



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

Enhancing Stakeholders Commitment to an Effective Management of Cibodas Biosphere Reserve

TECHNICAL REPORT 1



April 2014



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

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

**“Enhancing Stakeholders Commitment to an Effective Management of
Cibodas Biosphere Reserve”**

(Report on the implementation of activities pertaining to Output 1)

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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)

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Executing Agency : Gunung Gede Pangrango National Park Authority
Directorate General of Forest Protection and Nature Conservation
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LIST OF ABBREVIATIONS

CBR	: Cibodas Biosphere Reserve
CSR	: Corporate Social Responsibility
FGD	: Focus Group Discussion
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
MAB	: Man and Biosphere
MOA	: Ministry of Agriculture
MOF	: Ministry of Forestry
MPTS	: Multi Purpose Tree Species
NGO	: Non-Governmental Organization
PC	: Project Coordinator
PMT	: Project Management Team
PRA	: Participatory Rural Appraisal
PSC	: Project Steering Committee
YPO	: Yearly Plan Organization

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.....	6
3.1. Findings of Activity 1.1	6
3.2. Findings of Activity 1.2	19
3.3. Findings of Activity 1.3	26
4. ANALYSIS OF FINDINGS.....	32
4.1. Findings of the activities.....	32
4.2. Achievement of the Output.....	35
5. CONCLUSIONS AND RECOMMENDATIONS.....	20
5.1. Conclusions	20
5.2. Recommendations	21
6. PRACTICAL IMPLICATIONS OF DELIVERED OUTPUT	41
SELECTED REFERENCES.....	42

Summary

In order to deliver Output 1 of the project, three planned activities had been fully implemented. Under the first activity, a series of coordination and consultation meeting had been executed which comprised a regional workshop on realizing the management of CBR, a meeting on CBR Forum, a workshop on synchronizing and synergizing CBR management and a meeting on coordination of CBR management programs. The first component of the activity was a forum for sharing the practical experiences of NGOs and private firms on the implementation of various activities on reforestation and livelihood in the CBR buffer and transition zones in collaboration with local communities; such experience was found useful for revitalizing management planning. The CBR Forum meeting, the second component, discussed on the general issues on CBR management with the primary purposes to gain similar perception of stakeholders on management issues to be addressed and develop a framework to guide on management planning process. The primary objective of the third component was to promote tree adoption and rabbit cultivation programmes by evaluating the existing activities and making recommendations for their improvement. The fourth component intended to synergize policy initiatives and programmes of the central and district governments. The first activity had been fully executed and attended by some 239 representatives of the primary stakeholders.

Under the second activity, a series of training workshop and focus group discussion on village model development, formulation of village mid-term action plan and strategy for development planning at the district level had been organized. The workshops and discussions were attended by 283 representatives of the primary stakeholders and succeed in realizing the intended outputs. Such outputs had been documented by the project and would be used in the development of CBR management plan. Under the third activity, a series of training workshop on improving understanding on values of CBR and enhancing capacity to support CBR management were carried out. The workshops were attended by some 88 representatives of the primary stakeholders and produced the planned outcomes.

Through the full execution of three planned activities, numerous outcomes had been delivered. By comparing the outcomes of the activities to predefined indicators of Output 1, it has been concluded that Output 1 had been successfully delivered. That is to say that the commitment of stakeholders to an effective CBR management has increased or enhanced. Such commitment was expressed by the primary stakeholders by signing a commitment declaration document on 17 December 2013 at Puncak,

Cianjur. The exact degree of the expressed commitment, however, is not measurable at this stage; future performance of CBR management operations is the best indicator to use in measuring the actual commitment.

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-Republic of Indonesia. The implementation commenced in September 2011 and lasted for twenty-eight months; the project operation was governed by the 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, and (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 1 “stakeholders commitment to effective management of CBR increased” covering the implementation of pertinent activities, assessment of achievements as well as practical implications of the output. Pertaining activities that have been fully executed are:

- To conduct a series of coordination and consultation meeting amongst the key stakeholders on the effective management of CBR including enhancement of law enforcement;

- To develop programs and activities related to CBR to be facilitated by the CBR communication forum; and
- To carry out a series of training workshop for stakeholders in improving capacity/understanding as regards the importance of CBR conservation.

1.2. Organization of the report

The technical report has been prepared in accordance with the existing ITTO Manual and concerns only with Output 1 and its pertinent activities; the first part of the report highlights the project identities and main activities; the second part presents the methodologies applied in implementing planned activities, data collection and analysis. Findings of the activities are presented in part 3 and analyzed in part 4, while the conclusions drawn and recommendations made are shown in part 5. Practical implications of the findings are presented in part 6 of the report.

2. APPLIED METHODOLOGIES

The first project output was defined as “stakeholders commitment to effective management of CBR increased”. In order to deliver this output, three relevant activities had been identified during the project formulation stage and fully executed; these activities are:

- To conduct a series of coordination and consultation meeting amongst the key stakeholders on the effective management of CBR including enhancement of law enforcement;
- To develop programs and activities related to CBR to be facilitated by the CBR communication forum; and
- To carry out a series of training workshop for stakeholders on improving capacity/understanding as regards the importance of CBR conservation.

It was hypothesized by the project proponent that by fully executing the above listed activities, the first output defined will be fully achieved and that the output will contribute to achieving the specific objective thus solving the key problem addressed by the project.

Activity 1.1 defined as “To conduct a series of coordination and consultation meeting amongst the key stakeholders on the effective management of CBR including enhancement of law enforcement” had been fully implemented and completed through the following process:

- i. The activity was included in the first yearly plan of operation (YPO 1) which had been endorsed by the Project Steering Committee (PSC) as the guiding document for conducting project operations in Year 1;
- ii. A regional workshop on “revitalizing the management of Cibodas Biosphere Reserve” was organized on 27 September 2011 in Bogor wherein members of the CBR Communication and Coordination Forum participated in; the main objective of the workshop was to learn lessons from the private sector as regards the measures and actions it has taken to address the issues on sustainable development in the context of CBR management;
- iii. A meeting of CBR Communication and Coordination Forum was held on 24 January 2012 in Bandung to discuss on issues relating to CBR development involving key stakeholders from Bogor, Cianjur, and Sukabumi districts where the buffer and transition zones of CBR are located and to provide inputs to development of a blue print of CBR management;

- iv. A workshop on “synchronizing and synergizing CBR management” was organized on 25 June 2012 in Bogor with the main objectives to collect and consolidate information on the implementation of the “tree adoption program” that has been executed under the coordination of GGPNP and to formulate development of rabbit farming business to support livelihood of the local communities residing in the CBR buffer zone;
- v. A meeting on coordination of CBR management programs was held on 29-31 October 2012 in Cianjur with the main objective to synergize policy initiatives and programs of the district governments to support CBR development.

