chickens are sold it is because other people are looking for the product.

There is a stark difference between oil palm plantation that belong to the company and plasma plantation. The company garden is



CPO transport fleet in Kecamatan Empanang.

lush, while the plasma plantation is dry. Plasma plantations are located far away in infertile soil. Anyway if along the road there is a palm plantation, it's a nucleus plantation that belong to the company.

Similarly, the money coming from the sale of plasma oil palm fruit, every monthis is cut by the company to pay for the debt for fertilizer, etc. The residents feel cheated this way. At the time of socialization management of company called the two hectares of plasma land was cleanly owned by the residents. It is apparent now the price of the product is cut more thaen once..

The residents were promised clean water by the company, but the pipes were built only. It was not maintained. Even the container has been leaking many times. Hence the residents staged a demo. Women also took part in the demo. The community demanded the company to honor its promise.

The health facilities should be adequate, equipped with an ambulance. Actually the oil palm plantations have ambulances, but sometimes they cannot be used by the residents. Only when the company's employee recognize the sick person the ambulance is allowed to be used. If you are not recognized by anybody in the company usually you are not allowed to use company facilities.

The residents acknowledge as if Empanang Subdistrict has not been independent yet. No clean water, broken road, broken bridge. The trigger is oil palm too. The strength of existing roads is only able to withstand a load of six to seven tons. It's just that the vehicles passing through this road can reach a dozen tons. The wooden bridge had broken in many places. When it's broken, the palm oil truck is simply looking other other way. In fact, there are two palm oil processing factories that operate around Empanang. One factory

is in Badau, and the other is in Sejiram.

The condition of damaged roads becomes a serious problem for the people. If they want to shop for their basic needs in their own country is difficult. It is easier to do shopping in the neighboring country. But the Custom Office does not allow people to go shopping in Malaysia. It is said we have to shop in our own country.

Whereas the residents feel easier to shop in Lubok Antu rather than in Semitau. The distance to Malaysia only two hours drive. The shops there are complete, cheap, and easy. Incoming residents do not need to use passport. Enough with red letters specifically issued for shopping.

However, the residents' houses in Empanang are relatively better. The majority of houses already have bathing, washing and toilet facilities. Similarly, with raising

of pigs. It is used to be released to roam freely, but now are contained in cages or fences.

Other facilities already available in the region are telephone, internet, and station for buses connecting Puring Kencana-Putussibau. But there are also private buses connecting Badau-Pontianak.

The majority of residents in Empanang want their children to be educated. Therefore, the incidence of children working in oil palm plantations is low. Average yang people want to have high eduction. The trigger factor for school drop out is living and eductional cost. Besides, going to school is also far away to Semitau with a fairly difficult road access. They have the principle of not getting their children out of school. Not to live without school like their parents. While the residents who continue their education up to college are quite plenty. They attend lectures in Pontianak and Sintang.

If the child graduated from college or university, they are allowed to work in the oil palm plantations. The company also recommends that their children attend school. Later they will be facilitated to enter and work in oil company. There is a scholarship with a clear working contract.

The tradition of *gotong royong* is still holding and well maintained in Empanang until now. They volunteered shoulder to shoulder if there are people who are struck by disaster, build a house, or repair the road.

About institutions and financing, the residents still rely on the presence of the Credit Union (CU). They can borrow money with various collateral such as land certificates, car or motorcycle documents (BPKB). Working in oil palm is also relatively easy to get loans with an easy repayment system.



Children from Nanga Kantuk Village using oil palm truck to get home.

PARSING CHUNK OF ISSUE

The process of extracting data and information in seven sub-districts within KSK Agropolitan DSA in Kapuas Hulu runs as planned. The results of the visit left a stack of homework for the entire team. They find a number of shortcomings that must be addressed before reaching a big goal called green agropolitan.

Some of the growing issues at the site level are low levels of education, polluted river water, garbage, damaged road infrastructure, electrical energy crisis, and lack of microfinance institutions that can support small business funding in the community funding. Nevertheless, there is still a gap that can be used as a trigger in fixing a number of problems that occur in the midst of community. For example, information disclosure and support from stakeholders.

An ITB Expert Team member Tubagus Furqon Sofhani acknowledged that the school facilities were not sufficient for the people. Education had not been able to influence the quality of the community. "So the problem iss the quality of community resources. We hope that education can change people's mindset in a better direction. Another positive thing is, there is still a good spirit of gotong royong" he said.

In relation to oil palm, said Furqon, the horizontal conflict is still a big homework for all parties. For example, if there is oil palm coming into a region there should be accompanied by a government representative equipped with a clear scheme so not to harm the community.

Today a question is still entrenched in Dewi Sawitri's mind, another team of experts from ITB. According to Dewi, until now she has not found a definitive answer why the community so strongly reject the palm. "Is it related to access that is political or there is friction with the values in the local socioculture life of the people," she said while having breakfast in Putussibau. According to Dewi, this needs to be examined comprehensively so that the approach process can be done properly. That is, the facts in the field that is accompanied by input from relevant stakeholders is very useful to get a good solution.

While Hastu Prabatmodjo rated Agropolitan DSA as an aspiration that still requires encouragement and certain requirements. "If from the environmental side there are complaints about clean water because the river is contaminated. Then there are alternative commodities such as rubber that still require management skills more appropriate to market demand, "he said. According to Hastu, this becomes one of the challenges of Agropolitan DSA in the future. Governance of sustainable oil palm plantations is a necessity. While the majority of residents who live as dry land farmers and rubber tyappers, certainly need adequate assistance.

A number of issues also become important note for Delik Hudalah. According to him, the constraints facing the journey of this Agropolitan DSA is the clean water crisis due to management of natural resources that is not environmentally friendly. "For example, mining activities that have contaminated river water," he explained.

According to Delik, in general water is sufficient for everyday's needs but not yet able to support agricultural activities. In addition, no irrigation may be an obstacle. Including knowledge and lack of access, the supporting facilities for agricultural development are still not adequate. "Luckily, the community still capable of maintaining the culture of gotong royong or reciprocal help which I think will become a very high valued social capital that needs to be strengthened, that is the key." Said Delik.

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TRACING FIVE STRATEGIC ISSUES

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Why we are her e

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature

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