

**EX-POST EVALUATION**  
**ITTO PROJECT PD15/96 Rev.2 (M,I)**

**REPORT**

***UTILIZATION, COLLECTION AND TRADE OF  
TROPICAL NON-WOOD FOREST PRODUCTS  
IN THE PHILIPPINES***

*Submitted to:*

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## **I: EXECUTIVE SUMMARY**

### **I-1 Background**

ITTO Project PD 15/96 REV.3 (M,I), “Utilization, collection and trade of tropical non-wood forest products in the Philippines”, was awarded to and implemented by the Forest Products Research and Development Institute (FPRDI), Department of Science and Technology, Republic of the Philippines.

The general objectives of the Project were to provide essential information on and technologies relevant to the utilization, collection and trade of important non-wood forest products in the Philippines to promote the income and livelihood of local forest communities, and to promote sustainable collection and utilisation of NWFP, as an integral component of sustainable forest management.

The project had two specific objectives:

1. survey pilot areas & determine approximate volume of NWFPs and number of upland/forest dwellers engaged in collection, processing & sale of NWFPs; assess regeneration pattern & cycle and recommend sustained yield collection and observation measures for sustainable supply;
2. determine needs & problems of upland/ forest dwellers in collection, processing & storage of NWFP; recommend and introduce improved methods for collection, processing & storage; conduct market research on collection, utilisation and trade, and provide market information.

These objectives were to be achieved by implementing the activities identified in the project’s specific objectives, which were to lead to two primary outputs:

1. the identification of co-operators and pilot areas, and for each of these: estimation of the number of forest dwellers engaged in collection, utilization and sale of non-wood products and the approximate volume of non-wood products; an assessment of the regeneration patterns and their cycle; recommendations on sustained-yield collection practices to forest dwellers;

2. the identification of the needs and problems of forest dwellers; recommendations and introduction of workable and improved methods of collection, processing and storage of non-wood forest products; and provision of market research and market information to forest dwellers at each project site.

Project activities were implemented through five studies, the last of which was added as an approved amendment to the original project:

1. resource survey and inventory of important NWFP and assessment of natural regeneration;
2. assessment of collection, processing and trade of NWFP in local communities;
3. dissemination and demonstration of chemical treatment of NWFP in upland forest communities;
4. market research and market information on NWFP;
5. case studies of NWFP marketing.

The project was implemented from 1 October 1997, with an intended duration of 36 months; its actual duration was extended by 10 months, and the project concluded on 31 August 2001. ITTO funding awarded for the project comprised US \$383,493 (\$210, 895 - Government of Japan; \$172, 598 – Government of Switzerland). The Government of the Philippines contributed US \$382,800 (in cash and in kind) for a total project budget of US \$766,293.

A report on the completed project was presented to the ITTO Committee on Forest Industry at its Thirtieth Session, Bali, 13-18 May 2002.

## **I-2 Evaluation Purpose**

The ITTO Forest Industry Committee, at its Thirtieth Session in May 2002, decided that an ex-post evaluation of PD 15/96 Rev.2 (M,I) should be carried out to establish how well the project served its intended purposes and to draw up conclusions for future actions.

### **I-3 Scope of the Evaluation**

The following Terms of Reference were specified for the evaluation:

1. The ex-post evaluation work shall be conducted in such way as to allow answering the questions identified in the ex-post evaluation checklist provided in Part B, Annex A of the ITTO Manual for Project Monitoring, Review and Evaluation (1999), which primarily address a project's contribution to the achievement of its general and specific objectives and determine whether these objectives have been initially met and established.
2. In general, the consultant shall analyze and assess overall implementation efficiency, including the technical, financial and managerial aspects. The work shall assess unexpected effects and impacts, either harmful or beneficial, and present the reasons for their occurrence.
3. Taking into account the results of the evaluation, make an overall assessment of the project's relative success or failure; summarize the key lessons learnt; and identify any issues or problems which should be taken into account in designing and implementing similar NWFP projects in future.
4. Additionally, the following specific assessments shall be made:
  - (i) The project's executing agency (FPRDI) has indicated that the direct beneficiaries of the project were the forest dwellers dependent on NWFP and project activities have noted a high degree of participation of the forest dwellers in the implementation of the project. The consultant shall assess the degree of local involvement and determine the project's relevance in meeting the needs of the local forest communities.
  - (ii) The consultant shall also examine and determine the validity of ecological observation on important NWFP as noted in the project reports describing the

resource surveys and inventories of selected NWFP and the assessment of their natural regeneration.

- (iii) The consultant shall assess the validity of project results which indicate that the collection of NWFP, if done on a sustainable and non-destructive way, pose a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest.
- (iv) The consultant shall also contact the project's international marketing consultant and verify the problems associated with the marketing of the selected NWFP.
- (v) To evaluate the impact and relevance of the project; particularly its impact on the market aspects of non-timber forest products.
- (vi) Determine the effectiveness of the technology transfer to the upland dwellers and to assess the overall post-project situation.
- (vii) Recommend follow-up actions in order to enhance utilization of project developed technologies and other results.

The consultant conducted the evaluation to meet the specified Terms of Reference through:

- review of project reports and relevant literature;
- a site visit to the implementing agency (14-20 March 2003), to facilitate consultation with agency and project staff;
- consultation with project cooperators.

#### **I-4 Conclusions of the Evaluation**

##### **I-4.1 Achievement of general and specific project objectives**

In terms of its general objectives, the project has:

- provided essential information on and technologies relevant to the utilization, collection and trade of a number important NWFP in the Philippines. Project outputs have the capacity to enhance the income and livelihood of local forest communities, and to promote sustainable collection and utilisation of NWFP, as an integral component of sustainable forest management, as envisaged in the project proposal;

- offered directions for subsequent policy and project interventions to enhance the sustainability of NWFP utilization, collection and trade in the Philippines, and the economic returns to local communities from NWFP enterprises.

These are significant achievements for which the project team deserve commendation.

In terms of its specific objectives, the project has:

- provided sample plot data describing NWFP occurrence (bamboo – *Bambusa*, *Dendrocalamus*, *Gigantochloa* & *Schizostachyum* spp; erect palms – *Arenga*, *Corypha* & *Livistona* spp; pandans – *Freycinetia* & *Pandanus* spp; rattans – *Calamus* & *Daemonorops* spp; other forest vines – various spp) and information about regeneration of these plant groups based on field observation and literature review (objective 1.1). These data are largely of descriptive value;
- provided largely qualitative data about the numbers of individuals engaged in various stages of some NWFP collection, utilization and trade at the study sites (objective 1.2), and for various products elsewhere. These data (for enterprises based on the species listed above, honey, and *Agathis* and *Canarium* resins), are largely of indicative value;
- provided an overview of the challenges faced by those engaged in the collection, utilisation and trade of important NWFP in the study areas (those listed above, and some other fibres, grasses and leaves; objective 2.1), and at some other locations), and the associated challenges to sustainability;
- recommended and introduced improved methods and technologies for collection, processing and storage of a number of NWFP (objective 2.2) – variously, *Agathis* and *Canarium* resins; bamboo, rattan, palm, twig and vine stems; *Wikstroemia* bark. The adoption of these methods and technologies will have immediate positive impacts, and wider impact through the adoption of project technologies as the basis for two relevant Philippines National Standards;
- investigated trade and market networks and structures, associated pricing structures (value chains), and possible strategies for enhancing returns to rural communities from NWFP enterprises (objective 2.3). The information from these



studies is principally of value in designing subsequent policy and project interventions.

#### I-4.2 Assessment of overall implementation efficiency

The project has been implemented and managed efficiently, allowing for unforeseen factors outside the project's control. Collaborations with research partners at the four study sites were generally effective, with one exception outside the project's control, as were collaborations with those involved in NWFP trade. The extension to and expansion of project activities, by 10 months and through the addition of an additional case study site and of marketing case studies, were advantageous.

#### I-1.3 Specific assessments against Terms of Reference

- (i) The degree of local involvement and the project's relevance in meeting the needs of the local forest communities:

Project activities were conducted in partnership with local communities and relevant government agencies at four principal study sites in different regions of the Philippines. Local community involvement was good at three of these sites; that at the other was constrained by the security situation and larger social tensions. Even at the latter site, project collaborators were positive about the relevance of the project to local peoples' needs. Some of the issues which constrained local community engagement with the project at this site have now been addressed by the Philippines Government's recognition of ancestral domain rights.

All feedback which the consultant received from project partners suggested that the project was relevant to local communities' needs, specifically those needs associated with enhancing the sustainability of NWFP collection, maximising the recovery from products collected, and enhancing the returns to those in local communities engaged in NWFP enterprises. Key representative groups for the Philippines handicrafts industry confirmed the relevance of the project's activities

and outputs to their constituents' needs more generally. However, project partners noted that subsequent policy and project interventions will be necessary if the needs of local forest communities are to be met to fullest effect.

- (ii) The validity of ecological observation on important NWFP and the assessment of their natural regeneration.

Ecological observations and assessment of regeneration of NWFP at six study sites are valid, but are currently of only descriptive value. The observations were made in sample plots established for this project on a permanent basis, so can be re-assessed in the future to provide quantitative information on ecological dynamics. The principal strength of the approach used is its comprehensiveness, in terms of assessing a much wider range of NWFP than had previous surveys. However, because repeated assessment data were not available for these study sites (or other sites, for the range of NWFP assessed), the results of the project provide only limited general information to assist the development of sustainable management regimes.

- (iii) The validity of project results which indicate that the collection of NWFP, if done on a sustainable and non-destructive way, poses a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest.

Project results do not in themselves provide sufficient evidence to support or deny this hypothesis, which was suggested by Panayotou (1990). Project results do shed light on a number of the elements of this statement:

- results suggest that traditional NWFP collection practices can be either sustainable or unsustainable, depending on factors such as harvest method, intensity and frequency. There is evidence from project studies of both sustainable and unsustainable impacts of collection on NWFP resources;
- it is apparent from project studies that current levels of harvesting of some NWFP at some study sites exceed sustained yield for that site. However, this does not necessarily imply that harvest levels are unsustainable (or vice versa)

on a larger scale, and there is currently no inventory data available in the Philippines to inform the broader regional or national situation. NWFP assessment is planned as part of the current FAO-sponsored Philippines Forest Resource Assessment, but this national-scale coverage will be of only limited value at the forest management unit scale;

- results demonstrate that it is possible to improve the sustainability of some traditional collection practices, such as those for *Agathis* resin.

The NWFP inventory plots established by the project could be used to inform responses to this assertion, from data generated by subsequent assessments following NWFP harvesting.

- (iv) Problems associated with the marketing of selected NWFP identified by the project's international marketing consultant.

The international consultant's research identified a suite of challenges to marketing NWFP in the Philippines, and gave highest priority to those associated with product design, quality control, production capacity, marketing skills and support, market information, and access to capital. These challenges are consistent with those identified for NWFP, both in other project studies and elsewhere, and for small-medium enterprises more generally. Consultation with key handicrafts organizations during the ex-post evaluation confirmed both the international marketing consultant's assessment of the problems faced by the sector and his identification of strategic priorities to address these challenges.

- (v) The impact and relevance of the project, particularly its impact on the market aspects of non-timber forest products.

The project was directly relevant to a number of the key issues associated with the collection, utilisation and marketing of NWFP in the Philippines. Project activities and outputs associated with collection methods and processing technologies (eg improved resin tapping methods, chemical treatment of stems), have immediate impact to those engaged in particular NWFP enterprises. The intended adoption of

some project outputs as the relevant Philippines National Standard by the Department of Trade and Industry represents a significant project impact.

The resource data and those describing the numbers of people engaged in various NWFP enterprises have both short and longer term impact and relevance. In the short term, their main value may be in helping NWFP interests press the political case for the importance of NWFP and the regulation of their harvest, as the Philippine Craft Fair Traders association has begun to do for some NWFP of particular concern to its members. Similarly, information describing trade and market structures are valuable in the short term for those currently engaged in NWFP enterprises and current policy debate.

To date, trade and market information outputs from the project have been provided only to project partners; while a number of these partners are well-placed to disseminate the information widely to interested parties, other strategies to enhance awareness of project outputs would also enhance project impacts.

It is in the longer term that the trade and market information generated by the project may have the most significant impact, as the basis for development and design of subsequent policy initiatives and project interventions.

- (vi) **Determine the effectiveness of the technology transfer to the upland dwellers and assess the overall post-project situation:**

The principal elements of technology transfer which have the potential for immediate impact are those associated with collection methods and processing technologies. There is evidence that some of these technologies, principally those associated with chemical treatment, have been widely adopted because of the significant immediate economic benefits they confer. In contrast, adoption of the improved resin tapping technologies communicated by the project appears more varied, which seems likely to reflect the longer term and more common-good benefits of that technology. In the latter case, effective implementation of

supportive collaborative management arrangements, which give effect to existing regulatory regimes, are clearly also necessary to foster technology transfer. Such arrangements are the one of the central themes of Philippines forest policy.

