

International Tropical Timber Organization
(ITTO)

PROJECT COMPLETION REPORT

TRAINING AND MANPOWER DEVELOPMENT
IN COMMUNITY FORESTRY PROJECT

PD 103/90 Rev. 1 (F)

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A. Project Identification

- (a) Title: Training and Manpower Development in Community Forestry Management.
- (b) Serial Number : PD 103/90 Rev. 1 (F)
- (c) Executing Agency : The Institute of Forestry, Tribhuvan University,
Nepal.
- (d) Host Government : His Majesty's Government of Nepal.
- (e) Starting Date : 15th June, 1993
- (f) Actual Duration (months) : Six years and four months (76 months).
- (g) Actual Project Costs (US\$) : 1,203,000.00

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1. Background information

The key problem in forestry education was an imbalance of curricular and experience in critical teaching facets, new facing forest management. The gradual degradation and deforestation of Nepal's forest became a matter of national and international concern. It was recognized that the state of the forest was closely tied to forest users. Foresters needed to liaise with communities to manage forests; concepts foreign to traditional forestry practices, solely to related wood production. There was urgent requirement to build a training background of social sciences and biophysical sciences. Training needed to combine production of timber and as well of non-timber products primarily for community benefits.

The Institute of Forestry is the forestry educational institution in Nepal. The Project had a focal emphasis an enhancing the professional capability of the Institutes teaching staff in the new dimensions of forestry and the deepening of their research ability.

This was to be accomplished through an exposure programme of eminent Visiting Scholars (V.S.) in priority fields. This concept was an integral component of raising the quality and status of IOF to one of a regionally and internationally recognition as a center of excellence in Community Forestry education. This proposed Visiting Scholar Program was designed to create at the Institute, the capability to teach students the additional social and biological concepts necessary for the management of community forests and to conduct research that will lead to improvements in those management concepts.

In summary the Project was to enhance the research and teaching capability of Institute of Forestry (IOF) faculty, with particular attention to multiple-use management to combine the production of timber and non-timber products. Also to work toward the expressly stated goal of the Institute of Forestry becoming a regionally and internationally recognized center of excellence in community forestry education. Importantly, the Project through improved instruction, was to produce IOF graduates who are better equipped to implement community forestry practices and facilitate community forest management in Nepal.

An additional problem faced was the need to provide facilities (buildings, furniture, equipment) and logistical support particularly of transport.

and refinement, development of teaching modules and participation in the course in teaching and in student counseling, and fieldwork supervision. Of importance was the V.S. and counter-part selection of a research project, its implementation with students, its analysis and report presentation in international conferences, journals etc. The V.S. would also conduct seminars or workshops at the IOF.

The programme was intended cover the 4 years period at a cost of \$1,203,000. While expenditure was controlled to the projected cost, delays required the line extension to October 1999.

2. Project Achievements

An unstated output is the uplift in morale of the IOF staff from project inputs.

The construction of the support buildings, furnishing and equipment was completed and used during the V.S. program. The IOF now has equipment and transport to enable it to function in the intended proposal.

The V.S. project generated additional peripheral and valuable support to the IOF. This covered library development, linkage with international universities and organizations. A MOU was signed with the Philippine University and the Kasetsart University and collaboration with the Lincoln University, N.Z. to develop the linkages between these institution through research, training and faculty exchange.

All of the eight V.S. person years were term utilitised through Visiting Scholar programme and a further 7 short term V.S. completed the project time.

The IOF is the recipient of curricula development, teaching materials, co-research experience, seminar conduct, and international conference experience in the preparation of reports for publication and presentation at international conferences.

The IOF participating staff teaching and research are now better equipped and experienced in their professional ability and this provides a continuity of the project's output objectives for years to come. Faculty, who did not have the opportunity to work as counter parts to V.S., were able to complete 22 teaching materials aids.

The IOF organized and held an International Seminar on Sustainable Forest Management in 1998, the proceedings were published in May 1999. This was attended by participants from China, Egypt, India, Netherlands, Pakistan, Philippines, Sweden, Thailand, USA and Vietnam.

Study observation tours were completed by Project staff, Consultative and Steering Committee members in Thailand, Malaysia, Singapore and India.

The project achievements above provided sustained support to the concept of the development of IOF as a center of excellence in the education process in Community Forestry Management.

3. Target Beneficiaries

The major beneficiaries are the participating staff and students of the period; however the project has left long lasting benefits to future student intake. Of note is the morale uplifting effect on co-training lecture staff associated with the V.S. This close contact will an eminent V.S. has developed a personal staff confidence in future course implementation.