Above workshops and meetings were organized and implemented by the project management team (PMT) under the coordination of the Project Coordinator (PC).

Activity 1.2, defined as “To develop programs and activities related to CBR to be facilitated by the CBR communication forum”, had been fully executed and completed in the following fashion:

- i. The activity was included in the first yearly plan of operation (YPO 1) which had been endorsed by the Project Steering Committee (PSC) as the guiding document for conducting project operations in Year 1;
- ii. An experienced national consultant was temporarily hired by the project to assist in the implementation of the activity for which detailed terms of reference (TOR) was developed by the PC;
- iii. Among the tasks that had been accomplished by the national consultant were:
 - Organization of a series of workshop on “development of the model villages that are environmentally friendly to support CBR management” with the main objective to share the lessons learned from the model villages and use them for demonstration of planning, organizing, and implementing CBR development programs by the district governments of Bogor, Cianjur, and Sukabumi to support CBR management and development.
 - Development of strategy for the implementation of CBR development programs through formulation of village mid-term development action plan using three villages in Bogor, Cianjur, and Sukabumi districts as the model with the primary purpose for demonstration and training.
 - Organization of three Focus Group Discussions (FGDs) on “strategy and action plan for CBR management based on stakeholders consultation” on

18-20 December 2012 in the districts of Bogor, Cianjur, and Sukabumi, respectively.

Activity 1.3 defined as “To carry out a series of training workshop for stakeholders in improving capacity/understanding as regards the importance of CBR conservation” had been implemented in the manner outlined below:

- i. The activity was included in the first yearly plan of operation (YPO 1) which had been endorsed by the Project Steering Committee (PSC) as the guiding document for conducting project operations in Year 1.
- ii. To conduct stakeholder empowerment program through training of local communities on technical skills for development of integrated farming system that is environmentally friendly using locally available inputs;
- iii. Such training has been conducted at three model villages, one village in each of the districts involved, namely Bogor, Cianjur, and Sukabumi;
- iv. The underlying notions of this program were:
 - Enhanced capacity of local communities in undertaking integrated farming using local inputs should increase income thus serve as an incentive to engage in CBR development
 - Increased income should serve as a strong incentive for the communities to refrain from doing farming activities on the core area of CBR.

3. PRESENTATION OF FINDINGS

3.1. Findings of Activity 1.1

In the workshop on “revitalizing the management of Cibodas Biosphere Reserve” organized under this activity, the private sector including NGOs was granted a significant role for various reasons:

- Dissemination of CBR development concepts has been undertaken intensively through different occasions, especially since the establishment of the Forum for communication and coordination of CBR management in 2010 wherein the government organizations played a dominant role
- Many private companies and NGOs have been actively involved in the implementation of various activities in the buffer and transition zones of CBR and documented vast information and accumulated experience in environmental management that worth sharing among the stakeholders; and
- The companies and NGOs, however, have not been granted the opportunity they deserve to present and share their experience to formal meetings with government authorities.

Since the main objective of the workshop was to share the lessons learned from implementing the activities relating to environment conservation, it was thought timely to invite the private companies and NGOs to share their experience with other stakeholders, especially the government authorities of the three districts where CBR area is located. Accordingly, four private companies and NGOs had been invited to address the workshop with the following presentation titles:

- i. Green Radio: Promotion of sustainable economic development
- ii. PT Taman Wisata Matahari: Promotion of eco-tourism in the transition zone of CBR
- iii. Telapak Community Association: Community development in CBR area
- iv. PT Tenggara of Maleber Crop-estate: Involving private sector in environmental management

The workshop was attended by some 43 participants representing the government authorities, private companies, and local communities of Bogor, Cianjur, and Sukabumi districts. The main lessons learned from the respective speakers are outlined below:

Green Radio (NGO)

- Green Radio has implemented the tree adoption program since 2008 in collaboration with GGPNP and in cooperation with Green Initiative Foundation that has carried out a farming community empowerment program since 2011.



Green Radio technicians involved in tree planting under the tree adoption program
(Photos by Green Radio)

- The objectives of tree adoption program are:
 - ✓ To economically empower the farmers involved in cash-crop farming inside the GGPNP
 - ✓ To shift source of community livelihood from cash-crop farming inside GGPNP to farming outside the park on husbandry and organic production activities
 - ✓ To improve living standard of farmers in terms of economic income, education, and health
 - ✓ To educate and train farmers to become self-reliant entrepreneurs by providing assistance in terms of funds
 - ✓ To protect GGPNP areas of uncontrolled farming activities
 - ✓ To repair and restore biodiversity of GGPNP that has experienced degradation for years due to improper land use system
 - ✓ To promote development of area for nature conservation education
- The major achievements of Green Radio included:
 - ✓ Economically empowered farmers: 49 people in 2009 and 102 in 2011
 - ✓ Average income of farmers increased three folds within two years
 - ✓ Improved geographic coverage of the program from one to four villages after 3 years
 - ✓ Diversified farming products from only animals to also yield organic produce, and eco-tourism service
 - ✓ The model village on tree adoption program developed in collaboration with Green Initiative Foundation has been ranked third best model during the greening and nature conservation competition organized by the West

Java Provincial Government and selected for replication to other areas of the province.



Young students trained on tree planting under the tree adoption program
(Photos by Green Radio)

PT Taman Wisata Matahari

- This company, founded in 2008, covers an area of about 50 Ha in the transition zone of GGPNP (administratively in Bogor district) with a business motto of “recreation and education aimed at providing a recreation place for different levels of society and improve life quality of surrounding communities while improving quality of the environment.
- In performing the tourism business, the company has undertaken the following activities:
 - ✓ To establish partnership with local communities and entrepreneurs in order to augment their income
 - ✓ To develop eco-tourism concepts and introduce eco-tourism programs consistent with the functions of CBR catchment area through planting of trees and crops suitable for increasing oxygen supply and reducing carbon emission

Telapak Community Association (NGO)

- The association operates in four localities and concerns with community development focusing on enhancement of economic vitality and political efficacy.
- The major activities implemented include:
 - ✓ To establish a network of rural community development through partnership with external parties such as GGPNP, village governments, Bogor Agricultural University, Public Health and Education Services, Board of Cooperatives and Organic Certification Agency
 - ✓ To facilitate strengthening of community institutions
 - ✓ To help strengthen business unit management by local communities

- ✓ To assist in development of land products and environmental services in accordance with the designated ecosystem function
- The important lessons learned include:
 - ✓ Village cooperatives are now more confident as a business entity through the recognition granted by external parties
 - ✓ In collaboration with a village cooperative it has developed a timber community and help market products of planted trees

PT Tenggara (Maleber Crop-estate Company)

