

**Synthesis Report on Ex-post Evaluation:
Criteria and Indicators of Sustainable Forest Management**

PROJECTS

PD 37/00 Rev.1 (F)

**Operational Strategy for Sustainable Forestry Development with
Community Participation in India**

PD 272/04 Rev.2 (F)

**Development of National Principles, Criteria and Indicators for the
Sustainable Management of Congo Forest Based on ITTO Criteria
and Indicators for SFM (Rep. of Congo)**

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THEMATIC REPORT ON
THE EX-POST EVALUATION OF TWO ITTO PROJECTS ON
CRITERIA AND INDICATORS
OF SUSTAINABLE FOREST MANAGEMENT

1. PD 037/00 Rev.1 (F) Operational Strategy for Sustainable Forestry Development with community Participation in **India**.
2. PD 272/04 Rev.2 (F) Development of National Principles, Criteria and Indicators for the Sustainable Management of **Congo** Forests based on ITTO criteria and Indicators for SFM

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ABBREVIATIONS AND ACRONYMS

ATO	African Timber Organization
B-I	Bhopal-India Process
CAR	Central African Republic
C&I	Criteria and Indicators
DGEF	Directorate General of Forest Economy
EA	Executing Agency
FLEGT	Forest Law Enforcement, Governance and Trade
FORMACS	Forest Management Control System
FMU	Forest Management Unit
FRA	Forest Resource Accounting
FSC	Forestry Stewardship Council
GIS	Geographical Information System
Gol	Government of India
IFS	Indian Forest Service
IGNFA	Indira Gandhi National Forest Academy
IIFM	Indian Institute of Forest Management
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organization
JFMC	Joint Forest Management Committees
LUCID	Local Unit Criteria and Indicator Development
MoEF	Ministry of Environment and Forests
NFTP	Non-Timber Forest Products
NGO	Non Government Organization
NWPC	National Working Plan Code
PCI	Principles Criteria and Indicators
REDD	Reducing Emissions from Deforestation and Forest Degradation
SFD	Sustainable Forestry Development
SFM	Sustainable Forest Management

EXECUTIVE SUMMARY

This ex-post evaluation covers two projects related to criteria and indicators of sustainable forest management –

- PD 37/00 Rev.1 (F) *Operational Strategy for Sustainable Forestry Development with community Participation in India*, (Implementing agency: Indian Institute of Forest Management (IIFM)); and
- PD 272/04 Rev.2 (F) *Development of National Principles, Criteria and Indicators for the Sustainable Management of Congo forests based on ITTO Criteria and Indicators for SFM* (Implementing Agency: General Directorate for the Forest Economy Direction (Direction Générale de l'Economie Forestière – DGEF)

The primary purpose of the evaluation is to provide a concise diagnosis of the two projects so as to point out the successful and unsuccessful outcomes, the reasons for successes and failures, the contribution of the projects towards ITTO's Objective 2000 and the ITTO Action Plan, and to draw lessons that can be used to improve similar projects in the future.

The development objective of the **Indian** project was to create conditions for achieving sustainable forestry development in the states of Madhya Pradesh and Chhattisgarh, later expanded to cover four additional states. The specific objectives of the project were 1) to develop and operate a functional system of C&I for sustainable forestry development with community participation and 2) to establish institutional capability for implementing C&I. The objectives of the **Congolese** project were largely on similar lines. Its development objective was assessing and promoting SFM. Specifically, it intended to develop a set of Criteria and Indicators in order to assess the progress towards SFM at both the national and forest management unit levels.

ITTO's contribution to the Indian project was US\$ 594,678, and to the Congolese project US\$ 447,702.

The scope and approach of analysis of each project included an assessment of the overall role and contribution to improve the use of C&I in the country to achieve SFM, effectiveness and efficiency of project implementation, identify follow-up actions needed to enhance uptake of results along with an overall assessment of the project's relative success or failure and as well as lessons learnt.

Both projects have successfully achieved the objectives they set out to realize within the allocated budgets. PD 037/00 Rev.1 (F) in India is probably one of the most efficiently run projects. Implementation extended to cover four additional States over an extended period of nearly ten years, twice the time originally envisaged. Both these had been accomplished within the original budget allocation. In addition, the project also had produced a useful array of research and other studies, which have contributed to enhance the effectiveness of C&I in India with potential for use in C&I everywhere.

However, in formulating the project it was envisaged that the project intervention would indirectly lead to better land use practices and improved environmental stability. But this potential has not been realized to any great extent, as wider application of the project outputs has not taken place. Implementing C&I in a vast country like India requires commitment of significantly large resources, which need to be provided by the state. Since the government has not so far made a formal decision to implement the findings the expected long-term benefits are yet to be achieved.

The story is very much similar in the case of project PD 272/04 Rev. 2 (F) of Congo. While the project has produced a robust set of C&I tested in different key regions of the country no action has been taken, three years after completion, to distribute the reports or implement the findings.