The current overall post-project situation differs between different parties and interests in NWFP in the Philippines, reflecting both differences in the extent of direct project involvement and the different forms of project outputs:

- at the case study sites and for project partners directly involved with project work (local communities, NWFP enterprises and representative organizations, and government agencies), there have been immediate project impacts in terms of better collection methods and utilisation technologies for some products, and in terms of trade and market information about particular products. As a result of the project, these partners are better placed to manage particular NWFP resources sustainably, and to benefit from their production;
- the adoption of project outputs associated with chemical treatment technologies as National Standards for two NWFP product groups is a significant consequence of the project;
- there are not yet many other broader impacts as a result of the project, for two reasons. Firstly, project outcomes are still being disseminated to interested parties. Secondly, many project outputs are most relevant to informing subsequent policy development and project interventions to enhance the sustainability of NWFP utilization, collection and trade in the Philippines, and the economic returns to local communities from NWFP enterprises;
- given the continuing emphasis on community-based forest management and NWFP enterprises for sustainable livelihoods on the Philippines, in both forest and rural development policy and forest management, project outputs can be expected to contribute to the development of subsequent policies and project interventions.

- (vii) Recommend follow-up actions in order to enhance utilization of project-developed technologies and other results.

Discussed in III-2.

#### I-1.4 Overall assessment

The project achieved good success in ascertaining existing NWFP collection, utilisation and marketing practices, and associated income streams, in the case study areas and for the selected NWFP. It has contributed significantly to the knowledge base for these NWFP in the Philippines, although project outputs should be more widely disseminated to enhance their value. Similarly, the project was able to enhance some collection and processing practices, although adoption appears less for the former than the latter. The project has also identified strategic priorities to further enhance the sustainability of NWFP enterprises and their contributions to rural livelihoods. These are important and significant achievements with the potential for substantial impacts. The project's goals of ascertaining NWFP resource and user information were not as fully realised as the project proposal had envisaged, but the data collected by the project does provide important baseline information from which subsequent work can build.

More generally, the project contributes to the global body of knowledge of NWFP harvesting, utilisation and marketing, and about the role of NWFP in household and rural economies. The project has demonstrated the importance of NWFP in the Philippines, their value to forest-dependent people and rural communities, and identified opportunities to enhance and sustain the benefits derived from NWFP. The project has also demonstrated some of the many challenges posed by NWFP harvesting, utilisation and trade to sustainable management of the tropical forest resource base, and the relevance of ITTO investment in projects focused on NWFP.

## I-5 Recommendations

a) for sustainable management of NWFP:

1. more comprehensive and systematic resource inventory of key NWFP resources in at least some regions of the Philippines, and associated assessment of harvesting and regeneration rates;

A more comprehensive resource inventory than was possible in this project should link to each of inventory plots established under this project, the national Forest Resource Assessment sampling framework, and any other relevant NWFP inventory activity. The goal of further inventory work should be to establish the dynamics of representative populations of selected NWFP under various harvesting regimes (including zero harvest), so that sustainable yields can be estimated and the impacts of different harvesting regimes established;

2. continued collaboration between relevant agencies and enterprises and partner communities and organizations to foster adoption of sustainable collection methods.

Project results suggest that current collection practices vary in their impacts, and that levels of adoption of more sustainable collection methods are varied. While implementation of sustainable management regimes is formally the responsibility of DENR, NWFP-based enterprises have a stake in fostering a sustainable supply. Partnerships between government agencies, NWFP enterprises and local communities to promote sustainable collection practices are more likely to be successful than initiatives by only one of these parties.

b) for utilisation of NWFP:

3. continued collaboration with partner communities and organizations to foster adoption of technologies to minimize deterioration of NWFP.

These technologies have immediate advantageous impact in terms of recovery

and returns to collectors. There are also other technologies, appropriate to larger scale producers (eg kiln drying) or over the longer term (eg pest biological control), that are logical successor activities.

c) for trade and market development of NWFP:

4. adoption of the international marketing consultant's recommendations of strategic priorities to improve the production and marketing of NWFP in the Philippines. In addition to the resource inventory identified above, the priorities recommended were:

- initiatives to enhance the economic benefits to NWFP harvesters and handicraft workers;
- technology transfer programs targeting both production and marketing skills;
- improving access to capital and market information.

5. policy development and project interventions to support the initiatives identified above, for selected NWFP.

Project outputs have reiterated the importance of NWFP and identified ways in which both the sustainability of management and NWFP enterprises, and the benefits to rural communities, can be enhanced. Further policy development and project interventions will be necessary to support these outcomes. In the first instance, policy development might focus on the incentive and regulatory framework to foster implementation of sustainable harvesting regimes; project support might give priority to more comprehensive and representative resource inventory, adoption of collection and processing technologies and the identified production and marketing priorities.

d) project formulation and outputs:



6. this project has identified priorities for and established the foundations of subsequent research to enhance the sustainability of NWFP collection practices and enterprises, and the benefits to local communities. Some of those studies would best be conducted as interdisciplinary collaborations, eg with rural livelihood experts in the case of socio-economic work, and all will be able to build on the platform of partnership established by this project with principal NWFP interests, such as handicraft associations and their memberships. The formulation of subsequent projects would also benefit from wider consultation with relevant literature, from both the Philippines and abroad.
7. development and implementation of strategies by FPRDI and ITTO to promote wider dissemination of key project outputs.  
Key project outputs are not yet as widely known in the Philippines as they should be, and are not known outside the Philippines. This can be addressed in part by a targeted dissemination campaign by FPRDI, DENR, and other project partners. Additionally, a simple and cost effective strategy could be to ensure that key project outputs (in the case of this project, Technical Reports 1 and 2 and the International Consultant's report) are available – with appropriate acknowledgement, caveats and disclaimers – on both the FPRDI and ITTO www sites. Such a strategy would be advantageous for ITTO project outputs more generally, and should significantly enhance their impacts.
8. ITTO continue to invest in projects which focus on NWFP, in recognition of their importance to sustainable forest management and to sustainable development.

## II: MAIN TEXT

### Ex-Post Evaluation of ITTO Project PD 15/96 Rev. 2 (M, I) – “Utilization, collection and trade of tropical non-wood forest products in the Philippines”

#### II-1. PROJECT CONTEXT

The sustainable utilization of non-wood forest products (NWFP<sup>1</sup>) is a central issue for tropical forests and forestry worldwide. Various NWFP have been, historically, and remain, contemporaneously, important elements of livelihood strategies of many forest-dependent peoples, and are significant in the economies of many tropical countries. As Arnold and Ruiz Pérez (1996) noted in their commentary on NWFP research priorities globally:

“[NWFP] production and use can constitute one of the main demands placed on the forest resource. A complete understanding of the [NWFP] situation is therefore central to both the task of conserving and managing tropical forests, and of ensuring that these forests continue to contribute appropriately to the welfare of local populations.”

A second global review, of NWFP commercialisation, (Neumann and Hirsch 2000) noted:

“Commercial opportunities for [NWFP] are emerging throughout the world as economic liberalization is opening new markets and governmental decentralization and democratization are enabling communities to have a greater role in the management of forest resources...

... In a strategy that supports the linking of conservation of the forest with income generation activities, ... an underling assumption is that a community and its members (potential entrepreneurs) will conserve and protect forest resources, if they receive economic benefits from sustainable forest use.”

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<sup>1</sup> NWFP are also widely known as non-timber forest products (NTFP). The former term is used here for consistency with Project documentation.

These characterizations of the situation globally apply well to issues associated with NWFP collection, utilisation and trade in the Philippines, and provide the context to this project.

Other NWFP researchers (eg Padoch and Pinedo-Vasquez 1996) have noted the interdependencies, from the perspectives of tropical forest policy and management and of those who derive their livelihoods from tropical forests, between wood and non-wood forest products. This project therefore provides an important complement to other work, including that sponsored by ITTO, which focused on wood products from Philippines forests.

### **II-1.1 Background and Objectives**

A significant proportion of the Philippines population, over 25% (c. 22 M people), live within the country's forest zones, and a large majority of these – perhaps 90% - depend in some part on NWFP for their livelihood. Reliable data for both the levels and value of NWFP production are scarce; as examples, the market value of rattan, the largest NWFP product sector, was estimated at US\$275 M in the early 1990s, and exports of NWFP handicrafts were valued at c. \$78 M in 1998 (Eastin *et al* 2001). A diversity of NWFP are of commercial significance in the Philippines: the principal products comprise bamboo and rattans, bark, leaves & stems of erect palms, tree resins, and vines, but many others – such as grasses and honey - are of at least local significance. Many analysts believe that levels of resource exploitation over recent decades are not sustainable.

Forest policy in the Philippines has shifted significantly towards supporting the livelihoods of rural communities: a Community-Based Forest Management Program (CBFMP) has been adopted as the national strategy to promote sustainable development for the nation's forest resources. CBFMP seeks to give effect to the Master Plan for Forestry Development (MPFD), to provide participating communities with resource use rights for protection, rehabilitation, development, conservation, and management of the forest resources provided they employ environmentally-friendly, ecologically sustainable

and labor-intensive harvesting methods (Smith 2000). Consistent with this strategy, the current area of forest reserves under CBFM or similar management arrangements, of c 5 M ha, is expected to expand to 9 M ha (two thirds of the Philippines' forest reserves) by 2011; NWFP-based enterprises are seen as fundamentally-important means of delivering community benefits under these arrangements.

It was in this context that ITTO Project PD 15/96 REV.3 (M,I), “Utilization, collection and trade of tropical non-wood forest products in the Philippines”, was proposed by, awarded to and implemented by the Forest Products Research and Development Institute (FPRDI), Department of Science and Technology, Republic of the Philippines.

The general objectives of the Project were to provide essential information on and technologies relevant to the utilization, collection and trade of important non-wood forest products in the Philippines to promote the income and livelihood of local forest communities, and to promote sustainable collection and utilisation of NWFP, as an integral component of sustainable forest management.

The project had two specific objectives:

1. survey pilot areas & determine approximate volume of NWFP and number of upland/forest dwellers engaged in collection, processing & sale of NWFP; assess regeneration pattern & cycle and recommend sustained yield collection and observation measures for sustainable supply;
2. determine needs & problems of upland/ forest dwellers in collection, processing & storage of NWFP; recommend and introduce improved methods for collection, processing & storage; conduct market research on collection, utilisation and trade, and provide market information.

### **II-1.2 Activities and Outputs**

Project objectives were to be achieved by implementing the activities identified in the project's specific objectives, listed above.

Project activities were intended to lead to two primary outputs:

1. the identification of co-operators and pilot areas, and for each of these: estimation of the number of forest dwellers engaged in collection, utilization and sale of non-wood products and the approximate volume of non-wood products; an assessment of the regeneration patterns and their cycle; recommendations on sustained-yield collection practices to forest dwellers;
2. the identification of the needs and problems of forest dwellers; recommendations and introduction of workable and improved methods of collection, processing and storage of non-wood forest products; and provision of market research and market information to forest dwellers at each project site.

### **II-1.3 Strategies Adopted for the Project**

Project activities were organised and implemented through five studies, the last of which was added as an approved amendment to the original project:

1. resource survey and inventory of important NWFP and assessment of natural regeneration;
2. assessment of collection, processing and trade of NWFP in local communities;
3. dissemination and demonstration of chemical treatment of NWFP in upland forest communities;
4. market research and market information on NWFP;
5. case studies of NWFP marketing.

Project activities focused on four case study areas representing different regions of the Philippines, and on selected NWFP of greatest significance. Project fieldwork in case study regions was conducted in cooperation with local partners, three of whom were industrial forest concessionaires and one a NGO, and with the assistance of the relevant government agencies (principally the Department of Environment and Natural Resources, DENR). There has been a history of collaboration between FPRDI and these partners in an earlier ITTO project (PD47/88 Rev. 3 (I), “Utilization of Lesser-Used Species as Alternative Raw Materials for Forest-Based Industries”).

The case study sites and associated regional partners were:

1. Samar Province, Samar, eastern Philippines – San Jose Timber Corporation;
2. Aurora Province, Luzon, northern Philippines – Industries Development Corporation;
3. Palawan Province, Palawan, western Philippines – United Tribes of Palawan (Nagkakaisang Tribo ng Palawan - NATRIPAL);
4. Surigao del Sur Province, Mindanao, southern Philippines – Surigao Development Corporation.

Supplementary project work was also conducted at other locations in the provinces of Bukidnon, Masbate, Neuva Ecija and Quezon.

The principal NWFP on which various project activities focused were:

- *Agathis* and *Canarium* resins;
- bamboos – *Bambusa*, *Dendrocalamus*, *Gigantochloa* & *Schizostachyum* spp;
- erect palms – *Arenga*, *Corypha* & *Livistona* spp;
- forest vines and twigs – many species, including *Anamirta*, *Arcangelisia*, *Cissus*, and *Ichnocarpus*;
- honey;
- pandans – *Freycinetia* & *Pandanus* spp;
- rattans – *Calamus* & *Daemonorops* spp;
- *Wikstroemia* bark.

Project objectives, principal elements, study components and outputs are summarized in Annex A, which is derived from the project's Logframe Matrix.

#### II-1.4 Planned Project Duration and Costs

The project was implemented from 1 October 1997, with an intended duration of 36 months; its actual duration was extended by 10 months, and the project concluded on 31 August 2001. ITTO funding awarded for the project comprised US \$383,493 (\$210, 895 - Government of Japan; \$172, 598 – Government of Switzerland). The Government of the Philippines contributed US \$382,800 (in cash and in kind) for a total project budget of US \$766,293.

### II-1.5 ITTO Context of the Project

ITTO's mission is to "facilitate discussion, consultation and international co-operation on issues relating to the international trade and utilization of tropical timber and the sustainable management of its resource base." This project is directed to the sustainable management of Philippine forests, and to the collection, utilization and trade of products from them.