- The company has established partnership at the local and national levels; the objectives of developing local partnership are:

- ✓ To develop and preserve a strong commitment to partnership between local people and company personnel
- ✓ To raise awareness on the need to address environmental issues encountered in rural development



Creative factory established as learning and training site of eco-art activities for younger generation (Photo by PT Tenggara)

- The objective of establishing a national partnership is to raise awareness on the need to address environment degradation problem occurring in different areas in a staged and consistent manner based on responsibility and role of each of the parties involved.
- The forms of partnership that have been implemented included:
 - ✓ Management of a nursery for endemic tree species of GGPNP in collaboration with the park authority and volunteers. Under this program: endemic tree species have been planted on the watershed area previously administered by Perhutani, the state-owned forestry company; seedlings have been distributed to local farmers for planting on their home yards inside the national park; assistance for local communities provided in the supply of fuel wood and timber products for consumption; and distribution of seedlings to farmers outside the park free of charge

- ✓ Establishment of a “center for green inhabitants“ as a forum for exchanging ideas, information, and experience among the parties and individuals concerned with environmental problems
- ✓ Development of simple environmental education and campaigning methods based on local knowledge and culture



Goats donated by the firm to local community in the context of partnership (Photo by PT Tenggara)

- ✓ Conduct of informal education and training on “eco-art production system” for environment-based livelihood development in the makings of different products such as batik printing and handicrafts involving community members and company personnel
- ✓ The company strongly recommends adoption of strong policy framework that facilitates partnership between GGPNP authority and local firms in the utilization of space on the buffer zone of CBR.

The regional workshop on “revitalizing the management of Cibodas Biosphere Reserve” that was attended by 43 participants made the following recommendations:

- International communities and organizations have accorded recognition of CBR as a nature conservation area; the proper management to help mitigate climate change issues and global warming as well as conserve biodiversity is truly a big challenge for national, regional, and local communities;
- Environment-based socio-economic development approach should be adopted in CBR management planning and operation for which programmes within and between the zones should be integrated and development efforts of the government and private sector synergized;
- Involvement of stakeholders in CBR development is the best indicator to use in assessing performance of CBR management;
- The efforts of both private companies and NGOs devoted to supporting CBR development are consistent with sustainable development concepts that they should be appreciated and referred to by the stakeholders in planning and implementation of development programs and projects;

- The partnership between PT Taman Wisata Matahari, PT Tenggara, Telapak Community Association, Green Radio, and local communities that proved successful in improving livelihood and raising awareness on environment conservation is worth replicating by other stakeholders interested in nature and biodiversity conservation;



Meeting of the CBR Coordination and Communication Forum (Photo by the project)

- The government at all levels have to consistently guide and assist stakeholders in the employment of environment-based best practices in pursuing socio-economic development objectives and its replication;
- A workshop of the kind is an effective format for dissemination of biosphere reserve development concepts that needs to be included in the work programme of the CBR Communication and Coordination Forum.

The meeting of CBR Coordination and Communication Forum that was held in Bandung on 24 January 2012 was attended by some 98 participants representing the official members of the Forum as listed in the West Java Governor's decree No. 522.51/Kep.157-BKPPN I/2010 of 21 January 2010 on the formation of Forum for Coordination and Communication on CBR Management. The meeting was addressed by the West Java Governor, and high rank government officials including Director General of Forest Protection and Nature Conservation of the MOF and Prof. Y. Purwanto of LIPI in his capacity as the Director of Indonesia-MAB Program. Based on the information delivered by the key speakers and comments by the participants during the discussion sessions, following are the conclusions and recommendations made by the meeting:

- CBR boundary must be clearly marked on the ground in order to avoid improper decision making in land utilization;
- CBR is expected to have its own distinctive features, e.g. Lembang as an organic agriculture site wherein youth organizations produce biogas from agricultural wastes;
- Tree planting is an effective means to prevent existence of bare lands and open mining activities;

- Economic development in the districts of Bogor, Cianjur, and Sukabumi should be based on nature conservation concepts, e.g. orchid cultivation and deer breeding;
- The communities residing around CBR area should be empowered in proper street vendor business;
- Community empowerment on rabbit cultivation should be equipped with skills for handling disease;
- Training on ornamental plant cultivation needs promoting because community members make living of the plants;
- To overcome the problem of garbage, sufficient garbage transport capacity must be made available and training on compost making skills conducted;
- Over-exploitation of drinking water in the CBR buffer zone is taking place; there is an urgent need to revise and improve the existing rules and procedures for licensing of natural water utilization;
- There is a need to disseminate the CBR programmes and activities using a publicly accessible website;
- The West Java provincial forest service is committed to fully support the CBR development and eager to see actual operations in the immediate years to come;
- The conservation of protected areas generates little direct benefits to local communities therefore, a policy initiative on incentive to conserve CBR should be introduced;
- All CBR stakeholders must be committed to support the reserve development;
- There should be restrictions on the use of upstream and downstream areas that must be complied with by all stakeholders;
- Management plans of CBR watershed have been developed but require synergizing with the activities of the CBR Forum in order to make use of its recommendations for CBR management;
- Government policy on the involvement of private sector in CBR management needs to clearly define the applicable zones for operations in order to avoid confusion and facilitate efficient business undertaking;
- Coincidentally, the district governments have implemented particular CBR development programs and activities;
- The existing government regulations on CBR development has to be complied with by the districts government policies on designation of land areas for buffer and transition zones; and

- A portion of CBR development budget needs to be allocated for outreaching activities at the provincial level.

The workshop on “synchronizing and synergizing CBR management programs “ is a component of Activity 1.1 that had been implemented and dealt with through stakeholder consultation and coordination process. This workshop was organized by GGPNP authority on 25 June 2012 in Bogor to discuss on village-based development programs that have been implemented for years but require dissemination and promotion with the assistance of the project.

The workshop was attended by some 48 people representing the Indonesia MAB, GGPNP, Husbandry Research Institution of MOA, Sarongge Farmers Group of Cianjur, Gunung Malang Farmers Group of Bogor, and different government authorities of West Java Province, Bogor district, Cianjur district, Sukabumi district, farmer groups, and village cooperatives on rabbit business. The objective of the workshop was to promote tree adoption and rabbit cultivation programmes to support nature conservation, food security, and community development; its specific targets were to improve implementation of the tree adoption program and to promote rabbit cultivation in the CBR buffer zone.

