

Lessons From Internal Control System Development in the Sentarum Lake Region- Indonesia

Internal Control System Must Be Based Upon Common Accord

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Author's Background

Thomas first got experience in farmers organizing in 1994. He participated Internal Control System implementation in the Sentarum Lake National Park In 2006 together with Indonesian Organic Alliance.

Summary

The Internal Control System implementation took place in Sentarum Lake National Park where biodiversity is high and the lake and its swamp forest plays important role in protecting the down stream area from flood in the rainy season and from drought in dry season.

The National Park is threatened by people from outside and inside the lake. But some people in the lake who have local wisdom practice sustainable forest honey harvesting technique. Through this people, Indonesian Organic Alliance (AOI) tried to facilitate them to develop organic forest honey products and raise their awareness of keeping the conservation area.

They use Internal Control System to organize themselves, and to achieve their objectives. Internal conflict among them and changing from verbal to written habit are some of the challenges they have to face. However Internal Control System can contribute consistency, clarity, and accountability.

Background

The Place

The Internal Control System implementation took place in Sentarum Lake National Park (TNDS), District of Kapuas Hulu, West Kalimantan Province, Indonesia. The Lake is unique and rare, quite different from a "conventional" lake. It is actually a floodplain, a watershed area surrounded by several mountain ranges and are located in the Kapuas River Basin. Beneath the lake lies thousands years peat with depth ranging from 0.5 m to more than 4 m.

In the rainy season, the lake complex will be flooded by water streams from the surrounding ranges and Kapuas River, the longest river in Indonesia. During 9-10 months a year, Sentarum Lake Region will be flooded to the water depth of 6-14 meters, and calculated to store 16 trillion cubic meter of fresh water. The water surface will climb up, due to increased intake from Kapuas River, and form a large lake.

In dry season, the water surface will drop as water flows out to Kapuas River and the large lake dries out into small lakes and dry patches of land. The majority of land would dry off. The fluctuation of water surface is important for the Kapuas River, preventing flood in the rainy season and draught in the dry season. This hydrological function helps regulate the water cycle of Kapuas River Basin area, storing and supplying water to downstream region, and distinguishes Sentarum Lake Region as a rare floodplain ecosystem, one of the largest and best preserved of its kind in Indonesia and Southeast Asia.

The cycle is important for the ecosystems of Kapuas River and Sentarum Lake. The disturbance of the cycle would harm the creatures inhabiting the region. The local people understand the importance of the natural cycle. If the water surface follows the usual pattern year by year, it means the nature follows its normal course, and the communities will enjoy the benefits.

The area contains various ecosystems, i.e. lacustrine wetland, freshwater swamps, and tropical rainforests. According to the data from TNDS, Wetland International (WI) and World Wide Fund (WWF) of West Kalimantan, TNDS is home to hundreds of flora and animal species, including 794 species of flora, 147 species of mammals (or 64% of mammalian species in Kalimantan), 31 species of reptiles (including buaya katak, *Crocodylus raninus*, that was thought to have been extinct in Asia for around 500 years), 310 species of birds, and 265 species of fish (more than the number of freshwater species throughout Europe).

The Problems

This important conservation area is now still being threatened by at least six issues:

- Forest fire
- Illegal logging
- Over fishing
- Deagradation of water quality
- Lake and river sedimentation.

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- Expansion of palm oil plantation around TNDS.

Among them, two problems, the first and the sixth are the most concerned: the forest fire in the dry season that could destroy all the peat and the whole ecosystem, and the rapid expansion of large-scale development of oil palm plantations around the National Park that could destroy the local economic, ecological, and socio-cultural systems.

The problem is that the issues have to be overcome by the local people of TNDS and cannot be solely solved by government or other parties from outside TNDS. The local people have to be part of the solutions not part of the problems.

