



Japan International Cooperation Agency (JICA)  
Sustainable Natural Resources Management Project (SNRM)

# **EVALUATION ON IMPLEMENTATION OF COLLABORATIVE MANAGEMENT PLATFORM IN LANGBIANG WORLD BIOSPHERE RESERVE**

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## **ABBREVIATION**

BR	Biosphere Reserve
CMP	Collaborative Management Platform
CPC	Commune People's Committee
DARD	Department of Agriculture and Rural Development
DoNRE	Department of Natural Resources and Environment
DPC	District People's Committee
HHs	Households
JICA	Japan International Cooperation Agency
LB-BR	LangBiang World Biosphere Reserve
MB	Management Board
NP	National Park
SNRM	Sustainable Natural Resources Management
WG	Working Group
WPF	Watershed Protection Forest

## **1. Collaborative Management Platform (CMP) in Lang Biang World Biosphere Reserve**

Lang Biang World Biosphere Reserve (hereinafter referred to as “LB-BR”), with the area of 275,439 ha, is located in administration lands of 6 districts of Lam Dong province, namely; Lac Duong, Lam Ha, Dam Rong, Don Duong, Duc Trong and Da Lat city, possesses core value acknowledged by the international community, as follows: (i) A mosaic of ecological systems representative of major biogeographic regions; (ii) The area of significance for biodiversity and culture conservation; and (iii) Providing an opportunity to explore and demonstrate approaches to sustainable development on a regional scale. These values of the LB-BR help it to meet three fundamental functions of the BR, that is; conservation, supporting and development.

Being a newly-established biosphere reserve (hereinafter referred to as “BR”), the LB-BR has faced with such difficulties as an effective management mechanism of LB-BR is not developed yet as well as a national guideline on management of the BR system has not been issued. Under the situation the LB-BR management board (hereinafter referred to as “MB”) made efforts to develop a new management way which is align with general principles of the BR management as well as specific characteristics of the socio-economic conditions of the country and Lam Dong province.

LB-BR, like other BRs in Vietnam and the world, has a complicated structure in its inside with different social classes where their concerns and benefits differ. In addition, the legal status of the most of other BRs including the LB-BR in the national management system is another issue required to be considered for suitable management measures. In Vietnam, the MB of a BR does not own lands but other organizations such as forest owners do. And the MB of a BR is also not given a legal position to issue administrative documents to take actions against issues taking place inside the BR but local governments and many other authorities are. Furthermore, LB-BR has its specific characteristics that it has different ethnic groups with uneven education and intellectual levels and that social economy is under development with complicated land-use situations. As a result the generation of problems is taking place which could make negative impacts on the sustainable development of the LB-BR in the future.

With general and specific characteristics as mentioned above, LB-BRMB, under the support from the project of Sustainable Natural Resources Management (hereinafter referred to as “SNRM”) – Component 3 funded by JICA, has been making trials on a newly developed tool of a collaborative management platform (hereinafter referred to as “CMP”) toward the sustainable management of the LB-BR. The CMP is a forum where discussions on local issues/ problems are made in open and equal manner among relevant stakeholders including local community

members, based on which agreement on handling the above issues/ problems is made among them toward the sustainable management of the LB-BR.

During the period of the project, there were four CMPs organized with different topics in the LB-BR. Through these CMPs, advantages, disadvantages, shortcomings of the CMP organization as well as lessons for successful implementation of the CMP in the LB-BR were learned. This helps the LB-BR MB implement the CMP in a sustainable manner after the project termination.

## **2. CMPs implemented in LBBR**

### **2.1. The first CMP**

- **Topic of the CMP:** The pollution of a reservoir providing domestic water to people in Da Nhim commune and the need of collaborative management from relevant stakeholders for pollution control;
- **Time:** November 24 2017
- **Venue:** Community house of Da Raho village, Da Nhim commune
- **Participants:**
  - Representatives of households using domestic water from Da Nhim reservoir;
  - Da Nhim commune authorities: People's commission, Fatherland, Women association, Farmer association, Youth union, Veteran association;
  - Representative of Department of Environment – Lam Dong DoNRE;
  - Members of LB-BR working group;
  - Representative of Lac Duong district Department of Natural Resources and Environment;
  - Representative of Lac Duong district Center for Management and Utilization of Public Works;
  - Project of SNMR – Component 3
  - LB-BR Secretariat.

#### **2.1.1. Rationale for the CMP organization**

Da Nhim, a commune of Lac Duong district, is located along the national road of 27C which connects Da Lat city, Lam Dong province to Nha Trang city, Khanh Hoa province. Being a commune in the buffer zone of Bidoup-Nuiba national park and inside the core zone of the LB-BR, its local people belonging mainly to indigenous K'Ho ethnic group, are still facing to difficulties; the livelihood of the

poor people among the community members depends heavily on forest resources. Therefore, three villages of the commune, namely Da Raho, Da Bla and Da Tro, was selected as the target villages of the project SNRM – Component 3 when the Project Design Matrix of the project had been developed.

With quite rapid urbanization and population growth accompanied with high birth rate among the ethnic minority community and immigration by the Kinh people in the commune, some public enterprises providing services for local people in Da Nhim commune could not meet some of basic needs of the community members, such as the service of clean water supply. The reservoir was constructed in a remote non-residential area to provide domestic water for only around 500 people. However, the population of the commune is, currently, around 1,000 people and agricultural cultivation area of the commune has been expanded to get near to the reservoir; this not only makes the water supply to local people insufficient, especially in dry season, but also seriously pollutes the water of the reservoir.

Information collection was made through visits to local households in use of polluted water from the reservoir as well as to Da Nhim commune government on stakeholders related to the reservoir management and on the need of local government in terms of holding a CMP to improve the quality of reservoir water, based on which, LB-BR secretariat with support of the project SNRM – Component 3 proposed to and get agreement from LB-BR MB to organize a CMP to coordinate relevant stakeholders for finding out solutions of this problem.

### **2.1.2. Organization and results of the CMP**

With the agreements from relevant stakeholders after separate consultation meetings, the LB-BR MB secretariat organized a CMP to discuss the issue among the stakeholders and propose measures/ solutions to improve the quality of domestic water for local people in Da Nhim commune. In the CMP, all relevant stakeholders participated in the platform had an open and responsible discussion on the issue and then proposed feasible activities corresponding to their functions, capacities. The opinions and commitments from participants are summarized as follows:

#### **Opinions from local people in Da Nhim commune**

- ✓ The reservoir has not provided enough domestic water for local people; Water supplied was polluted, turbid and muddy. Around the reservoir, there are two ravines so when raining, all dirty things run to the reservoir; there are many cows, buffalos grazing near to the reservoir, thus polluting water of the reservoir;
- ✓ Proposing some measures such as making a fence around the reservoir to prevent cows, buffalos from the reservoir; repairing and making a cover of

- water filtering tank; making a trench around the reservoir to stop cattle shit flowing to the reservoir when raining; dredging around and clean up trash in the reservoir while there are no long-term measures yet for providing clean water to local people;
- ✓ Some households living near the reservoir have baths and wash clothes in the reservoir. This makes the water of the reservoir polluted.

#### **Opinions from Da Nhim CPC officers**

- ✓ Due to fast population growth, currently, the reservoir provides only 60% of domestic water demand for the people. Furthermore, water of the reservoir badly smells because of rotting logs, clothes washing in the reservoir and cattle grazing, farming near the reservoir;
- ✓ Da Nhim CPC had propaganda to local people on keeping the reservoir hygienic and using cloth, sand to filter water before utilization;
- ✓ Proposing Lac Duong district Center for Management and Utilization of Public Works to repair the reservoir, filter tank, to clean trash in and around the reservoir and to send staff to monitor regularly the reservoir because the local people pay the fee for the center to manage the water supplying works.