The following ITTO objectives were specifically addressed by this project:

- (c). To contribute to the process of sustainable development;
- (f). To promote and support research and development with a view to improving forest management and efficiency of wood utilization as well as increasing the capacity to conserve and enhance other forest values in timber producing tropical forests;
- (m). To promote the access to, and transfer of, technologies and technical cooperation ...

The following cross-cutting actions of the ITTO Yokohama Action Plan 2002-2006 were addressed by the project:

- a) Encourage and assist producing member countries to identify and address constraints in their implementation of sustainable forest management and the sustainable development of the forest industry to enhance the contribution of the forest sector to national objectives;
- i) Support the sharing of information, knowledge and technology to improve sustainable forest management, product processing, utilization and understanding of the marketplace as related to ITTO's priorities;
- l) Support research and development studies and projects to improve understanding of the marketplace, efficient product processing, industrial utilization and better forest management.

The project is relevant to each of the Yokohama Action Plan goal areas, viz. economic information and market intelligence, reforestation and forest management, and forest industry.

## II-2 EVALUATION SCOPE AND FOCUS

### II-2.1 Type of Evaluation

The ITTO Forest Industry Committee, at its Thirtieth Session in May 2002, decided that an ex-post evaluation of PD 15/96 Rev.2 (M,I) should be carried out to establish how well the project served its intended purposes and to draw up conclusions for future actions. This evaluation was conducted approximately 18 months after completion of the project, and according to the recommendations of the ITTO *Manual for Project Monitoring, Review, and Evaluation* (1999).

### II-2.2 Terms of Reference

The following Terms of Reference were specified by ITTO for the evaluation:

1. The ex-post evaluation work shall be conducted in such way as to allow answering the questions identified in the ex-post evaluation checklist provided in Part B, Annex A of the ITTO *Manual for Project Monitoring, Review and Evaluation* (1999), which primarily address a project's contribution to the achievement of its general and specific objectives and determine whether these objectives have been initially met and established.
2. In general, the consultant shall analyze and assess overall implementation efficiency, including the technical, financial and managerial aspects. The work shall assess unexpected effects and impacts, either harmful or beneficial, and present the reasons for their occurrence.
3. Taking into account the results of the evaluation, make an overall assessment of the project's relative success or failure; summarize the key lessons learnt; and identify any issues or problems which should be taken into account in designing and implementing similar NWFP projects in future.
4. Additionally, the following specific assessments shall be made:



- (i) The project's executing agency (FPRDI) has indicated that the direct beneficiaries of the project were the forest dwellers dependent on NWFP and project activities have noted a high degree of participation of the forest dwellers in the implementation of the project. The consultant shall assess the degree of local involvement and determine the project's relevance in meeting the needs of the local forest communities.
- (ii) The consultant shall also examine and determine the validity of ecological observation on important NWFP as noted in the project reports describing the resource surveys and inventories of selected NWFP and the assessment of their natural regeneration.
- (iii) The consultant shall assess the validity of project results which indicate that the collection of NWFP, if done on a sustainable and non-destructive way, pose a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest.
- (iv) The consultant shall also contact the project's international marketing consultant and verify the problems associated with the marketing of the selected NWFP.
- (v) To evaluate the impact and relevance of the project; particularly its impact on the market aspects of non-timber forest products.
- (vi) Determine the effectiveness of the technology transfer to the upland dwellers and to assess the overall post-project situation.
- (vii) Recommend follow-up actions in order to enhance utilization of project developed technologies and other results.

The consultant conducted the evaluation to meet the specified Terms of Reference through:

- review of project reports and relevant literature;
- a site visit to the implementing agency (14-20 March 2003), to facilitate consultation with agency and project staff, project cooperators, and other relevant parties;
- consultation with project cooperators.

### II-2.3 Duration of the Evaluation

The ex-post evaluation was conducted over an 8 week period, from 17 February - 14 April 2003. The evaluation employed the following work schedule:

17 February – 13 March 2003      Review of project documentation and outputs and relevant literature; development of prior questions; consultations with project leader and international marketing consultant; organisation of site visit.

14 – 20 March 2003      Site visit by the consultant to FPRDI, for discussions on project implementation, outputs and results; consultations with project cooperators and other relevant parties.

21 March – 6 April 2003      Review of information originating from site visit; preparation and discussion of draft report.

7 April 2003      Submission of draft final report to both ITTO and FPRDI for comment.

14 April 2003      Submission of final report to ITTO.

## II-3 EVALUATION METHODOLOGY

### II-3.1 Review of Project Documents and Other Literature

The following documents were provided by ITTO as background materials prior to the ex-post evaluation of PD 15/96 Rev.2 (M,I):

1. Project Proposal PD15/96 Rev.2 (M,I), nd, & Amendment Proposal to Approved Project, dated 25 November 1997;
2. Project Agreement, dated 15 August 1997;
3. Bi-annual Progress Reports #1-8, covering the duration of the project;
4. Financial statements (1997-2001);

5. Project Completion Report, dated September 2001;
6. Terminal Reports, Studies 1-4, nd:
  - *Resource survey and inventory of important NWFP (rattan, erect palms, bamboo, pandan and forest vines) in the Philippines and assessment of their natural regeneration;*
  - *Assessment of the collection, processing and trade of NWFP in local communities;*
  - *Dissemination and demonstration on the chemical treatment/ protection of on rattan, bamboo, palms, twigs and vines in upland communities;*
  - *Market research and market information on NWFP.*
7. Pamphlets:
  - 1 - *Proper techniques in tapping almaciga (Agathis philippinensis Warb)),* dated June 1998;
  - 1E - *Prevention and control of fungal and insect attack on rattan, bamboo, palms, twigs and vines,* dated June 1998;
  - 2E - *Treatment procedures against insect and fungal attack on rattan, bamboo, palms, twigs and vines,* dated June 1998;
  - 3E - *Handling and preparation of fungicides and insecticides,* dated June 1998;
8. Final Marketing Report, *Some considerations for more effective production and marketing of NTFP in the Philippines,* dated October 2001;
9. Final Technical Reports, Parts 1 and 2, dated February 2002;
  - *Resource survey and inventory of important NWFP in the Philippines and assessment of their natural regeneration;*
  - *Collection, processing and trade, chemical protection, market research and market information on NWFP.*
10. ITTO Committee on Forest Industry Report on Completed Project PD15/96 Rev.2 (M,I), dated 19 March 2002;
11. ITTO *Manual for Project Formulation,* 2<sup>nd</sup> edition;
12. ITTO *Manual for Project Evaluation, Review and Monitoring,* 2<sup>nd</sup> edition.

Other relevant literature (listed in Annex B) was also reviewed.

### **II-3.2 Review of Project Logic and Outputs**

The Logical Framework Matrix developed for the project (as presented in the Project Proposal) was used as the basis for developing a matrix of project objectives and outputs (Annex A).

### **II-3.3 Review Visit and Associated Activities**

The timing and program for site review visit to FPRDI were agreed after consultation with the Director FPRDI, the Project Leader, and ITTO. The site visit was conducted between 14-20 March 2003. Prior to the visit, the consultant prepared a set of questions for the following groups of respondents associated with the project:

- Director FPRDI;
- Project Leader/ Project Monitoring and Evaluation Committee;
- Leaders of each of Studies 1-4;
- International Marketing Consultant (Study 5);
- Relevant DENR staff;
- Case study cooperators.

These questions (Annex C) were emailed to the Director FPRDI and the Project Leader on 24 February 2003. Project staff responses to these questions are included in Annex C. Questions were also emailed to the international marketing consultant (Dr Ivan Eastin, CINTRAFOR). Responses received in writing are attached as Annex D.

The primary purpose of the review visit was to verify past and ongoing activities related to the project, and consult with project staff, project partners, and other interested parties. The program for the review visit is presented in Annex E. Those consulted during the review visit are listed in Annex E, and included:

- the Director, FPRDI;
- the project leader and study leaders;
- the most relevant DENR staff;
- staff of the principal collaborating organizations at the field sites (and in the handicrafts sector).

The consultant interviewed the international marketing consultant by telephone on 7 March 2003, and the evaluator (Dr Paul Smith) of ITTO PD47/88 Rev. 3 (I), “Utilization of Lesser-Used Species as Alternative Raw Materials for Forest-Based Industries”, also implemented by FPRDI, on 4 March 2003.

## **II-4. FINDINGS AND LESSONS LEARNED**

### **II-4.1 Effectiveness and Impacts**

#### **1. Merit of the project proposal and activities**

The project proposal and activities are consistent with priorities identified more generally for NWFP research. There have been two recent global reviews commissioned by CIFOR (Arnold and Ruiz Pérez 1996) and CIFOR and FAO (Neumann and Hirsch 2000). Arnold and Ruiz Pérez (1996) identified four interdependent NWFP research themes, and associated sub-themes:

- the forest resource and impacts of forest management and use
  - forest ecology and change;
  - defining sustainable management;
  - indigenous knowledge and forest management;
- NWFP and household livelihood strategies
  - household use and dependence on NWFP;
  - changes in the role of NWFP over time;
  - community dynamics;
- markets, technology and impacts of market forces
  - identifying market impacts;
  - exploiting market opportunities;
- policy issues.

Neumann and Hirsch (2000) similarly identified four themes relevant to research specifically on NWFP commercialisation:

- socio-political aspects;
- economic considerations in extraction and trade;
- management issues;

- ecological aspects.

The scope and foci of the project – on resources and ecology, collection and processing technologies, and trade and markets, for selected NWFP of particular importance in the Philippines - are consistent with these themes. While the project team had excellent knowledge of the Philippines forests and NWFP sectors, they drew less on the wider NWFP literature in formulating the project and most of its constituent studies. More extensive consultation with this literature may have helped in more efficient conduct of some project activities.

The project scope and foci are also consistent with the central direction of forest policy and management in the Philippines, which is emphasizing co-management and support of local livelihoods (DENR 2002): the current area of forest reserves under CBFM or similar management arrangements, of c 5 M ha, is expected to expand to 9 M ha (two thirds of the Philippines' forest reserves) by 2011; NWFP-based enterprises are seen as fundamentally-important means of delivering community benefits under these arrangements.

## **2. The achievement of general and specific objectives, and their impacts**

In terms of its general objectives, the project has:

- provided essential information on and technologies relevant to the utilization, collection and trade of a number important non-wood forest products in the Philippines. Project outputs have the capacity to enhance the income and livelihood of local forest communities, and to promote sustainable collection and utilisation of NWFP, as an integral component of sustainable forest management, as envisaged in the project proposal;
- offered directions for subsequent policy development and project interventions to enhance the sustainability of NWFP utilization, collection and trade in the Philippines, and the economic returns to local communities from NWFP enterprises.

As discussed below in terms of the specific objectives, some project outputs are of immediate benefit to those in NWFP enterprises, and have been adopted to varying degrees. Others are more relevant to subsequent policy development and project interventions than to immediate impacts in the field or in NWFP enterprises.

In terms of its specific objectives (Table 1), the project has:

- (objectives 1.1 and 1.2) provided sample plot data describing NWFP occurrence (bamboo – *Bambusa*, *Dendrocalamus*, *Gigantochloa* & *Schizostachyum* spp; erect palms – *Arenga*, *Corypha* & *Livistona* spp; pandans – *Freycinetia* & *Pandanus* spp; rattans – *Calamus* & *Daemonorops* spp; other forest vines – various spp) and information about regeneration of these plant groups based on field observation of sample plots and literature review.

Because of the form in which the survey was conducted (plots were not established on a random nor a systematic basis, but were located according to feasibility and to ensure subject species were included), these data are largely of descriptive value. Consequently, it is not possible – as Project Terminal and Technical Reports #1 note – to draw conclusions about the extent of NWFP resources in the project areas or more generally.

Given the current general lack of Philippines NWFP resource inventory, it would have been advantageous if sample plots had been established in a way which allowed some generalisation. However, the consultant acknowledges the response of the project team that such an exercise would have been significantly more costly, perhaps prohibitively so, if it were to have any real wider value.

Similarly, because this study did not seek to establish quantitative data on regeneration of NWFP surveyed or production rates, it is not able to move beyond the recommendation of more than principles of sustained yield collection methods;

- (objective 1.1b) provided largely qualitative data about the numbers of individuals engaged in various stages of some NWFP collection, utilization and trade at the study sites, and for various products elsewhere. These data (for enterprises based on the species listed above, and for honey and *Agathis* and *Canarium* resins), are largely of indicative value.

As with the resource data, it would have been helpful for policy development if a survey approach which allowed generalisation had been adopted. While the consultant accepts that the intent of the work was more descriptive, and notes that the data generated are helpful as a starting point for policy analysis and subsequent research, it would be helpful for subsequent work to adopt a more quantitative survey approach;

- (objective 2.1) provided an overview of the challenges faced by those engaged in the collection, utilisation and trade of important NWFP in the study areas (those listed above, and some other fibres, grasses and leaves), and at some other locations, and the associated challenges to sustainability.

Challenges to sustainability evident from project research include: inappropriate collection methods; overharvesting associated with non-observation of traditional systems, uncertainty about tenurial rights, and lack of enforcement of regulations; poor recovery from some harvested products as a result of deterioration from inadequate processing technologies; diminution of resource supply due to overharvesting; loss of skilled workers to more rewarding employment opportunities.