The People

Most of the people who live in TNDS get their livelihood either from fishing in the dry season or from harvesting forest honey in the rainy season. Their previous practices degrade fish and forest honey bee population. But some of them who have local wisdom practice sustainable forest honey harvesting technique. Their traditional organization is called Periau. Through periau Indonesian Organic Alliance (AOI) tried to develop organic forest honey products and raise their awareness of sustainable forest management and of keeping the conservation area.

The Periau, in particular the villages of Leboyan, Semangit and Semalah, has long used rafter as artificial branch (called tikung) as a honey farming tool. The rafters are made of dead Tembesu trees. The tree trunk is cut into pieces 1.5 meter long, 25 cm wide, and 4.5 cm thick. The rafters look a bit like a kite, wide in front and narrow in the back, imitating a natural branch suitable for honeycomb. The rafters are then placed in trees to be the home of the forest honey bees. When the trees bloom, honey bees would come to feed on the nectar and nestle in the provided branches.

In 1996 the Periau started practising sustainable forest honey harvesting technique. Three natives of Sentarum Lake Region, facilitated by the Wetland International, learned The Sustainable Harvesting Technique from Vietnam people that use the same methods of using rafter as artificial branch. They are Pak Thamrin from Tekenang, Pak Harianto from Nanga Leboyan, and Pak Ade Juhur from Semalah. Since then the technique has spread around periau in Sentarum Lake.

In previous technique, harvest was performed during the night, when lots of honey bees would die, while escaping bees could not return to the nest because they need light to orient themselves. Now in new technique, harvest is performed during the day. After flying away avoiding the smoke, the honey bees could return to their nest.

Previously, the whole honeycomb was harvested. Currently the harvest only includes the 'head' part of the nest which contains honey. The part containing larvae, also a part of the head, are left in the nest so the larvae could still be fed the remaining honey and grow up. Within three weeks the bees have rebuilt the head part and it is ready for another harvest. In one season a honeycomb could be harvested three times, as long as there are still blossoming trees in the surrounding place to provide nectar to the bees.

Previously the honeycomb was pressed to obtain the honey. Nowadays the honeycomb is sliced off and the honey is allowed to drip. During pressing, some larvae inside the comb are also pressed and died. With the current technique, the extracted honey is clean and clear. Pemuar (honey farmers) have also been encouraged to use rubber gloves and fine screen. The sustainable harvesting technique produces forest honey of higher quality while reducing bee mortality, thus preserving the bee population.

Later this technique was adopted as harvesting standard by Asosiasi Periau Danau Sentarum (APDS), an Association of Periau in Sentarum Lake founded in 2006. APDS further complemented the technique with a set of rules and procedures, including the obligation to watch and protect the periau area from logging, forest fire and using poison for fishing, and obligation to use of rubber gloves, closed containers, fine and clean screen filters, clean and sharp knives, etc., to guarantee that the forest environment and the honey is clean and free from contaminants, and can be claimed as organic forest honey.

This technique and internal standard plays an important role in developing organic honey production, while contributing to the livelihood of pemuar in the conservation area and conserve the area. The tool used is internal control system.

Main Chapter

Internal Control System Must Be Based Upon Common Accord

The development of internal control system (ICS) in the Sentarum Lake Region was started on 13 December 2005. At the time, an assessment on the implementation of ICS at periau in Sentarum Lake Region was conducted by Indonesia Organic Alliance (AOI) and the members of AOI Kalbar, i.e. Riak Bumi Foundation, Dian Tama Foundation, and People Resources Communities Fund Indonesia (PRCFI). The assessment was followed by the first training on ICS in Nanga Leboyan on 13 February 2006. This event was also supported by the World Forest Fund for Nature (WWF) West Kalimantan, Tesso Nilo, and Kayan Mentarang. In this process, the periau members put the foundation to formulate their internal standard of territorial management, harvest, post-harvest, transport, and storage, based on local wisdom and continuously improved knowledge.