Table 1: Adopters of tree adoption program and the trees planted until the end of 2012

No.	Adopter	Year of planting	Number of trees	Area (Ha)	Resort
1	PDIP	Jan 2008	4000	10	BODOGOL
2	MAZARS Indonesia	June 2009	400	1	BODOGOL
3	GUNMA	Jan 2010	400	1	BODOGOL
4	MAZARS Perancis	April 2010	2000	5	BODOGOL
5	RECAPITAL	Nov 2010	800	2	BODOGOL
6	BII	Nov 2010	400	1	CIMANDE
7	BANK MANDIRI	Nov 2011	800	2	CIMANDE
8	ADIRA FINANCE	Dec 2010	1400	3.5	TAPOS
9	YPO	Feb 2011	800	2	CISARUA
10	GLOBAL JAYA INTERNATIONAL SCHOOL	July 2011	400	1	CISARUA
11	IWAN TUMEWU	Jan 2012	400	1	CISARUA
	TOTAL		11.800	29,5	

Source: ITTO Project TFL-PD 019/10 Rev. 2 (M), 2012.Draft Report of Activity 1.1

- The salient features of the “tree adoption program” are highlighted below:
 - ✓ The program aims to restore integrity and role of the national park as a pillar of human and other organisms survival;

- ✓ The program is collaboratively implemented by Gedepahala consortium of NGOs, Conservation International Indonesia (CII), GGPNP, and Halimun-Salak National Park;
- ✓ Execution of the program can be requested by at least twenty five adopting individuals, by an organizer representing individuals or companies or institutions, or directly by any companies or institutions;
- ✓ The tree species to be planted are endemic ones like rasamala, puspa, saninten, and suren;
- ✓ The trees planted are to be raised until three years of age by the local communities whom can grow seasonal plants between the trees; and
- ✓ The program is a unique approach for gaining economic value by local communities from the trees while also raising awareness on the opportunity to conserve nature side by side with economic activities.

- The salient features of the “rabbit cultivation business” are presented below:

- ✓ The program is component of the tree adoption program that was initiated by GGPNP in collaboration with Local NGOs to support CBR conservation programs through rural economic development activities;
- ✓ Rabbit cultivation business in the two model villages, i.e. Sarongge (Cianjur District) and Gunung Malang (Bogor District) is developing well and contributing significantly to livelihood of participating partners due to:



The kind of rabbit raised by villagers (Photo by Kopnakci)

- Culturally strong motivation of farmers to cultivate crops and rabbits
- Availability of local inputs especially rabbit seed and food
- Simple technologies and low capital investment with short gestation period
- Strong local markets

- ✓ The Gunung Malang rabbit farmers through its village cooperative have been successful in expanding rabbit cultivation to include rabbit breeding, rabbit food processing, utilization of wastes for fertilizer, eco-tourism, rabbit skin processing, and technical assistance to other farmers in rabbit business development;
- ✓ Improved livelihood of rabbit farmers has served as a strong incentive for local communities to refrain from forest encroachment and land occupation in the core area of CBR.



Utilization of rabbit parts for different products (Photo by Kopnakci)

The workshop on “synchronizing and synergizing CBR management programs” held on 25 June 2012 in Bogor, was attended by 48 people representing West Java provincial government, district governments of Bogor, Cianjur, and Sukabumi, farmers groups, community cooperatives, GGPNP, and Indonesia MAB Programme and made the following recommendations:

- i. CBR is a precious heritage of Indonesia that has to be collectively managed by its stakeholders in line with existing management plans;
- ii. Government policies on CBR development must be geared towards sustaining the reserve and improving welfare of the population living in and around the reserve which have to be adequately captured in management planning process;
- iii. The bio-village concept that concerns with people’s welfare and sustainable utilization of local natural resources including water, soil, and biodiversity is also a pro-poor, pro-job, pro-gender, pro-environment, and pro-growth postulate that needs to be promoted in support of CBR development and management through adoption of appropriate technology and supportive public policy;

- iv. Rabbit cultivation business can support food supply, conservation, and livelihood of involved communities; its adoption by farmers owning small capital that reside in the CBR buffer zone needs to be strongly promoted
- v. The tree adoption program has been successful in increasing forest cover and improving livelihood and reducing the incidence of forest encroachment in the CBR area;
- vi. The tree adoption program has been successful in empowering farmers of Sarongge village in Cianjur district to undertake rabbit cultivation business at profit;
- vii. Local institution of rabbit cultivation needs to be strengthened through formulation of rabbit raisers cooperatives and expansion of rabbit business to also include an integrated farming business not only rabbit raising;
- viii. The district governments need to adopt policy initiatives that support eco-business development by local communities, e.g. tree planting under the tree adoption program and rabbit cultivation business; and
- ix. The tree adoption and rabbit cultivation programs proved able to improve income of the local communities, reduce forest encroachment and land occupation on CBR zones, and increase forest cover through planting thus need to be supported and promoted by the government.



Meeting on Coordination of CBR development program (Photos by the project)

The meeting on coordination of CBR development programs that was held on 29-31 October in Cipanas of Cianjur district was attended by 50 participants representing the district governments of Bogor, Cianjur, and Sukabumi, GGNP, NGOs, ITTO project key personnel and consultants, and farmers groups. The primary objectives of the meeting were to enhance commitment of the district governments to CBR development and synergize development programs on CBR and district territories.

The expected outputs of the meeting were:

- Participants awareness of CBR;
- Improved understanding on nature conservation and sustainable development concepts;
- Enhanced commitment to CBR development; and
- Development of stakeholders action plans initiated.

The meeting made the following recommendations:

- Dissemination of information on CBR development should reach different groups of stakeholders including the government at different levels, communities, NGOs, private sector, mass media, and academes;
- CBR development should have a more powerful higher level legal framework than the West Java provincial government policy initiative;
- Communication and coordination among CBR stakeholders needs to be strengthened over time to ensure harmony of work relations;
- The village development models under implementation needs to be continuously monitored and improved for their proper replication; and
- CBR management needs to take into account the dynamic nature of attitude of the people living in the buffer and transition zones of the reserve.



Involving local communities in PRA (Photos by the project)

3.2. Findings of Activity 1.2

The workshop on “development of the village models that are environmentally friendly to support CBR management” was organized with the following objectives and expected outputs:

- The objectives of the workshops were:
 - ✓ To develop priority programmes on CBR management based on aspiration of the local stakeholders;
 - ✓ To prepare a pilot project of prioritized CBR development programmes that is “applicable” in a participatory manner; and
 - ✓ To agree on institutional setting of multi-stakeholders and source of funding to support CBR management.
- The expected outputs were:
 - ✓ Consensus of stakeholders developed on CBR development programmes in the districts of Bogor, Cianjur, and Sukabumi;
 - ✓ Work plans of the respective stakeholders involved in CBR management developed, including local governments, private sector and communities; and
 - ✓ Committed teamwork for implementation of activities on the village models established.
- Participants of the workshops were representatives of the respective district governments, private sector, local communities, NGOs, GGPNP authority, and ITTO project personnel.
- Conduct and achievements of the workshops are summarized below:

The Bogor workshop

- Held on 15-16 May 2012 at Pasir Buncir village in Bogor district.
- There were 52 participants representing the district governments of Bogor, Cianjur, and Sukabumi, private firms interested in nature conservation, local NGOs and communities, GGPNP personnel, project consultants, and counterparts.
- A visit was paid to Pasir Buncir village to observe activities of the villagers on the making of environmentally friendly products from plastic wastes and traditional bricks from local clay soil.
- Achievements of the workshop included:

- ✓ Participants were able to understand results of PRA at the model villages and use them for developing a relevant action plan;
 - ✓ Participants gained the skills for problem recognition and analysis at the village level; and
 - ✓ Priority actions identified were plastic waste processing, conversion of organic wastes into compost, home industry development, drinking water supply, village cooperative development, village institutional strengthening, and community forest as well as medicinal plants development.
- The recommendations made:
- ✓ It is urgently needed to improve livelihood of the villagers as about 50 percent of them are farmers dependent on occupied state lands for living;
 - ✓ Community groups should actively communicate with concerned sub-district government in identifying livelihood activities for implementation; and
 - ✓ To ensure applicability and support of local communities and Bogor district government, CBR development programmes should be planned in close consultation with the local communities through district development planning body.

The Cianjur workshop

- Held on 28-29 March 2012 at Ciputri village in Cianjur district;
- Attended by 47 participants representing district governments of Cianjur, Bogor, and Sukabumi, local private firms and NGOs interested in nature conservation, local communities, GGPNP, ITTO project personnel as well as project consultant and counterparts.
- A visit was paid to Ciputri village to observe on the activities implemented by the villagers relating to wastes utilization, village eco-tourism development, village cooperative management and MPTS nursery operations.
- Achievements of the workshop included:
 - ✓ The participants were able to comprehend results of the PRA at the model village;
 - ✓ The participants were taught on techniques for problem analysis and for identification of priority actions based on the results of the PRA;
 - ✓ Priority activities were identified, which included: management of village cooperative, strengthening of local institutions, development of village eco-tourism based on available local resources, establishment of nursery

- for perennial crops and planting trials, development of village infrastructure, and integrated processing of village wastes;
- ✓ Responsible parties for implementation of prioritized actions were identified and endorsed by the participants.
- The recommendations made:
 - ✓ Accidentally, the government of Cianjur district has so far implemented some activities that consistent with the various CBR development programs;
 - ✓ In order to develop Ciputri village as a conservation model and tourist destination, the village needs assistance in the form of planning, physical infrastructure development, institutional strengthening and revolving funds for production of organic vegetables;
 - ✓ Capacity of local communities in the production of MPTS seedlings and planting needs to be enhanced by the Cianjur district government in the context of CBR development through provision of technical training and capital funds in view of generating sustainable income from CBR buffer and transition zones
 - ✓ The villagers are in need of assistance in wastes utilization in the forms of technical training, awareness raising, and production facilities in view of improving environment quality and livelihood of the local communities

The Sukabumi workshop

- Held on 25-26 April 2012 at Langensari village in Sukabumi district.
- Attended by 46 participants representing the district governments of Sukabumi, Bogor, and Cianjur, local private firms and NGOs, local farmers, GGPNP personnel, project consultant and counterparts.
- A visit was paid to Langensari village to see the activities implemented by farmers on cow milk production process, absorption well, and plantation development.
- Achievements of the workshop included:
 - ✓ Ability of the participants to comprehend results of the PRA improved;
 - ✓ Capacity of the participants to identify and analyze problems on village development in a participatory manner enhanced
 - ✓ The participants gained skills for identifying priority actions on village development
 - ✓ Responsible parties for the implementation of the actions identified and endorsed by the participants

- The recommendations made by the workshop include:
 - ✓ The government of Sukabumi district needs to assist local communities in various forms, in the context of CBR development including training on the utilization of cow dung for biogas and fertilizer.
 - ✓ Conservation of water resource at Batukarut has to be supported by drinking water company through CSR programs involving local communities
 - ✓ The villagers need to be empowered in forest plantation development to optimize land productivity and increase income through agro-forestry activities

Another component of Activity 1.2 is to assist in village development planning through training on techniques needed for the formulation of mid-term development plan through demonstration at three model villages, namely: Pasir Buncir Village in Bogor district, Ciputri Village in Cianjur district, and Langensari Village in Sukabumi district. Training on the mid-term planning was needed to guide stakeholders to carry out adequate planning process with the objectives to:

- Show case the function and role of a mid-term rural development plan
- Demonstrate on the planning process based on local needs and conditions
- Direct on how to define the objectives, policy, and strategy for village development, and
- Harmonize community development plans with CBR development programmes and activities involving stakeholders consistent with availability of village resources

The expected outputs of this training component were:

- A mid-term development plan available for each village model
- Increased ownership of the plan and enhanced commitment to its implementation
- Reduced livelihood gap between village communities arising from lack of planning capacity
- Increased contribution of community members to local economy
- Strengthened cohesion between community members and groups, and
- Enhanced capacity of local governments in providing support to CBR management through rural development

The training comprised three stages:

- Preparatory stage, which consisted of: consultation with villagers on the exercise and formation of team of planners
- Implementation stage which included village profiling; identification of conflicts and available resources; defining vision, mission, and priorities; drafting of mid-term plan; dissemination and discussion on the draft; and finalizing the draft and obtaining authentic commitment to finalized mid-term plan
- Dissemination of the mid-term plan through various means such as community meetings, circular letters, announcement at village hall and formal endorsement of the mid-term by the village government.

Each training session was attended by some 15 participants representing village government, cultural and religious community leaders, youths, and farmers groups. Achievements of the training include a final mid-term development plan for each village model and formal adoption of the mid-term plan as a legitimate guiding document for village development operations through its endorsement as a village regulation (PerDes).

The last component of Activity 1.2 that had been completed is the conduct of three FGDs on CBR development programmes and actions; the FGDs were consecutively held on 18-20 December 2012 at Cibinong in Bogor district, at Cipanas in Cianjur district, and at Selabintana in Sukabumi district.

- The objectives of the FGDs were:
 - ✓ To evaluate progress in implementation of the ITTO project in three districts where the CBR area is located;
 - ✓ To share lessons learned from implementation of the ITTO project and programmes of the district governments relating to CBR development; and
 - ✓ To provide recommendations for CBR development planning.
- The expected output of each FGD was inputs to CBR development planning by each district government collected, compiled, and submitted to the ITTO project management.
- The participants of the FGDs were representatives of GGPNP, authorities of district governments of Bogor, Cianjur, and Sukabumi, private firms, NGOs, mass media, and academes.

