



ITTO TFL-PD 019/10 Rev. 2 (M)
Developing Collaborative Management
of Cibodas Biosphere Reserve in West Java Indonesia

Promoting Community Awareness on the Conservation and Sustainable Use of Biodiversity and Environmental Services to Enhance Forest Law Enforcement and Governance

TECHNICAL REPORT 3





Project TFL-PD 019/10 Rev. 2 (M)

**“Collaborative Management of Cibodas Biosphere Reserve West
Java Indonesia”**

**“Promoting Community Awareness on the Conservation and Sustainable
Use of Biodiversity and Environmental Services to Enhance Forest Law
Enforcement and Governance”**

(Report on the implementation of activities pertaining to Output 3)

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Directorate General of Forest Protection and Nature Conservation
The Ministry of Forestry

With the assistance of:

The International Tropical Timber Organization (ITTO)

Cibodas, April 2014

Project Title : Developing Collaborative Management of Cibodas Biosphere Reserve in West Java Indonesia

Serial Number : TFL-PD 019/10 Rev. 2 (M)

Executing Agency : Gunung Gede Pangrango National Park Authority
Directorate General of Forest Protection and Nature Conservation
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Host Government : Republic of Indonesia

Starting Date : September 2011

Duration : 28 months

Budget	: ITTO	US\$ 496,670
	Disbursed amount	US\$ 432,880
	GOI	US\$ 94,608
	Total	US\$ 591,278

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Published by : GGNP and ITTO

Place & Date : Cibodas, April 2014

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LIST OF ABBREVIATIONS

CBR	: Cibodas Biosphere Reserve
Forum	: Forum for Coordination and Communication on Cibodas Biosphere Reserve Management
GGPNP	: Gunung Gede Pangrango National Park
GOI	: Government of Indonesia
ITTO	: International Tropical Timber Organization
NGO	: Non-Governmental Organization
NTFP	: Non Timber Forest Product
PRA	: Participatory Rural Appraisal
R&D	: Research and Development

Table of contents

List of abbreviations	iii
Table of contents.....	iv
Summary.....	v
1. INTRODUCTION	1
1.1. Background information	1
1.2. Organization of the report.....	2
2. APPLIED METHODOLOGIES.....	3
3. PRESENTATION OF FINDINGS.....	5
3.1. Findings of Activity 3.1	5
3.2. Findings of Activity 3.2	7
3.3. Findings of Activity 3.3	12
4. ANALYSIS OF FINDINGS.....	13
4.1. Requisites for enhancing law enforcement and governance.....	13
4.2. Assessment of achieved output.....	16
5. CONCLUSIONS AND RECOMMENDATIONS.....	19
5.1. Conclusions	19
5.2. Recommendations	20
6. PRACTICAL IMPLICATIONS.....	21
SELECTED REFERENCES.....	22

Summary

Output 3 of the project defined as “community awareness on the conservation and sustainable use of biodiversity and environmental services as well as forest law enforcement and governance enhanced”, has been delivered by fully implementing the three pertinent activities that had been identified through an adequate process. Under the first activity, training of trainers for capacity building of local stakeholders had been completed and had produced 78 trainers. Such trainers were intended to take role in the empowerment of local stakeholders in carrying out environment-based livelihood activities. In addition, local stakeholders have also been equipped with a deep understanding on the values of CBR development and the critical role they play in sustaining the reserve. The activity has, indeed, made great achievement in terms of awareness on CBR development and its sustainable management.

Under the second activity, local stakeholders have been exposed to the essential existing forestry and environmental laws and regulations and had gained deep understanding on the crucial role of these laws and regulations in the CBR development and sustainable management. Further, the local stakeholders have been taught on how to detect and properly handle forest crimes using the existing laws and regulations as the legal framework. Indeed, the project has made a fruitful endeavor on building the capacity in forest law enforcement.