After formulating internal Standard, the periau decided to found a common organization called Asosiasi Periau Danau Sentarum (APDS) on 21 July 2006, to represent the periau in dealing with buyers. Pak UG, who served as the head of Periau Semangit, was one declarers of APDS, along with Pak M. Sahadi (head of Periau Danau Luar), Pak Baharrudin (head of Periau Suda), Pak M. Suryani (head of Periau Mersak), and Pak Abdul Hamid (head of Periau Semalah). Of the five people, currently only Pak UG remains active within APDS as an internal inspector and harvesting technique instructor.

On March 2007, APDS succeeded to apply ICS and can assure 4.3-ton honey of good quality. Board of Indonesian Organic Certification (BIOCert), confirmed this after they carried out external inspection on APDS. The honey 4.3 ton were sold to Dian Niaga and Riak Bumi through cooperation of Forest Honey National Networking at Rp 28.000/kg price at local site. BIOCert in Mei 2007 also recognizes the product as organic.

The APDS gets this achievement through a series of hard work activities. The most difficult part is when The APDS applied the first internal control inspection in harvesting season of February – March 2007. They faced a lot of tensions and internal conflicts among themselves.

There are cultural differences brought by ICS and they found changes from emotional relationship to functional relationship among them. Culture brought by ICS is a culture of management control and personal responsibility. They must document all transactions and control events in written report. They need openness, more discipline and firm sanction. Therefore, there are conflicts between verbal and written cultures; between family fashioned and management control; between speaking in the back, reluctant, ashamed expression and speaking openly in organization forum; between permissive, tolerant attitude and more discipline, firm sanction.

It was interesting to see that leadership of the APDS is critical in overcoming the differences and tensions. The differences are accepted and adapted in harmony to keep social solidarity. Control is carried out firmly but still keep harmonious relationship, openness is not to humiliate individuals and sanctions are not intended to punish but to remind and to improve broken social relationships.

With ICS, APDS has succeeded in promoting many improvements in quality standard, quality assurance, organic certification, and common marketing deals. The organization has also applied dehydrating and better packaging techniques. This improvement was supported by Ashoka Indonesia, WWF of West Kalimantan, and Perkumpulan Kaban. The forest honey, which originally has 25-27% water content, is dehydrated with dehumidifier to contain less than 21% water. The dehydration facilitates honey packaging and transporting, resulting in certified organic and assured product. The Indonesian Ulama Council (Majelis Ulama Indonesia, MUI) has also declared APDS honey as halal. Pak UG is one of the halal inspectors trained by MUI. This adds value to the forest honey and opens the opportunity of exporting the product to Sarawak and Brunei.

The sustainable harvesting technique, ICS, and dehydrating technique are the three innovations promoted by APDS among the member periau. Pak UG holds an important role since the foundation of APDS till now. He himself has learned a lot from the experience, including in the forest honey management, participating in and contributing to training sessions, public speaking on organization for a, preparing for APDS documentation, and communicating with various parties.

Up to 2009, APDS was growing well. Production grew to 16.2 tons of honey. Honey farmers were enthusiastic to improve the cultivation of forest honey and preserving the forest. The growth process was dynamic, healthy, and inspiring. However, since 2009 the situation started to change. Honey production decreased due to forest fires from outside periau area on August 2009 that destroyed 230 hectares of periau's territory and around 1760 rafters.

The situation did not improve in 2010 and subsequent years, because of the remaining smoke and other natural disasters that followed afterwards. In October 2010 there was a big flood in the upstream region of Kapuas, which inundated houses in Putussibau up to two meters high and soaked almost all APDS' rafters in Sentarum Lake. In August 2011, there were more fires in various sites in Sentarum Lake outside periau area, such as Danau Luar (Leboyan), Pintas Taman (Leboyan), Tanjung Kelansau (Lanjak), Empiru (Semangit), and Tanjung Bunuh (Semalah). The climaxing problem was the anomaly of the blooming season of samak and masung trees in the end of 2011. The trees did not blossom to the end of the blooming season, while putat trees had blossomed. Normally samak trees would blossom in the start of the season, followed by masung trees in the middle, and putat trees in the end of the season. The harvest failures in three consecutive years almost broke the spirit of APDS and its members, even while they had planned to cover their certification cost.