The delay in a decision to implement the findings of the two projects may be due to several reasons. They may include lack of commitment to SFM at higher levels of administration or poor understanding of issues or indeed lack of ownership of the project by decision makers. Whatever it is, it is essential the issue be addressed to avoid wasteful use of limited resources in the future.

Nevertheless, the two projects have made a significant contribution. Within the two countries they have created a new awareness on SFM and the use of C&I to achieve it. In Congo stakeholders who have been involved with the project use the criteria and indicators as a reference in their decision-making. In India SFM units have been set up within the forestry administration at the centre and States. C&I also have been included in postgraduate studies in universities and forestry training institutes.

Contribution of the projects to the enhancement of C&I as a tool of forest management is also important. Some areas, such as forest resource accounting, which has not been amenable to quantitative assessment,

has been addressed as part of the Indian project. Other areas covered include studies, manuals and methodologies focused on C&I for plantations, NTFPs and wildlife protected areas management, ways to evaluate and prioritize progress of indicators over time, and ways to introduce C&I to the less educated at the village level.

The relevance of such developments goes beyond the host country of the project. One of the issues that the ITTO may need to address is how to capture such findings on an ongoing basis to help improve the conceptual and operational efficiency of C&I.

In addition the C&I also need to take on board emerging issues to ensure it remains relevant as a comprehensive tool in forest management. Current such concerns include REDD and other climate related matters and legality of timber.

1. INTRODUCTION

Key objectives of the International Tropical Timber Organization (ITTO) established in 1986 include the promotion of international trade in tropical timber, the sustainable management of tropical forests and the development of tropical forest industries through international cooperation, policy work and project activities. There is a parallel global consensus on criteria and indicators (C&I) as the principal tool in implementing and monitoring progress towards SFM at both the national and the forest management unit levels. ITTO has been a pioneer in developing C&I, which are being used by its members to report progress in SFM in their own countries.

In pursuit of the ITTO objectives, the Committee on Reforestation and Forest Management, at its Forty-fifth Session, decided to conduct the ex-post evaluation of the following projects relating to Criteria and Indicators of Sustainable Forest Management:

- PD 37/00 Rev.1 (F) *Operational Strategy for Sustainable Forestry Development with community Participation in **India***, (Implementing agency: Indian Institute of Forest Management (IIFM)); and
- PD 272/04 Rev.2 (F) *Development of National Principles, Criteria and Indicators for the Sustainable Management of **Congo** forests based on ITTO Criteria and Indicators for SFM* (Implementing Agency: General Directorate for the Forest Economy Direction (Direction Générale de l'Economie Forestière – DGEF)

The evaluation mission included Don Wijewardana from New Zealand and Roger Foteu from Cameroon. While the latter was specially assigned for the ex-post evaluation in the Republic of Congo Wijewardana was responsible for evaluation in India and for the thematic report. Following a study of project documents, and visits to the two countries and holding discussions with the project implementing agencies, officials and a range of other stakeholders, the mission produced ex-post evaluation reports on each of the projects. The primary purpose of these assessments was to provide a concise diagnosis of two projects related to criteria and indicators of sustainable forest management so as to point out the successful and unsuccessful outcomes, the reasons for successes and failures, and the contribution of the projects towards ITTO's Objective 2000 and the ITTO Action Plan, and to draw lessons that can be used to improve similar projects in the future.

1.1 Terms of Reference

The terms of reference for the consultants for the conduct of the ex-post evaluation included:

a) Analyze and assess for each project:

1. The overall role and contribution of the project in light of sectoral policies, development programmes, priorities and requirements to improve the criteria and indicators of sustainable forest management (SFM) in the countries concerned.
2. The current status of criteria and indicators (C&I) of SFM in the concerned countries, the effectiveness of the project's implementation and its effectiveness in promoting SFM.
3. The contributions of the specific studies in various C&I-related tools/manuals/guidelines prepared by the project as regards the monitoring of sustainable forest management in the concerned countries.
4. The results and potential impact of applied research conducted by the project (if any) and its contribution to the overall knowledge on criteria and indicators of sustainable forest management in the country.
5. The impact of project activities on the improvements of forest management monitoring.
6. The effectiveness of dissemination of project results.
7. The overall post-project situation in the concerned country.
8. The unexpected effects and impacts, either harmful or beneficial, and the reasons for their occurrences.
9. The cost efficiency in the implementation of the project, including the technical, financial and managerial aspects.
10. Follow-up actions in order to enhance uptake of project results.
11. The project's relative success or failure, including a summary of the key lessons learnt; and the identification of any issues or problems that should be taken into account in designing and implementing similar projects in the future.

b) Provide a synthesis to:

1. Assess the overall role and meaningful contribution of the two projects in improving Criteria and Indicators of Sustainable Forest Management in ITTO Producing Member countries taking into account ITTO's objectives, relevant ITTO Action Plan for each project, and Objective 2000.
2. Assess the potential and actual contribution of the two projects to ITTO's SFM work.
3. Evaluate the overall impact on and relevance of the two projects for the forestry, the forest industry and conservation sector in the countries concerned.
4. Evaluate the overall attainment of the objectives and assess the overall effectiveness of the two projects.
5. Evaluate the overall appropriateness of the costs and cost structure and use of resources within the two projects.