Direct Student/V.S. interaction covered 290 hours of instruction by V.S. and 330 hours by short term V.S. Additionally there was contact exposure in interactive practical field classes. It can be said confidently that there was integrated contact with the V.S. and the student body throughout the V.S. tenure. This contact can only be highly beneficial in post training employment. Details are supplied in Appendix B.

During the period, 10 IOF Faculty Research Projects, and 16 Forestry students Research Projects were funded during the Project. Subjects concerned to such and other achievement are included in Appendix C.

The IOF is a major beneficiary in terms of resources in buildings, equipment and logistical support. To this must be added the curricula development, teaching methodology and materials, and the strong support to the Institute in its drive as a forest educational center.

The published compendium of Graduate Theses in forestry and allied subjects (IOF/ITTO 1998) and the Proceedings, and of the Sustainable Forest Management Seminar (IOF/ITTO 1999) are landmark achievements for future training programmes.

4. Lessons Learned

a. Development Lessons

The implementation of the project has been greatly assisted in the delegation of responsibility for physical facilities, selection of V.S. to the executing agency, the IOF. This simplification and delegation has been most beneficial.

Of major assistance was the guidance and operation of the Project through the clear definition of the Work Plan, the Outputs expected and Statement of conformity with the Monitoring, Evaluation and Reporting procedures of the Project Document. There were of considerable assistance to the executing Agency.

During the period of the project, intersectoral links in no way hindered, the effective

implementation of the project. In fact appreciation must be recorded for very readily available assistance at all times.

It is also concluded that the publication of the Graduate Theses Compendium on the Proceedings of the International Seminar on Sustainable Forest Management Ecotourism, Agroforestry and Community Forestry Workshops strongly endorsed that satisfactory arrangements and participation of all parties interested in, and contributing to the project, had been in place.

It must be considered that the serious lengthy extension length of project completion time is a substantial defect in the project, in fact a major failure area. The breakdown followed the difficulty of the V.S. recruitment commencing after project start up in attracting eminent experienced V.S. at short notice due to their own time commitment. A resolution is proposed in that, in future projects, a list of suitable V.S. be prepared in advance, with sufficient alternative V.S.'s listed to allow the project to flow in a smooth work plan.

A conclusion drawn from the sustainability of the project's impact is that clearly this rests on a few major concerns viz:-

- (a) assistance under a continuing V.S. programme, in regard to new emerging directions of tropical forestry management requiring a change of priority and emphasis in training, and
- (b) staff retention, and their further development in education, and importantly of professional career status (academic elevation in higher degree training) in a forestry training center of excellence.

b. Operational Lessons

- (a) No problems were encountered in project organization and management.
- (b) The Project document was adequate for the purpose and can be expanded from project experience now developed for possible future V.S. programmes. Relevant subject documentation provided to V.S. should clearly state the existing position, and future output expectation.
- (c) Monitoring and evaluation, provisions were adequate.
- (d) Project planning, and implementation must be more closely developed and integrated into IOF curricula. Several of the V.S. inputs were hampered by the lack of curricula time slots available and by the inflexible schedules already adopted. As the project time period projected as of 4 years (later expanded to 6)

this is a matter of considerable concern. Recruitment of a V.S. must be related to an available time slot, or the curriculum altered in internal agreement. The original intent of the V.S. programme considered a 1 year V.S. term. It is now believed this is counter productive and should be shortened with V.S. negotiated consent. The long period may be detrimental to V.S. involvement due to some experiencing difficulty in release in their own career. Future offers could be of less than one year.

Experience has revealed that the IOF, in preparation of the curriculum and of staff postings years in advance – incurred failures in the co-ordination of V.S. activities and actual curriculum timetable availability. This inflexibility, a deficit of management planning is recognized and a future flexible approach must be adopted.

- (e) As the whole Forest Education Authority in the embracing Tribhuvan University, no problems arose in the roles of other Agencies widely consulted in project development and implementation.
- (f) Variations between planned and actual implantation in future are to be accommodated within a better IOF scheduling. In the present project several V.S. were not maximized due to the established inflexible curriculum programme. Experience gained emphasises the need for project planning to closely study the availability of physical resource (class rooms, accommodation, equipment, transport etc) in relation to V.S. tenure. Due regard be given to timing so that the V.S. tenure is maximized.
- (g) External influencing factors relate particularly to V.S. availability. The lack of this and difficulties experienced suggest that a list of V.S. be documentated in advance by the Institute (on a non committal basis) on IOF's priority scientific concerns from International Organisations, related Forestry Training Organisations, Forest Agencies, Eminent Persons etc. This would to assist in curricula integration.
- (h) Some unforeseen external influences are perhaps inevitable. Project experience related to one withdrawal after partial completion of his tenure due to a health problem. Executive Agency action taken may substitute another V.S. from the proposed list above, or scour internal assistance for the component completion.