#### **Opinions from other departments, agencies**

- ✓ There was the circular regulating a security corridor for a reservoir providing domestic water; The Center for Management and Utilization of Public Works was proposed to take immediate measures to decrease pollution of the reservoir. In addition, the local people can use simple measures to reduce pollution such as using water filtering materials, opening the taps strongly to reduce iron amount in water.

#### **Opinions from Lac Duong Center for Management and Utilization of Public Works**

- ✓ The center took a sample of water for analysis based on 14 criteria of rural clean water. The results showed that the criterion of Ecoli to be 44 times higher than standard, the amount of Colifom many times higher, too;
- ✓ The center had the measures to be proposed to Lac Duong district government. However, because of the shortage of district budget, until now, there has not been capital for any activity. The fee collected from local beneficiaries only covers salaries to the operators of water providing system.

#### **Commitments by the stakeholders in CMP**



**(i) Commitments from the local people and the CPC**

- ✓ To mobilize the labors in the commune to clean the trash inside and around the reservoir and to rinse the water filtering tank;
- ✓ To educate local people not to bath, wash, litter and graze inside and around the reservoir.

**(ii) Commitments from Lac Duong district Center for Management and Utilization of Public Works**

- ✓ To repair and make a cover of water filtering tank, to regularly send a staff to the reservoir for checking and reminding local people to keep the reservoir and its surrounding area clean;
- ✓ To create a fence around the water filtering tank to prevent the contamination of the water tank by cows.

**(iii) Relevant departments, agencies participating the CMP**

- ✓ To advise relevant organizations to provide budget for upgrading the water providing system in Da Nhim commune.

**(iv) LBBR secretariat**

- ✓ To submit the minutes of the CMP to LB-BR MB as well as to present the results of the CMP in the next LB-BR MB meeting for the discussion on upgrading of the water providing system in Da Nhim commune which was committed by the relevant provincial departments and agencies;
- ✓ To coordinate with the participants in the CMP for early and smooth implementation of activities committed in the CMP and report in timely manner the results of the committed activities to relevant stakeholders.

**Proposals from the CMP:**

- ✓ To propose Lam Dong Department of Agriculture and Rural Development to provide the budget for construction of a new water supplying system in Da Nhim commune because the old one cannot be upgraded enough to provide clean water;
- ✓ In short term, to propose relevant departments to provide budget for building the system of current water source treatment by pumps.

**2.1.3. The results of CMP commitment implementation**

After the CMP organization, the project supported the LB-BR secretariat in terms of the coordination with the relevant stakeholders and of monitoring the implementation of their commitments in the CMP.

**The results of the commitment implementation:**

- ✓ Da Nhim CPC mobilized local people and communal agencies to clean the reservoir and its surrounding area and made the signboards to inform local people not to wash, bath or cattle grazing in the reservoir area;
- ✓ The villages in Da Nhim commune organized meetings to increase awareness of local people on keeping the reservoir clean;
- ✓ Lac Duong district Center for Management and Utilization of Public Works cleaned, made a cover of water filtering tanks, and made a fence around the tank as committed;
- ✓ The project and the LBBR secretariat presented the results and recommendations, proposals of the CMP in the fourth LB-BR MB meeting.

**Shortcomings in implementation of the commitments by the relevant stakeholders:**

- ✓ In spite of some improvements, there are some local people who remain washing clothes, bathing in the reservoir and grazing cattle in the area next to the reservoir;
- ✓ The proposals of the CMP, although presented in the LBBR MB meeting with the participation of provincial departments and agencies relevant to the proposed issue, the process of dealing with the proposals from the CMP was not monitored and nor informed timely to relevant participants by LBBR secretariat in accordance with the procedure of operation of the CMP in the LB-BR.

**2.2. The second CMP**

- **Topic of CMP:** Establishment of a model of improved cowshed with biological bed;
- **Time:** March 9 2018;
- **Venue:** Meeting room of Da Nhim CPC, Lac Duong district, Lam Dong province;
- **Participants:**
  - Cow raising farmers who want to participate in the model in three communes of Da Nhim, Da Chais and Lac Duong town;
  - Representatives of CPCs of the 3 communes, Farmer Associations and Agricultural extension staff of the communes;

- Representatives of Lac Duong Agriculture Department and the Center for Agriculture;
- Representatives of Lam Dong Environment Department - DoNRE;
- Representatives of Lam Dong DARD;
- Representatives of Lam Dong Extension Center;
- Project SNRM – Component 3;
- LBBR Secretariat.

### **2.2.1. Rationale for the CMP organization**

Lac Duong district is located at the northeast of Lam Dong province with its entire area in the core and buffer zones of the LB-BR. Being a mountainous district with main industries of agriculture and livestock farming in which the raising of more than 7,000 cows and buffalos is considered as an important income of the local people. However, because most of local people in Lac Duong district is indigenous K’Ho ethnic group with the tradition of free cattle grazing, therefore, the livestock farming is currently facing/ causing difficulties, as follows:

- The cattle raising does not bring high economic benefits with insufficient growth of the cattle and many losses due to limited nutrients to the cows and buffalos which are accompanied by the free grazing;
- Production and application of the organic compost brings high profitability to crop farming including coffee farming. However, organic compost making in use of organic matters from the livestock farming is rarely done among the local people. Some people even buy the organic compost at high prices.
- Free grazing causes damages to crops cultivated by the local people and forests.
- Droppings from grazing cattle has been polluting the water of rivers, streams, lakes and ponds in the communes which is currently used as domestic water for most of local people in the district;
- Some local households have cattle sheds which, however, causes nuisance in residential areas through very bad smell as well as brings the cattle sick easily due to lack of technics of waste treatment.

The support for local people at Lac Duong district – in the core zone of the LB-BR- in terms of improving their livelihood, through which the reduction of their negative impacts on forest resources of the LB-BR is very important for the sustainable conservation/ development of the LB-BR. This is one of the essential outputs of the JICA project SNRM Component 3 to

support for the management activities of the LB-BR. In addition, every year, with supports from government programs and projects some activities are conducted to support local people in Lac Duong district to develop livestock sector in more sustainable direction. However, these activities are often implemented separately by relevant government agencies. During the process of implementation of their activities, these agencies are often lack of coordination and cooperation to work together for more efficient and effective establishment of husbandry models.

After conducting the surveys to learn the real situation of livestock farming and the needs of the people in the target villages in establishment of improved cowsheds, the project supported the LBBR secretariat to have discussions with the leaders of the three communes to collect their ideas, opinions on initial measures, activities for improved cowshed establishment in the target villages. Next, the agreement was sought and made with the LB-BR MB on the need of a CMP organization for cooperation with relevant stakeholders to establish an improved cowshed model. Prior to the CMP organization, consultation meetings with relevant provincial and district level departments/ agencies were made separately to gain the agreement on the CMP organization, the time and venue of the CMP as well as to have initial discussions on idea of cowshed improvement and their responsibilities/ roles in the formulation of the improved cowshed model.

### **2.2.2. Organization and results of the CMP**

With prior the agreement from relevant stakeholders on the contents etc. of the CMP organization, the project supported the LBBR secretariat to organize the CMP for the discussion on the issue and proposed collaborative activities for the establishment of the cowshed improvement as a solution against the issue among the participants. The discussion and commitments of the CMP participants are summarized as follows:

#### **Opinions of local people in the communes**

- ✓ The livestock farming of the local people in the communes is conducted mainly through free grazing. Some households (HHs) are raising in a semi-grazing way where they do not build sheds for cattle but make a fence to lock up their cattle during night. This way of cattle raising makes the water source polluted and makes the droppings from the cattle unused for organic compost making for crops;

- ✓ Building sheds for cattle raising brings considerable amount of the compost for crops. With 6 cows, 8 m<sup>3</sup> of organic compost can be produced per month and this amount can be applied enough for 8,000 m<sup>2</sup> of coffee fields.
- ✓ In Lac Duong district, there are some HHs who have been using the husk of rice/ coffee for the beds of cowsheds but they do not know how to make/ use biological bed for cow sheds yet;
- ✓ In Da Chais commune, local people are faced with the shortage of land to build cowsheds. While making cowsheds in forestry land is illegal, there is no land available for cowshed establishment according to the land use plan of the commune;
- ✓ Local people in the communes, in general, are not financially affordable to build their cowsheds, thus, they need the financial support to build cowsheds. In addition, local people needs to be provided the seedling of grass to plant for feeding cattle in the cowsheds;
- ✓ The model of the improved cowshed with biological beds is an appropriate one for local people.