Conduct of the FGDs, achievements, and the recommendations made are highlighted:

The Bogor FGD

- Organized on 18 December 2012 at Cibinong in Bogor district with 27 participants.
- Among the important inputs provided for CBR development planning were:
 - ✓ Education on environment conservation should be given priority in CBR development planning in view of raising awareness and involving students in nature conservation programmes and activities;
 - ✓ Women need to be involved in CBR development through engagement in appropriate activities for which capacity building is essential;
 - ✓ CBR development should be supported not only by the West Java provincial government but also by the Jakarta City government as the downstream area of CBR;
 - ✓ A strategic plan of CBR development should cover the period until 2025 while the period covered by the mid-term plan should be properly defined;
 - ✓ Formulation of village development plan should be encouraged and used by district planning agency in development planning;
 - ✓ District development plans have to be taken into account in the CBR development planning process;
 - ✓ Activities on nature conservation are best to be implemented on the CBR buffer zone; and
 - ✓ The role of CBR Forum in planning and monitoring of CBR development process needs to be enhanced through better communication and coordination with the districts government.
- The main recommendations made by the FGD:
 - ✓ Bogor district government needs to formulate a midterm development plan based on the mid-term village development plans that have been developed using PRA findings thus consistent with local conditions;
 - ✓ In the planning process, Bogor district government needs to take into account the management objectives of CBR development; and
 - ✓ In effect, Bogor district development plan should adopt bottom-up and top-down approaches.

The Cianjur FGD

- Organized on 19 December 2012 at Cipanas in Cianjur district with 34 participants.
- Among the inputs provided for CBR development planning were:

- ✓ Development of village cooperatives should be based on self-sufficiency principle of financing, not to rely on district government funding;
- ✓ Cibodas Botanical Garden is an important source of information on environment conservation management that maybe useful for CBR management planning;
- ✓ Commitment of stakeholders is among the requisites for successful CBR management in achieving its planned objectives;
- ✓ Ciputri model village should be replicated and used as a source of information for CBR development planning;
- ✓ Replication of the model village to other areas should be prioritized on villages in the buffer zone;
- ✓ Lack of communication between sectors within Cianjur district government needs to be overcome through periodical coordination meetings;
- ✓ Boundaries of the buffer and transition zones have to be well marked on the ground and formal CBR maps to be widely disseminated;
- ✓ Eco-friendly agriculture activities should be given priority in CBR development plans in view of providing incentives for local communities to support CBR development;
- ✓ Development of environment-based agriculture should be supported by execution of a sound extension program for which professionals and required inputs must be made available;
- ✓ CBR development objectives and strategies must be widely disseminated over time;
- ✓ Synergy between stakeholders is to be developed through communication and coordination process; and
- ✓ Strengthened coordination between Cianjur district planning agency and CBR authority is essential for the development of a sound CBR management plan.

The Sukabumi FGD

- Organized on 20 December 2012 at Selabintana in Sukabumi district with 32 participants.
- Among the important inputs to CBR development planning discussed were:
 - ✓ Licensing procedures and requirements for land use rights should be more stringent and their application to be monitored by involving NGOs and village authorities;

- ✓ Promotion of ecotourism must be supported through improved infrastructure and facilities;
- ✓ Outreaching program needs strengthening in order to raise awareness on the values of nature conservation;
- ✓ To facilitate development of environment-based settlements, there is a need to define criteria and indicators for such endeavor;
- ✓ Religious leaders need to be involved in the outreaching program;
- ✓ Management objectives on individual CBR zones need to be clearly defined;
- ✓ Experienced NGOs in environment-based agriculture development should be involved in transferring appropriate technologies to villagers for increasing land productivity;
- ✓ Marketing of cash crops produced by farmers should not be hampered by administrative requirements imposed by local governments;
- ✓ In spatial planning at district level, allocation of space for agriculture must be given priority; and
- ✓ Private sector should take greater role in rural development in the buffer zone through CSR funding.

3.3. Findings of Activity 1.3

Under Activity 1.3, a series of training workshop on improving understanding on values and capacity to support CBR development were carried out. The training workshops dealt with the utilization of different forms of waste, especially plastic wastes, for different products (such as lanterns, handbags) and biogas. The workshops were conducted at the model villages located each in Bogor, Cianjur, and Sukabumi districts respectively.

The workshops were organized as follows:

- On 2-4 July 2012 at Pasir Buncir village in Bogor district with 29 participants dominated by farmers.
- On 5-7 July at Ciputri village in Cianjur district with 30 participants mostly of farmers.
- On 16-18 July 2012 at Sarongge Village in Sukabumi district attended by 29 participants, mostly farmers.

Achievements and recommendations of the workshops are summarized in the following paragraphs:



The making of handicrafts from plastic wastes (Photos by the project)

The Bogor training workshop

- Participants were trained on waste identification, both organic and in-organic wastes as well as solid, liquid, and gas wastes.
- Participants were taught on how to differentiate solid wastes into: (i) inorganic, e.g. metals, glasses, plastics; or organic wastes, e.g. food leftovers, wrapping debris, etc. (ii) flammable wastes, e.g. papers, plastics, cottons, etc.; or inflammable wastes, e.g. steel, glasses, etc.; and (iii) perishable wastes, e.g. food leftovers, meat cuts; or durable wastes, e.g. plastics, and glasses.
- Techniques for making different products, i.e. lanterns, ornaments (fish or butterfly-shaped) were demonstrated and participants left to practice the techniques by themselves.
- Techniques for producing organic fertilizer using organic materials, such as: leaves, rice stalks, imperata, plants, and animal feces as the raw materials demonstrated;
- The techniques demonstrated were then practiced by the participants and the results were satisfactory
- The workshop made the following recommendations:
 - ✓ To form farmer groups and legalize their existence and operation;
 - ✓ To include activities on the utilization of garbage and production of organic fertilizer in mid-term village action plan.

The Cianjur training workshop

- The participants were trained on village eco-tourism development by introducing the essential elements of ecotourism including human-nature relationship, enabling conditions for eco-tourism development, tree planting for environment re-greening, the role of tour guides, identification and utilization of village resources, etc.
- The workshop made the following recommendations:
 - ✓ There is a need to form and legalize farmer groups as a local business entity
 - ✓ To include ecotourism development in the village midterm action plan
 - ✓ To perform capacity building in ecotourism development



Training of local communities on village eco-tourism development (Photos by the project)

The Sukabumi Training Workshop

- The participants were trained on the techniques for producing different products from different forms of garbage using locally available simple tools.
- The participants were asked to apply techniques for making four kinds of ornaments, i.e. lantern, fish-shaped ornament, butterfly-shaped ornament, and bags, which were all made of recycled materials; the performance was also satisfactory.
- The participants were also trained on techniques for producing biogas from cow dung.
- When the participants were asked to apply the techniques, they performed well thus able to adopt the technology.
- The recommendations made by the workshops include:
 - ✓ To form farmer groups and legalize their operation as a village business entity;
 - ✓ To include garbage utilization and biogas production as priority activities in the village midterm action plan for development;
 - ✓ To continuously implement capacity-building program focusing on plastic waste utilization and biogas production.