5. Recommendations

The primary project is considered to have contributed significantly to the objectives, of improving training efficiency and in upgrading of facilities and staff and curricula development of IOF. It fostered to good effect, the improvement of research technology, analysis and report presentation to peer groups internationally.

It is recognized that the Project impact was of such beneficial assistance to IOF the IOF in developing international status that it will benefit from a further modified project. The concept of such a Project would comprise two major thrusts. Viz.:-

- The continuity of the Visiting Scholar programme in priority forestry education components of concern in Nepal, and
- Importantly the retention and upgrading of professional training of IOF staff.

It is appreciated that education is an ongoing experience and that Forest Management changes will bring new issues and problems to be faced, beyond present experience. HMG/N has recognized that the future production forest is that of the tropical/sub tropical Terai. This generates a need of intensive natural regeneration and management of the new forests. This aspect itself is a significant challenge as the IOF has not had experience in tropical forestry, where the national production forests are located. Further it is to be supported by complementary tropical reforestation on nearby common lands in the interactive buffer zone of forest/farms. This is to reduce pressure on forests, in combinations of silvicultural and of non-wood agroforestry products and techniques.

In these plantings the emphasis is to be on non wood forest products, fruit, food, fodder, medicinal plants etc, and has implications in the national policy of poverty alleviation.

In interactive zone both forest and plantation management will involve participation involvement with village communities, leaseholders and private forestry. These programmes introduce new management challenges, and the preparation of curricular components of IOF student training. Visiting Scholar assistance is seen in these components:

Silviculture

- Tropical forest natural regeneration, management and rotation technique development. Silvicultural systems of community and farm tree cropping with intercrops: as non wood forest products viz fruit trees, medicinal plants, sustenance food and fodder crops.

Community Development - People development long term and in improvement in existing legislative rights, assistance in formation of legal groups; in advice on their access to governmental procedures; and resources as in access to tree/plant/seed inputs and in extension servicing.

Marketing and Utilization- Community organisation assistance in development of VDC, leaseholders, User Groups in preferential contracts, access to work potential; conversion of small size logs, firewood, fodder depot and sales management.

Regionally the lowland production forest is impacted by rainfall and flooding from the mid range (Mahabharat) and the Siwalik range. A further V.S. input is recommended in:

Watershed management and River training

- To study the hinterland of the production forest, recommend on watershed management practices and in the lowlands to regulate and manage river flows to minimize forest and agricultural lands.

PART – II MAIN TEXT

1. Project Content

a. Forestry Education

The Institute of Forestry is the only educational institution providing forestry manpower training in Nepal. It was incorporated into the Tribhuvan University in 1972, the Institute offers courses of instruction at both the certificate (Ranger) and B.Sc. level of education. The Institute of Forestry operates from two campuses, a Campus in Pokhara and one Campus in Hetauda. As the sole source of manpower for the forestry sector in Nepal, the Institute is recognized as a key component in national forestry development. International commitments relate specifically to the Tribhuvan University Regulations. The Project was based at Pokhara.

It is accepted that the population of the hill area of Nepal was largely engaged in subsistence agricultural use recent times, as the population increased and as older farmed sites depleted in fertility new forest areas were drawn into the agriculture process. The mid 20th century saw a substantial change in population increase and a marked change in forest ownership with the 1957 nationalization of the forest resource. This raised concerns in forest management education in forest management commenced with the establishment of the IOF in 1962. As forest management spread increased the Institute was expanded and it was incorporated into the

Tribhuvan University in 1972.

b. Forest Management

The gradual and continued deforestation and degradation of the forests of Nepal has increasingly become a matter for national and international concern. As this concern grew, it quickly became recognized that the state of the forests of Nepal is closely tied to the forest users i.e. the local people. Forestry in Nepal required that foresters work with local people in ways that are often times foreign to the traditional practice of forestry. The National Forestry Plan of 1976 recognized that "The Forestry Department has been ignoring the forests in the Hills regions and this had led to the deterioration of the watersheds which are now in very poor condition." The classical model of government owned forests, in which foresters protect the forest from the people, and manage the resource for the state was not working. Part of the solution to this problem was to encourage the conversion of government owned forest land to organized groups of local forest users. This policy toward encouraging community forestry was further strengthened by the 1978 Panchayat Forest, Panchayat Protected Forest and Leaschold Forest Legislation, the 1982 Decentralization Act, and the recently completed Forestry Sector Master Plan.