### **Opinions of the CPCs, relevant departments and agencies**

- ✓ **Lam Dong Department of Environment:** Cattle grazing causes pollution in domestic water source, resulting in negative impacts on community peoples' health. In 2018, Lam Dong Department of Environment has budget for improving environmental situation in Lac Duong district;
- ✓ **Lac Duong Agriculture Department:** In Lac Duong district, up to 2020 the livestock is significant for the livelihood of the local people. Therefore, the DPC considers prioritizing the improvement of free grazing of cow/ buffalos by the local people to increase productivity and quality of cattle farming;
- ✓ **Lac Duong Center for Agriculture:** The Center, with the budget of Lac Duong district, supported HHs to build models of improved cowsheds. The center will continue to support the HHs in veterinary issues and cattle shed sanitary.

### **Commitments by the stakeholders in the CMP**

#### **(i) Commitments of the project**

- ✓ To organize a study tour for the HHs willing to participate in the model to see cowsheds with biological bed in Duc Trong district, Lam Dong province;
- ✓ To provide a part of materials for the cowshed construction;

- ✓ To conduct training courses for relevant households on techniques of cattle raising and on making compost from manure of livestock and to support expansion of the models if possible.
- (ii) **Commitments of Lac Duong DPC**
  - ✓ To conduct training courses on techniques of cowshed construction and cattle raising for the households participating in the model;
  - ✓ To provide high-productivity grass seedling to the HHs for the cattle feeding;
  - ✓ To support local people in construction of the cowsheds with appropriate techniques as well as to implement cowshed hygienic and veterinary issues.
- (iii) **Commitments of Lam Dong Department of Environment - DoNRE**
  - ✓ To support financially buying husk, bran, microbiological yeast to make biological bed for the improved cowsheds.
- (iv) **Commitments of the CPCs**
  - ✓ To monitor the construction of cowsheds in cooperation with relevant stakeholders;
  - ✓ To select the suitable local households for participation in the model in cooperation with the project.
- (v) **Commitments of the HHs participating in the model**
  - ✓ To provide labors and additional materials for cowshed construction;
  - ✓ To conduct cowshed construction and cattle raising in accordance with the techniques trained by experts;
  - ✓ To prepare land and plant grass seedlings timely when provided.

### **2.2.3. The results of CMP commitment implementation**

After the CMP, the project supported the LB-BR MB secretariat to make coordination and monitoring on the implementation of their commitments in the CMP among the relevant stakeholders.

#### **The results in the implementation of the commitments:**

- ✓ The project SNRM – Component 3 organized a study tour on improved cowsheds for the households who want to participate in the model;
- ✓ The project cooperated with 3 town/ commune PCs to check actual situations of HHs for selection of suitable HHs to participate in the model;
- ✓ The Lac Duong district Center for Agriculture in cooperation with the project formulated the designs of the cowsheds, to provide construction materials to the selected HHs and to monitor the process of cowshed construction;

- ✓ Lam Dong DoNRE provided the material for making biological beds of the cowsheds as committed; the Project and Lam Dong Center for Agriculture supported the HHs to make the beds for the cowsheds;
- ✓ Lac Duong Department of Agriculture organized the training courses on the technics of cattle raising and grass planting for the HHs;
- ✓ Lac Duong Center for Agriculture supported the HHs in terms of veterinary and cowshed sanitary;
- ✓ The project organized training courses on making compost from waste of cattle raising for the HHs.

#### **Specific results:**

- ✓ Establishment of 17 improved cowsheds with biological beds including 7 models in Da Nhim commune, 4 in Da Chais and 4 in Lac Duong town;
- ✓ Total area of grass planted by the HHs is 15,500 m<sup>2</sup>;
- ✓ The number of cow of the HHs participating in the models increased from 87 to 108 and the amount of the compost produced increased from 23 m<sup>3</sup> to 118 m<sup>3</sup> after establishment of the cowshed model;
- ✓ The constructed cowsheds did not cause any nuisance to residences in terms of bad smell anymore and contributed to reduced pollution of the water from droppings of grazing cattle in the three town/ communes.

### **2.3. The third CMP**

- **The topic of CMP:** Strengthening the cooperation for law enforcement among relevant stakeholders on forestry land encroachment– Da Nhim Watershed Protection Forest Management Board
- **Time:** September 25 2018;
- **Venue:** Meeting room of Da Nhim CPC, Lac Duong district, Lam Dong province;
- **Participants:**
  - 10 local HHs, representatives for local HHs allocated forest area to protect in Da Nhim WPF MB;
  - Chairman of Da Nhim CPC, Da Nhim Communal Forestry Board and Police;
  - Leaders of Da Nhim WPF MB and Bidoup-Nuiba national park;
  - Leaders of Lac Duong district Ranger Department;
  - Mr. Le Van Trung: Official of Lam Dong DARD, a member of LB-BR Working Group;

- Mr. Hoang Xuan Hai: Head of Lac Duong Agriculture Department, a member of LBBR Working Group;
- Mr. LeVan Son: Bidoup-Nuiba NP staff, Head of LBBR WG;
- Mr. Nomura Takuya, coordinator and local consultants of the project;
- LBBR secretariat.

### **2.3.1. Rationale for the CMP organization**

Total area of the buffer zone of the LB-BR is around over 70,000 ha, which are under the management of the forest owners of Da Nhim Watershed Protection Forest Management Board (DNWPF MB) and Bidoup-Nuiba National Park (BNBNP MB). Along with the development of local economy and rapid population growth in the buffer zone of the LB-BR, the pressures on the forest resources increase, especially the demand on land for agricultural cultivation.

Although DNWPF MB has made efforts in cooperation with relevant stakeholders to prevent the forestry law violations in its administrative forest area, however, with its area consisted mainly of pine forests located next to the residential and farming areas, encroachment of pine forest has been made by local people during the past few years. Through a survey to evaluate the forest area changes on Google Map in compartment 97, the loss of the forest area from 2008 to 2017 is over 100 ha. This change is the conversion mainly from pine forests into agriculture land. DNWPF MB, in a meeting with the project and LBBR secretariat, identified difficulties in dealing with the violations of encroachment from local people as follows:

- DNWPF MB has never received any information of violations from local people who had a contract of forest protection with the forest owner. All violations have been found out by forest owner staffs;
- The cooperation of Lac Duong Ranger department with the DNWPF MB in investigating and dealing with encroachment violators is not effective, resulting in low deterrence;
- The cooperation of Da Nhim CPC in implementing initial activities of deterrence and education to suspects of violation is not effective;
- There are local HHs in the forest protection contract with BNBNPMB, who make encroaching forests in DNWPF. However, the cooperation to deal with the above violators between DNWPFMB and BNBNPMB was neither well done and nor effective.