Training of local communities on the conversion of cow dung into biogas (Photos by the project)

4. ANALYSIS OF FINDINGS

4.1. Findings of the activities

Output 1 was defined as “stakeholders commitment to effective CBR management increased”; this output would be delivered through implementation of the pertinent activities namely:

- To conduct a series of coordination and consultation meeting amongst the key stakeholders on the effective management of CBR including enhancement of law enforcement;
- To develop programs and activities related to CBR to be facilitated by the CBR communication forum; and
- To carry out a series of training workshop for stakeholders in improving the capacity/ understanding as regards the importance of CBR conservation.

Achievement of the output is to be measured using three predefined indicators as listed below:

- Three series of consultation/dialogue held and participated by 75% of the key stakeholders
- One package of programme and activities developed
- Three series of training carried out attended by 75% of interest groups in 3 districts of West Java

Commitment of stakeholders is basically a promise or pledge of the stakeholders to do something; in this case, to implement an effective management of CBR. Has this commitment been materialized after implementing the pertinent activities? If so, to what degree this commitment has materialized? Can one assume that participation of 75% of key stakeholders, formulated programmes and activities, and attendance of a series of training by 75% of interest groups in three districts of West Java province will be able to create commitment of stakeholders to an effective management of CBR?

Obviously, the first indicator defined is not easy to measure; to allow measuring of the indicator it required to define clearly the key stakeholders in terms of number by individual or group. By so doing, it would be possible to compare the key stakeholders taking part in the consultation process with existing key stakeholders thus to calculate the percentage or degree of participation.

The organizer of the consultation/dialogue process did report on the attendants of individual meetings and workshops organized under Activity 1.1. Available lists of

attendant indicate that the participants of the consultative meetings and workshops were representatives of the provincial government and three district governments, private firms, NGOs and local communities within the three districts where CBR area is located as well as academes and mass media, GGPNP, and Indonesia-MAB Programme. By common sense, the key stakeholders of the CBR are: GGPNP authority; West Java Provincial government; Bogor, Cianjur, and Sukabumi district governments, private firms and local communities doing activities on the CBR area. By comparing the stakeholders groups taking part in the consultation processes with the aforementioned stakeholder groups, it is reasonable to conclude that, by group, 75% percent of the key stakeholders have participated in the consultation processes.

Under Activity 1.1, two workshops and two meetings have been implemented with the primary objectives to disseminate information on CBR development and management as well as document stakeholders characteristics, problems, needs, and interests relating to CBR development. The organizers' reports on the occasions indicate that these objectives have been achieved. Since the occasions were attended by at least 75 percent of the key stakeholders, it can be concluded that the first indicator has been satisfied and that Activity 1.1 has contributed to achieving the defined output.

The expected outcome of Activity 1.2 was formulated programmes and activities applicable to support an effective management of CBR. Through the workshops on "development of the village models of environment-based rural development" consensus of stakeholders on programmes and activities was developed; work plans of the respective stakeholders for supporting CBR management were formulated while the parties responsible for the implementation of the work plans have been identified. Through the training sessions on the formulation of mid-term development plan, the village authorities and farmers have been equipped with the skills needed for identifying and solving problems at the village level, defining priority programmes and activities on environment-based village development, formulating a midterm development plan, and legitimizing the development plan. Through the FGDs, interest and aspiration of key stakeholders have been documented and submitted to GGPNP authority for further use in the development of CBR management plans.

The work plans of the key stakeholders, especially at the district government level have been developed through a participatory process taking environment conservation as well as livelihood of local communities into account. In this manner, the proposed programmes and activities of the district governments should be supported by local communities, NGOs and private firms. More importantly, the consultation and

training processes have generated, to some extent, commitment of the key stakeholders to support nature conservation consistent with the primary goal of CBR management. In other words, the processes have contributed to creating commitment of the stakeholders to support CBR management operations.

Activity 1.3 dealt with implementation of livelihood activities. Environment-based activities in different forms were identified and demonstrated. The activities chosen were those ones that farmers are familiar with but unable to perform effectively due to the lack of needed skills. The activities were also chosen based on availability of the local material inputs, application of simple technologies, and affordability of capital requirement. In essence, the activity was devoted to improving livelihood of local communities through implementation of environment-based sustainable income generating activities for which a practical demonstration is inevitable; among the activities demonstrated under the activity were utilization of garbage for different products including ornaments, biogas, and fertilizers.

The basic notion adopted in the execution of Activity 1.3 is that conservation initiative shall be performed hand in hand with poverty alleviation; that is to say that poverty alleviation is an essential component of any nature conservation initiative. The opportunity cost of conservation is too expensive for the poor communities to afford because a conservation initiative entails foregone income. It is therefore unrealistic to expect poor communities to support on conservation initiative without providing any livelihood incentive to compensate for foregone income.

Activity 1.3 has equipped local communities with the necessary skills for implementing sustainable environment-based income generating activities using available local resources. Such activities that have been demonstrated at three model villages are replicable to other localities with adjustments, as necessary, to local circumstances. Through such process, it was expected that poor local communities would be able to improve livelihood within their village without having to encroach existing forests or occupy unproductive forestlands. Willingness of local communities to perform livelihood activities outside the CBR core area is a form of commitment to implement an effective CBR management noting that poor local communities have substantial influence on sustainable management of CBR. In this respect, it can be concluded that execution of Activity 1.3 has contributed to delivery of defined output.

It is noted that participants of the livelihood training were predominantly farmers and local NGOs reaching well above 80 percent of the whole participants. This is

understandable because the primary concern of the activity was training on livelihood activities. On the other hand, the third indicator of achievement was defined as “a series of training carried out attended by 75% of interest groups in 3 districts of West Java”. The problem with this definition is on “interest groups” which can be understood in different ways. When the term is applied to livelihood activities, indeed the interest groups are mainly farmers; but in the context of CBR management, “interest groups” are surely not only farmers.

4.2. Achievement of the Output

To assess properly achievement of Output 1, outcomes of pertaining activities have to be matched with the defined output indicators. Defined indicators of Output 1 are presented in Table 2.

A series of stakeholder consultation process comprising two meetings and two workshops have been organized and attended by representatives of the key stakeholders, i.e. West Java provincial government; Bogor, Cianjur, and Sukabumi district governments, local communities, local private firms and NGOs noting that the groups of stakeholder attended the consultation processes represented well the whole groups of stakeholder. This attendance was verified using the lists of attendant, meeting/workshops report, field visit reports and associated pictures. Therefore, the first indicator of the output has been fully met.