- (objective 2.2) recommended and introduced improved methods and technologies for collection, processing and storage of a number of NWFP – variously, *Agathis* and *Canarium* resins; bamboo, rattan, palm, twig and vine stems; *Wikstroemia* bark. The adoption of these methods and technologies would have immediate positive impacts; there is evidence of such adoption for some of these technologies by NWFP enterprises. The relevant technologies have also formed the basis for the development



of two Philippines National Standards – on Handicraft Products Baskets (BPS PN 275) and Christmas Decorations (BPS PN 276);

- (objective 2.3) investigated trade and market networks and structures, associated pricing structures (value chains), and possible strategies for enhancing returns to and the livelihood of rural communities. The information from these studies is of considerable value in identifying strategies and designing subsequent policy and project interventions to support these goals.

### **3. Scale and nature of impacts**

The scale of project impacts vary. Those associated with resource information are of little value outside the sample sites, although observations on regeneration processes have wider applicability. As with the data describing the numbers of people engaged in various NWFP enterprises, their main value may be in helping NWFP interests press the political case for the importance of NWFP and the regulation of their harvest, as the Philippine Craft Fair Traders Association has begun to do for some products of particular concern to its members.

The project's contributions to understanding of challenges faced by those engaged in NWFP enterprises, and of NWFP trade and markets for the Philippines, have broad relevance to policy development and subsequent project interventions to enhance sustainable forest management and rural livelihoods in the Philippines. The results also contribute to the wider global understanding of the role of NWFP and their potential to contribute to sustainable forest management and rural livelihoods, and are broadly consistent with the results of other studies.

The impacts from the project's work on collection and processing technologies apply across the Philippines, and more widely where similar NWFP are harvested. These outcomes have the potential to considerably enhance the sustainability of production of the particular products addressed, and the adoption of some project technologies as relevant Philippines National Standards demonstrates their value.

The project has distributed copies of Technical Reports 1 and 2 to partner organizations and to DENR regional offices. This represents an appropriate first stage of dissemination, but should be supplemented by wider distribution (*eg* across the NGO sector) in the Philippines. Copies of these reports were also made available to delegates at the ITTO Thirtieth Session, Bali, 13-18 May 2002. However, the impacts of the project, both in the Philippines and internationally, would be considerably enhanced if key project reports (*eg* Technical Reports 1 and 2, and the international marketing consultant's report), were made available on an appropriate www site – *eg*, FPRDI's and/or ITTO's. This appears to be an issue more generally, as – for example – there appears currently to be no established process by which leaders of particular ITTO projects become aware of the output of other ITTO projects in any systematic or comprehensive way.

The project has helped to build relevant research capacity in the Philippines. It engaged a team of researchers at various stages of their career in collaborative research with local communities, government agencies, other stakeholders, and each other. This represents a positive impact in terms of capacity for subsequent NWFP-related (and other) research.

The consultant was not able to identify any adverse impacts which have arisen or might arise from project activities; feedback from project partners supported this conclusion. This reflects the largely informative nature of the majority of project outputs. Concerns had been expressed that preservative chemicals and methods recommended by the project might have adverse environmental and health impacts; these have been addressed by revision of the recommended practices to exceed national compliance requirements and follow international best practice.

#### II-4.2 Efficiency

The project was implemented efficiently, allowing for unforeseen factors outside the project's control; there were difficulties in accessing and working at two field sites due to security issues and atypical weather patterns. Collaborations with research partners and government agencies at the four study sites were generally effective, although

collaboration with the local community at one project site (Surigao del Sur) was poor as a result of political tensions concerning Indigenous Peoples' rights; these issues have now been addressed through the recognition of ancestral domain rights (NCIP 1998). Collaborations with those involved in NWFP trade and businesses were effective.

The extension to and expansion of project activities, by 10 months and through the addition of marketing case studies, were advantageous for the successful completion of project objectives.

Financial aspects of the project have been managed efficiently, and project balance sheets have been independently certified as presenting fairly the project expenditure. The project was able to reorganize expenditure to accommodate the addition of a fourth case study area (Palawan) at no additional cost to ITTO, and should be commended for doing so.

#### II-4.3 Lessons learned

The principal lessons learned from this project are:

1. in general terms, the need to contextualise knowledge of NWFP in a broader understanding of peoples' livelihoods, to enable development of appropriate policy and project interventions;
2. reiteration, for the case of the NWFP and sites studied, of the interdependencies between collection, utilisation and trade and marketing practices in determining the sustainability of NWFP production and their contributions to livelihoods. This result is consistent with those of other recent work, summarised by Arnold and Ruiz Pérez (1996) and Neumann and Hirsch (2000);
3. reiteration of the need, emphasized in the reviews cited above, to contextualise knowledge of NWFP in a broader understanding of peoples' livelihoods, to enable development of appropriate policy and project interventions;
4. the complementarity of information presenting a broad overview of the NWFP sector with that presenting detailed knowledge of collection, utilisation and marketing systems for particular products;
5. confirmation for the case of the Philippines that, in general terms, the value chain for NWFP follows the typical pattern reported elsewhere (*eg* Hyman 1996), with NWFP

- gatherers receiving only a small share of the final value of the product, with the majority of value captured by middle(wo)men and processors;
6. the advantages of conducting baseline surveys according to methodologies which will provide the most informative and robust results, and which are informed by approaches to similar work elsewhere.

- in specific terms:

1. sustainable resource supply is an issue of strong concern to Philippines NWFP enterprises, and circumstantial evidence suggests that availability of NWFP is declining in at least some areas;
2. resource data for NWFP in the Philippines are currently poor, although this has been recognized and initiatives to begin to address this situation (eg FAO-sponsored National Forest Resource Assessment) are underway;
3. basic ecological information for sustainable management of some important Philippines NWFP is also poor, although there is considerable evidence of traditional knowledge and management regimes which could inform management on all tenures;
4. the results of this project illustrate the complexities of technology transfer of project outputs. Some project technologies – notably chemical treatment preservation technologies – have been adopted readily, but the adoption of others – notably improved resin tapping methods – has been more limited. One difference between the two technologies is that the former deliver immediate financial advantages, whereas the latter deliver longer term benefits. A second reason, in the case of this project, might be the differences between communities at project study sites noted by the research team; some communities were more receptive to adoption of new technologies than others - as discussed, for example, by Almeida (1996). In the case of practices with longer-term benefits - such as the resin tapping investigated by this project - supportive collaborative management arrangements, which give effect to regulatory regimes, are clearly also necessary to foster technology transfer;
5. secure tenure rights over forest resources are advantageous in enlisting local communities' cooperation in both research and sustainable forest management;

6. there is a suite of strategies which would enhance the production and marketing of NWFP in the Philippines, the returns to local NWFP-based enterprises, and the contribution of these enterprises to rural livelihoods on a sustainable basis.

## **PART III CONCLUSIONS AND RECOMMENDATIONS**

### **III-1 CONCLUSIONS**

#### **III-1.1 Achievement of general and specific project objectives**

In terms of its general objectives, the project has:

- provided essential information on and technologies relevant to the utilization, collection and trade of a number important NWFP in the Philippines. Project outputs have the capacity to enhance the income and livelihood of local forest communities, and to promote sustainable collection and utilisation of NWFP, as an integral component of sustainable forest management, as envisaged in the project proposal;
- offered directions for subsequent policy and project interventions to enhance the sustainability of NWFP utilization, collection and trade in the Philippines, and the economic returns to local communities from NWFP enterprises.

These are significant achievements for which the project team deserve commendation.

In terms of its specific objectives, the project has:

- provided sample plot data describing NWFP occurrence (bamboo – *Bambusa*, *Dendrocalamus*, *Gigantochloa* & *Schizostachyum* spp; erect palms – *Arenga*, *Corypha* & *Livistona* spp; pandans – *Freycinetia* & *Pandanus* spp; rattans – *Calamus* & *Daemonorops* spp; other forest vines – various spp) and information about regeneration of these plant groups based on field observation and literature review (objective 1.1). These data are largely of descriptive value;
- provided largely qualitative data about the numbers of individuals engaged in various stages of some NWFP collection, utilization and trade at the study sites (objective 1.2), and for various products elsewhere. These data (for enterprises based on the species listed above, honey, and *Agathis* and *Canarium* resins), are largely of indicative value;

- provided an overview of the challenges faced by those engaged in the collection, utilisation and trade of important NWFP in the study areas (those listed above, and some other fibres, grasses and leaves; objective 2.1), and at some other locations), and the associated challenges to sustainability;
- recommended and introduced improved methods and technologies for collection, processing and storage of a number of NWFP (objective 2.2) – variously, *Agathis* and *Canarium* resins; bamboo, rattan, palm, twig and vine stems; *Wikstroemia* bark. The adoption of these methods and technologies will have immediate positive impacts, and wider impact through the adoption of project technologies as the basis for two relevant Philippines National Standards;
- investigated trade and market networks and structures, associated pricing structures (value chains), and possible strategies for enhancing returns to rural communities from NWFP enterprises (objective 2.3). The information from these studies is principally of value in designing subsequent policy and project interventions.

### III-1.2 Assessment of overall implementation efficiency

The project has been implemented and managed efficiently, allowing for unforeseen factors outside the project's control. Collaborations with research partners at the four study sites were generally effective, with one exception outside the project's control, as were collaborations with those involved in NWFP trade. The extension to and expansion of project activities, by 10 months and through the addition of an additional case study site and of marketing case studies, were advantageous.

### III-1.3 Specific assessments against Terms of Reference

- (i) The degree of local involvement and the project's relevance in meeting the needs of the local forest communities.

Project activities were conducted in partnership with local communities and relevant government agencies at four principal study sites in different regions of the Philippines. Local community involvement was good at three of these sites;

that at the other was constrained by the security situation and larger social tensions. Even at the latter site, project collaborators were positive about the relevance of the project to local peoples' needs. Some of the issues which constrained local community engagement with the project at this site have now been addressed by the Philippines Government's recognition of ancestral domain rights.

All feedback which the consultant received from project partners suggested that the project was relevant to local communities' needs, specifically those needs associated with enhancing the sustainability of NWFP collection, maximising the recovery from products collected, and enhancing the returns to those in local communities engaged in NWFP enterprises. Key representative groups for the Philippines handicrafts industry confirmed the relevance of the project's activities and outputs to their constituents' needs more generally. However, project partners noted that subsequent policy and project interventions will be necessary if the needs of local forest communities are to be met to fullest effect.

(ii) The validity of ecological observation on important NWFP and the assessment of their natural regeneration.

Ecological observations and assessment of regeneration of NWFP at six study sites are valid, but are currently of only descriptive value. The observations were made in sample plots established for this project on a permanent basis, so can be re-assessed in the future to provide quantitative information on ecological dynamics. The principal strength of the approach used is its comprehensiveness, in terms of assessing a much wider range of NWFP than had previous surveys. However, because repeated assessment data were not available for these study sites (or other sites, for the range of NWFP assessed), the results of the project provide only limited general information to assist the development of sustainable management regimes.

(iii) The validity of project results which indicate that the collection of NWFP, if done on a sustainable and non-destructive way, poses a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest.

Project results do not in themselves provide sufficient evidence to support or deny this hypothesis, which was suggested by Panayotou (1990). Project results do shed light on a number of the elements of this statement:

- results suggest that traditional NWFP collection practices can be either sustainable or unsustainable, depending on factors such as harvest method, intensity and frequency. There is evidence from project studies of both sustainable and unsustainable impacts of collection on NWFP resources;
- it is apparent from project studies that current levels of harvesting of some NWFP at some study sites exceed sustained yield for that site. However, this does not necessarily imply that harvest levels are unsustainable (or vice versa) on a larger scale, and there is currently no inventory data available in the Philippines to inform the broader regional or national situation. NWFP assessment is planned as part of the current FAO-sponsored Philippines Forest Resource Assessment, but this national-scale coverage will be of only limited value at the forest management unit scale;
- results demonstrate that it is possible to improve the sustainability of some traditional collection practices, such as those for *Agathis* resin.

The NWFP inventory plots established by the project could be used to inform responses to this assertion, from data generated by subsequent assessments following NWFP harvesting.

(iv) Problems associated with the marketing of selected NWFP identified by the project's international marketing consultant.

The international consultant's research identified a suite of challenges to marketing NWFP in the Philippines, and gave highest priority to those associated with product design, quality control, production capacity, marketing skills and



support, market information, and access to capital. These challenges are consistent with those identified for NWFP, both in other project studies and elsewhere, and for small-medium enterprises more generally. Consultation with key handicrafts organizations during the ex-post evaluation confirmed both the international marketing consultant's assessment of the problems faced by the sector and his identification of strategic priorities to address these challenges.

- (v) The impact and relevance of the project, particularly its impact on the market aspects of non-timber forest products.

The project was directly relevant to a number of the key issues associated with the collection, utilisation and marketing of NWFP in the Philippines. Project activities and outputs associated with collection methods and processing technologies (eg improved resin tapping methods, chemical treatment of stems), have immediate impact to those engaged in particular NWFP enterprises. The intended adoption of some project outputs as the relevant Philippines National Standard by the Department of Trade and Industry represents a significant project impact.

The resource data and those describing the numbers of people engaged in various NWFP enterprises have both short and longer term impact and relevance. In the short term, their main value may be in helping NWFP interests press the political case for the importance of NWFP and the regulation of their harvest, as the Philippine Craft Fair Traders association has begun to do for some NWFP of particular concern to its members. Similarly, information describing trade and market structures are valuable in the short term for those currently engaged in NWFP enterprises and current policy debate.