Under the third activity, the laws and regulations relevant to sustainable development and management of CBR have been reproduced and widely disseminated through various means to reach as large number of individuals and institutions as possible; which, actually, a resource consuming task of the project.

By fully implementing the pertinent activities, it can be concluded that Output 3 has been delivered and should contribute to achieving the project’s specific objective. This conclusion is justifiable, as all the predefined indicators of the output have been satisfied. It should be noted, however, that achievement of the output is measured only qualitatively, leaving the exact degree of achievement remains unclear.

1. INTRODUCTION

1.1. Background information

ITTO-assisted project TFL-PD 019/10 Rev. 2 (M) entitled “Developing Collaborative Management of Cibodas Biosphere Reserve in West Java, Indonesia” was implemented by Gunung Gede Pangrango National Park Authority (GGPNP) of the Directorate General of Forest Protection and Nature Conservation, Ministry of Forestry of the Republic of Indonesia. The implementation commenced in September 2011 and lasted for twenty-eight months; the project operation was governed by project agreement signed by the Government of Indonesia (GOI) on 3 December 2010 and by the International Tropical Timber Organization (ITTO) on 25 May 2011.

The project was aimed at promoting conservation and sustainable use of biodiversity and environmental services of Cibodas Biosphere Reserve (CBR); its specific objective was to strengthen forest law enforcement and governance in conservation and sustainable use of biodiversity and environmental services rendered by CBR. The specific objective was expected to be achieved through delivery of three outputs, namely: (i) stakeholders commitment to effective management of CBR increased, (ii) integrated management plan for CBR developed, (iii) community awareness on conservation and sustainable use of biodiversity and environmental services as well as on forest law enforcement enhanced. The defined outputs were expected to be delivered through full execution of nine relevant activities that had been identified through an adequate problem analysis process.

The planned project budget was US\$ 591,278 in total comprising contribution of ITTO and GOI in the amounts of US\$ 496,670 and US\$ 94,608, respectively. The sum of project funds actually disbursed to the executing agency, the GGPNP, was US\$ 432,880 as an amount of US\$ 63,790 was retained and administered by the ITTO to finance monitoring and evaluation related activities.

This technical report presents information on Output 3 “community awareness on the conservation and sustainable use of biodiversity and environmental services as well as forest law enforcement and governance enhanced” covering the implementation of pertinent activities, assessment of achievement and practical implications of the output delivered. The pertinent activities that had been fully executed are:

- To conduct extension to the communities on the conservation and sustainable use of biodiversity and environmental services targeting 20 community groups;

- To conduct training workshop on forest law enforcement for local communities and law enforcement officers in three districts; and
- To disseminate policies and regulations on protected area management for the enhancement of forest law enforcement and governance.

1.2. Organization of the report

This technical report has been prepared in close consultation with the ITTO Manual for Project Monitoring, Review, Reporting, and Evaluation, third edition (2009) and is organized as follows:

- Part 1 highlights the project identities and major elements
- Part 2 presents the methodology applied in the implementation of activities, data collection, analysis of findings, and assessment of achievement
- Part 3 features findings/outcomes of the activities implemented
- Part 4 analyzes findings/outcomes of the activities implemented
- Part 5 presents the conclusions drawn and recommendations made, and
- Part 6 outlines the practical implications of the findings/outcomes and the output delivered

2. APPLIED METHODOLOGIES

The project activities had been implemented in the following manner:

Activity 3.1

- The activity was broken down into three components, namely training of trainers for capacity building of CBR extension officers, training of local communities on environment-based business development, and promotion of collaborative CBR management.
- The first component had been accomplished through:
 - ✓ Two training sessions organized on 11-13 February 2013 and 14-16 February 2013 at Karya Nyata Cinagara Training Center in Bogor
 - ✓ The objectives of the training were: to enhance capacity of the CBR staffs in performing extension programme of sustainable business development in the buffer zone in the context of CBR management and train social workers on community development in the buffer and transition zones
 - ✓ Each training session took the forms of class lecturing and practical demonstration, guided by experienced professionals
- The second component was accomplished through establishment of demonstration plots on handicraft and eco-tourism development at three sites, one in each district; such demonstration plots were then used for training of local communities residing in the buffer and transition zones.
- The third component that concerned with promotion of collaborative CBR management was conducted in March-April 2013 in the districts of Bogor, Cianjur, and Sukabumi targeting conservationists, forest interest groups, village conservation advocates, local cultural and religious leaders, school teachers, and GGPNP rangers.