After a discussion with DNWPF MB, the project supported LB-BR secretariat to have consultation meetings with relevant stakeholders, namely Lac Duong



Department of Forest Protection, Da Nhim CPC, BNBPNMB and representatives of HHs with the forest protection contract on the necessity for organization of a CMP, aiming at making an open discussion on the encroachment and collaborative measures to be proposed for dealing with the issue among stakeholders. Consequently, relevant stakeholders agreed that a CMP should be organized for the measures to deal with the issue. After that, the secretariat obtained the agreement from the LBBR MB for the CMP organization and then, in cooperation with the project, prepared the contents, venue and time for the CMP organization.

### **2.3.2. Organization and results of the CMP**

With gaining the agreement in venue, time for the CMP organization from relevant stakeholders, the project and LBBR secretariat organized the CMP. The purposes of the CMP are to make an open discussion among the stakeholders on the issue of encroachment in DNWPF – the buffer zone of LBBR, based on which to propose collaborative measures for improvement of the issue.

In the CMP, in order to encourage local people to speak their own opinions in a fearless and frank manner, the CMP, firstly, was divided into two groups for discussions. One of the groups included the local people having forest protection contracts with DNWPF MB. After separate discussions, two groups gather and present their own opinions in the discussions and then agree the measures, commitments and proposals to LBBR MB for the improvement of the problem.

The discussions, commitments and proposals of the CMP participants, in summary, as follows:

#### **The situation of encroachment law enforcement**

- Forest owners (DNWPF MB and BNBPN MB) do not receive any information on forestry related violations including encroachment from forest protection contacters (villagers) with the forest owners. All violations have been found out by the forest owner staffs;
- The situation of encroachment in Da Nhim is serious (Example in small area shows that around 10 ha of encroachments took place per year);
- The prompt prevention of encroachment is difficult because these violations often happen during night time, thus making it difficult to find violators;
- There are local HHs having the contract of forest protection with BNBPN MB, who makes encroachment of forest areas of DNWPF MB. However, the cooperation between DNWPF MB and BDNBNP MB to deal with violators was slowly done and not effective (until now there is just one case in which violated HH was proposed for cutting the contract by BNBPNMB but not agreed by Da Nhim CPC because the HH is poor HH)

- Lac Duong Ranger department has the budget to pay for violation information but the procedure for the payment is quite complicated (it has to follow the government financial procedure). It is one of the reasons why until now the department has never received information on the encroachment from local people;
- The cooperation between Lac Duong ranger department, Da Nhim communal police and DNWPFMB in investigating encroachment violators is slowly done. Local people are not often cooperative and Da Nhim CPC does not participate actively in violator investigation and does not have the effective measures of deterrence, education to suspects of violation;
- Finding violators (local people) is not implemented in an enthusiastic manner because the violators are mostly poor, for whom political consideration is made, thus resulting in inefficient law enforcement.

### **The causes of the issue**

- The cooperation among stakeholders in law enforcement on encroachment is inefficient/ ineffective;
- There is no mechanism of reward for information provision and of punishment against negligence of information provision from forest protection contracted HHs;
- The process of violation information verification and then payment to informants from Lac Duong Ranger Department takes time, therefore local people are discouraged to be involved in the process (losing their time and take so long to get paid) and to provide violation information;
- Fine against violators on their encroached forest areas is very low (400,000 VND per ha per year, therefore, encroaching 1,000 m<sup>2</sup> is fined 40,000 VND per year). This amount of money is so little compared with damages of forest destruction;
- The money paid to contracted local people under PFES program is still very low (each HH is paid around 12 mil. VND per year, that means 1 mil. per month. If subtracted the money for gasoline, food for patrols as necessary expenditures for PFES patrol every month, contracted local people get around 600,000 – 700,000 VND only);
- PFES program is operated as a social policy for local people with focus on the poor rather than a tool for forest protection and its benefits are halved to local people. Thus, the effectiveness of forest protection is not high;
- Some government policies on support for local people in terms of livelihood development are contradictory to forest protection. For example, provision of coffee seedling to local people every year sometimes encourages encroachment in forest land;

- Many of contracted HHs do not know exact boundaries of forests assigned in field, the effectiveness of Da Nhim CPC in deterrence and education to violators, especially in village and commune meetings is not very high;
- Under the current PFES operation same amount of money is paid to contracted HHs between those assigned with hot spots and with forest areas of almost no violations, thus bringing reduced effectiveness.

### **Commitments by the stakeholders in the CMP**

#### **(i) Commitments of local people**

- ✓ To report violations in a timely manner to relevant ranger or forest protection stations, communal forestry board;
- ✓ To participate in forest patrol and implement tasks as mentioned in the contract of forest protection with the forest owners

#### **(ii) Commitments of Da Nhim CPC**

- ✓ To disclose names of violators through communal broadcast and village and commune meetings for deterrence and education;
- ✓ To work closely with the forest owners in dealing with violations and in cutting the forest protection contracts for violated HHs;

#### **(iii) Commitments of Lac Duong Ranger Department**

- ✓ To cooperate closely with the forest owners to deal with violations as regulated by forestry law;

#### **(iv) Commitments of DNWPF MB and BNBPN MB**

- ✓ To cooperate closely each other in dealing with crossed violated HHs, e.g. cutting contract, subtracting money.
- ✓ To organise joint forest patrols in boundary areas, if needed;

#### **(v) Commitments of Lac Duong Agriculture Department**

- ✓ To advise Lac Duong DPC on taking measures for strengthening effectiveness of forest protection;
- ✓ To review local people provided seedlings every year to prevent planting coffee tree on encroached land.

### **Proposals/ recommendations of the CMP to LBBR MB**

- ✓ Organising professional forest patrol teams in areas where encroachments take place frequently, members who are paid enough to cover their basic needs of living (5-6 mil. per month)
- ✓ Making an effective and efficient mechanism of violation information

- collection including its payment for local people (for instance, spending 0.5% management cost under PFES program for forest owners on this activity). Because it becomes easier for local people to inform to and then get paid from ranger or forest protection stations;
- ✓ Increasing allowance for communal forestry board;
  - ✓ Involving local people in successful livelihood improvement models and ecotourism activities to improve their income;
  - ✓ Providing suitable seedlings for boundary planting to reduce encroachment through delineation of boundaries of patrolled area and to possibly increase livelihoods for contracted HHs;
  - ✓ Providing uniforms for forest patrol groups as incentives.

### **2.3.3. The results on the implementation of commitments in the CMP**

The implementation of the CMP commitments among relevant stakeholders until now has not been monitored so the effectiveness of the CMP in strengthening the efficiency of law enforcement in forest encroachment in forest area of Da Nhim WPF MB has not been evaluated yet. This is because of the following causes:

- ✓ The change of the secretariat of LB-BR: LB-BR MB secretariat had only one member who concurrently served as BNBPNMB staff, however, right after the CMP implementation, that member moved to a new job. The vacant post for a professional member of the LB-BR MB secretariat have not been filled. However, an assistant was recruited to the secretariat post who, however, had little knowledge/ experiences to fully understand the concept of CMP in a biosphere reserve. Therefore, unfortunately, monitoring and coordination of relevant stakeholders to implement their commitments in the CMP could not be carried out;
- ✓ The proposals and recommendations of the CMP to LBBR MB are planned to be presented in the fifth LBBR meeting on December 2018 for considerations and then to coordinate relevant provincial departments and agencies for carrying out the suitable activities to improve the problem. However, due to the request from the PPMU, these proposals and recommendations were not presented in the fifth LBBR meeting but they will be moved to the next meeting.