To date, trade and market information outputs from the project have been provided only to project partners; while a number of these partners are well-placed to disseminate the information widely to interested parties, other strategies to enhance awareness of project outputs would also enhance project impacts.

It is in the longer term that the trade and market information generated by the project may have the most significant impact, as the basis for development and design of subsequent policy initiatives and project interventions.

- (vi) Determine the effectiveness of the technology transfer to the upland dwellers and assess the overall post-project situation.

The principal elements of technology transfer which have the potential for immediate impact are those associated with collection methods and processing technologies. There is evidence that some of these technologies, principally those associated with chemical treatment, have been widely adopted because of the significant immediate economic benefits they confer. In contrast, adoption of the improved resin tapping technologies communicated by the project appears more varied, which seems likely to reflect the longer term and more common-good benefits of that technology. In the latter case, effective implementation of supportive collaborative management arrangements, which give effect to existing regulatory regimes, are clearly also necessary to foster technology transfer. Such arrangements are the one of the central themes of Philippines forest policy.

The current overall post-project situation differs between different parties and interests in NWFP in the Philippines, reflecting both differences in the extent of direct project involvement and the different forms of project outputs:

- at the case study sites and for project partners directly involved with project work (local communities, NWFP enterprises and representative organizations, and government agencies), there have been immediate project impacts in terms of better collection methods and utilisation technologies for some products, and in terms of trade and market information about particular products. As a result of the project, these partners are better placed to manage particular NWFP resources sustainably, and to benefit from their production;
- the adoption of project outputs associated with chemical treatment technologies as National Standards for two NWFP product groups is a significant consequence of the project;

- there are not yet many other broader impacts as a result of the project, for two reasons. Firstly, project outcomes are still being disseminated to interested parties. Secondly, many project outputs are most relevant to informing subsequent policy development and project interventions to enhance the sustainability of NWFP utilization, collection and trade in the Philippines, and the economic returns to local communities from NWFP enterprises;
- given the continuing emphasis on community-based forest management and NWFP enterprises for sustainable livelihoods on the Philippines, in both forest and rural development policy and forest management, project outputs can be expected to contribute to the development of subsequent policies and project interventions.

(vii) Recommend follow-up actions in order to enhance utilization of project-developed technologies and other results.

Discussed in III-2.

#### III-1.4 Overall assessment

The project achieved good success in ascertaining existing NWFP collection, utilisation and marketing practices, and associated income streams, in the case study areas and for the selected NWFP. It has contributed significantly to the knowledge base for these NWFP in the Philippines, although project outputs should be more widely disseminated to enhance their value. Similarly, the project was able to enhance some collection and processing practices, although adoption appears less for the former than the latter. The project has also identified strategic priorities to further enhance the sustainability of NWFP enterprises and their contributions to rural livelihoods. These are important and significant achievements with the potential for significant impacts. The project's goals of ascertaining NWFP resource and user information were not as fully realised as the project proposal had envisaged, but the data collected by the project does provide important baseline information from which subsequent work can build.

More generally, the project contributes to the global body of knowledge of NWFP harvesting, utilisation and marketing, and about the role of NWFP in household and rural economies. The project has demonstrated the importance of NWFP in the Philippines, their value to forest-dependent people and rural communities, and identified opportunities to enhance and sustain the benefits derived from NWFP. The project has also demonstrated some of the many challenges posed by NWFP harvesting, utilisation and trade to sustainable management of the tropical forest resource base, and the relevance of ITTO investment in projects focused on NWFP.

### III-2 RECOMMENDATIONS

#### a. for sustainable management of NWFP:

1. more comprehensive and systematic resource inventory of key NWFP resources in at least some regions of the Philippines, and associated assessment of harvesting and regeneration rates;

A more comprehensive resource inventory than was possible in this project should link to each of inventory plots established under this project, the national Forest Resource Assessment sampling framework, and any other relevant NWFP inventory activity. The goal of further inventory work should be to establish the dynamics of representative populations of selected NWFP under various harvesting regimes (including zero harvest), so that sustainable yields can be estimated and the impacts of different harvesting regimes established;

2. continued collaboration between relevant agencies and enterprises and partner communities and organizations to foster adoption of sustainable collection methods.

Project results suggest that current collection practices vary in their impacts, and that levels of adoption of more sustainable collection methods are varied.

While implementation of sustainable management regimes is formally the responsibility of DENR, NWFP-based enterprises have a stake in fostering a

sustainable supply. Partnerships between government agencies, NWFP enterprises and local communities to promote sustainable collection practices are more likely to be successful than initiatives by only one of these parties.

b. for utilisation of NWFP:

3. continued collaboration with partner communities and organizations to foster adoption of technologies to minimize deterioration of NWFP.

These technologies have immediate advantageous impact in terms of recovery and returns to collectors. There are also other technologies, appropriate to larger scale producers (eg kiln drying) or over the longer term (eg pest biological control), that are logical successor activities.

c. for trade and market development of NWFP:

4. adoption of the international marketing consultant's recommendations of strategic priorities to improve the production and marketing of NWFP in the Philippines. In addition to the resource inventory identified above, the priorities recommended were:

- initiatives to enhance the economic benefits to NWFP harvesters and handicraft workers;
- technology transfer programs targeting both production and marketing skills;
- improving access to capital and market information.

5. policy development and project interventions to support the initiatives identified above, for selected NWFP.

Project outputs have reiterated the importance of NWFP and identified ways in which both the sustainability of management and NWFP enterprises, and the benefits to rural communities, can be enhanced. Further policy development and project interventions will be necessary to support these outcomes. In the first instance, policy development might focus on the

incentive and regulatory framework to foster implementation of sustainable harvesting regimes; project support might give priority to more comprehensive and representative resource inventory, adoption of collection and processing technologies and the identified production and marketing priorities.

d. project formulation and outputs:

6. this project has identified priorities for and established the foundations of subsequent research to enhance the sustainability of NWFP collection practices and enterprises, and the benefits to local communities. Some of those studies would best be conducted as interdisciplinary collaborations, *eg* with rural livelihood experts in the case of socio-economic work, and all will be able to build on the platform of partnership established by this project with principal NWFP interests, such as handicraft associations and their memberships. The formulation of subsequent projects would also benefit from wider consultation with relevant literature, from both the Philippines and abroad.

7. development and implementation of strategies by FPRDI and ITTO to promote wider dissemination of key project outputs.

Key project outputs are not yet as widely known in the Philippines as they should be, and are not known outside the Philippines. This can be addressed in part by a targeted dissemination campaign by FPRDI, DENR, and other project partners. Additionally, a simple and cost effective strategy could be to ensure that key project outputs (in the case of this project, Technical Reports 1 and 2 and the International Consultant's report) are available – with appropriate acknowledgement, caveats and disclaimers – on both the FPRDI and ITTO www sites. Such a strategy would be advantageous for ITTO project outputs more generally, and should significantly enhance their impacts.

8. ITTO continue to invest in projects which focus on NWFP, in recognition of their importance to sustainable forest management and to sustainable development.

#### **ACKNOWLEDGEMENTS**

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**ANNEX A: Summary of Project Logic and Outputs**

Objectives, elements & study components		Principal project & study outputs
<b>Development objectives:</b> Provide essential information and technologies on the role of NWFP utilisation and trade in promoting the income & livelihood of local forest communities. Promote sustainable collection and utilisation of NWFP, as an integral component of sustainable forest management		Project Completion Report Project Technical Reports Parts 1 & 2
Specific objectives	Specific study component	Principal study outputs
<b>Specific objective 1:</b> 1.1 Survey pilot areas/ sites & determine approximate volume of NWFPs and number of upland/forest dwellers engaged in collection, processing & sale of NWFPs.	1.1a. determine supply volume of selected NWFP (rattan, bamboo, pandan, buri, anahau & vines); 1.1b. some information on numbers of people involved in relevant activities collected as part of Studies 2 and 5	ecological survey data for sample plots in 4 pilot study areas and 2 additional study sites (Terminal Report 1, Final Technical Report 1);  data on numbers of people involved in some activities in some areas/ product streams (Terminal Report 2, Final Technical Report 2; Study 5 Final Report)
	1.2 Assess regeneration pattern & cycle and recommend sustained yield collection and observation measures for sustainable supply.	1.2a. evaluate regenerative cycle and pattern through field observation and interview.
	1.2b. recommend sustained yield collection practices & conservation measures	commentary in project reports for rattan, erect palms, bamboo, pandan & vines (Terminal Report 1, Final Technical Report 1); information on improved resin tapping methods (2.4)
<b>Specific objective 2:</b> 2.1 determine needs & problems of upland/ forest dwellers in collection, processing & storage of NWFP;	2.1. review & evaluate past & present harvesting methods for selected NWFP.	results of field research in project areas (Terminal Report 2, Final Technical Report 2)
	2.2. determine needs and problems of people engaged in collection and use of NWFP.	results of field research in project areas (Terminal Report 2, Final Technical Report 2)
	2.3. assess volume and income derived in trading selected NWFP.	results of field research in project areas (Terminal Report 2, Final Technical Report 2)
	2.5. assess overall impact of harvesting NWFP on socio-economic conditions of dependent communities.	commentary in project reports (Terminal Report 2, Final Technical Report 2)



Annex A ctd

Objectives, elements & study components		Principal project & study outputs
2.2 recommend and introduce improved methods for collection, processing & storage.	2.4. improve and recommend appropriate technical skills for NWFP collection.	recommendations for improvement of collection methods for resins & bark(Terminal Report 2, Final Technical Report 2)
	3.1. impart knowledge on nature & cause of biological deterioration of bamboo, rattan, palms, vines & canes.	workshops at 11 locations and 3 pamphlets in both English and Tagalog (Terminal Report 2, Final Technical Report 2; Pamphlets 1-3 (E/T))
	3.2. to provide knowledge on preservatives, how to handle them, and methods of application.	as above
	3.3. provide knowledge of remedial treatment and relevant safety precautions.	as above
2.3 conduct market research on collection, utilisation and trade, and provide market information.	4.1. determine market outlets for NWFP.	results of field research (Terminal Report 4, Final Technical Report 2, Study 5 Final Report)
	4.2. determine marketing practices for NWFP in forest communities.	as above
	4.3. determine the pricing structure for NWFP.	as above
	4.4. provide information on markets, prices and strategies for marketing NWFP.	as above
	5.1. conduct literature review of NWFP marketing.	literature review reported (Study 5 Final Report)
	5.2. prepare NWFP marketing case studies.	case studies reported for 2 resins, vines & twigs, plant splits & fibres, leaves & grasses, bamboo poles & splits (Study 5 Final Report)
	5.3. recommend appropriate marketing strategies for NWFP.	11 strategic priorities recommended (Study 5 Final Report)
	5.4. recommend appropriate strategies for providing economic benefits to forest dwellers.	4 strategic priorities recommended (Study 5 Final Report)
	5.5. conduct workshop on preparation & analysis of marketing case studies.	workshop conducted (Project Completion Report)
<b>Organization of work –</b> Studies 1-5, for selected NWFP: 1. Resource survey & regeneration assessment 2. Assessment of collection, processing & trade 3. Appropriate chemical treatment 4. Market research and information 5. Marketing case studies and strategies	<b>Associated project outputs</b>  1. Study 1 Terminal Report 2. Study 2 Terminal Report 3. Study 3 Terminal Report + 3 pamphlets 4. Study 4 Terminal Report 5. Study 5 Final Report	

## ANNEX B: References

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## ANNEX C: Evaluator's prior questions:

### Ex-Post Evaluation of ITTO Project PD 15/96 Rev. 2 (M, I)

#### 1. Questions for the Director, FPRDI

1. Was the project a success from FPRDI's perspective, in terms of:
  - contribution to FPRDI's mission?
  - achievement of specified project objectives?
  - administrative and financial management?
2. What are the principal lessons FPRDI has taken from experiences with this project in relation to future work, both project and non-project based?
3. Are there any changes you would make to future project partnerships with ITTO as a result of this project?

#### 2. Questions for the Project Leader/ Project Monitoring & Evaluation Committee

1. Compared to other projects with which you have been associated, how does this project rate in terms of:
  - achievement of specified project objectives?
  - ease of implementation?
  - administrative and financial management?
  - quality of staff who worked on the project?
  - the collaborative relationships with relevant government agencies and businesses?
  - the collaborative relationships with local communities in the case study areas?
2. In your view, what were the project's:
  - most significant achievements towards sustainable utilization, collection and trade of tropical non-wood forest products in the Philippines?
  - least satisfactory outcomes in relation to the sustainable utilization, collection and trade of tropical non-wood forest products in the Philippines?
3. What lasting impacts do you believe the project has made in terms of its two specific objectives (Appendix 1), and in any other terms:
  - in the case study areas?
  - towards sustainable utilization, collection and trade of tropical non-wood forest products in the Philippines more generally?
4. Are there any aspects or outcomes of the project (scientific, administrative, partnership, etc) that you regard as disappointing or unsatisfactory?
5. Why was the Palawan case study added, and what were the costs and benefits to the project of expanding the project to include it?

6. During the course of the project, was the project able to establish useful links with related projects in the Philippines or elsewhere?
7. What do you see as the most significant contributions of the project's findings to the larger body of research on NWFPs internationally?
8. How were you able to verify that the project met the needs of local communities in the case study areas?
9. Please comment on the statement: "project results indicate that the collection of NWFPs, if done in a sustainable and non-destructive way, poses a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest".
10. Are there issues related to the project, other than those identified above, that you wish to discuss?