Activity 3.2

- The activity comprised two sub activities, namely training on CBR area protection and organization of a multi-stakeholder workshop on “Participation of stakeholders in the protection of CBR area.”
- The training on CBR area protection was conducted on 1-3 July 2013 in Bogor targeting on civil service police, justice department, district forest rangers and partners, and NGOs.
- The objective of the training was to gain deep understanding on existing laws and regulations on the protection of CBR area and environment pronounced by the central, provincial, and district government as the legal basis for law

enforcement operations; the objective was to be achieved through collective learning and discussions and practical application of the laws and regulations on hypothetical crime cases.

- The principal resource persons of the workshops were the Head of GGPNP and Head of West Java Region I Coordinating Body.
- The second sub activity, the multi-stakeholder workshops were conducted consecutively on 23 July 2013 in Sukabumi, on 24 July 2013 in Cianjur, and on 25 July 2013 in Bogor.
- The primary objectives of the workshops were to comprehend the CBR development concepts and existing legal framework for law enforcement in the CBR area and to demonstrate on crime handling process.

Activity 3.3

This activity concerned with the dissemination of information on existing policies and regulations on CBR management and development and had been accomplished through the following steps:

- Identification of the relevant policies and regulations
- Publication of selected policies and regulations
- Distribution of the documents using different means including stakeholder meetings and workshops as well as stakeholder dialogues organized under the project

3. PRESENTATION OF FINDINGS

3.1. Findings of Activity 3.1

As highlighted in the preceding section, the activity was broken down into three components, namely:

- i. training of trainers for capacity building of CBR extension officers;
- ii. training of local communities on environment-based business development;
and
- iii. promotion of collaborative CBR management.

The first component of the activity, the training of trainers held on 11-16 February 2013 in Bogor, was attended by 78 participants from Bogor, Cianjur, and Sukabumi districts representing different stakeholders as depicted in Table 1. Conduct and achievements of the programme are summarized below.

Table 1: Number of participants of training of trainers on 11-16 February 2013

No.	Stakeholders group	District			Total
		Bogor	Cianjur	Sukabumi	
1	School teachers	4	4	4	12
2	Religious leaders	4	4	4	12
3	Family welfare education trainers	4	4	4	12
4	Farmers	4	4	4	12
5	Conservation cadres	4	4	4	12
6	Forest rangers	4	4	4	12
7	CBR extension workers	2	2	2	6
	Total	26	26	26	78

- The training programme comprised class lecturing and field demonstration; the class lecturing covered different subjects including:
 - ✓ CBR salient features and management
 - ✓ Significance of CBR in supporting sustainable development
 - ✓ Values of CBR biodiversity
 - ✓ Techniques for developing institution for CBR management
 - ✓ Community empowerment concepts
 - ✓ Community empowerment techniques for sustainable development
 - ✓ Method and techniques for undertaking PRA
 - ✓ Working area mapping and planning

- The field demonstration consisted mainly of discussions, brainstorming, application of empowerment techniques, problem identification and resolution, field practice on selected PRA activities, as well as mapping and planning of working area.



Discussion, mapping and planning of working area (Photos by the project)

- The primary objectives of the training programme were:
 - ✓ To produce trainers of local communities to assist in performing livelihood activities in the CBR buffer and transition zones
 - ✓ To equip the trainers with knowledge on CBR, its management and objectives, as well as on livelihood activities and community empowerment techniques.
- Through the class lecturing and field demonstration sessions, the planned objectives were satisfactorily achieved; the trainers trained are expected to support CBR development and management by providing assistance to local communities in carrying out environmentally friendly livelihood activities.