And make recommendations on:

1. The needs for similar projects in the future.
2. The objectives of such future projects.
3. Innovative approaches/designs for projects aiming at improving Criteria and Indicators of Sustainable Forest Management.
4. Appropriate target groups, e.g. countries, governments, organizations, forestry sector, local communities, etc.
5. The organizational arrangements of the projects.
6. Follow-up and evaluation practices.
7. Supplemental, alternative activities, processes, procedures, and/or follow-up programmers in the field of Criteria and Indicators of Sustainable Forest Management, if appropriate.

The analysis and assessment in terms of section 1.1 a) above has been undertaken separately in the ex-post evaluation of each project. The focus of this thematic evaluation is to draw on those assessments to produce a synthesis report in terms of section 1.1 b) of the TOR, and make recommendations that can help improve the conceptualisation, formulation and implementation of similar projects in the future.

The total budget for the project PD 37/00 Rev.I (F) amounted to US\$ 1,226,978, of which the ITTO share was US\$ 594,678 (Government of Japan (MoFA) US\$ 584,678 and Government of Republic of Korea US\$ 10,000) with the Government of India contributing the balance US\$ 632,300. The total budget of project PD272/04 Rev.2(F) amounted to \$ 551,405, of which the ITTO share was \$454,901 with the government of Congo contributing the balance \$ 96,504.

The two projects, both focused on developing and promoting C&I, were in conformity with key ITTO objectives and action plans, as well as Objective 2000 which is aimed at moving as rapidly as possible towards achieving exports of tropical timber and timber products from sustainably managed sources. Both projects complied with the objectives of ITTA 1994. Of the 14 objectives enshrined in ITTA 1994, six (c, d, f, i, j and l) directly deal with sustainability. The projects also complied with the goals of the ITTO's Libreville Action Plan, particularly goal 2, to improve the tropical timber resource base. Each project also made a significant contribution to the development and implementation of C&I.

2. SYNTHESIS OF EVALUATION RESULTS

2.1 The overall role and contribution of the projects in light of sectoral policies, development programmes, priorities and requirements to improve the criteria and indicators of sustainable forest management (SFM) in the countries concerned.

In spite of the enormous pressure exerted by a growing large population India has been able to maintain its 68 million hectare forest resource base. But the pressure on the resource has been huge as evident in the forest degradation that has continued to be a rampant problem. While much of the forest resource is exploited for wood fuel the country relies on large volume of imports to meet the deficit in industrial wood.

In the Republic of Congo its 22 million hectares of equatorial forest cover much of the landscape, stretching from the Massif de Chaillu and Mayombe in the south to enormous tracts of primary forest in the north. But these forests are now under increasing threat as human populations grow and they seek access into formerly remote areas. Pressure also stems from the shrinking natural resource base on account of growing industrial demand and destructive exploitation such as uncontrolled swidden agriculture and logging practices. Consequently deforestation is emerging as a growing problem.

History has shown that using 'command and control' methods to address problems of sustainability faced by the forestry sector are often ineffective and, indeed, could be counterproductive. What recent experience shows in many parts of the world is that criteria and indicators for sustainable forest management is a more innovative and effective tool that can be used to deal with the problem with the participation and empowerment of stakeholders. This is the rationale behind the two projects in India and Congo.

In both countries the projects have helped improve C&I. In India it has been tested in eight States across the country and adapted to cover all 16 major forest types that exist. The GoI has commenced training sector players on SFM, which has helped enhance awareness among stakeholders. C&I have also been used to prepare FMU level working plans due every ten years.

In addition to the C&I developed and tested for natural forest management the project also has developed:

- Separate C&I to meet specific needs of sustainable management of forest plantations, non-timber forest products as well as wildlife protected area management.
- A Forest Resource Accounting System has been developed based on the gap analysis of the conventional accounting system to capture forest products and services that are inadequately reflected in conventional national accounts. Such under-valuations have tended to contribute to disinvestment in forestry all over the world.
- A study of the relevance of C&I for forest certification undertaken by the project is being used by a national level forest certification committee to establish an accreditation system for forest certification in India.

All these initiatives have helped improve C&I in India. However, in spite of them C&I are not currently being used as a tool for general application in forest management in India. The delay is due to MoEF not issuing a general instruction to State governments for the purpose so far. However, some progress has been made in this direction. At least one State has moved to apply the C&I following a preliminary instruction issued in the NWPC in June 2004. Also, a national committee has been constituted to revise the Code for inclusion of the C&I framework.

In the **Republic of Congo** too a set of PC&I have been developed and tested in the three main forestry regions and suitably modified to meet the country's needs. The tools developed under the project constitute a basic reference on SFM recognised by all stakeholders. They are regularly using these tools and consultants' reports for the purposes of information, comparison, harmonisation and consolidation of forest management related instruments.

