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USAID LESTARI: STORY FROM THE FIELD

PRODUCING AGARWOOD IN BOVEN DIGUL

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“The forest certainly is a source for the welfare of the people however, the forest must be well managed. But my people don’t know how to utilize the forest wisely because there is no alternative source of living other than gathering from the forest,” said Fayahok.

Agar wood is known as a forest commodity that is highly valued for its fragrance. Since its price can reach hundreds of thousands to millions of rupiah per kilogram many people are cultivating this type of Aquilaria plant. However, the unsustainable cultivation of the agarwood is not only threatening the agarwood itself but also its habitat, the forest. Nevertheless, the people of Kampung Mondobo, Boven Digoel, have proven that agarwood cultivation can provide a long term solution for the conservation of the forest and at the same time enhance the livelihood of the people.

Fayahok Wanimba, the Chief of the Kampung Mandobo, in Kouh Sub-District, Boven Digoel District, Papua Province, is a pioneer in cultivating agarwood in his village. In his garden at home has been transformed into an agarwood plot. Fayahok has started cultivating agarwood in significant quantities and has introduced it to the people in his village. There are four types of agarwood planted by Fayahok namely *Aquilaria malakensis*, *Aquilaria microcarfa*, *Aquilaria filaria* and *Aquilaria girinops*. The two last ones (*Aquilaria filaria* dan *Aquilaria girinops*) are indigenous of Boven Digoel District.

Most of the people of Kampung Mandobo depend their livelihood on the forest or on fish for food in the Digoel River. The people rely on the forest and

the river as their main source for living. However, due to their limited knowledge and since there is no alternative source for living, the people continue to practice an unsustainable livelihood of utilizing the forest.

The story began in 2010. As chief of the kampong, Fayahok was concerned about the way people harvest agarwood in an unsustainable manner. If nothing is done about this, Fayahok predicts that the agarwood would soon be gone and the future of the forest would also be endangered. Being aware of this threat, Fayahok started to seek information and discussed this issue with various resourceful people to find the right solution to address this issue of forest conservation and to secure the people's livelihood in his village.

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The Potential Papuan Agarwood

The Papuan agarwood particularly from Bouven Digoel had enjoyed a booming era in the early years of 2000s as the price at that time was very high. As a result, many people began to gather agarwood, but since the way they **"harvested"** the agarwood was unsustainable, the forest vegetation was endangered. When the price of agarwood started to decline, there was not much left of the woods except for an almost bare forest. Then the people had to return to scouring the forest for a living or went back to fishing in the river.

The agarwood is an aromatic substance that is found between the cells of the wood of a tree in various shapes and particular colors and contains aromatic dammar gum. The fragrance is derived from a tree or part of a tree that naturally produces agarwood but the tree dies because of the infection, either natural or induced infection.

There is a misperception among the people that think agarwood is a type of tree. Actually agarwood is a resin from the wood of the Aquilaria tree that naturally produces the resin due to bacterial infection on the trunk of the Aquilaria causing the tree to wither because of the infection. The infected tree produces the agarwood resin on its trunk.

However, not all Aquilaria trees can produce agarwood resin, only about 10 percent of the total population of the Aquilaria trees produce the resin naturally and therefore it cannot be produced massively. The rush for agarwood in Papua became more intense as the supply of agarwood from other regions

in Indonesia such as Kalimantan and eastern Indonesia became scarce. Gathering agarwood is usually done in groups. Fayahok knows that this would be a threat to the rich biodiverse forest of Papua.

As the Chief of the Kampong, Fayahok believes that if the people have a role model to look up to as an example this would be the best solution rather than only prohibiting the people. Driving a change in the Kampong without an example would only be futile. Especially having such a challenging geographical condition, it would be difficult to communicate with his people. Nevertheless, despite these constraints, Fayahok never gave up. With the knowledge from the short term training in Mataram that he participated, Fayahok could see the big potential of cultivating agarwood as a source of livelihood and that it could become a solution to prevent people from damaging the forest.

Ever since cultivating the agarwood in 2010, Fayahok has planted the *Aquilaria filaria* dan *Aquilaria girinops* in his own yard and has inoculated the trees with the liquid inoculant he brought from the training in Mataram. Three years after the inoculation, the results are visible with the trees producing agarwood.

The plot of land around his house was quite big enough, which inspired him to start expanding agarwood production independently. Slowly but surely, the results began to show. People also began to gain interest in cultivating agarwood, and eventually an association of agarwood farmers was established in Kampong Mandobo with the name KUB **"Finafenandi"**.