## **2.4. The fourth CMP**

- **Topic:** Mushroom development as an environmentally friendly crop solution of Langbiang Biosphere Reserve;
- **Time:** May 17, 2019;
- **Venue:** Meeting room of Bidoup - Nui Ba National Park, Lac Duong district, Lam Dong province;
- **Participants:**
  - SNRM – Component 3 project;
  - LB-BR Secretariat;
  - Mr. Hoang Xuan Hai: Head of Agriculture Department of Lac Duong District;
  - Ms. Nguyen Khanh Ngan: Representative of Environmental Protection Sub-Department, Lam Dong DoNRE;
  - Mr. Le Van Trung: Representative of Lam Dong DARD;
  - Representative of Bidoup - Nui Ba National Park;
  - Representative of Da Nhim Watershed Protection Forest MB
  - Leaders of Lac Duong Town, Da Nhim, Da Chais CPCs, Farmer's Associations and extension staff of 3 communes;
  - Mr. Truong Binh Nguyen: Director of Nguyen Long Company
  - Ms. Nguyen Thi Moi: Chairman of the Board of Directors of the Lam Dong Cooperative of Agriculture, Service and Environment;
  - Farmers in 3 communes of Da Nhim, Da Chais and Lac Duong Town who have participated or wish to participate in the mushroom cultivation model to improve livelihoods.

#### **2.4.1. Context for the CMP Organization**

Support of the local communities in the buffer zone of LBBR for improving their livelihoods through environmentally friendly and sustainable cultivation activities is considered as an important and appropriate solution of the SNRM - Component 3 project to reduce the pressure on forest resources, contributing to the conservation and enhancement of biodiversity values of the core zone of the BR.

With the goal defined above, in 2018, after the evaluation of the practical situation in the locality, the needs of the local people as well as having the meeting with Nguyen Long company, which is the mushroom producing company in Lac Duong district, SNRM - Component 3 project provided its support to two (02) households in Da Nhim commune to develop models of shiitake mushroom cultivation so as to create a basis for assessing the effectiveness of the mushrooms cultivation models, local people's acceptance for the models as well as the results of cooperation between the people and Nguyen Long company during the process of mushroom production and consumption. The results of trial of the two HHs showed quite positive signals such as: people learned quite well and followed the guidelines

of mushroom growing from the Company, the economic efficiency from the models was quite high compared to other agricultural crops in Da Nhim, the Company's cooperation in disseminating mushrooms growing techniques and consumption for the HHs was very good.

With the good implementation results, the project made a survey on the needs of the model development with the local people and collected opinions from departments, organizations concerned of Lac Duong district and Lam Dong province on directions of agricultural economic development in the coming years and on possible supports to the model development as well as on willingness to continue cooperation from Nguyen Long company. Then a CMP was organized to mobilize possible resources from all the relevant stakeholders to replicate the mushroom production models in the buffer zone of LB-BR. This helps improve the livelihoods on step by step basis for local communities in a sustainable way, contributing to the achievement of management objectives of the LBBR.

#### **2.4.2. Organization and results of the CMP**

After reaching an advance agreement among core stakeholders concerned on the necessity of the expansion of the model, willingness for support and draft collaborative action, the CMP was organized by the LBBR secretariat with support of the project where the stakeholders concerned could discuss openly ways of the mushroom model expansion and then propose collaborative activities among the stakeholders to expand the model based on the draft collaborative action in the buffer zone of the BR as well as to establish a linkage chain of mushroom production and consumption for improving the value of local mushroom products.

Summary of discussions and commitments of related parties from the CMP as follows:

#### **Discussions in the CMP**

- (i) **Nguyen Long Company:** The Company and SNRM - Component 3 project cooperated to form mushroom production models in Da Nhim commune since 2018. From the first two households, the model has been replicated for 18 households with 25 mushroom houses, up to now. major difficulties and obstacles are mainly due to the fact that some people involved in the model did not strictly follow the company's technical processes and production plans. Currently, the company has the orientation to develop a plan of shiitake mushroom linkage chain with 60 households in Lac Duong district based on cooperation with SNRM - Component 3 project and key households. The project is going also to apply the technology of mushroom residue treatment for composting.

- (ii) **Ms. Nguyen Khanh Ngan - Sub-Department of Environmental Protection, DoNRE:** Supporting local people in terms of improving their livelihoods through sustainable and environmentally friendly farming models to reduce pressure on forest resources is a good measure in LBBR management. It is recommended that local people should comply with technical guidelines and contractual commitments with the company so that the cooperation becomes sustainable and in line with the development orientation of the company.
- (iii) **Mr. Hoang Xuan Hai - Agriculture Department of Lac Duong district:** The models of linkage chain between mushroom production and consumption should be implemented effectively for their replication. However, the contract between the company and the people in the production and consumption chain should clearly define the rights and responsibilities of each party concerned in order to effectively implement the model. In addition, the DPC also would highly appreciate applying mushroom residue treatment technology for organic compost production. Therefore, the DPC pledged to work closely with the stakeholders concerned to replicate this model with the budget for the development of the linkage chains in the DPC's new rural program.
- (iv) **Mr. Le Van Trung – Lam Dong DARD:** The active and responsible participation of stakeholders in the CMP proves that the stakeholders are very interested in the development of the model. In the new rural program of Lam Dong province, Lac Duong district will build 4 linkage chains in agricultural production of which is the linkage chain of mushroom production and consumption. Lam Dong DARD is committed to supporting the establishment of a linkage chain of mushroom production and consumption in Lac Duong district.
- (v) **SNRM - Component 3 project:** The CMP is a management tool of LBBR to involve all the relevant stakeholders in collaborative action for sustainable development/ conservation of the LB-BR. The project pledges to support a number of households in the buffer zone of the LB-BR, which belong to the target villages of the project to develop mushroom production models and build a supply chain to raise mushroom product values, to support the marketing, promotion and improvement of the quality of mushroom products.
- (vi) **Mr. Lieng Jrang Ha Thuyen - Vice Chairman of Da Chais CPC:** Currently, in Da Chais commune, there are some households being supported from the cooperative to build a linkage chain of production and consumption of grey Abalone mushrooms. However, there are still four households supported but not involved in the production and consumption chain. Therefore, in the near future, if these four households do not participate, it is proposed that this funding will be transferred to growing Shiitake mushrooms.

(vii) **Mr. Bui Van Trinh - Vice Chairman of Da Nhim CPC:** There are 11 households in Da Nhim commune participating in the mushroom production and consumption model with Nguyen Long Company with the support from SNRM - Component 3 project. Initially, they were not familiar with the technology of production but being supported by the Company/ the project, they are gradually grasping the technique. According to the information I have, the income of the two mushroom houses is about 10 million VND / crop of 3 to 3.5 months. However, the current difficulty of the commune is the lack of hygienic water sources for mushroom cultivation, so households have to drill wells to give water to mushrooms which increases production costs. It is proposed that (i) Lam Dong DARD, DoNRE, Lac Duong DPC to invest in clean water provision for Da Nhim commune people, (ii) the company continues to enlarge mushroom production scale to support local people in developing their economy, (iii) SNRM - Component 3 project continues to support the commune in implementing livelihood improvement models. The government of Da Nhim commune is committed to working closely with related departments, agencies and organizations to build successful mushroom production and consumption linkage chains in the commune.

(viii) **Opinions of local people:**

- Ms. Ko Dung Ka Hoa - people in Da Chais commune - who grows grey Abalone mushrooms: Mushroom cultivation model brings economic benefits. It is proposed to support for workwear and some working tools, technical assistance in handling mushroom residues for composting.
- Mr. Y Sai - a farmer in Da Nhim commune grows – who grows Shiitake mushroom: Each crop earns about 20 million VND after deducting all expenses and depreciation of the factory. People want to participate in the model but lack the capital for initial investment so it is proposed that the government should have the policy to give low interest loans to local people.
- Mr. Tuyen - Da Chais Farmer's Association: Mushroom growing model is very good for people's livelihood. However, people now have difficulties in the capital for production, so it is recommended that related parties should have the measures to support local people to access to loans.