### **3. Questions for Leaders of each of Studies 1-4 about the study they led**

1. What were the study's most significant achievements?
2. What were the most difficult challenges you faced in seeking to meet study objectives?
3. What would you do differently next time to achieve similar objectives to those specified for this project?
4. Who are the principal beneficiaries of the study's work?
5. How effective was the technology transfer component of your project?
6. How confident are you about the robustness of the results, and how generalisable are they in the Philippines?
7. How do the results of your work relate to other relevant research findings?
8. Please comment on the statement: "project results indicate that the collection of NWFPs, if done in a sustainable and non-destructive way, poses a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest".
9. What follow-up activities are necessary to maximise the uptake of your results?
10. If you were awarded further funding to build on the results of this work, what would your priorities be?
11. Are there issues related to the study or project, other than those identified above, that you wish to discuss?

### **4. Questions for the international marketing consultant**

1. The study identifies 4 priority areas to improve the production and marketing of NWFPs in the Philippines. Those associated with NWFP inventory and technology transfer appear relatively straightforward (please comment if you wish), whereas those associated with enhancing economic benefits to local people and with improving access to capital and market information appear more challenging. Are you able to elaborate on strategies that might be effective in these areas, possibly on the basis of experiences/ examples elsewhere?

2. What is your assessment of the contribution of the project to knowledge of NWFP production and marketing in the Philippines, and more widely?
3. Are there issues related to the study or project, other than those identified above, that you wish to discuss?

### **5. Questions for relevant DENR staff**

1. How familiar are you with the project's outcomes?
2. From your perspective, what were the project's most significant achievements?
3. Compared to other projects with which you are familiar, how does this project rate in terms of:
  - its contribution towards sustainable management of the Philippines' forests?
  - the collaborative relationships with project researchers?
  - the collaborative relationships with local communities in the case study areas?
4. To what extent have the project's outcomes assisted DENR fulfil its responsibilities?
5. Project studies identified tenurial arrangements and poor inventory information as key constraints to more sustainable management of NWFPs in the Philippines. Can you comment on the prospects for addressing these constraints?
6. What priorities do you identify for subsequent research to support more sustainable management of NWFPs in the Philippines?
7. Are there issues related to the project, other than those identified above, that you wish to discuss?

### **6. Questions for case study collaborators**

1. From your perspective, what were the project's most significant achievements?
2. What outcomes of the project have helped your organization most?
3. Will these outcomes be of lasting value, or do they depend on ongoing external support?
4. How much do you think the project has helped local people who derive part of their livelihood from NWFPs?
5. Compared to other projects with which you are familiar, how does this project rate in terms of:
  - its contribution towards sustainable management of the Philippines' forests?
  - the collaborative relationships with project researchers?
  - the collaborative relationships with local communities in the case study areas?
6. Are there any aspects of the project that you found disappointing or unsatisfactory?
7. What priorities would you suggest for any follow-up work?
8. Are there issues related to the project, other than those identified above, that you wish to discuss?

**ANNEX D: Written responses to evaluator's prior questions:  
Questions for the Project Leader/ Project Monitoring & Evaluation Committee**

1. Compared to other projects, how does this project rate in terms of;

Achievement of specific objectives of this project rate relatively well compared to other projects which I am likewise involved. Given the capable manpower and the financial support to execute the Project, the specific objectives were attained.

The ease of project implementation is not quite easy, particularly the weather conditions significantly affected the activities in resource survey and inventory of NWFP in the project areas. Another factor that affects the ease of project implementation is the peace and order condition in some areas in the country.

Considering that in this particular project, the Project Leader is the person responsible for the actual administration and management of project funds once released by the ITTO, we are glad to state that Project Management did not encounter problems which are administrative or financial in nature.

The project has qualified, capable, cooperative and dedicated project staff. We realized the danger, the risk and difficulty in implementing most of the project activities on the rural communities particularly in project sites, but these does not deter the project staff in pursuing their tasks to attain their objectives. The staff is composed of Two PhD,s and four M.Sc.

The collaborative relationships of the project with the Department of Environment and Natural Resources and its Regional and Provincial Offices, the Department of Science and Technology and its Regional and Provincial Offices is relatively at par compared to other projects which I am associated with.

The collaborative relationships with local communities in the project areas vary with communities. The social and cultural behaviour of the local people specially the Indigenous People (Ips) in the areas are not identical. The social and cultural traits of the Manobos at SUDECOR are different to that of the Tagbanuas and Bataks at NATRIPAL in Palawan so that the collaborative relations likewise vary. Considering however the objectives, the expected outputs and the actual activities of the project, the collaborative relationship of the project with the local people in the project areas would relatively rate higher than the other projects.

2. In your view, what are the he project most significant achievements towards sustainable utilization, collection and trade of tropical non-wood forest products in the Philippines are:

- a) The data and information obtained on the natural regeneration cycle and the determination of volume of selected NWFP in the project areas.
  - b) The determination of the collections practices, processing methods and trade of NWFP being employed by upland forest dwellers and local communities. The determination of their actual needs and problems.
  - c) The appreciation and adoption of the technologies disseminated and demonstrated by the project staff/personnel on the application of chemical preservatives on some NWFP such as bamboo, rattan, palms, twigs and vines to forest communities and rural training center. The adoption of the scientific tapping method for collecting almaciga and canarium resins in the project areas.
  - d) The actual gathering and determination of the prices of some NWFP from the collector/gather to the different intermediaries or middlemen and the final end-user of the products.
- Least satisfactory outcomes in relation to the sustainable utilization, collection and trade of tropical NWFP in the Philippines?

In some very few instances, there are some instances that collectors/extractors of NWFP would not care for the wildlings or regenerants during the collection process. Others would try to extract/collect what is available without considering the maturity of the species. Some few gathers/tappers of resin from trees still practiced the traditional and unscientific method of collection.

3. In terms of the two specific objectives (Appendix 1), and in any other terms, the lasting impacts made by the project

In the case study areas/project areas?

The lasting impacts made by the project in the project areas are: (1) The regeneration cycle of the selected NWFP were determined for the information of the local people and forest dwellers. This would served as a guide for them as to how often for a given period they would collect or harvest said products; (2) The problems encountered by the people (indigenous people or migrants from lowland) in regard to collection, processing and marketing of NWFP were identified so that solutions to these problems could be work on by concerned government institutions and non-governmental organizations; and (3) The introduction of improved methods of collection, processing/protection and storage of selected NWFP would to some extent improved the capabilities of the people engaged in collection, processing and trade of

NWFP. It would likewise improve quality of their finished products and would command higher prices in the market.

Towards sustainable utilization, collection and trade of tropical non-wood forest products in the Philippines?

The lasting impacts made by the project towards sustainable utilization, collection and trade of NWFP in the Philippines are: (1) Knowing the regeneration pattern/cycle of selected NWFP would contribute a lasting impact towards sustainable utilization, collection and trade of tropical NWFP in the sense that it would guide the collectors, processors the users of the products when to cut or collect the stated NWFP to support the sustainability and supply of the species; (2) by following the recommended sustain-yield collection practices would greatly support the project objective on sustainable utilization, collection and trade of NWFP in the Philippines; (3) the introduction of improved methods of collection, protection and storage of selected NWFP would also give a lasting impact on the project objective on sustainability of NWFP. Observing the scientific way of collection particularly on extraction of resin/exudates from trees would ensure a sustain yield of resin. By employing the proper methods of applying chemicals to prolong the life and serviceability of NWFP would create a lasting impact on the sustainable utilization, collection and trade of tropical NWFP.

4. There are aspects in the project implementation that as the Project Leader regard it as disappointing to a certain extent.

(a) The occurrence of typhoons during the months of September to December in some years during the project implementation period greatly affects the schedule work program particularly the resource survey and inventory in two project areas facing the Pacific Ocean. These areas are the SUDECOR and IDC. The activities were delayed that we have to ask ITTO for an extension of eight months to finish the project.

Another aspect that could be said as disappointing is the attitude of some IP,s (the Manobos) in the area of SUDECOR were somewhat hesitant to cooperate in data gathering process on collection, processing and trade of NWFP. They still have some clouds of doubt on certain activity of the study.

5. The Palawan project area (the fourth area) was included in the original three project areas for the reason that the delegate of Switzerland during the Twenty first session of the International Tropical Timber Council (ITTC) in Yokohama on November 13-20, 1996 informed the committee and the delegate of the Philippine government that his delegation would want to suggest that the project include the NATRIPAL area in Palawan. His justification for the inclusion of NATRIPAL is that several conservation



NGO,s are interested in the project and there are some activities under NATRIPAL that pertains to bring access to land and its natural resources to the group of IP,s in the province. It also aimed to enhance economic bargaining position of IP,s through capability building on sustainable management and trade of NWFP. Considering that the FPRDI-ITTO Project PD 15/96 rev. 2 (M,I) has some related activities to that of NATRIPAL the committee requested the implementing agency that it would be advantageous to include and expand the data gathered by NATRIPAL and to take into account the views of NGO,s in the implementation of the project.

With the above justifications and Committee decision, Philippine delegate informed the Committee that the implementing agency is accepting the request. The Philippine delegate also informed the Committee that the budget approved by the Council might be affected with the addition of another project area.

The cost of project activities incurred in the NATRIPAL area was subsumed by the project. Project Management has designed and implemented a strategic work plan to accommodate the costs that would be involved in executing the activities in the additional area. The costs were personnel services, travel, daily subsistence allowance, supplies and some contingencies.

Several benefits were derived by the project with the inclusion of the Palawan area. These includes the following:

- (a) It expanded the resource inventory data of important NWFP particularly on bamboo and rattan. Some inventory works were done in areas outside of NATRIPAL area.
- (b) It expanded the data and information base in market information, collection and processing of bamboo, buri, almaciga resin and honey. It also provided the project relevant traditional practices employed the IP,s in the province which includes the Palawan, the Bataks and Tagbanuas in their collection and trading of NWFP.

6. During the course of the Project execution, the project was not able to establish links with related projects in the Philippines. We made some efforts after the project implementation to link with Ghana Government thru their delegate during the Council Session of ITTC in Yokohama Japan on November 2000 but the delegation was not quite interested to the project.

7. The most significant contributions of the projects findings to the larger body of research on NWFP internationally, is the information generated by the project on the regeneration cycle of important NWFP in the Philippines and the establishment of their specific locations and volume. Equally significant

contribution of the project findings is the actual information and verification of the actual needs and problems of forest dwellers in the project areas primarily dependent on the collection and sale of NWFP for their livelihood. It can also be stated that if collection of NWFP could be done on a rational and sustainable process it will contribute to the continuous existence and maintenance of the forest and its products.

8. Verification and monitoring on how the project met the needs of local people in the project areas is a continuing process after project completion. The aspect of verification and monitoring is another phase which is not covered in the project. However, during the initial project implementation covering year two, project staff were able to identify some major problems/needs of the local people particularly on premature deterioration of rattan, bamboo, some palms and vines after cutting and on the unscientific method of tapping resin from almaciga trees. So that during the later part of the second year and the whole third year implementation of the project, project staff conducted actual training and demonstration work on chemical treatment of rattan, bamboo, and some palm species in the project sites and vicinities. Seminar and field demonstrations on specific method of tapping of almaciga resin were done.

Based from these project activities and on the enthusiastic reactions of the participants, their problems on these aspects were positively met. Other needs such as marketing of NWFP could be monitored and verified.

9. The statement: „Project results indicated that the collection of NWFP, if done in a sustainable and non-destructive way, poses a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest.

Non-Wood forest products are renewable resources unlike metal. It could be planted in the soil in the form of seeds or cuttings and it will grow and mature and produce more seeds to continue the life cycle. If the process of collection and utilization of these NWFP is done on a way that the extraction/collection of the utilizable product or part of the species for a given time will be just enough in volume or quantity that it will not aggravate or substantial exceed the volume of the existing regenerants available to grow and mature for a given time, then this would validate the above statement.

10. I would say that most issues related to the project were taken care of.

#### **Questions for Leaders of each of Studies 1-4 about the study they led** **Study 1: Resource Survey and Inventory**

1. What were the study's most significant achievements?

The Study I, which dealt with resource survey and inventory of selected NWFP, was able to gather quantitative data on relative supply, volume and availability of materials that are very important for the current and potential users.

2. What were the most difficult challenges you faced in seeking to meet study objectives?

Some of the study sites particularly in Surigao, Mindanao and Western Samar are plagued with rebels and lawless elements which really posed threat on our safety and security.

3. What would you do differently next time to achieve similar objectives to those specified for this project?

Early coordination not only with DENR officials but with local government as well should be done for them to certify on the peace and order situation in the proposed project site.

4. Who are the principal beneficiaries of the study's work?

Principal beneficiaries are traders or people indulge in commerce or industry that use NWFP as raw materials.

5. How effective was the technology transfer component of your project?

Study I did not actually come up with technology but rather was able to disseminate information on material resource availability through technical write-up and report.

6. How confident are you about the robustness of the results, and how generalisable are they in the Philippines?

The results obtained particularly on relative volume and availability of materials covered admittedly small segment of the country. Relative abundance of the species, therefore, presented could not now be taken in a general sense for the Philippines as a whole.