The forest administration has also been using these C&I in relating to the VPA/ FLEGT process, particularly regarding i) the ongoing development of a legality and traceability systems ii) the development of rules of procedures, study and the instructions for environmental and social impact in force since 2009 (subject of decree 2009-415 of 20 November 2009), iii) Directive for sustainable management of natural forests; iv) the blueprint for preparing and monitoring plans for managing of natural forests v) the draft PCI for the management of wild life resources, as well as PCI for the development and management of plantations.

However, apart from these indirect benefits gained, the C&I developed by the project have not been used in general forest management. Three years after its conclusion the final reports of the project have not been distributed to stakeholders or action taken to implement them. As such the impact of the project on sustainable forest management in Congo remains limited.

2.2 The potential and actual contribution of the two projects to ITTO's SFM work.

The objectives of the International Tropical Timber Agreement include promotion of the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests and to promote the sustainable management of tropical timber producing forests. Its Action Plan is the principal vehicle for translating these aims into action. The guiding principle that underpins the Plan is sustainable forest management, which in turn is implemented on the ground using criteria and indicators.

The projects have contributed significantly to ITTO's work related to SFM by addressing aspects of C&I that have a major bearing on the efficient and effective use of this tool in promoting sustainability. The Congolese C&I were developed by a team of highly skilled and experienced experts to suit equatorial tropical forest in

the country and tested in the three main regions to derive a modified set that best suited its conditions. As such it can offer lessons for countries that intend to develop tools to manage their own forests especially in the Congo Basin.

In India the introduction of C&I to the curriculum of the Indira Gandhi National Forest Academy (IGNFA) and forest training institutions and universities and in adoption of C&I into some of the working plan revisions, establishment of SFM units in Gol and some of the States, sizable participation of the stakeholder groups in the workshops and training programs and the attitudinal changes generated among policy makers and stakeholders are some of the important indicators of the impact of the project in promoting SFM.

The Indian project also provides a well-tested set of C&I that covers a wide array of forest types in this vast country which traverses several climatic zones. They will also be of great relevance to many tropical countries, especially in Asia and Latin America, with similar conditions. But the contribution of the Indian project goes well beyond. During the course of research and analyses related to the project undertaken during the decade of its operation it has addressed a number of key issues that are vital to the effective use of C&I but not so far developed. Among them were the following:

- Separate C&I to meet specific needs of sustainable management of forest plantations, non-timber forest products as well as wildlife protected area management.
- A Forest Resource Accounting System developed based on the gap analysis of the standard accounting system to capture forest products and services that are inadequately reflected in conventional national accounts. Such under-valuations have tended to contribute to disinvestment in forestry all over the world.
- A study of the relevance of C&I for forest certification. This is being used by a national level forest certification committee to establish an accreditation system for forest certification in India.
- Development of a procedure for assessing sustainability using temporal data through software package FORMACS– a simple procedure to establish the direction of change in sustainable forest development.
- A literature review on C&I that produced a comprehensive annotated bibliography especially for researchers.
- Identification of R&D gaps to achieving SFM, e.g. those related to biological diversity, species and genetic diversity etc for further enhancing research approaches.
- An illustrated C&I manual for the benefit of less literate and not conversant with the national languages, especially at the FMU level.

These are some of the work produced by the project, a number of which could help enormously to enhance the utility of C&I.

The two projects under review were aimed at promoting the development, implementation and monitoring of criteria and indicators for SFM. The documents that emanated from the two projects are useful by themselves. But there is considerably more potential for ITTO's work on SFM to benefit once the C&I produced by the two projects become operational. But that has to wait until the government agency responsible for implementing them in the two countries take action to operationalise them.

2.3 The overall impact on and relevance of the two projects for the forestry, the forest industry and conservation sector in the countries concerned

Both projects were highly relevant to the ground situation since the two countries are facing significant issues related to deforestation and forest degradation. In both nations the major forest owner is the state and the impact was felt largely on the publicly owned forests. In India the project had inspired a general surge in interest in SFM as evident from the establishment of SFM units at the centre and most state forestry departments. Training in C&I has also been introduced to a wide spectrum of training institutes from universities to professional training institutions and technical institutes. C&I are being used in forest planning purposes as well. Some other States such as Sikkim have decided to apply C&I to all forests within the state.

The principal focus of the project was natural forest management. But C&I developed for natural forests do not fully capture the sustainability of resources that have a particular interest for the forest industry. For example a wide range of non-timber forest products (NTFPs) ranging from edible plant products to medicinal plants and other produce like honey. Vast majority of the population living close to the forest depends on them for livelihood. A focused set of C&I could form the basis of certification for NTFPs, which could enhance trade opportunities for them. A separate set of C&I for NTFPs developed by the project is being used by a government committee for further action.

The Indian project also addressed other specific issues related to industry as well as conservation sectors. As the project implementation progressed it was realized that the C&I developed were not sufficiently specific to meet the requirements of forest plantations, forest certification or wild life management. As a result separate criteria and indicators were developed to cover these areas as part of the main project. In addition the team also recognized that a major obstacle to conservation was the bias in national accounts, which tended to consistently under estimate environmental values generated by the forest. This too was addressed through a study on a new forest resource accounting document.