**Conclusion and commitments of stakeholders in the CMP**

**Conclusions of the CMP:**

The participants in the CMP agreed that the expansion of the linkage chain of production and consumption of mushroom products in the buffer zone's communes of the LB-BR is very good, contributing to improving the environmentally-friendly



livelihoods for the local people, thereby reducing the pressure on the biodiversity in the core zone of LBBR and meeting the management objectives set for the LB-BR.

In order to increase probability of successful model development as well as to motivate local people to better participate in forest protection of the LB-BR and to ensure investment resources, the CMP participants agreed on the following criteria to select households (HHs) for participation in the model:

- ✓ HHs do not violate the Forestry Law;
- ✓ HHs willing to participate in the model (having responsibility, skills ...);
- ✓ HHs with lawfully owned land to build mushroom houses;
- ✓ HHs with human resources to implement the model;
- ✓ HHs with economic capacity to invest in building mushroom houses and buying mushroom embryos to grow mushrooms;
- ✓ HHs commit complying with technical instructions and contractual regulations signed between the company and the people;
- ✓ HHs willing to share knowledge and experience with other households.

### **Commitments of the CMP**

#### **(i) SNRM - Component 3 project**

- ✓ Collaborate with stakeholders to check the conditions and select HHs that meet the above criteria for participating in the model;
- ✓ Support participating households for study tours to successful mushroom models and for participating in technical training;
- ✓ Provide equipment to control mushroom quality and hygiene of mushroom houses to improve labor productivity;
- ✓ Support marketing and promotion of mushroom products and improving the quality of mushroom products for the linkage chains;
- ✓ Support the HHs participating in the models for registration of VietGap certification to increase the value of products.

#### **(ii) Lam Dong DoNRE**

- ✓ Provide funding to buy mushroom embryos for the HHs participating in the model but outside the target villages of SNRM - Component 3;
- ✓ Contribute budget to training in mushroom cultivation techniques;

#### **(iii) LAM Dong DARD**

- ✓ Support the development of procedures to establish a chain of links for mushroom products;
- ✓ Develop a new rural plan for Lac Duong district, in which building linkage chains of mushroom production and consumption is a criterion of the plan.

#### **(iv) Lac Duong District Department of Agriculture**

- ✓ Contribute budget to buying tools for mushroom houses and mushroom embryos for the HHs participating in the model but outside the target villages of SNRM - Component 3 project;
  - ✓ Support the company in building projects on the chain linking production and consumption of mushroom products;
  - ✓ Connect mushroom companies and producers with potential markets to promote the consumption of mushroom products.
- (v) Nguyen Long Company**
- ✓ Collaborate with stakeholders to select households that are eligible to participate in the model to build a linkage chain of mushroom production and consumption.
  - ✓ Provide to the HHs technical guidance on growing, tending and harvesting
  - ✓ Commit to purchasing products produced by the HHs in the mushroom production models under the agreement between the HHs.
  - ✓ Build a chain linking production and consumption of the mushroom products
- (vi) People's Committees of communes / towns**
- ✓ Coordinate with SNRM – Component 3 project and related enterprises to check the conditions and select households to participate in the model of production and consumption of mushrooms
  - ✓ Supervise the implementation of the HHs in the models and motivate stakeholders to comply with the commitments of the CMP.
- (vii) Households participating in the model**
- ✓ Invest in building mushroom growing houses and buying embryos and equipment in addition to those supported by other stakeholders as committed in the CMP;
  - ✓ Provide labor for growing, harvesting and preliminary processing of the mushroom in accordance with the requirements of the signed contract with the company;
  - ✓ Comply with cultivation techniques guided by the company and the terms of the contract signed.

### **2.4.3. Results of implementing the commitments in the CMP**

#### **2.4.3.1. SNRM Project - Component 3**

##### **(i) Supported activities of study tours on successful models and of training**

- ✓ Organized a study tour for 19 households growing Shiitake mushroom at Nguyen Long Company on September 29, 2019;
- ✓ Organized a study tour for 17 households growing Abalone mushrooms on at the Cooperative on September 30, 2019;

- ✓ Conducted a training course on disease prevention and management techniques on Abalone mushroom for 16 households in Lac Duong town on October 17, 2019.

**(ii) Supported for registration of VietGAP certification**

- ✓ Collaborated with Da Lat Nuclear Research Institute and Nguyen Long Company to check conditions of growing and processing the mushroom, and to collect water samples (watering mushrooms) and the medium for growing mushrooms to apply for VietGAP certificate. To date, 17 households growing Shiitake mushrooms have been granted VietGAP certificates.

**(iii) Supported marketing and labeling for mushroom products**

- ✓ Introduced and promoted Shiitake mushrooms through Lam Dong Agricultural Products Fair at AEON MALL Tan Phu - Ho Chi Minh City;
- ✓ Conducted the activities to support mushroom product labeling for the HHs in the models (ongoing);
- ✓ Shared information on Shiitake mushroom model at the "Training on capacity building on sustainable development in the buffer zone of natural reserve" organized by the BCC project at Bidoup - Nui Ba National Park.

**(iv) Supported equipment for the HHs in the models**

- ✓ Providing 25 sets of quality control and hygienic kits for 25 households in 7 target villages (18 households growing Shiitake mushrooms and 7 households Abalone mushrooms).

**2.4.3.2. Lac Duong Department of Agriculture and Rural Development**

**(i) Supported for kits and purchase of mushroom embryos**

- ✓ Being submitted to Lac Duong DPC for approval to provide funding of VND 80 million to buy quality control and hygienic kits for 14 HHs and VND 120 million to buy mushroom embryos for 6 HHs. After the funding is approved, it will be implemented.

**(ii) Supported the cooperatives to develop linkage chain**

- ✓ The department has formulated the plan for establishing a linkage chain of Abalone mushroom production and consumption in the cooperatives. The plan has been submitted to Lac Duong DPC for approval. The DPC is currently reviewing the effectiveness of Abalone mushroom growing model in the cooperatives as a basis for the plan approval.

**2.4.3.3. Lam Dong DoNRE**

- ✓ Provided funding for study tour to the successful mushroom growing models with a budget of VND 5 million;

- ✓ Submission of the budget request of VND 19 million for purchasing mushroom embryos to DoNRE leaders for approval for implementation.

#### **2.4.3.4. Da Nhim, Da Chais and Lac Duong town CPC**

- ✓ Collaborated with SNRM - Component 3 project and the company, cooperatives to check the conditions and select HHs participating in the linkage chain of producing and consuming mushrooms;
- ✓ Monitored the process and promoted the implementation of commitments made by the stakeholders involved in the CMP. Participated in the study tours, training courses for HHs in the model, checked and signed to confirm the minutes of handing over tool kits, mushroom embryos for HHs, to sign for certification in mushroom purchasing contracts between local people and the company.

#### **2.4.3.5. Lam Dong DARD**

- ✓ Advised the Lam Dong PPC to approve and allocate the budget of New Rural program for Lac Duong district by Plan 419/SNN-KH.

#### **2.4.3.6. Nguyen Long Company**

- ✓ Participated with the CPCs and SNRM - Component 3 project checks the conditions and selects suitable households to participate in the model of mushroom producing and consumption linked chain;
- ✓ Conducted guidance on cultivating, tending and harvesting techniques for HHs in the model;
- ✓ Signed a contract of commitment to purchase products for the mushroom producing HHs in the model.

#### **2.4.3.7. HHs participating in the model**

- ✓ Made investment by 15 HHs to build mushroom growing houses, buying embryos and equipment in addition to those supported by the SNRM - Component 3 project, DoNRE and Agriculture Department of Lac Duong district.
- ✓ Cultivate, take care of and harvest mushrooms (15 HHs), following the company's farming technique guidelines and signed contracts;

### 3. Evaluation on the CMP implemented in LB-BR

CMP in LB-BR is a new management tool developed from practical requirements of the LB-BR, in where various stakeholders exist with different concerns, conflicting benefits and various educational backgrounds in addition to the BR's legal position in the national administrative system, that is; a multi-sector/ multi-field coordination organization rather than a management body authorized to issue decisions for the obligatory implementation to state management departments, agencies.