Extension through class lecturing and field demonstration by the trainers' trainee (Photos by the project)

The training component on environment-based business development was attended by participants from Bogor, Cianjur, and Sukabumi districts and used the model villages located in each district as the training site. The subjects covered under this component were:

- Production techniques for biogas, integrated animal husbandry, and handicrafts in Bogor district;
- Techniques for eco-tourism, organic agriculture, organic fertilizer, and products market development in Cianjur district; and
- Production techniques for organic fertilizer, sheep raising, and garbage utilization in Sukabumi district.

The third component of Activity 3.1 was promotion of collaborative CBR management, which took two months to complete, in March-April 2013. This promotion was carried out by sixty-five extension professionals that had been previously trained on needed extension skills. The types of promotional activities undertaken included direct dialogues with community groups such as farmers, students, and community leaders aided by attractive posters on CBR management practices and environment-based livelihood activities. During the two-month promotion period, a total of 2,639 people were met by the 65 extension professionals.

These people represented school leaders, religious leaders, women, farmers, students, and community leaders in three districts. They were made aware of the crucial role of protected area in sustainable development and threats of deforestation as well as forest encroachments. In addition, these people have now understood on their contribution to CBR management by practicing environment-based livelihood activities only in the buffer and transition zones.

The promotion programme concluded that local communities in general have gained understanding on the impacts of deforestation and forest degradation and the importance of protecting CBR for sustainable socio-economic development. The organizer recommended that CBR campaigning programme should be continued, especially by the district governments, in order to preserve the nature conservation awareness that has been implanted among local stakeholders.

3.2. Findings of Activity 3.2

The first component of the activity was training on CBR area protection by enforcing the relevant forest laws and regulations. At completion of the training sessions, the participants were expected able to comprehend and properly enforce the relevant forest laws and regulations including:

- West Java provincial regulation No. 1 of 2013 on guidelines for the conservation and utilization control of protected areas
- Forestry Act No. 5 of 1990 on the conservation of the biodiversity resource and its ecosystems
- Forestry Act No. 41 of 1999 on forest governance
- Forestry Act No. 32 of 2009 on environment protection and management
- Government regulation No. 6 of 2007 on forest planning, development of forest, management plans, and forest utilization
- Presidential regulation No. 59 of 2008 on spatial planning of Jakarta, Bogor, Depok, Tangerang, Bekasi, Puncak, and Cianjur areas
- West Java provincial regulation No. 7 of 2005 on the control and rehabilitation of critical lands

The participants were also informed of the activities applicable to individual CBR zones based on designated function and zone characteristics, which were:

In the core area

- Research on and monitoring of biodiversity
- Eco-tourism
- Conservation education
- NTFPs utilization
- Utilization of ecosystem services, and
- Ecosystem restoration related activities

In buffer and transition zones

- Eco-tourism
- Conservation/Environmental education
- Environment-based agriculture and crop-estate
- Sustainable economic development
- Culture preservation
- Environmentally friendly industries and settlements; and
- Watershed protection

The participants, divided into three groups, were also taught on how to handle forest crimes occurring in CBR area under the existing laws and regulations using hypothetical crimes for practical demonstration.