It was recognized that part of the problem of implementing community forestry in Nepal is that the professional foresters and ranger level technicians receive a traditional forestry education, with its heavy emphasis on understanding the bio-physical forest resources, and on the management of forests primarily or solely for wood production.

c. Development Objectives:

This led to the IOF redefining its training programme. The basis of this sought ITTO assistance in a Visiting Scholar Project in staff development, facilities, curricula development, research capability of faculty and graduates with emphasis on the management of community forestry.

The ITTO Visiting Scholar project is an essential part of an international multi-agency package involving USAID, the World Bank, and the Ford Foundation to change the way on which foresters are educated in Nepal, and help the Institute of Forestry realize a goal of being a regional and internationally recognized center of excellence in the study and implementations of community forestry.

The Visiting Scholar program and associated facilities improvement was designed to create at the Institute the capability to teach students the social and biological concepts necessary for the management of community forests and to conduct research that will lead to improvements in these management concepts.

The project objectives were:

- a. to enhance the research and teaching capability of Institute of Forestry (IOF) faculty, with particular attention to multiple-use management to combine the production of timber and non-timber products.
- b. to work toward the expressly stated goal of the Institute of Forestry to become a regionally and internationally recognized center of excellence in community forestry education; and,
- c. through improved instruction, to produce IOF graduates who are better equipped to implement community forestry practices and facilitate community forest management in Nepal.

d. Institutional Framework

The IOF of the Tribhuvan University is the whole forestry education unit in Nepal and provides professional and technical staff to the MFSC and its agencies, the Departments of Forest, Soil Conservation, National Parks, Herbs Production and Processing Co., Forest Products Development Board, Timber Corporation and to N.G.O.'s and private employers.

The ITTO Visiting Scholars Program is part of a total institutional development activity at the Institute. The objective is sharply focused on the IOF in creating a recognized international center of excellence in community forest management, and in providing the required trained manpower for forest management to the Ministry of Forests and Soil Conservation etc. The Project will bring community forestry management skills and expertise to the Institute and graduates. Other related Institution activities include assistance from USAID, the World Bank on the Ford Foundation.

USAID provided technical assistance in institutional development, third country training opportunities, library resources development and limited educational commodities procurement. The World Bank has provided funding for classroom and dormitory construction. Additional funding is anticipated for the construction of an additional women's dormitory. The Ford Foundation has supported the Institute with a grant for basic studies of selected communities practicing community forestry in Nepal.

The proposal meets the ITTO criteria set forth for project support under Article 23, Number 5, of the International Tropical Timber Agreement. The proposal will address issues related to management, production and utilization of timber at the local level and will support existing institutions through training, manpower development and facilities development.

To support the activities of the ITTO scholars, and to insure the ability of the Institute to sustain the momentum gained through their presence, the following facilities were constructed or commodities purchased:

- a. An ITTO visiting scholars activities support building. This would serve as housing quarters for the scholars, provide essential office space and quality seminar facilities.
- b. Laboratory and related field research equipment for each scholar.
- c. Transportation – ten motor cycles to enable visiting scholars and their faculty counterparts to easily and cheaply get to their research sites, and one four wheel drive vehicle.

e. Work Plan and Specific Outputs

A detailed work plan showing the proposed timeline of activities is presented in Appendix A.

Specific Outputs

The Institutional strengthening objectives are:

- a. The Creation of Teaching Modules – Each scholar will work with faculty counterparts during his or her term in residence to design and test subject specific teaching modules. They will work with IOF faculty in teaching classes, advising students and directing student field exercises. In the process of teaching each scholar/faculty team will also be developing teaching materials, thereby enhancing the teaching skills of the faculty and developing curricula for use at both campuses of the Institute.
- b. Conducting Research – Each scholar will work with his or her faculty counterparts to conduct a research project. The IOF faculty will work with ITTO scholars in the design, field work and data analysis of a research project. The ITTO scholar will in this way bring his or her specialty to bear on a community forestry management research problem in Nepal. The IOF faculty will contribute to the research through its knowledge of the social, cultural and institutional

condition in Nepal. The faculty member will benefit by working closely with an experienced researcher with a depth of knowledge in his or her subject matter.