The project supported LB-BR MB to formulate initial theoretical and practical foundations for the operation of a CMP in LB-BR where the local issues/ problems related to the management of the LB-BR can be discussed among relevant stakeholders in an open/equal manner and then collaborative and feasible measures can be proposed to solve/mitigate the issues /problems.

CMP was implemented four times for identifying and solving local issues over around 2 year (from November 2017 to December 2019), which were evaluated mainly on effectiveness, efficiency, impact and sustainability as explained in the table below.:

<b>Perspective</b>	<b>Description</b>
Effectiveness	Mainly measures the extent to which a program or a project attains its objectives.
Impact	Examines positive and negative changes as a result of the project. This includes direct and indirect effects and expected and unexpected effects.
Efficiency	Measures the outputs in relation to the inputs to determine whether the project uses resources effectively to achieve the desired results.
Sustainability	Measures whether the benefits of the project are likely to continue after the closure of the project.

The component3 collected opinions on the CMP organizations/ implementations from stakeholders below for the evaluation.

Lac Duong DPC including District Agriculture Department, Agriculture Center, CPCs concerned (Da Nhim, Da Chais and Lac Duong), DARD, DoNRE, Nguyen Long Company and community members involved in the CMPs

The summary of the information collection is shown below.

Question	Answer	
Understanding on CMA	Well understood 92%, Not clear 8%	
Horizontal approach of CMA	Effective 92%, Little effective 8%	
Selection of topics of CMP	Suitable 92%, Do Not know 8%	
Selection of participants	Good 88%, So so 12%	
Discussion in CMP	Good 92%, So so 4%, Bad 4%	
Implementation of solution	Good 33%, Satisfactory 67%	
Solution	Good model on the issue 100%	
Necessity of CMP organization after termination	Necessary 100%	
Active participation after termination	Yes 100%	
Effectiveness of CMP	Effective tool to tackle local issues 92%, too many works 8%	

### 3.1. Effectiveness

As explained previously, the objective of the CMP is to identify local issues, to develop their solutions among relevant stakeholders through discussions and to make agreements on collaborative actions for solving/mitigating the issue with roles/responsibilities of the stakeholders.

#### 1) Identification of issues

Most of issues taking place in LB-BR are serious and complex in nature, thus requiring early /timely solution, however, those are sometimes invisible to relevant authorities. Thus, under the conventional method issues could often be overlooked or taken care of too late to solve the issues.

On the other hand, CMP could identify issues through information collection on a regular basis, which provide much better opportunities to identify issues at the LB-BR in a timely manner. Thus, CMP is effective in the identification of issues.

## 2) Development and implementation of appropriate/effective solutions against the issues

Most of issues in LB-BR are complex in nature, covering various fields and involving various stakeholders such as relevant community members (groups), local government organizations and private companies. Therefore, solutions on the issues should include various activities of the stakeholders in response to the complex nature of the issues. Thus, it is apparent that the issues cannot be effectively solved by one stakeholder alone but by collaboration among the relevant stakeholders.

Solutions on the issues are developed through discussions among the relevant stakeholders in the CMP, resulting in agreed solutions comprised of collaborative actions among the stakeholders with their roles and responsibilities in response to the issues.

Whereas, under the conventional method it is considered rare to develop solutions against the issue in a collaborative manner with relevant stakeholders due to vertically divided administrative systems in the province although collaboration among the relevant stakeholders is indispensable for solving issues, considering complex natures of the issues.

Thus, CMP is judged much more effective compared to the conventional method. Actually 92% of the organizations/ individuals involved in the CPMs are of the opinions that CMP is an effective tool to identify and tackle local issues.

### **3.2 Efficiency**

CMP is also a tool to help develop/ implement solutions comprised of collaborative actions among the relevant stakeholders including community members concerned, which bring win-win situations to stakeholders as explained below.

For instance, local community members suffering from livelihood issues in many cases could be provided with environmentally friendly and profitable livelihood options based on the agreement in the CMP through various means of inputs given by the stakeholders such as conduct of training courses and supply of materials/ equipment necessary while local members provide their own inputs such as labor, materials other than those provided by the other stakeholders. As a result,

livelihoods of the community members are improved with **small inputs** by each stakeholder based on agreements of CMP especially as in cases of the shiitake mushroom production and cowshed improvement.

Provincial departments and organizations concerned are allocated budgets regularly by national/ provincial government in accordance with their tasks and functions to implement activities serving for fulfillment of their tasks in the local areas. However, under the vertically divided administration system in the province, each organization concerned, generally speaking, tackle the issues by itself without any collaboration between organizations concerned, resulting in bringing much limited impacts on the issues because the solution on the issues requires multi-fields treatments in many cases as mentioned above.

Under the current situation, CMP provides very good opportunities to the provincial organizations concerned for fulfilling effectively their tasks/ missions through taking collaborative actions on the issues among the stakeholders based on the agreement of the CMP, thus bringing much better results on the issues.

In addition, each organization concerned uses **tiny parts of regular budgets** for collaborative acts based on the agreement of the CMP to solve issues.

Thus, CMP helps implement collaborative actions on the issues among the relevant stakeholders **with use of small parts of their budgets**, resulting in solution/ mitigation on the issues as well as the fulfilment of their tasks/missions.

Therefore, it is concluded that CMP is high in terms of Efficiency.

### 3.3 Impact

CMP was organized 4 times by the end of 2019, through which impacts on the stakeholders became bigger as follows.

The 2<sup>nd</sup> CMP was held on Cowshed improvement, based on which collaborative works among the stakeholders were conducted, thus having made a model for appropriate grazing to contribute to ①livelihood improvement of the community members through manure collection for compost making/ application to reduce coffee production cost and to raise fertility of coffee fields toward profitable coffee farming ②reducing pollution caused by cow manure ③



decrease of damages by cows on agriculture crops. Having seen the good results of the CMP based collaborative works in terms of livelihood improvements of the local people and reduction of the pollution caused by the manure in the surrounding area etc., DPC (the most important stakeholder) soon decided and implemented the 2<sup>nd</sup> cowshed improvement activities with the stakeholders.

Understanding high effectiveness/ efficiency of the CMP based collaborative work as well as of high profitability of the shiitake mushroom model developed by the project, stakeholders especially DPC actively participated in the CMP based collaborative work for the expansion of the shiitake mushroom production model, leading to the expansion of the shiitake mushroom production model.

Thus, the impact of the CMP is also judged high.

### **3.4. Sustainability**

It is understood that the recognition of the CMP was made deeply by the stakeholders through a series of its implementations as an effective and efficient tool to identify local issues, develop solutions on the issues with roles/ responsibilities of the relevant stakeholders and implement the solutions (collaborative works) among the stakeholders. Thus, the CMP is a very good tool for each provincial organization to make contributions for the fulfillment of its duties/tasks and missions in the local areas.

The CMP is organized by the secretariat of the LB-BR MB with cooperation of provincial organizations concerned such as DARD, DoNRE and DPC. Therefore, willingness of the provincial organizations to cooperate in terms of CMP is indispensable for the sustainable organization of the CMP whereas, as mentioned above, the provincial organizations concerned are considered very positive to the CMP based collaborative works to solve local issues.

The stakeholders (participants) of the CMPs including provincial departments/ organizations considered that CMP organization is necessary even after the project termination and that they are willing to actively participate in CMP according to the information collection mentioned above.

Thus, sustainability of the CMP is judged to be high.