In Congo the influence of C&I was not so widespread but the consultants were advised by several parties that the tools developed by the project were regularly consulted by both public and private stakeholders in their management decision making. C&I development in Congo comes at a time when the majority of countries of the Congo Basin including Burundi, Cameroon, Congo and, to some extent, the CAR are currently engaged in a process updating their various forest management tools. The objective is to sharpen their forest policies to meet current requirements, including the integration of adaptation and mitigation to climate change through the implementation of REDD.

Furthermore, as do other countries of the Central African sub-region, Congo has signed a Voluntary Partnership Agreement with the European Union, which requires it to develop a system of traceability and legality which will undoubtedly impact on the management of forests. Similarly, there is ongoing brainstorming in Central Africa led by the FSC to include certification requirements in the legality conditions of timber trade in Central Africa. They are all measures that would fit comfortably alongside C&I. With such potential for supporting forest industry and forest conservation development of C&I could not have come sooner for Congo.

2.4 The overall attainment of the objectives and the effectiveness of the projects

The development objective of the Indian project was to create conditions for achieving sustainable forestry development in the states of Madhya Pradesh and Chhattisgarh, which in turn would serve as a model to be replicated in the rest of the country. It was later expanded to cover four additional states. Specifically, the project was: 1) to develop and operate a functional system of C&I for sustainable forestry development with community participation and 2) to establish institutional capability for implementing C&I.

The two specific objectives have been fulfilled thus contributing to the achievement of the development objective of creating conditions for achieving sustainable forest development in the country.

The project has played a critical role in developing criteria and indicators applicable to all major forest types in India, thus promoting eventual institutionalising of C&I. It has also enhanced awareness among officials, local communities and other stakeholders to the need for sustainable forest management and the role C&I can play in implementing and monitoring SFM.

In addition to the C&I developed and tested for natural forest management the project also has developed separate C&I to meet specific needs of forest plantations, non-timber forest products as well as wildlife management. Studies have also included a Forest Resource Accounting System to capture forest products and services that are inadequately reflected in conventional national accounts, as well as a study of the relevance of C&I to certification.

However, countrywide application of C&I is yet to be incorporated in a government instruction into the National Working Plan Code (NWPC) which is the basis for planning and execution of forest development in the country. Although some States have moved to apply the C&I following a preliminary instruction included in the NWPC of June 2004, its wider application has been delayed until a final directive is issued. A national committee has been setup to revise the National Working Plan Code 2004.

The success of the results achieved will depend on the application of C&I on the ground. For that to happen the ITTO focal point and the project implementing agency (EA) need to work together to ensure the adoption

of C&I into the NPWC which will allow for its implementation. To ensure momentum in implementation, the EA also may find useful to support the States that are currently willing to adopt C&I for management of forests in their own territories.

The most effective way to ensure execution of results of a project is the direct involvement of the responsible agency from the beginning - design stage to implementation. That will offer them ownership of the project and responsibility to follow up.

Project PD 37/00 Rev.1 (F) could serve as a benchmark for efficiency in assessing future project proposals.

The development objective of **Congolese** project was to provide Congo with tools and the ability to evaluate, and promote sustainable forest management (SFM). Its specific objective was to develop a set of criteria and indicators (C & I) adapted to specific conditions in the Congo based on ITTO Criteria and Indicators (C & I) to evaluate the effect progress in SFM at both the national and the Forest Management Units.

The project has achieved its objective with the development and testing of a set of C&I well suited to Congolese conditions. This has been helped by a number of factors:

- Efficient execution of the project from planning to completion.
- Location of the project within the Ministry of Forestry which was in a position to muster the support of all key stakeholders.
- The high level and quality of consultants involved in the implementation of the project;
- The participatory approach adopted throughout the project.

However, as far as effectiveness is concerned, as noted earlier, three years after project completion its output has not been circulated to stakeholders and no action has been taken to implement them. Other obstacles that have hampered the effective implementation include:

- The regulations prescribed under the project for the formalization and implementation of project outputs have not been implemented;
- The training of trainers of forest auditors has not been undertaken as part of the project. As a result Congo remains dependent on outside expertise;
- The scarcity of candidates from forest-sector operators in the training;
- Inadequate involvement of researchers and university academics as key partners in developing PCI/V and in training of C&I auditors;
- So far, no institution has been identified to take responsibility for implementation of project results.

Such tendencies have led to hampering the effectiveness of the two projects although their main objectives have been fully achieved.

2.5 The overall appropriateness of the costs and cost structure and use of resources within the projects

The evaluation mission examined the audit reports and related documents and found the two projects have been managed efficiently. In fact, PD 37/00 Rev.1 (F) executed by the Indian Institute of Forest Management is one of the most efficiently run projects. It was originally intended to operate in eight Forestry Divisions (FMUs) within Madhya Pradesh but eventually extended to cover 16 FMUs in six different States. The expansion also required the extension of project from five to almost ten years. Also as part of the project new studies and manuals have been developed in a number of areas, which have added to the current knowledge on implementing C&I. All these had been accomplished without any increase in the original budget.