- c. Research Presentation – Each scholar and his or her faculty counterparts will prepare their research findings for publication in a professional journal. They will also attend on regional or international conference together during the scholar's period of residence. In general this will be to present the findings of their joint research efforts. This will give needed exposure to the Institute as it builds its reputation in community forestry. It will also give the IOF faculty a chance to take part in a major conference, enhancing their own professional growth, and it will highlight the important role of ITTO in the development of the Institute of Forestry.
- d. Topical Seminars – Each scholar will be responsible for conducting a seminar or workshop for the faculty and students of the Institute, as well as other interested members of the forestry community, on his or her special field of interest. This seminar can be part of the IOF's established topical seminar conference held at the Institute or in Nepal.
- e. International Conference – Near the end of the ITTO Visiting Scholars Program the Institute will hold an international conference on the management of community forests. this conference will draw o the research and faculty development completed during the program. It will contribute to the efforts throughout the project period toward gaining recognition for the Institute of Forestry as a center of excellence for the study of community forestry. It will also highlight the important role of ITTO in Nepalese forestry development and the complimentary roles of the IOF, the ITTO and the Ministry of Forests and Soil Conservation.

f. Monitoring and Evaluation

Monitoring

The project was subject to monitoring reviews in accordance with the procedures established by ITTO.

Internal bi-weekly status report were written by the Project Manager. These were used as a record for semi-annual progress reports that will be submitted to ITTO, the Ministry of Forest and Soil Conservation, and the finance contributing government.

Quarterly financial statements were prepared and submitted to ITTO, the Ministry of Forestry and Soil Conservation and the finance contributing governments.

Evaluation

The project will be evaluated jointly by ITTO, the Ministry of Forestry and Soil Conservation in accordance with ITTO's established policies and procedures.

2. Project Context

The Ninth Plan, HMG/N has these objective and targets:

a. Objective

On the basis of the current situation of forest resources, natural environment and development are regarded as a foundation for the overall system. Based on this assumption, the main objectives of the forestry sector will be the mobilization, conservation and management of forest resources to equilibrate their demand and supply; the creation of income-oriented and employment opportunities for the poor and marginal families, the mobilization of peoples participation for productivity enhancement, and the adoption of proper land-use plan.

b. Target

To initiate the private sector and adopt the free market system for the long-term development of forest sector, to implement the forest management working plan, to make an institutional arrangement for a revolving fund with a certain percent share of the revenue obtained from the sale of forestry, to provide lease-hold forest to forest industries and institutions and develop industrial forest, to prepare an integrated plan for implementing the forest production and management in the hilly area, to strengthen the agro-forestry and leasehold forest system in poverty alleviation programme, to support the management, marketing, industrial development, processing and export of herbs and forest product, to adopt a co-ordinated approach to alternative energy management are the policies and implementation strategies that will be adopted.

The Department of Forests (through the Ministry Soil Conservation and Forest) has the responsibility for implementing National Forest Plans and providing basic objectives. The IOF through the Tribhuvan University is the responsible national forestry educational facility for providing MFSC Departments of Forestry, Soil Conservation, National Parks, NGO's etc trained manpower. The project enhances the capability of the IOF to provide skilled manpower to

implement the 9th National Plan.

3. Project Design and Organization

It is considered the Project adequately fulfilled the major concerns identified in 1990. Also that the strategy adopted – prioritizing of V.S. assistance, providing support facilities and logistics, research ability capability and exposure in research analysis reportage/publication and regional study was the appropriate implementing path.

The output/achievement (Appendix B) provides data of the results achieved through each V.S. of the project. The publication of proceedings papers in the IOF/ITTO seminar on Sustainable Forest Management, Ecotourism, Agroforestry and Community Forestry provides convincing evidence of the adequacy of research stimulation. The compendium of Graduate Theses fully supports the beneficial impact on the IOF on the student output. These outputs strongly support the adequacy of identification. They are indicative of also positive prioritization of issues facing the IOF and its educational policies and curricula. This also applies to the project concept as outlined in the careful selection of project objectives and the choice at that time of specific V.S. fields of expertise and experience.

The period allocated (8 V.S. man years) was fully utilized. However it is considered the original intent of 1 year tenure in same case was excessive and possibly detrimental to eminent V.S. recruitment, the period being a too large period of absence from own careers. From experience it is considered that the IOF propose to each V.S. a time frame for allotted subject and allow negotiation for this to be amended. The maximum would be of one year for selected V.S. units.

All of the eight person years of Visiting Scholars were recruited for various length of time. The first Scholar in Social/Community Forestry area could not work for full tenure due to health problem and left after seven months of his joining. Other five scholars, Dr. K.M. Tamang (Natural Resource Conservation/Wild Life); Mr. B.P. Kayastha (Silvicultural/Agroforestry) Dr. S.N. Rai (Tropical Forest Management); Mr. D.P. Parajuli (NTFPs); Dr. Tej B.S. Mahat (Social/Community Forestry) Mr. K.M. Sthapit (Watershed Management/Environment Science) completed their tennure.

Two faculties members from Lincoln University Department of Parks Recreation and Management were also hired as short term consultants in Wildlife and Park Recreation Management in 1995.