Group discussions by various law enforcement instruments on identifying practical application of law and regulation in solving violation/crime cases. (Photos by the project)

The second component of Activity 1.2 was to conduct a series of multi-stakeholder workshop on safeguarding CBR area through participatory law enforcement. Conduct of the workshops and their achievements are highlighted below:

- Three one-day workshops were conducted consecutively on 23-25 July 2013 in Sukabumi, Cianjur, and Bogor, respectively.
- The workshops were attended by 28; 33; and 31 participants, respectively or 92 in total, representing GGPNP, district government authorities, district police departments, West Java provincial government, district justice departments, local firms, NGOs, and ITTO project key personnel.
- The expected outputs of the workshops were:
 - ✓ the lessons learned from forest law crime handling processes identified and shared by the participants;
 - ✓ constraints to forest law enforcement and governance identified and shared by the participants;
 - ✓ elements of collaborative forest law enforcement are well understood by the participants;
 - ✓ institutional arrangements for collaborative law enforcement identified and endorsed by the participants; and

- ✓ commitment of stakeholders to undertake collaborative law enforcement enhanced.
- The participants that had ever been involved in forest law crime handling were requested to share and discuss their experiences; constraints to forest law governance were identified through sharing of experiences and discussions. The elements of collaborative forest law enforcement and the relevant laws and regulations to be applied in forest crimes handling were presented by experienced resource persons and elucidated through discussions. Institutional arrangements for the operation of collaborative law enforcement were identified in a participatory manner, wherein ideas and propositions of individual participants were documented and their applicability discussed. Towards the end of each workshop, the participants were asked to declare support or the otherwise to the institutional arrangements developed by the workshops.
- To deepen understanding on forest crime handling using the relevant laws and regulations, several hypothetical crime cases were formulated by the resource persons to be processed legally by the participants. Results of the exercises were discussed and their strengths as well as weaknesses highlighted. Through this process, it was expected that at completion of the workshops the participants would have built the capacity to handle forest crimes consistent with the existing laws and regulations.
- It was concluded by the organizers that the expected outputs of the workshops had been delivered, thus achieved the envisaged objectives.



Multi-stakeholder workshop on safeguarding CBR – Cianjur District (Photos by the project)



Discussion and sharing during the workshop in Sukabumi (Photos by the project)

3.3. Findings of Activity 3.3

This activity specifically dealt with dissemination of existing laws and regulations applicable to protection of CBR area. The first attempt made was to identify such laws and regulations. This step had been accomplished during the multi-stakeholder workshops conducted under Activity 3.2; elucidation of individual laws and regulations was also undertaken during the same workshops.

In essence, the remaining task of the activity was to publish and disseminate the relevant laws and regulations to CBR stakeholders which include the government institutions external to GGNP such as police and justice departments at the district level, community groups, private firms, NGOs, formal and informal educational organizations, academes, and R&D institutions. The publishing of the documents was done by GGNP authority with the financial assistance of the project.

Dissemination of the documents was accomplished using various means and channels as appropriate including the meetings and workshops, training sessions, occasions in stakeholder consultation, etc. Direct delivery of documents to selected stakeholder groups, e.g. educational and R&D institutions, police, and justice departments was also made. No less than 75 hardcopies of the document have been distributed out before the project completion.

One could argue that distribution of hardcopies is unnecessary because distribution of soft files is more efficient. The latter mode of distribution is hardly applicable for at least the following reasons:

- A soft file can be disseminated through the GGNP website but may not reach all targeted stakeholder groups, e.g. farmers and certain groups of students due to handicap in information technology or the absence of facilities.
- Those who are able to retrieve the documents from the web are reluctant to print out such a thick document due to the cost involved.
- For comprehension reading, a hardcopy is normally preferable to personal computer screen reading for convenience reason.

4. ANALYSIS OF FINDINGS

4.1. Requisites for enhancing law enforcement and governance

As defined in the project document, Output 3 concerns with two essential elements: community awareness and forest law enforcement and governance. The underlying notion of the output is that forest law enforcement can be effectively enhanced and performed with the support of the primary stakeholders, notably the local communities, district governments and legal-justice authorities. Indeed, there are requisites that have to be satisfied for conducting an effective forest law enforcement and governance which include:

i. Awareness on the values of GGNP

- The primary stakeholders have to be made aware of the different values GGNP can provide for them, in terms of social, economic, and environmental benefits; that GGNP can directly or indirectly create job opportunities by carrying out environment-based livelihood and business activities on the buffer and transition zones; that such activities will generate sustainable income for participating individuals and community groups; that participation in GGNP management operations can also generate income.
- To raise awareness of the primary stakeholders on the values of GGNP and the potential benefits the park can generate for them, a massive extension programme has been accomplished under Activity 3.1 involving sixty-five extension professionals targeting on twenty community groups. Under this extension programme, trainers on community empowerment comprising village formal, cultural, and religious leaders, schoolteachers, farmer groups, leaders, and NGOs have been equipped with the essential knowledge on the various aspects of GGNP management as well as skills for undertaking sustainable livelihood activities in view of their future role in rural development.
- Under the same activity, local communities residing in the buffer and transition zones have been taught on various techniques for undertaking livelihood activities such as production of biogas, organic fertilizers, and vegetables.
- Under Activity 3.2, the primary stakeholders have been exposed to CBR protection related aspects and activities through the relevant workshop

which is believed has, to some extent, raise awareness of the participants on the role of CBR in sustainable development.

- Awareness on the values of CBR and on potential benefits of the reserve accruable to the primary stakeholders has been raised through above activities. Such awareness is indeed an invaluable social asset essential for shaping attitude towards conservation of the reserve through collaborative forest law enforcement operations, wherein local communities play a significant role.

ii. Appropriate incentive is available

- Incentive is an essential element to participate in a collaborative efforts; this is an undeniable fact of real life situation. One cannot expect others to support on achieving one's objective without providing incentive in one form or another. Likewise, GGPNP authority cannot request the primary stakeholders to participate in a collaborative forest law enforcement operation without any incentive for their participation.
- Incentive may take tangible or intangible forms; tangible ones include: wage, contribution of inputs to activities, job opportunity, seed capital, etc., while intangible incentive may be in the forms of knowledge and skills, access to using lands and harvesting of planted trees, policy initiatives on tax reduction, business license, etc.
- Different forms of incentive have been introduced by the GGPNP authority through the project, both in tangible and intangible forms. The tangible incentives in the forms of wage associated with implementation of project and park management activities. Most important incentive, however, is the skills for doing different livelihood activities taught by the project free of charge. Indeed, the awareness raised on the potential benefits of CBR is also a form of intangible incentive, because awareness is a social and moral asset that directs people in making decision on future livelihood activities.
- In essence, different forms of incentive have been introduced and applied by the project that should encourage the primary stakeholders to engage in collaborative forest law enforcement operation. By so doing, it is reasonable for the GGPNP authority to successfully enhance the forest law enforcement and governance within the CBR areas.

iii. Familiarity with legal framework

- In order to equip the primary stakeholders with practical skills for forest law enforcement, the stakeholders need to understand and digest on the legal framework of law enforcement. For this purpose, the relevant laws and regulations have to be identified and elucidated through discussions. This task has been accomplished through the workshops organized under Activity 3.2. At least seven laws and regulations issued by the central and provincial governments relevant to the management of protected area have been discussed with the participants for purpose of elucidation and digestion.
- Another step taken under Activity 3.2 was to introduce the management strategy for the national park and biosphere reserve as well as the activities applicable to the different zones of CBR. Comprehension of these management and operational aspects is indispensable since these are the norms to be enforced using the relevant legal framework. Forest rangers and law officers alike have to exactly know the applicable actions inside the core area to enable detection of any deviations of the norms. Actually, this task has been already accomplished through implementation of Activity 3.1. At completion of the activity, participating primary stakeholders should be able to digest on the management strategy and applicable management activities on each zone of the CBR and make use of the laws and regulations in handling any deviating conduct of local people.
- To empower the primary stakeholders in applying the laws and regulations in handling forest crimes, three multi-stakeholder workshops on law enforcement had been used for demonstration of crime case handling process. In addition, the experience of forest rangers and other law officers in the detection and handling of forest crimes was presented to the workshops by the those rangers/law officers involved and thoroughly discussed among the participants for deep understanding and digestion of crime handling process.
- In essence, the primary stakeholders have been equipped with the skills necessary for detecting and handling forest crimes occurring in the CBR area. Therefore, enhancement of forest law by GGNP and other government authorities, police and justice departments as well as local communities, is now technically feasible.