## **4. LESSONS LEARNED FOR SUCCESSFUL CMP**

Through the trial of four CMPs in LB-BR, some lessons learned are drawn for the successful organization of the CMP as follows:

### **4.1. Selection of a suitable topic for a CMP**

The selection of the topic (issue/ problem) to organize a CMP is one of the important factors to ensure the success of a CMP. A suitable topic of a CMP should include the following points:

- The topic should be issues/ problems causing negative impacts on stakeholders in a local area and the stakeholders relevant to the issues/ problems are willing to cooperate for urgently solving/ mitigating them;
- The stakeholders should include local governments, agencies, organizations, private companies and local people which are relevant to the issues/ problems;
- The issues/ problems can be basically solved/ mitigated through collaborative activities among stakeholders relevant to the issues. Those issues/ problems required to involve institution and policy of national level or to involve the governments, agencies, organizations in the central levels for their solution should not be selected as a topic of the CMP;
- Collaborative activities among the stakeholders to solve/ mitigate issues/ problems can be evaluated in terms of effectiveness through the specific outputs implemented by the relevant stakeholders. These outputs can be measured through the monitoring and evaluation by LBBR MB.

### **4.2. Preparation for CMP organization**

After selecting a topic for the CMP, a series of preparations for the CMP are the next important step to ensure the success of the CMP. The following preparations are required for the successful CMP organization:

#### **4.2.1. Identification of appropriate participants in the CMP**

Identification of relevant stakeholders for CMP participation based on the topic of the CMP is very important. The selection of the participation in the CMP should be made based on direct/ indirect relations of a candidate person or an organization with the issue/ problem as well as role / contribution of the person or the organization for solving the issue/ problem through collaborative activities.

#### **4.2.2. Advance consultation meeting with important participants among those invited to the CMP**

In order to develop a possible draft solution and to make a consensus on the solution in advance for the successful CMP organization, it is necessary to hold advance consultation meetings with important participants among the those to be invited to the CMP who are supposed to play important roles in developing / implementing solutions on the issues/ problems. The advance consultation meetings have the following purposes:

- ✓ To explain causes of the issues/ problems and idea of their solutions prepared by LB-BRMB secretariat; to confirm the level of interest in and desire of the important stakeholders on their solutions; to discuss and create a proposal of solutions in the CMP based on the idea of solutions prepared by the secretariat of the LB-BRMB; and to obtain initial agreements on the solutions and their implementations (collaborative activities);
- ✓ To gain an agreement on several options of draft date/time and candidate venues for the CMP organization, the latter of which should be near residential areas of local people participating in the CMP as well as should not be meeting rooms of state agencies/ organizations, considering that local people have difficulties to get the transportation means to the CMP venue if the CMP venue is far from their houses and that official meeting rooms make local people an unconfident and difficult to express their opinions in the CMP.

#### **4.2.3. Determination of the time and venue suitable for CMP organization**

Determination of suitable date/ time and venue for the CMP organization is one of the factors influencing the success of the CMP. The date /time and the venue of the CMP should be determined among the several options agreed upon in the above advance consultation meeting, considering the convenience to all participants being invited to the CMP. It is advised the venue should be cleaned prior to the CMP organization.

#### **4.2.4. Preparation for any situations that may happen in the CMP to ensure its success**

It is assumed/expected that various views and questions are expressed/raised on the issues/ problems as well as proposed solutions (collaborative activities to be implemented by participants on the issues/ problems) in the CMP such as (i) a

participant(s) may decline a part of role/ responsibility to solve the issues/ problems, (ii) the activities committed from participants may not be sufficient enough to fully solve the issues/ problems and (iii) the resources (budget, human) of a participant(s) are not enough to solve the issues/ problems in one year, etc. Therefore, every preparation must be made in advance to fully respond to the situations that may happen in the CMP for its success.

#### **4.3. The role of facilitator in a CMP**

The role of a facilitator is crucially important to ensure success of the CMP through open and equal discussion among the participants, to set right direction and to achieve the objectives. LB-BRMB secretariat often performs the role as a facilitator of a CMP. Generally speaking, the facilitator of the CMP needs to carry out following tasks:

##### **4.3.1. Creating an open and reliable environment among relevant stakeholders in a CMP**

A CMP is related to many relevant stakeholders. Concerns, benefits, views, understandings of CMP participants are surely different and sometimes conflicting each other on the issues/ problems in the CMP. Therefore, before starting discussion, creation of an open and reliable environment among CMP participants makes an important premise, possibly leading to the agreement and collaboration among relevant stakeholders in resolving the CMP issues/ problems.

##### **4.3.2. Ensuring the equality in the role of all CMP participants**

Participants in the CMP often belong to different social positions with various levels of education. During the discussion in a CMP, the participants with higher social positions/ education level (local governments, state agencies, organizations) often tend to impose their ideas/ opinions on the participants with lower social positions, levels of education (local communities). Therefore, the facilitator of a CMP is required to ensure the equality of all CMP participants in discussion to make as appropriate agreement and collaboration as possible in handling the issues/ problems.

##### **4.3.3. Ensuring the collaborative responsibility for commitments and proposals / recommendation of the CMP**

The results of a CMP include the commitments with specific collaborative activities of CMP participants for solving the issues/ problems and proposals/ recommendations of the CMP to higher authorities if the solution on the issues/ problems requires some activities in addition to collaborative activities committed in the CMP, which are requested to higher authority as proposals/ recommendations of the CMP. In order to prevent the situation where only relatively limited participants undertake many responsibilities while others have very few or no responsibility for issues/ problems solving, the facilitator of CMP needs to orient the participants to share responsibilities of the agreement committed in more balanced manner as much as possible among the participants.

#### **4.4. Monitoring CMP commitment implementation performance and informing it in timely manner to relevant stakeholder**

After obtaining commitments from relevant stakeholders/participants in a CMP, it is important to promote early implementation of activities committed and to monitor its implementation and to inform to the CMP participants and LBBR MB the progress of commitment implementation as well as difficulties arising in the process of the implementation, if any. This is aimed at increasing the responsibilities of relevant stakeholders in fulfilment of their commitments in the CMP.

### **5. CONCLUSION**

The CMP is a new management tool for the LBBR, which is aimed to solve local issues/ problems arising in the process of the management the LB-BR toward achieving the objectives of sustainable development/ conservation and the harmonization between the Man and Nature in the BR.

The SNRM project – Component 3 supported the LB-BR MB to conduct CMP trials 4 times within LB-BR for achieving those objectives. The results of the CMP trials demonstrated the effectiveness of this new management tool, where local issues/ problems can be identified and collaboratively solved in a timely and efficient manner among local relevant stakeholders through their agreement. This new management way is also corresponding to the management of most of BRs in the world with emphasis on the role of the MAB in solving the issues/ problems in a BR.

When the CMPs were carried out as trials, difficulties/ shortcomings associated with the CMPs were successfully overcome, based on which the above lessons learned have been also drawn for successful organization of CMP in LB-BR. This is aimed to support LB-BR MB to sustainably operate the CMP after the project

termination. The project strongly recommends that LBBR MB should continuously operate, together with other good management tools such as CMA with BSM, the CMP as a very important tool to better manage the LB-BR toward achieving the objectives and realizing the vision of the 10-year Management Plan

## **6. RECOMMENDATION**

LB-BR MB secretariat has crucially important roles for functioning CMP in addition to those of the LB-BR. In order to make the CMP fully functioned without donor's support after the project termination, a talented consultant with enough coordination experiences and facilitation techniques should be employed as a full-time secretariat of the LB-BRMB or a talented staff should be assigned from DPC in addition to the one assigned from BNBNPMB, considering that some DPC officials have enough coordination experiences, facilitation techniques and enough knowledge on the situation of a target district including livelihood of local people.

Considering that CMP is a very effective tool to identify local issues and to find/ implement their solutions among stakeholders, the concept and guideline of the CMP should be shared with MARD, MoNRE and all the BRs in Vietnam for possible application.