Altogether eight local Nepali experts were recruited during different periods for 1-3 months in enabling training areas of Remote Sensing and Geology and Soil Science, Range Management, Hydrology, Forest Mensuration, Forest Economics and Biochemistry.

Other experts working under the MFSC were hired as resource persons for short period (less than 1 month) on per diem basis to undertake collaborative work such as conduct training for CF User Groups, field research and upgrade soil laboratory.

There were several instances when the expertise of the V.S. at the time of their appointment were not harmonized with the established curriculum. However all of the V.S. were fully employed through the period and added valuable services to IOF.

It was possible for the V.S. project in most cases to be directly involved with the beneficiaries, counter part staff and students in class and field teaching programmes. Also the staff were intimately involved in research project selection, implementation, analysis, and report presentation at internal and International Seminars.

4. Project implementation

Assumptions and Correct Identification of risks involved very largely concerned V.S. health, rigidity of the established curriculum, and of timely V.S. availability. Generally they were in conformity with project context, if of shower implementation.

Breakdown occurred, however the project as a whole was fully implemented. Variations in V.S. inputs were occasioned through ill health and V.S. non-availability at the established curriculum timing. The latter was the basic cause of project time expansion. Generally costs, outputs and overall achievement were contained in the project as prescribed in the Project Document.

Problems of ill health must be regarded as accidental and unavoidable. While a “robust health” certificate by a V.S. might offer some protection, it is not considered that this should be mandatory. However in V.S. acceptance of a project component should perhaps include a reference to good health. Accidental problems can not be ruled out, and alternative V.S. options should be provided for.

The availability of a V.S. on short notice is fraught which possibilities and non-possibilities of timely implementation. In the Project this caused a lengthy time extension. It is considered that in any future project this V.S. availability concern is of paramount importance. To reduce (eliminate) this problem it is advocated that on completion of the list of major V.S. components, a reference list be prepared of selected V.S. and contact established to ascertain

availability at what time, and for what period. It is further considered that a local support V.S. list prepared by project to draw on the developing pool of national talent now gaining experience in the field as counterparts etc to various projects in operation in Nepal.

Appropriateness of project input is perhaps best examined in relation to the outputs achieved. As stated, the publication of research results, and of seminar papers of a high quality at an International Seminar, indicates the inputs were appropriate timely. It is considered that the quality of the V.S. was appropriate, and that it was very appropriate at the then stage of development of the IOF. It is considered further additions of the V.S. programme are now appropriate.

The sustainability of the post project period is a matter of serious concern. Certainly the physical components will remain. Of paramount importance is the retention and career upgrading of IOF teaching staff. Experience gained in the project period greatly benefited counterpart staff, and in extension of this, the IOF as a whole. However we must look beyond purely personal experience gained and see how it can be retained. We must look at the basic educational levels of IOF staff and of careers structure in the IOF. They must be upgraded as a matter of general principle, and especially so as the IOF moves into higher levels of education (M.Sc. etc). It is considered that a rotation of staff in upgrading of educational levels, and an engagement in an expanding career structure should be a serious component in any further IOF project. The inclusion of upgrading educational levels and their retention may need to incorporate bonding conditions of IOF service after completion of upgrading levels.

5. Project results

The Project has achieved its objectives and especially at the completion has there advantages. The IOF is now equipped in basic physical facilities to function as a training center of excellence. The Pokhara Campus has established and equipped a V.S. center including a conference hall and equipment. Transport facilities, 2 jeeps and 10 motorcycles have been procured. Support training equipment, includes: teaching aid/equipments, eight computers, seven printers, four digitizers, three overhead projectors, three photocopy machines, two fax machine, one scanner, one zip driver, library materials required for cataloguing and classification, a conference system in the newly constructed conference hall, generator EBK 2800 (2100 watt), lawn mower etc.

The eight (8) man years of V.S. programme were completed over the extended period. Though extended to over twice projected life, the specific objectives of enhancing research and

teaching capability, developing recognition as a Regional and International Center of excellence in community forestry education, and improved quality of graduating students in CF practices, has been achieved. The beneficiaries, the IOF, staff members and graduate students are considerably improved through the project.

The IOF has added necessary furniture, equipment, and transport.

- The IOF staff corps have had specific inservice training in curricula context, teaching methods, teaching materials, research guidance and analysis of results, preparation and presentation of data.
- The IOF as a whole has had a morale lifting experience in contact with V.S.
- The IOF has benefited from internal seminars and from the conduct of an International Seminar.

The student beneficiaries

- Have an improved formal and practical community forestry education; have participated in V.S. supervised field exercises, in a wide range of subjects.

The collective contribution of this input will improve the qualities of staff and of the student graduates to make positive involvement in all manner of social and environmental management in the field of community forestry management. This is a substantial contribution to the improvement of forestry education at the IOF.