With regard to project PD 272/04 Rev.2 (F) in Congo although the implementing agency's finances were adversely affected by the sharp decline in the value of the dollar during implementation all its objectives have been achieved at no extra funding.

3. RECOMMENDATIONS

3.1 The needs for similar projects in the future

There is a global consensus on the need for SFM along with the recognition of C&I as the most appropriate vehicle to deliver sustainability. ITTO has been at the forefront of promoting the application of C&I for forest management among its member countries. In keeping with its objectives the organization has invested a

great deal of resources and effort in supporting projects and training members in the use of C&I. Such efforts are supplemented by thematic ex-post evaluations of this nature, which provide the opportunity for all to learn from the experience. C&I are continually evolving and progressing as a prime tool for implementing and monitoring progress in SFM. As such, there is a continuing need for more similar projects, as well as more related evaluations of completed projects in the future.

There are a number of lessons that could be learnt from the experience of these two projects. Conventional Forest Resource Accounting system (FRA) has tended to consistently underestimate the tangible and intangible benefits generated by forests. To address this, the project developed a new and modified FRA to help capture such gains more comprehensively. The Indian Statistics Office has accepted the study as a basis for reviewing the current national accounting system relating to forests. This is a major contribution in addressing a problem faced by most countries that has contributed to disinvestment in the sector.

Among the other documents published by the project for monitoring SFM in India, is a very useful practical guide graphically presented to promote SFM among the less literate communities. Such innovative tools have helped successfully promote C&I especially at the grassroots level.

Applied research undertaken as part of the project has contributed to enhanced knowledge and application of C&I. These were in addition to other research undertaken as part of the activities of the project. They included, among others:

- Use of modern tools and techniques to gathering comprehensive data related to indicators, e.g. remote sensing, GIS, etc. Establishment of GIS lab and hiring the GIS experts to assist in developing spatial database of the FMUs proved to be an efficient way of gathering the necessary information.
- Development of a procedure for assessing sustainability using temporal data through a software package FORMACS– a simple procedure to establish the direction of change in sustainable forest development.
- A literature review on C&I that produced a comprehensive annotated bibliography especially for researchers.
- Identification of R&D gaps to achieving SFM, e.g. those related to biological diversity, species and genetic diversity etc for further enhancing research approaches.

Project PD 272/04 Rev. 2 (F) in Congo also offers lessons especially in the form of its PC&I, manuals and other related studies, which have been fully tested in its here main forestry region. They have close relevance to other equatorial forests, especially in the Congo Basin but also has wider general significance to any country using C&I.

Both these projects have added significantly to the available knowledge base on C&I and more similar projects will help enrich our understanding of this instrument. As criteria and indicators is a tool with enormous potential to shape the future global forest management to enhance their sustainability it is important that such lessons are used when reviewing and updating ITTO's C&I.

3.2 The objectives of such future projects

The ex-post evaluation of the two current projects has identified a number of areas for priority action in funding future projects.

A major problem faced by both projects was the inability to get their final report adopted for general application in forest management, several years after completion of the projects. We understand this is not a unique situation. But if project outputs are not implemented it is a wasteful use of the time, effort and resources spent on them with severe opportunity costs. Every effort needs to be made to avoid such situations.

Discussions with stakeholders revealed a number of possible reasons for this. They include:

- Lack of commitment to SFM and/or understanding of issues at the decision making level.
- Non-involvement of decision maker/his representatives in the design and implementation, and as a result not having 'ownership' of the project.

- Concerns among forest managers that they could be held responsible for non-performance if monitoring C&I shows no progress in indicators.

If the ITTO and its member countries are to gain greater utility from projects of this nature these problems need to be addressed. It may include keeping decision makers more closely involved. It may also require a commitment to implement once a project is completed.

Ensuring C&I always remain relevant to emerging needs of countries is essential to maintain the relevance and robustness of it as a forest management tool. For that to happen important emerging issues need to be embraced and effectively addressed within C&I. There are a number of areas currently in this category:

- Many markets are increasingly demanding sustainably managed or legally harvested timber. This is evident in the public procurement policies in a number of countries. The United States is now implementing the Lacey Act and in the European Union the Due Diligence Regulations are expected to enter into force at the end of 2012. Both these set similar requirements. These laws compel exporters to provide credible assurance of timber legality. While a few member countries have adopted measures for verification of legality along with implementation of C&I others have not. Projects to address these issues are therefore important if exporters of timber and timber products are to benefit from the rewarding market opportunities.
- Although some C&I indicators are intended to capture data on non-timber forest products the greater emphasis in C&I has been timber production followed by conservation. But this overlooks the fact that in many producer countries by far the larger share of products extracted from the forest is fuelwood. For instance in India 86 per cent of the wood extracted in 2005 was wood fuel¹. The story is similar for many developing tropical countries. These figures show that the overwhelming pressure on SFM arises not from harvesting industrial wood but from wood fuel extracted by people living in or adjacent to forests. As such it is an issue that needs to be focused on when promoting SFM through C&I. Failure to deal with it will result in forest encroachment and degradation and eventually undoing efforts to promote SFM.
- Although not as widespread as fuelwood, the gathering of non-timber forest products (NTFPs) is a progressively expanding activity especially in community-managed forests. Although current C&I recognize the extraction of NTFPs it is not treated in the same detail as industrial wood. Recognizing its importance the Indian project addressed it by developing a set of C&I focused on NTFPs. It is important that the C&I process bring NTFPs into the mainstream of assessment since the extraction of these products is emerging as a growing economic activity and it has a significant impact on sustainability.
- There are also other emerging issues that need to be captured to ensure C&I remain constantly relevant to forest management. The most prominent current issue relates to the role of forests in climate change and carbon absorption encompassed in REDD and related developments. This is particularly important since the overwhelming nature of climate change related issues tend to eclipse the wider and more significant sustainability aspect of forests. There will be more such emerging issues, which need to be addressed within C&I.