Priority programmes and activities of the three district governments have been developed through a participatory process to be used as appropriate in the development of CBR management plans. This outcome has been verified using the relevant discussion reports and associated documentations. Consequently, it is reasonable to conclude that the second indicator of Output 1 has been satisfied.

Table 2: Predefined indicators of Output 1

Output	Indicators	Means of verification
Output 1. Stakeholders commitment to the effective Cibodas biosphere reserve management enhanced	<p>a) Three series of consultation/dialogue held and participated by 75 % of key stakeholders</p> <p>b) One package of programmes and activities developed</p> <p>c) Three series of training carried out and attended by 75 % of interest groups in 3 districts of West Java</p>	<p>List of participating key stakeholders; meeting reports; field visits; documentations</p> <p>Discussion reports; documentations</p> <p>Training reports; list of participating key stakeholders</p>

A series of training workshop on livelihood activities have been conducted in the three districts where CBR area is located. The workshops were attended by more than 75 percent of interest groups under the assumption that “interest groups” refer to only those parties interested in livelihood activities. Attendance of the workshops was verified using the lists of attendant, and training reports. Hence, the third indicator of Output 1 can be assumed as already fulfilled.

Above assessment of individual indicators of Output 1 points to the fact that all defined indicators have been satisfied thus the output has been delivered through the full execution of planned activities. In other words, commitment of stakeholders to support CBR management has been enhanced. The exact degree of such commitment is, however, not measurable at this stage. The enhanced commitment is evident by the collective declaration document endorsed by the participants of the meeting held on 17-18 December 2013 at Puncak in Cianjur district; the commitments made by the stakeholders are:

- i. To support application of Integrated Strategic Management Plan of CBR for achieving the objectives of biodiversity conservation and sustainable development involving local communities based on scientifically sound methodologies;
- ii. To use the CBR strategic management plan as a reference in the formulation of regional/local development plans;
- iii. To agree on the formulation of a task force of CBR integrated management in each of the districts involved;
- iv. To accede on the use of a simple system by the task force in the monitoring and evaluation of the security of CBR area;
- v. The CBR management task force shall be assisted in performing its function and its existence is legitimized by the district government;
- vi. The CBR management task force in each district will follow up the activities that have been initiated under the ITTO project; and
- vii. The villages located within the CBR buffer and transition zones are the essential component of CBR management.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Following are the conclusions drawn from the implementation of three planned activities on Output 1:

- i. Under Activity 1.1, four stakeholder meetings and workshops were organized with 239 participants in total representing the key stakeholders at different levels with the main objectives to learn lessons from the private sector on implementation of activities relating to environment-based sustainable development, discuss on crucial issues relating CBR development, collect and disseminate information on implementation of activities relating eco-agriculture, and synergize programmes and activities relating CBR development at the village, district, and central levels.
- ii. Under Activity 1.2, a series of workshop on development of village models, a meeting on CBR development programmes and three focus group discussions have been implemented with 283 participants in total representing the key stakeholders at different levels with the main objectives to develop village models on environment-based sustainable management, assist village leaders and local communities in the formulation of mid-term village development plan, and to identify and discuss on priority programmes and activities of the district governments that are relevant to support CBR development and management.
- iii. Under Activity 1.3, three series of training workshop on community livelihood activities were implemented with 88 participants in total, predominantly comprising farmers and local NGOs with the main objectives to equip farmers with the skills needed to implement sustainable livelihood activities that are environmentally friendly using simple technologies and available local inputs.
- iv. Implementation processes as well as outcomes of individual activities have been adequately documented in the respective technical reports of activities and sub-activities; the technical reports indicate that planned objectives of the activities have been satisfactorily achieved.
- v. The predefined indicators of the output have been fully satisfied through the full implementation of all three activities pertaining to the output. Therefore, it is justifiable to declare that Output 1” stakeholders commitment to the effective Cibodas biosphere reserve management enhanced” has been fully delivered; in other words, commitment of the stakeholders to support the

effective management of Cibodas Biosphere Reserve is perceived has been increased by the ITTO project.

- vi. The stakeholders of CBR should now be fully aware of the potential socio-economic benefits of the reserve accruable to them over time through implementation of environment-based development activities on the buffer and transition zones of the reserve and their participation in CBR management operations, as appropriate.

5.2. Recommendations

- i. In order to preserve and enhance the expressed commitment of stakeholders to CBR management and development, it is strongly advisable for the CBR Forum to periodically organize consultative meetings of stakeholders to discuss on the progress in implementation of programmes and activities on CBR management and arising issues;
- ii. Each of the district governments is strongly recommended to form a Task Force on CBR integrated management with the main tasks to harmonize district development plan with CBR management plan and to monitor implementation of such plans in view of harmonizing and revitalizing development plans at the different levels;
- iii. The private firms operating in the CBR buffer and transition zones need to play greater role in CBR management through their respective CSR programmes by providing technical and financial assistance to local communities;
- iv. The GGPNP authority and district governments are strongly advisable to increase involvement of local NGOs in the implementation of awareness raising and local capacity building programmes, taking advantages of their accumulated experience in rural and environmental development and familiarity with rural conditions;
- v. Experience of the model villages in performing environment-based sustainable development needs to be well documented and widely disseminated to facilitate replication of the model to other localities;
- vi. The appropriate technologies for the utilization of garbage and wastes need to be continuously refined and widely disseminated to facilitate adoption by farmers of other villages;
- vii. The local communities are now aware of the potential economic gain from the environment-based livelihood activities on CBR buffer and transition zones and also of the ecological values of the CBR core area that the GGPNP

authority and district governments alike should strive to preserving and strengthening this awareness by consistently implementing capacity building and livelihood programmes.

6. PRACTICAL IMPLICATIONS OF DELIVERED OUTPUT

The following are among the practical implications of results and outcomes of the activities executed as well as delivery of Output 1:

- i. As the key stakeholders have already declared commitment to support CBR development and management; enhancing such commitment is truly a big challenge for the CBR Forum, GGPNP authority and the district governments;
- ii. Local capacity building and livelihood programmes are among the programmes that have to be given priority by the GGPNP and district governments for funding and implementation in order to preserve the commitment that has been granted by the local communities to support CBR development and management;
- iii. Continued assistance in implementation of sustainable livelihood activities by the GGPNP authority, district governments, and private firms is a strong incentive for local communities to support CBR development and management and stay out of the CBR core area, thus should never be overlooked; and
- iv. To apply the appropriate techniques for the garbage utilization and eco-tourism development, local communities at certain localities may need financial assistance in the form of seed capital or revolving funds that concerned authorities and private firms should strive to fulfill, as appropriate.

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