Specific Objectives of V.S. programme recruitment were achieved, and were supplemented by short term V.S. Appendix B.

The project real sustainability rests on the retention of qualified staff and on partly their access to an improving career structure. This is entertained with the future development of the IOF within the Tribhuvan University. Plans are in train to develop M.Sc. Forestry courses within the TU, IOF staff development will require their attaining higher degree training. It is considered IOF staff status be enhanced by further training and on completion of this, a time bonding arrangement be entered as a minimum.

A further sustainability concept lies within the curriculum refinement and improvement, provision of resources buildings, in equipment, transport etc.etc. These residuals will remain for some time.

It is pointed out that the concepts of regional of international status lies on the IOF being competent to face the changing facets of social and economic forestry in its teaching role. It is considered a further set of inputs in desirable now some ten years since concept of the project, to

cover new emphasis on peoples improvement, new silvicultural techniques and wider emphasis on non wood forest products.

6. Synthesis of the Analysis

- | | | |
|-----|-----------------------------------|---|
| (a) | Specific Objective(s) Achievement | <input checked="" type="checkbox"/> Realised
Partly Realised
Unrealised |
| (b) | Outputs | <input checked="" type="checkbox"/> Realised
Partly Realised
Unrealised |
| (c) | Schedule | In advance/on time
Delayed but not seriously
<input checked="" type="checkbox"/> Seriously delayed largely due to difficulties in recruitment of V.S. and on ill health interruption.
As planned |
| (d) | Actual Expenditures | Below planned
More than 10% above planned
More than 20% above planned
<input checked="" type="checkbox"/> As planned |

PART – III CONCLUSIONS AND RECOMMENDATION

The overall assessment of the project implementation is one of IOF satisfaction and of being beneficial of the concept objectives in providing training expertise, research promotion, physical supports, improved graduate output and improved status of the IOF.

Deficiencies that arose are now recognised and are within IOF management capability to avoid in future proposals.

(a) Development lessons

- i) IOF experienced difficulty in attracting at short notice, eminent V.S. due to their own time engagements. It is recommended in future projects adequate pre notice is given to selected V.S. so that IOF curriculum time slots are planned. IOF develop a register of appropriate fields and of V.S. who would be available at a given time schedule. The list should assist in overcoming difficulties that may be

experienced due to ill health, accidents etc. In establishing this list of V.S. experts, the IOF prepare for distribution, an outline to include a general course pattern of: short history of the subject; relevance to Nepal; technical components, course selection of research subject etc.

- ii) It is recommended that on upgrading of IOF staff quality and security be implemented to ensure long term sustainability. The long term (staff asset) sustainability will depend on the retention of experienced qualified staff for a considerable period. The development of a staff career structure within IOF needs to be examined, and implemented. Higher staff education levels need to be stressed and implemented. There may be a need of a bonding facility.
- iii) It is now some ten years since the V.S. concept was promoted. There have been significant changes in the application of forest management in regard to traditional User Groups in hill forests and to migrant population transfers to the lowlands and in tropical forest degradation. These changes have introduced new techniques in projects that are still in unfolding stages of, people participation in forest management, legislative development, and social improvement. These and further technical advances in silvicultural and marketing practices are occurring that require early introduction with IOF curricula.

It is recommended that a future ITTO-IOF V.S. project be implemented to prepare IOF a commanding role in community forestry education and in related research.

(b) Operational Lessons

Due to the difficulty of obtaining suitable V.S. at short term notice an account of their prior arrangements, there was considerable delay in project implementation. A further complication occurred that when arranged, the V.S. tenure, was impacted by inflexible, earlier established IOF curricula. This resulted in several cases in the non availability of time slots for V.S. teaching activities a totally unacceptable position.

It is recommended that IOF in forward planning of curricula, include provision for V.S. participation in the appropriate course, and the IOF provide and pre-arrival data as the V.S. may request.

Further, in the view that length of time may be excessive, or the V.S. unavailable for a long career separation, it is recommended that IOF vary the V.S. time period (in consultation with the V.S.) as required by the subject course rather than of a 1 year

period. Although this period may apply in some cases, lesser on repeated visits, could perhaps be negotiated.

(c) **Recommendations**

A **second stage V.S.** programme be conducted 2000-2004 with due regard to V.S. availability, and a negotiated subject/time allocation approach and emphasis on tropical forestry management, control of lowland river damage, peoples empowerment, and NWFP.

a) Objectives of Phase I apply with the addition of (d) the project incorporate a plan of IOF staffing staff sustainability through a career status programme, educational upgrading and bonding to IOF for an appropriate period.