Aside of the external factors, there are also internal factors that stunted the growth of APDS. Two times the periau from Nanga Leboyan, i.e. periau Danau Luar, Suda, and Meresak drew their membership from APDS, in August 2008 and January 2011. The three periau were among the founders of APDS. After the first withdrawal in 2008, the three periau have rejoined APDS, but only for two months. After the second resignation in 2011, the three periau have decided not to rejoin APDS.

The problems faced by APDS since its foundation and throughout its development need to be evaluated in a comprehensive manner. In general there are two factors that influence the organization of APDS internally, as follows:

- The traditional rivalry among hamlets and village leaders around the base of APDS, i.e. the village of Nanga Leboyan. The village was founded only a few years before APDS, and consisted of four hamlets: Nanga Leboyan, Semangit, Semalah, and Tempurau. In July 2007, the village of Nanga Leboyan was split into the villages of Nanga Leboyan (consisting of the hamlets of Nanga Leboyan and Semangit) and Semalah (consisting of Semalah and Tempurau). In 2010, the village of Semalah was split into the villages of Semalah and Tempurau, while the proposition of splitting Nanga Leboyan and Semangit was rejected. Within the last ten years, hamlets have been trying to separate themselves from the other hamlets and becoming an independent village. APDS was started in the situation, and while it grows the rivalry is getting stronger.
- APDS did not set up separate units to manage members and its business. Business management is rather straightforward and the problems are relatively easy to solve. On the other hand, members' voice and interests to control APDS business are more difficult to accommodate. Members must be managed and accommodated to

ensure the smooth operation of APDS business. In practice, the APDS staff would prioritize business more than members' interests.

There are many lessons that could be learned from the development of ICS in the Sentarum Lake Region. Start with ICS itself. At first, ICS is a documented quality assurance system that allows a certification body to delegate the annual inspection of individual members to the internal unit of the organization applying for certification. In particular, what the internal unit take care of is the quality assurance regarding processes and products to ensure conformance to the agreed standards. But, ICS is also a tool for organizing. Later on the internal unit merged into the organization board and It must solve various factors other than product quality assurance such as such as organizing and leadership factors that affect members' ability to conform to the standards and the organization's rules. It happened that when the organizational problems cannot be accommodated, members would choose not to conform to Internal Standard and quit the organization. Therefore, in the future, organizing and leadership elements of APDS should be solved separately from quality assurance. The internal unit that deals with product quality assurance should be independent unit.

However, the conflict inside APDS organization can be perceived as a positive sign, because one characteristic of a vigorous people organization is divergence. In the middle of internal conflict, APDS leaders still hold on periau agreement and their internal standard, because they were elected democratically, and the agreement and the internal standard was formulated together. In that situation ICS contribute a sense of consistency, clarity, and accountability.

In 2013, APDS has the chance to improve its situation. At the season, APDS reached its peak production of 18.3 tons, of which 13 tons have been sold with the total value of more than 1.17 billion rupiahs.

The implementation of ICS is just one of many efforts to forest honey development since 1996, involving numerous parties. The unique result of the process is the foundation of a people organization, APDS, together with the agreement and the internal standard, that was based on their common accord.

Table 1: APDS Progress 2006 - 2013

	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
Total of Periau	5	8	8	9	6	7	7
Total of Members	89	158	175	217	171	180	186
Production, Kg	4.329	163	16.214	4,219	229	0	18,392
Price, Rp/Kg	28,000	28,000	45,000	45,000	60,000	60,000	90,000
Sales, Rp 000	120,960	3,008	714,001	227,131	13,740	0	> 1.170,000

Core messages and conclusions

Implementing ICS for people organization or smallholders enterprise as part of certification process cannot be separated from people organizing process. But organizing and leadership element of a people organization should be solved separately from product quality assurance. And all must be based on common accord of the people.

References

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