A number of the issues that need addressing are related to application of C&I at the FMU level. But FMU level is the weakest link in implementing C&I. It is understandable given that the concept is difficult to comprehend especially by often a predominantly less educated or illiterate audience. But what we have learned from the two current projects are that a) giving responsibility to local communities helps derive best results and b) for this purpose it is important to translate manuals and other documents to local languages as well as use illustrations as much as possible. India has gained considerable success using this approach.

3.3 Innovative approaches/designs for projects aiming at improving Criteria and Indicators of Sustainable Forest Management.

These two projects also have produced valuable material in the form of manuals and studies, which could be of immense value in promoting continuous improvement of C&I. They include improved and tested criteria and indicators that will have particular relevance to equatorial countries in Africa and Asia, and probably to other tropical nations. They also help in promoting continuous improvement of C&I. But unless they are

¹ This is the latest year for which data is available. See Annex table 2 for details.

picked up by countries or the ITTO or any other interested forum for adaptation and implementation they will end up merely as academic exercises. It is necessary to ensure new knowledge gained, modern techniques developed, as well as experience acquired by countries in applying C&I are all used to update and improve effectiveness of C&I everywhere. Even if these elements may appear on their own in electronic media and similar means it is unlikely that countries assimilate them. This is because some may not have access to such media or may be preoccupied. A regular C&I newsletter or a prominent and dedicated section of ITTO's website need to be kept regularly updated with matters related to C&I. When the C&I documentation is revised and updated all such important additions could be incorporated.

Projects could also be geared to develop capacity within countries. But it is understandable that international consultants are often engaged to assist with technical aspects of projects. Nevertheless, over-reliance on them needs to be avoided to prevent a vacuum in that area of expertise when the project ends and the consultancy ceases. Planning is therefore necessary from the very beginning so that an expert will always have a local counterpart who will be able to takeover. Such an arrangement will be necessary to provide opportunities for the development of skills through 'on the job training' and to ensure project sustainability.

A problem, to which attention has been drawn in previous ex post evaluations, and tends to recur constantly, is the poor involvement of stakeholders in project design and management. As a result smooth project implementation is often hindered and operationalising outputs is held up. For success of projects it is vital that all key players are involved in all stages of a project from design and management to completion and implementation of results so that they have 'ownership'. Project design and project assessment need to pay specific attention to this matter, including seeking a stakeholder analysis prior to approval, and their involvement, if appropriate, in the steering committee.

3.4 Appropriate target groups, e.g. countries, governments, organizations, forestry sector, local communities, etc

The implementing agency for both projects evaluated was the government. This was logical given the forests were very largely owned by the state. But the success of projects always requires the cooperation of all primary stakeholders. Unlike in the unsuccessful earlier approaches to forest management through government directives C&I rely on cooperation and voluntary participation of stakeholders. They often include the government, industry, local communities and NGOs. They all should be target groups for every project and need to be formally recognized as such.

3.5 Organizational arrangements of the projects

The main aim of the ITTO and the host government obviously is to ensure all committed project outputs are delivered and the final reports are approved by the relevant government agency and implemented. There are three critical points at which interventions could be introduced to help avoid any failure. The first is at the Expert Panel and the project Technical Committee where the involvement of all primary stakeholders from design to implementation is ensured as well as the expertise of the steering committee to foresee any potential problems is assessed. Also it is necessary to ensure that the implementing agency has the skills to deal with technical and managerial issues that arise.

The second stage is at the implementing agency which needs to have a complete picture of how implementation should pan out and where the possible weak links are. The third stage is with the Steering Committee, which should include the necessary expertise and the experience to foresee potential problems.

The two evaluated projects have very successfully delivered the promised outputs. The unforeseen issue arose only after completion when for three years the results were left in limbo without action to implement them. This seems to be a recurrent problem and could result in wasted resources. There could be several reasons for such breakdowns such as the lack of commitment or poor understanding by the responsible agency or shortage of resources. In the first instance ITTO technical committees need to address this issue.

3.6 Follow-up and evaluation practices

Monitoring and evaluation are critical elements of successful project implementation. When they fail projects become incapable of delivering the expected results. To prevent this happening it is important that monitoring mechanisms are in place to alert the implementing agency about the potential failure. For this it

is necessary to ensure the steering committee has people adequately qualified to read the signals and understand all the elements of a project.