7. How do the results of your work relate to other relevant research findings?

Some of non-wood forest products like pandan and forest vines for instance are hard to obtain because of limited supply. Problem on material availability for the uses has always been reported in various studies.

8. Comments on the statement: „project results indicate that the collection of NWFPs, if done in sustainable and non-destructive way, poses a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest.“

This simply refers to proper collection practices with due consideration on life and ability of NWFP species to regenerate and perpetuate. If adequate care in harvesting is practiced and attention is given the regeneration of young wildlings, sustainability of material can be achieved.

9. What follow-up activities are necessary to maximize the uptake of your results?

A good follow-up could be the conduct of monitoring and silvical maintenance and management of inventoried plots to ensure survival and future stock of the NWFP species studied. Other species not covered previously but have economic importance for various users can be included.

10. If you were awarded further funding to build on the results of this work, what would your priorities be?

To include other non-wood species not covered by previous study and focus on regenerants monitoring and silvical maintenance.

11. Are there issues related to the study or project, other than those identified above, that you wish to discuss?

Project site selection I think is a very important aspect. Selection should be based on feasibility of conducting field activities on the basis of species availability in the area and the peace and order situation.

## Study 2: Assessment of Collection, Processing and Trade

### 1. Most significant achievements.

Data and information on the past and present situation of harvesting NWFP were gathered in four selected areas of the country representing the three main geographical regions of the country including the province of Palawan. Problem of people engaged in the collection and utilization of selected NWFP were identified. In the same manner, trading and marketing of these NWFP were further documented through interviews and survey questionnaire.

Considering the bulk of NWFP in the areas studied, the forest settlers mostly indigenous people engaged in the collection of NWFP were trained to improve their technical skills along their line of practice and to adopt workable and sustainable procedures in the collection of NWFP especially in the case of almaciga and *Canarium* (pili) resins. The training provides this knowledge in the scientific/proper methods of tapping almaciga and *Canarium* trees; rectify the crude practices in resin collection currently practiced by tappers in the area and encourage them to preserve the trees to enhance fields and improve resins quality.

Primary data and other information on the system of collecting, processing, trading and marketing of selected NWFP were further documented through interview, survey questionnaire and photographs. Secondary data, supplementary and related information were gathered from government cooperators like the Department of Environment and Natural Resources, department of Trade and Industry and NWFP licensees and permittees and also from related and published technical reports and articles.

The actual needs and problem of forest dwellers engaged in the collection of NWFP were determined. The volume of production of NWFP and income derived from sale of selected NWFP were assessed in the four project areas/sites and selected areas with substantial supply of NWFP.

### 2. The most difficult challenges you faced in seeking to meet study objectives.

In the beginning some minor problems were encountered or had challenged rather the project management staff to meet study objectives. Among others were the following:

In accessibility of some identified sites especially the Surigao Development Corporation (SUDECOR) areas: This could be attributed to the presence of militant forest settlers—the indigenous people most especially the Manobo tribes who were uncooperative, unwillingness and negative attitudes to be interviewed;

Delayed issuance of Environment Compliance Certificate (ECC) by DENR to Industries Development Corporation (IDC) in their field areas located in Aurora province and vicinities to operate.

In the case of Nagkakaisang Tribu ng Palawan (NAFRIPAL) forest settlers who belong to 3 groups of indigenous people, i.e., Tagbanua, Batak and Palawan—were unanimous to reveal that they could not fully execute their activities as far as management of forest resources, i.e., almaciga resin and rattan concessions/permittees pending approval of forest sector policies that will give them more rights and management responsibilities to forest based Communities (CADCs and CBFMAs)

NWFP gatherers especially indigenous people still strongly embrace the so called traditional way of extracting NWFP, not to mention their beliefs and rituals being practiced before extraction and utilization of NWFP. These practices hampered the maximum collection and utilization of NWFP hence further affected the trading and marketing activities for these NWFP.

3. What would you do differently next time to achieve similar objectives to those specified for this project?

Educate the ips. Initial moves to educate this Ips have been carried out by military men (Philippine National Police) in Aurora Province as part of extension activities by the Department of Interior and Local Government (DILG).

Appropriate training such as environmental impact assessment, integrated community-based resource management to include protection and conservation of biodiversity especially endangered species present in the area should new undertaken. Training is the optimum linkage to impart technical knowledge to forest settlers.

Intensive training campaign should be implemented to raise the level of literacy. For the facilitation of information dissemination and technology transfer on NWFP collection and utilization.

To further address the needs of the tribal groups like the issue on tenurial rights. Indifferences between indigenous and non-indigenous groups like licensees and permittees should be given immediate action. In this case peace and order in local communities shall be attain thus data collection will be easy and smooth sailing.

4. Who are the principal beneficiaries of the study work?

Farmers, forest settler,s mostly indigenous people, NWFP licensees and permittees, traders and handicraft entrepreneurs using NWFP are the principal beneficiaries of the study work.

5. How effective was the technology transfer component of your project?

The technology transfer component of the project especially in the form seminar/trainings on proper and scientific methods of resin extraction was a tremendous success and very effective. There was positive response among participants as showed by their enthusiasm and interest on the subject matter by participating actively ion the discussions and adoption of technology.

6. How confident are you about the robustness of the results?

The study indicated that harvesting of the so-called NWFP was favorably accepted and gained strong support from the forest settler,s especially indigenous people.

Impact of extracting NWFP on the socio-economic and everyday living of forest settlers and farmers are indeed important findings of the study, viz:

Upliftment of socio-economic standards due to employment generation

Creation of people,s organization as social impact, extraction of NWFP generates strong ties and camaraderie among resin tappers, rattan and honey gatherers, resin and rattan licensees

And permittees, bamboo growers, traders, entrepreneurs, government officials especially DENR, [private sectors and NGOs thus developed connection and contacts that could uplift the system of handling, trading and marketing of collected NWFP.

Adoption of technology on proper harvesting of NWFP, i.e., resins generate more employment, increase income of gatherers which was attributed to higher production of NWFP. Moreover, the technologies educate and appreciate environment-awareness between IPs and others involved in NWFP extraction, thus contribute to lessen environmental problems. Further, this minimize the unscrupulous and crude system of extracting NWFP, hence, help in the forest conservation program of the government.

7. How do the results of your work relate to other relevant research findings?

Data and other information gathered in the study will serve as strong reference by researchers involved in handicraft and local coating industry which include parts and varnishes that depends largely on imported raw materials for their operations.

8. The sustainable and non-destructive way of extracting NWFP definitely reduces or minimizes the number of deaths of Almaciga and Canarium trees tapped for resin production. Deep, wide and long wounds on the bark create awareness for these organisms to infect on the tree and softly killing it. Declining tree population would result in low income earned from resin, high environmental and natural resources protection costs, and high mitigation costs. Moreover, the declining forest cover would enhance environmental problems such as soil erosion, flooding, loss of habitats, and biodiversity. Ultimately, unsustainable practices of resin tapping would result in the decimation of income sources to the detriment of common populace.

9. What follow-up activities are necessary to maximize the uptake of your results?

Based in the findings of this study the following are recommended:

v Training

Appropriate training such as environmental impact assessment, integrated community-based resource management to include protection and conservation of biodiversity especially endangered species present in the area.

Intensive training campaign should be implemented to raise the level of literacy for the facilitation of information dissemination and technology transfer on NWFP collection and utilization.

v Marketing Needs

It is necessary to get in touch with market outlets and NWFP buyers to help them in the marketing off the extracted forest products. It is likewise recommended that study the capacity of establishing forest occupants marketing cooperatives. This could be viewed as an organized vehicle for soliciting active and divert participation of the forest settlers in which majority are upland dwellers.

10. If you were awarded further funding to build on the results of this work, what would your priorities be?

My priority is to establish adequate information on the supply distribution and volume of economically important NWFP available in the country.

11. Are there issues related to the study or project, other than those identified above, that you wish to discuss?

I would like to know the gender sensitivity in the collection, processing and marketing of NWFP and handicraft products.

### Study 3: Dissemination and Demonstration of Chemical Treatment of NWFP Stems

1. What were the study's most significant achievements?

- a. It created awareness on the part of NWFP gatherers, traders and other sectors of the industry the importance of clean, blemish-free and high quality raw materials that shall be used in the manufacture of furniture and handicraft products.
- b. Requests for technical assistance on the same technology is continuously being received by FPRDI. After the completion of the project, dissemination and training on chemical treatment is now being handled by the Furniture and Handicraft Industries Research Program of the Institute.
- c. The study did not only create awareness but adoption of the technology on chemical treatment of NWFP paved the way in the production of high quality raw materials that are free from insect and fungal making the products competitive in the world market.
- d. Resolution No. 99-112, a resolution extending appreciation and gratitude to ITTO and FPRDI was given by the Municipality of Kiamba, Sarangani Province July 13, 1999 for the support in the conduct of the training program.
- e. The technology which was packaged in 3 pamphlets were adopted as Guides by the Philippine National Standards on Handicraft Products: Baskets ^ BPS PNS 275 and Christmas Decorations ^ BPS PNS 276 by the Department of Trade and Industry, Makati City.

2. What were the most difficult challenges you faced in seeking to meet study objectives?

- a. The original cooperators of the study were DENR, Integrated Development Corporation IDC Quezon Province), Surigao Development Corporation (SUDECOR Surigao) and San Jose Timber Corporation, Samar. Since SUDECOR and IDC were not operational or not involved in TNWFP anymore during the implementation of the study, changes in the linkages among cooperators were made. The Regional Offices of the Department of Science and Technology (DOST), Non-Government Organizations (NGO) and local government units (LGUs) were tapped to coordinate with the Upland Forest Communities. They have played a vital role in the achievement of the objectives of the study.
- b. Although arrangements with the Upland Forest Communities (Indigenous People) were meticulously organized, we did sometimes had difficulty in achieving the required attendance for the training program. However, coordinators who were contacted for the training were very helpful in organizing the training proper.

3. What would you do differently next time to achieve similar objectives to those specified for this project?

- a. The approach shall still be the same except that monitoring and impact assessment of the adoption of the technology should be done.

4. Who are the principal beneficiaries of the study work?

- a. The Upland forest Communities are the principal beneficiaries. Traders, manufacturers and entrepreneurs were also interested in the program and have made use of the technology.

5. How effective was the technology transfer component of your project?

- a. The pamphlets and the audio-visual aids that were prepared for the lecture and hands-on demonstration/training were very effective in the transfer of the technology. Actual samples that were treated were also brought to the sessions and participants were impressed by the performance of chemical treatment. Safety procedures in treatment application were presented as precautionary measures in the adoption of the technology.

6. How confident are you about the robustness of the results, and how generalisable are they in the Philippines?

a. Results are encouraging and it is accepted that application of chemical treatment on bamboo, rattan, palms, twigs and vines is necessary to obtain insect and fungal free raw materials and finished product.

7. How do the results of your work relate to other relevant research findings?

a. Our project is dissemination and demonstration of chemical treatment and apparently this will work on raw materials which would be difficult to treat non-chemical methods. Although kiln drying shall also minimize insect and fungal attack, it would require expensive equipment. Target clientele were upland forest communities or small entrepreneurs, application by chemical treatment would still be cheaper than kiln drying.

8. Comments on the statement: „project results indicate that the collection of NWFPs, if done in sustainable and non-destructive way, poses a negligible threat to the maintenance of a continuous forest and results in minimal changes to the natural tropical forest.“

a. I would agree to the statement. Application of any kind of treatment will of course reduce losses if not completely eliminate insect and fungal attack on NWFPs. Raw materials or finished products will last long, thus reducing pressure to cut more rattan, bamboo, palms, twigs or vines.

9. What follow-up activities are necessary to maximize the uptake of your results?

a. Training on marketing of the raw materials or finished products. In this regards, lectures from Department of Trade and Industry shall be an important component. Likewise, their assistance on pricing and marketing of the product shall be very helpful in maximizing the results of the study.

b. An impact assessment on the adoption of technology should be conducted.

10. If you were awarded further funding to build on the results of this work, what would your priorities be?

a. Continue on disseminating and demonstrating the technology on chemical and also non-chemical treatment to protect NWFP against insect and fungal attack.

b. Conduct further studies on non-chemical methods to control insect and fungal attack in NWFP and disseminate the same.

11. Are there issues related to the study or project, other than those identified above, that you wish to discuss?

a. I guess the above questions have taken care of all the issues that are relevant to our study.

#### **Study 4: Market Research and Market Information**

1. Study,s most significant achievements.

The significant achievements of the study were:

• Being able to generate and provide information on the marketing system of some NWFPs in the four selected areas in the country.

• The study was able to determine the pricing system of various NWFPs, the different channels of distribution and the participants involved in the chain, the marketing constraints of the participants in the distribution chain; the marginal profit earned by each participant in the distribution chain.



The powerless of the gatherers to dictate price for their harvest make the least compensated in the trade of NWFPs ^ the reason could be attributed to illiteracy of these people who mostly belong to the IPs and are often vulnerable to tricks done by some traders.

The study found out that there are still untapped NWFPs which have a great potential for commercial utilization. Utilization of NWFPs were mostly focused on popular materials such as bamboo, rattan, vines and resins. There are areas in the country which have an abundant supply of NWFPs but the problem is their accessibility for harvesting or extraction.

Inaccessibility of the raw materials were due to poor conditions; transportation problem.

Non-utilization of some NWFPs were due to lack of knowledge, skills and technology on processing and utilization and linkage with [proper authorities to assist communities in the marketing of forest products and in product development.