- In addition to the above-mentioned assumptions, however, achievements need to be assessed using the predefined indicators of the output as the framework of assessment as presented in the following section. With all the requisites for pursuing a collaborative law enforcement approach are satisfied, it is reasonable to assume that law enforcement has been enhanced. At the completion of the activities pertaining to Output 3, it is reasonable to assume that community awareness on conservation and sustainable use of biodiversity and environmental services has been enhanced.

4.2. Assessment of achieved output

Table 2: Predefined indicators of Output 3

Output	Indicators	Means of verification
Output 3 Community awareness on the conservation sustainable use of biodiversity and environmental services as well as on forest law enforcement and governance enhanced	a) Three series of extension event conducted on the conservation and sustainable use of biodiversity and environmental services which are to be participated by 20 communities group b) One package of workshop training for the community residing in buffer zone and local law enforcement officers conducted in 3 districts c) At least, 3 series of training was conducted on policy and regulation of protected area to enhance forest law enforcement and governance	Extension report; Field visit documentations; list of community groups Technical report ; survey; Database Training report; list of participants

The question to be asked here is “have the results of individual activities as presented in the preceding sections contributed to the delivery of Output 3?” If so, to what extent or to what degree, if not, why? In order to adequately answer this question, it is best to first understand the predefined indicators of the output. For this purpose, the output indicators as contained in the project document have been reproduced in Table 2.

- The first indicator of Output 3 achievement is “3 series of extension event on the conservation and sustainable use of biodiversity and environmental services conducted”. Evidently, this indicator has been met through:

- ✓ Conduct of two training sessions in Bogor on 11-16 February 2013 on capacity building for extension operators for community empowerment or training of trainers with 78 participants representing seven community groups in three districts
- ✓ Conduct of training on environment-based business development at the village models with participants representing community groups in three districts
- ✓ Conduct of dialogues on collaborative CBR management with 2,639 people representing six community groups in each of the three districts.
- In total, three series of extension events of training and workshop with participants representing community groups in three districts have been accomplished; these events confirm the contribution of above processes to achievement of Output 3.
- The second indicator of Output 3 achievement is “one package of training workshop on forest law enforcement for local communities and law officers conducted”. This indicator has been fully satisfied through:
 - ✓ The training sessions on CBR area protection and forest laws and regulations with 170 participants; and
 - ✓ The conduct of a series of multi-stakeholder workshop on CBR area protection through participatory law enforcement with 83 participants;
- The full execution of above events sustain fulfillment of the indicator thus their contribution to achievement of Output 3.
- The third indicator of achievement of Output 3 is “at least 3 series of training conducted on policy and regulation to enhance forest law enforcement and governance of protected area”. Obviously, this indicator has been satisfied by conducting three training sessions on CBR protection and forest laws and regulations relevant to protected area management.
- As all three predefined indicators are satisfied, it is reasonable to conclude that the full execution of planned activities has led to achievement of Output 3. The hypothesis made by the proponent that “output will be delivered if full planned activities are fully implemented” is therefore “accepted”. This acceptance of the hypothesis, however, deserves the following notes of caution:
 - ✓ The training sessions and workshops conducted under the project have certainly raise awareness of the stakeholders on the potential benefits of conserving biodiversity and environmental services; it is not clear, however, to what extent and degree the awareness has been raised considering the facts that stakeholder participation in the events was only partial and that quality of awareness amongst the participants varies with educational as well as occupational backgrounds;