Ever since then, there is almost 30 hectares of land that are planted with trees to produce agarwood. Fayahok believes that the future economy of Kampong Mandobo will be from agarwood that is cultivated in their own back yard instead of gathering it from the forest.

"We no longer gather agarwood from nature. The experience in cultivating agarwood in our own backyard has raised hopes for a better livelihood without necessarily damaging the forest," said Fayahok optimistically.

Fayahok hopes that there would be some mentoring to further expand what he has done. The assistance that he hopes for is more inoculant mixture to inoculate the planted trees. Currently the Finafenandi farmers' association has one distillation equipment provided by the government of Boven Digoel to distill etheric oil. However, the people don't know how to use it. Besides that, other supporting equipment are lacking such as water pump, a profile tank, a hose to deliver cold water as a coolant, therefore this equipment is idle and only serves as a decorative ornament in Fayahok's terrace.

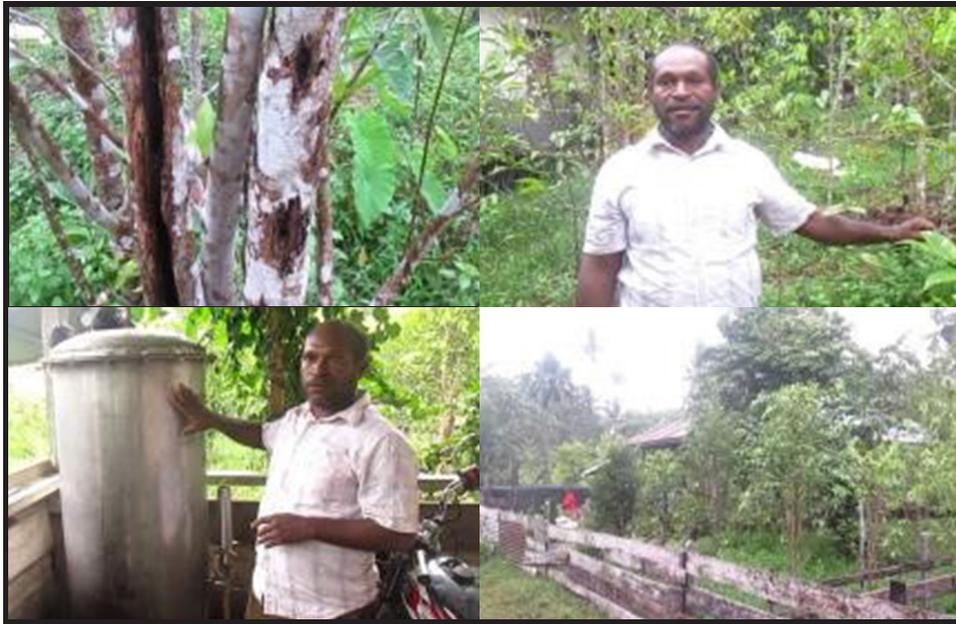


Photo: (from top left to right)
1. Agarwood Tree
2. Fayahok Wanimba
4. Mandobo Village
3. Fayahok explaining the Agarwood distilling process

Fayahok says that the people are very enthusiastic to develop the agarwood as a source of sustainable livelihood but the people need mentoring.

“In the past, the agarwood cultivation that we are doing now is only based on our knowledge and local wisdom. Actually if we were to gain maximum results, we would need to have at least 3 years of mentoring and access to the market. So it is not a priority to give us any equipment at this point”.

The government assistance in the form of seedlings, equipment and one time training is not enough. The people of Kampung Mandobo hope that the government could collaborate with other stakeholders to facilitate routine mentoring and advocacy. The government of Bouven Digoel is aware of the importance of developing the people’s economy particularly in developing the agarwood products as potential commodity to increase the people’s income and local government.

The government of Bouven Digoel in cooperation with the USAID-LESTARI project has initiated studies to identify the value of the investment stock and the important local commodities to empower the farmers.

The results from the USAID-LESTARI study show that the agarwood in Bouven Digoel has potentially high value for export. The recommendation from the study indicated that there is a necessity to empower the farmers and increase their capacity in developing their farms and provide policies that support their growth through partnership with the private sector. From the study results, it shows that the agarwood is valued at a high price of 100 thousand to 300 thousand per kilogram.

Fayahok believes that the forest shall remain conserved if all the stakeholders work together to ensure intensive mentoring and advocacy and market access for the agarwood produced by the Kampong

Mandobo people. He is certain that the people can prosper without necessarily damaging the forest. For Fayahok, agarwood cultivation is the hope for the future of the heavenly land of Kampong Mandobo.