Lack of initiative on the part of the government to help IPs develop.

2. What were the most difficult challenges you faced in seeking to meet the objectives of the study?

Data gathering activities ^ Some NWFPs available in the areas visited have no market potential because of the lack information on their economic value for utilization. Rattan, bamboo and vines were more popular.

In some instances, the participants in the distribution chain cannot be reached because we were not able to time their arrival for marketing of NWFPs in communities nearby. Most of the gatherers live in the forest and it is only during market days that they can be seen around the town.

Traders were also difficult to approach because they were not around at the time the surveys were conducted. We were able to chance upon them during the technology transfer activities.

3. What would you do differently next time to achieve similar objectives to those specified for this project?

Visit the place and stay there for a certain time to observe and experience the whole process in the process in the marketing of NWFPs. Coordinate with different community organizers on the schedule of marketing of NWFPs so that the visit is timed perfectly. This would enable the researchers to interview both the gatherers and traders and have a feel of the marketing system.

4.

5. Effectiveness of the TT component ^ c/o Dr. M.Y. Giron on Study 3

6. Very confident with the results of the study. Results have similar findings with other researchers done in the [past and therefore can be generalized.

7. I find the results of this study have similar results with studies conducted in the local and foreign countries. Results can be validated with those studies.

8. c/o Aragonese, Study 1

9. & 10. Expand the coverage of NWFP survey to other areas in the country to:

Provide linkage with concerned agencies/institutions to help the marginalized communities come up with new products and designs.

• Include technology transfer activities and other capability building training courses as components of the project to help uplift the conditions of the people ^ maybe an action research program to see the results/impacts of actions made.

• Success of this study would serve as a Model on Community Development in NWFP communities.

11. The study would address the issues and recommendations found in the study.

### Questions for collaborators:

#### 1. response from Federation of Philippines Craft Traders

1. From your perspective, what were the project,s most significant achievement?

The project most significant achievement lies on the comprehensive statistical data and other descriptive information on the production and trade of NWFP are essential for an accurate appraisal of their true socio-economic contribution to sustainable development. This, in turn, will contribute to the elaboration (and acceptance by policy and decision-makers) of appropriate policies leading to more equitable access to non-wood forest resources and to a fair distribution of benefits obtained from them.

2. What outcomes of the project have helped your organization most?

This project has help gain greater knowledge on how to manage non-wood forest products, which is complicated by the nature of the products themselves. In particular the sourcing of the NWFP, chemical treatment, and marketing aspects help us the most.

Since the volume of non-wood forest products is often low, therefore, economic development efforts in most provinces have not assigned a high priority to their improvement. Non-wood forest products have also been perceived as unprofitable, with low market visibility and characterized by a high degree of waste and inefficiency throughout the collection, processing, storage and marketing phases.

3. Will these outcomes be of lasting value, or do they depend on ongoing external support?

This project has imparted knowledge and resources which is essential element of forest sustainability, particular in remote communities and upland areas. By this we empowered them.

4. How much do you think the project has helped local people who derive part of their livelihood from NWFPs?

Combining there best available knowledge from traditional method with this project scientific methodology will result to an optimize NWFPs to the lives of our rural people.

5. Compared to other projects with which you are familiar, how does this project rate?

Not applicable, have not encountered any of similar nature,.

6. Are there any aspects of the project that you found disappointing or unsatisfactory?

Non but many other useful, economically important non-wood forest products may be discovered in the tropical forests. However, future discoveries are threatened by wide-scale deforestation. Globally, there is a high price to pay for deforestation: global warming, shrinking forest capital, loss of biodiversity, soil erosion, flooding. Locally, deforestation threatens the life of rural communities which depend on forest products for subsistence and income generation.

There must be an increase in the sustainable, long-term benefits to these societies from the forest. Some of these increased benefits can be realized by promoting the use and marketing of non-wood forest products.

To date, non-wood forest products have not received the attention they deserve and have traditionally not been included in the economic accounts of most countries. This is in part due to a lack of knowledge on how to manage non-wood forest products; a lack of long-term sustainable resource management policies; and a lack of effective institutional frameworks to improve the management of these products. Resolving these deficiencies will be challenging.

7. What priorities would you suggest for any follow-up work?

In the past, some development policies and international aid initiatives have supported land-use policies favoring short-term returns from industrial and agricultural users of the forest at the expense of longer-term, sustainable, multiple-use resource policies. Often these policies are in direct conflict with the development of non-wood forest products. The challenge of non-wood forest products management is further complicated by the lack of supporting services and partnerships between government, private sector groups, communities and industry.

8. Are there issues related to the project, other than those identified above, that you wish to discuss?

Creating and implementing the structures to facilitate the sustainable development of Non Wood Forest Products is a major issue as now, but this will depend on the combined efforts and will-to-change of all stakeholders.

## 2. response from SUDECOR

1. From your perspective, what were the project's most significant achievements?

The most significant achievements of the project are as follows:

1. Resource survey/inventory of NWFP - This initially identified what are the most important non-timber species that are naturally growing or regenerating in the selected study sites in terms of their respective volumes and potential uses;
2. Resource collection, utilization and trade of NWFP – This provided the basic information on the indigenous practices of gathering non-wood forest products, incl. their economic utilization and marketing, which led to the improvement of the crude and destructive methods of extracting NWFP thru the conduct of appropriate training/seminars of forest dwellers by government experts and technologists. The improved methods of gathering, utilizing and marketing of the commercially important non-wood forest products has created more beneficial livelihood opportunities for the indigenous cultural communities in the uplands. Moreover, the proper extraction methods of the selected NWFP is deemed as a very important aspect/component in the sustainable management and conservation of the non-timber plant resources

2. What outcomes of the project have helped your organization most?

The study has concluded that the collection, utilization and trade of some NWFP species, like rattan which naturally abound not only in the SUDECOR timber concession but also in other forest concessions, contributed to the upliftment of socio-economic standards of forest dwellers. Among the other findings, this

outcome of the study has the most notable and positive impact to our organization as a forest concessionaire. By generating other employment opportunities in gathering, crafting, and marketing NWFP which directly provide extra income of the lumads or indigenous people in the upland communities, SUDECOR as a timber licensee is greatly benefited since agro-forestry and other livelihood projects are also the basic components of our organization's social action program. Aside from the positive socio-economic impact of income-generating projects which are beneficial to the forest settlers, like the utilization of NWFP that are naturally abundant in the timber concession, our company's forest protection problem is partly addressed in view of the mere fact that the natives would no longer enlarge their forest clearings just to raise agricultural crops for additional income. In other words, the utilization of non-timber resources alleviates dependency of the upland people on shifting agriculture or other illegal forestry practices like log/lumber smuggling in order to earn comfortable living.

3. Will these outcomes be of lasting value, or do they depend on ongoing external support?

The outcomes of the study will be of lasting value if the appropriate sustainability practices in the collection of NWFP is properly implemented by concerned agencies of government. Existing minor forest products regulations should be updated, otherwise new rules/regulations should be formulated to incorporate conservation measures based on the new developments in the field of collection and utilization of NWFP. Otherwise, the natural regeneration method of replenishing NWFP raw material sources should be augmented by establishing plantations of NWFP species. However, this requires the badly needed information technologies that are related to the propagation and culture of the desired species, which are still presently wanting.

4. How much do you think the project has helped local people who derive part of their livelihood from NWFPs?

The project has significantly helped the local people who derive additional income from NWFPs by improving their crude collection/extraction methods with scientific methods which are learned thru the on-the-spot training courses/seminars that were conducted by the experts/technicians of the ITTO-FPRDI NWFP Project. With increased productivity output of better quality non-timber forest products resulting from the proper implementation of scientifically tested NWFP extraction methods, the capabilities of forest dwellers to earn more have consequently improved.

5. Compared to other projects with which you are familiar, how does this project rate in terms of:  
a) Its contribution towards sustainable management of the Philippines' forests?

This project is contributive towards the sustainable management of our Philippine forest in the sense that its positive socio-economic impact has alleviated the living standards of forest dwellers who have learned to advantageously derive better income thru the collection, utilization and trade of NWFP in lieu of destructive forest clearings or illegal kaingin making and log/lumber smuggling. If the 20-million forest occupants can totally forget their unproductive and destructive shifting agriculture activities and then fully engage in a more environmentally friendly and more profitable cottage industry involving NWFP raw materials, then the country's forest resources would be better protected or conserved and managed on sustainable basis.

b) The collaborative relationships with project researchers?

The researchers of the ITTO-FPRDI project on NWFP had been properly coordinating with our cooperative SUDECOR management especially in the conduct of their field works inside our forest concession. Being just one of many other study sites, the researchers of this project were not as close as the ITTO-SUSTEC researchers who maintain a field office in our SUDECOR Camp while conducting their Biodiversity Assessment Project that was also conducted in our forest concession during the past 5 years.

c) The collaborative relationships with local communities in the case study areas?

The residents of local communities in the various case study areas were cooperative so that close collaborative relationship exist between them and the ITTO-FPRDI NWFP project personnel as manifested

by their perfect attendance during demonstration trainings and seminars on the extraction of non-wood forest products in the project sites.

6. Are there any aspects of the project that you found disappointing or unsatisfactory?

Considering the positive impacts in terms of the beneficial results/outcomes of the NWFP project, it is rather disappointing to note why bigger follow-up projects like the organization of more community-based projects or bigger cottage industries involving NWFP raw materials have not been subsequently conducted on a province, regional, or nationwide basis.

7. What priorities would you suggest for any follow-up work?

The following priorities are hereby suggested for follow-up work:

1. Economic Feasibility Studies of NWFP plantations (for selected rattans, palms, vines, pandans, ornamental & medicinal wild plants).
2. Establishment of Pilot Cottage Industries for Selected NWFP Species in Collaboration with DENR and DTI.

8. Are there issues related to the project, other than those identified above, that you wish to discuss?

Is it worthwhile considering a similar project on the Survey, Collection, Extraction and Trade of NWFP for Food, Medicines, Essential Oils or Ornaments with Potential Commercial Value? Do we have enough information on alternative sources of food, medicines, essential oils and ornamental wild plants from our secondary and primary forests in the Philippines. Can these be considered as economically feasible livelihood projects of forest dwellers? Are the forest communities technically and financially capable to manage small-scale cottage industries for the commercial production of herbal foods, medicines, oils, or wild ornamental plants? This could be a supplementary livelihood project to alleviate poverty in the uplands. Logically, these are thought-provoking questions which need satisfactory answers from our researchers/scientists, concerned agencies and project sponsors.

## ANNEX E: Itinerary for evaluator's site visit, 14-20 March 2003, and persons consulted

Date	Activities	Individuals involved
Thu. 13 March 10.30am – 9.15pm	Travel Canberra – Los Baños	Met at Manila airport by FPRDI staff
Fri. 14 March 8.30am – 5pm	Preliminary meetings: FPRDI  Ecosystems Research & Development Bureau  UPLB College of Forestry	Director FPRDI - Dr F Soriano Project Leader – Eng A Mosteiro  Director ERDB – C Diaz ERDB Scientists – A Guillen, A Lapis, A Piñol, & others  Dean, Prof. R Razal
Sat. 15 March 8.30am – 6pm evening	Report preparation  Dinner - FPRDI Director	  Dr F Soriano
Sunday 16 March 8.30am – 4.30pm	Report preparation	
Mon. 17 March 9am – 4.30pm	Project review meeting: FPRDI	FPRDI staff: Project Leader – Eng A Mosteiro Study Leaders – Dr EG Aragones, Dr MY Giron, Mrs EC Cortiguerra  DENR staff: For E Argete, Director of Policy & Planning; For RA Oliveros, Senior Forest Management Specialist  Federation of Philippine Craft Traders: President, Mr R Mendoza
Tues. 18 March	Visit to: DENR Forest Management Bureau, Manila  Community Crafts Association of the Philippines, Manila	DENR staff: N Andin, Assistant Director; R Oliveros, G Pajaullege & A Cortillo, Reforestation Division; I Austria & N Patize, CBFM; G Francisco, Forest Economics; E Cadiz, Natural Forest Management; C Bal, Forest & Land Use  Ms C Gragera, Acting Director
Wed. 19 March 9am – 9pm	Report preparation	
Thu. 20 March 9am – 12 noon  1-1.30pm  2pm	Discussion of draft findings with Project Team, FPRDI.  Concluding discussion with FPRDI Director and Project Leader.  Depart for airport	Project Leader – Eng A Mosteiro Study Leaders – For AB Ella, Dr MY Giron, Mrs EC Cortiguerra  Dr F Soriano, Eng A Mosteiro
Fri. 21 March 9am	Return to Canberra	

**ANNEX E (ctd): List of project collaborators contacted for comment**

- Forester Edilberto S Buiser, PENRO-DENR, Tandag, Surigao del Sur
- Ms C Gragera, Acting Director, Community Crafts Association of the Philippines, Quezon City
- The General Manager , Industries Development Corporation, Manila
- The General Manager, NATRIPAL, Palawan
- Mr Danilo Javier , CENRO DENR Regional Office No. 8, Catobalogan, Samar
- Mr Bernardo A Mendoza, Coordinator, S& T Experts Volunteers Pool, DOST Mindanao
- Mr R Mendoza, President, Federation of Philippine Craft Traders, Quezon City
- Mr Ivone T Reyes, PENRO-DENR, Puerto Princesa City, Palawan