PD 037/00 Rev.1 (F) was a longer term project that has benefited from a midterm review. Such reviews are effective to ensure, especially a long term project, stays on track. The important thing is that at that stage there is still time to effect changes to achieve the desired outcomes.

Another need for the consultants involved in ex post evaluations is to receive a complete set of important project documents well ahead of the visit to the country. This will enable them to study the documents to get a good picture of the project, its implementation, progress, constraints faced etc well in advance. Such background information will enable them to seek more pointed information and assist with undertaking an effective enquiry into issues. Requiring host countries to electronically file such documents with the secretariat will obviate the hassle of collecting, cataloguing and storing hard copies.

3.7 Supplemental, alternative activities, processes, procedures, and/or follow-up programmes in the field of Criteria and Indicators of Sustainable Forest Management, if appropriate

The ITTO has been in the forefront in developing C&I. It has also been perhaps the most successful organization in testing C&I in different regions, improving them to meet specific needs of tropical countries and training members to use them effectively. C&I have been recognised by the international community as the principal tool in implementing SFM. As far as ITTO is concerned SFM and C&I are at the core of all its activities.

But forestry is a dynamic sector with continuous changes taking place partly from ecological processes within forests and partly from changing perceptions of forestry, new knowledge gained, experiences of countries and emergence of circumstances that had not been foreseen when C&I were introduced.

At the same time C&I is also an evolving instrument with several aspects yet to be fully developed to effectively capture all elements of sustainable forest management. In particular, some aspects are not readily amenable to quantitative measurement at present.

These twin factors make it essential to review C&I on a regular basis to ensure they remain valid and effective to deliver SFM.

The two current projects have produced useful manuals, studies and methodologies that can assist in this regard. In particular, research and analyses undertaken in conjunction with the project PD 037/00 Rev.1 (F) in India provide material (detailed earlier in the report) that address a number of issues affecting C&I. There could be other completed projects that provide similar valuable contributions. But at present there does not seem to be a mechanism by which they can be captured and formally incorporated into the C&I repertoire. This needs to be addressed as a matter of priority.

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5. ANNEXES

TABLE 1: CONSOLIDATED PROJECT INFORMATION

	PROJECT DETAILS	CONGO	INDIA
1	NUMBER	PD 272/04 Rev.2 (F)	PD 037/00 Rev.1 (F)
2	TITLE	Development of National Principles, Criteria and Indicators for the Sustainable Management of Congo Forests based on ITTO criteria and Indicators	Operational Strategy for Sustainable Forestry Development with community Participation in India
3	DURATION	Commenced 22 February 2006 / 24 months	Commenced June 2001 planned for 4 years, Actual: 9.6 years
4	DEVELOPMENT OBJECTIVE	Aimed at assessing and promoting sustainable forest management (SFM) in Congolese forests.	To create conditions for achieving sustainable forestry development in the states of Madhya Pradesh and Chhattisgarh, which in turn would serve as a model to be replicated in the rest of the country.
5	SPECIFIC OBJECTIVES	To develop a set of Criteria and Indicators (C&I) adapted to Congo's specific conditions, based on ITTO's C&I, in order to assess the progress towards SFM at both the national and forest management unit levels.	1) To develop and operate a functional system of C&I for sustainable forestry development with community participation through refinement of the Bhopal- India Process following the guidelines contained in the ITTO criteria and Indicators; and 2) to establish institutional capability for implementing C&I for sustainable forestry development, taking into consideration the principles contained in the ITTO manuals and other relevant documents.
6	ITTO BUDGET (US\$)	447,702	594,678

TABLE 2: COUNTRY DATA

		CONGO	INDIA
Area (000 ha)		34,150	297,319
Population (000)		3,615	1,118,412
Per Capita GDP (2008) (US\$):		3949	2946
GDP growth rate		5.6	6.1
Estimated total forest area (000 ha)		22,414	68,434
Forest area as % of land area		66	23
Annual Change			
1990-2000	Area (000 ha)	-17	145
	Per cent	-0.1	0.2
2000-2010	Area (000 ha)	-15	304
	Per cent	-0.1	0.5
Production (000 m3)	a) Wood fuel ²	1317	86,369
	b) Industrial round wood ²	1450	14,428
	Total a)+b)	2767	100,824
	Logs	1,981	23,192
	Sawn	369	14,789
	Other	16	2,811
Import (000 m)	Logs	0	5,062
	Sawn	0	136
	Other	0	97
Export (000 m3)	Logs	508	26
	Sawn	685	18
	Other	1,853	92
Employment in for. Sector (000)		7	481
% of lab. Force in forestry		0.5	0.1
% Contribution of forestry to GDP		1.1	0.9

Sources:

FAO (2011) State of the World's Forests 2010

ITTO (2011) Annual Review and Assessment of the World Timber Situation, 2010

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² These figures are for 2005. Source: FAO (2011), Global Forest Resources Assessment, 2010, Rome.