- ✓ Assuming that the awareness has been raised to a certain level and awareness is an essential component of participation in different management activities, raised awareness does not necessary result in enhanced law enforcement and governance due to the facts that adoption of collaborative law enforcement approach is influenced by such other factors as institutional arrangements, operational inputs and professionalism of the law enforcers; and
- ✓ To adequately measure achievement of the output, outcome of each event should have been assessed by comparing the baseline, the initial condition to the prevailing post event condition using scientifically sound procedures and techniques.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Activity 3.1 has been fully implemented under three components namely: training of trainers for capacity building of CBR extension officers, training of local communities on environment-based business development and promotion of collaborative CBR management; results of the respective components are:

- 78 trainers comprising school teachers, religious leaders, family education tutors, farmers, conservation cadres, forest rangers and CBR extension staffs trained on techniques for livelihood activities and equipped with knowledge on CBR management and objectives
- People residing in the buffer and transition zones of CBR trained on environment-based business activity such as production techniques for biogas, handicrafts, and animals raising
- Collaborative CBR management has been promoted through intensive dialogues with 2,639 people representing various community groups including schoolteachers, women, farmers, students, and community leaders.

Activity 3.2 has been fully executed. The multi stakeholder workshop on collaborative protection of CBR area was attended by numerous participants representing police and justice department officers, park rangers, partners, and NGOs while the multi-stakeholder workshop on legal framework for law enforcement was attended by participants representing the same groups of stakeholders;

Activity 3.3 has been accomplished by identifying the relevant laws and regulations on protected area management, publishing and widely distributing the legal documents to the stakeholders using different means;

Using the predefined indicators of the output to gauge achievement, Output 3 has been delivered through the full execution of the pertinent activities; awareness on conservation and sustainable use of biodiversity and environmental services of CBR raised and forest law enforcement enhanced.

Degree of achievement is, however, remains debatable as quality of awareness and law enforcement are influenced by various factors that are beyond the scope of the project to deal with.

5.2. Recommendations

- The local stakeholders that have been trained in appropriate techniques for undertaking applicable livelihood activities in the buffer and transition zones need to be provided with the necessary assistance in making use of the knowledge and skills they have acquired from the project.
- Such assistance, in the forms of technical and/or financial aid, will enable the stakeholders to develop profitable and sustainable source of income that will serve as strong incentive to refrain from doing activities in GGNP area and thus support the CBR management operations;
- The local stakeholders have also been equipped with the knowledge on collaborative forest law enforcement and trained on technical skills on forest crime handling process that should be utilized now under the leadership of GGNP authority;
- To facilitate the functioning of a collaborative forest law enforcement, operational inputs should be made available and an effective mechanism for involving local stakeholders in the endeavor be put in place by the GGNP authority;
- Consultation and coordination of stakeholders must be periodically and consistently organized as a matter of priority for the CBR Forum in order to preserve the positive attitude towards CBR development that has been successfully developed under the project; and
- The GGNP authority take the lead for conducting contact and coordination with the CBR Forum and local stakeholders setting aside the necessary resources in view of preserving and enhancing the support of local stakeholders on CBR management operations.

6. PRACTICAL IMPLICATIONS

As community awareness on the conservation and sustainable use of biodiversity and environmental services as well as forest law enforcement and governance have now been enhanced, the crucial practical implications of this achievement should be strongly taken into account by the GGPNP authority which include:

- To develop an applicable time table for conducting periodical stakeholder consultation along with its associated budget
- To develop a collaborative monitoring plan for management operations in the CBR area
- To put in place an effective mechanism for involving local stakeholders in the collaborative monitoring of CBR management operations and in forest law enforcement establishing institutional arrangements and sources of funding;
- To formulate standard operating procedures for the monitoring and law enforcement tasks; and
- To develop technical manuals for forest crime handling in collaboration with the police and justice authorities;

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ITTO TFL-PD 019/10 Rev. 2 (M)
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