Design is to follow the Phase I project but with interrelation of V.S. availability and IOF curriculum harmonized.

New units are subject specific, and reflect changing appreciation of the breadth of forest values and particularly of forest management terms, of community and private forest management.

(d) **Inputs**

A total of 96 man months of technical assistance will be recruited for the Visiting Scholars Program. In recruiting scholars, we will be looking for candidates who have wide experience in the social forestry/community forestry and forest management fields. Scholars will be recruited with expertise in areas such as:

- | | |
|---|--|
| <p>(a) Community forestry development</p> <p>Silviculture</p> | <p>Establishment, management, harvesting and marketing, forests.</p> <p>Silviculture systems for fast growing tropical tree crops in short rotations.</p> <p>Intercrop for hill and tropical forestry, fodder, food, fuel, medicinal, wood crops.</p> <p>Natural regeneration of tropical forest and management thereof.</p> |
| <p>(b) Community empowerment development</p> | <p>Education of management group and empowerment of legal rights and guidance and assistance in project development.</p> |

- | | |
|---|--|
| <p>(c) Harvesting and Marketing Employment</p> | <p>Development of groups in management in harvesting, utilization and marketing of small size loges.</p> <p>Preferential employment opportunities for the interactive buffer zone.</p> |
| <p>(d) Watershed management and River training</p> | <p>To develop an understanding of watershed protection roles and management are to manage river systems to minimize tropical forest and agricultural land damage.</p> |
| <p>(e) Non wood forest products</p> | <p>Short term V.S. units of 3 months in recognized NWFP terms e.g. fungi, orchids, arenas, medicals, bamboo, resins, fruits, eco-tourism etc. etc. The final V.S. in this programme to produce a management curriculum for NWFP to be a component of the IOF curriculum.</p> |

Long Term Sustainability of the project requires the development of a staff retention programme, through staff academic advancement status and a career process.

It is recommended that the T.U. through IOF develop post project (in conjunction with the expansion proposal of M.Sc. training a career programme for IOF staff and a rotational role of staff gaining higher academic qualifications through an attachment to notable centers of tropical forestry training.

The organization and management and implementation of this Phase II project would follow in general arrangements of Phase I.

Responsible for the Report

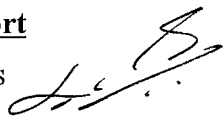
Name : Abhoy Kumar Das

Dean

Institute of Forestry

Pokhara, Nepal

Date : 29 October, 1999



Appendix A

Project Achievements :

Activities	Percentage Executed	Estimated date of completion	Remarks
A. <u>PROJECT/OFFICE MANAGEMENT</u>			
1. Appointment of Project Manager & Supporting Staffs (Administrative Officer, Secretarial Staff, Driver, Office helper, Sweeper/Peon and some part time staffs such as electrician, watchman, gardener, plumber)	100	--	-Curreant level of staffs will be required for the submission of final report
2. Purchase of Commodities Two Jeeps (1 Japanese & 1 Indian) & 10 Mobikes	100	--	
B. <u>VS SUPPORT BUILDING</u>			
Construction & Furnishing	100	--	
Equipping of VS building/Conference hall	100	--	-Conference system have been installed.
Land scaping & monitors & Certification of Building	100	--	-Certification of VS Building completed.
C. <u>VISITING SCHOLAR PROGRAM</u>			
(A total of Eight person year during the project period)			
1. Identification of subject areas for VS positions	100	--	
2. Recruitment of VS in			
-Social/Community Forestry	100	--	-1st VS left after 7 months because of health problem
-Resource Conservation with Wildlife Mgmt.	100	--	- has completed his tenure
-Agroforestry/Silviculture	100	--	- has completed his tenure
-Sustainable. Res. Mgt (NTFP).	100	--	- has completed his tenure
-Social/Community Forestry	100	--	- has completed his tenure
-Tropical Forest Res. Mgmt.	100	--	- has completed his tenure
-Watershed Mgt./Env. Science.	100	--	- has completed his tenure
3. Recruitment of Short term Visiting Scholar			
a. Short term consultants from New Zealand (in Park Rec. & Mgmt.)	100%	--	-Hiring of some short term local VS and two consultants from NZ was also done in place of the first VS Dr. John's remaining period after getting approval from ITTO, Headquarter.
b. Eight local Nepali Experts in the areas; Remote Sensing and Geology & Soil Science, Range Management, Hydrology, Forest Mensuration, Forest Economics & Bio-Chemistry.	100%	--	- The resource persons were involved in carrying out various works on the perdiem basis in field research, assessing soil lab facilities and conducting trainings
c. Some resource persons	100%	--	

D. Other Activities	100%		
1. Library development (Pokhara/Hetauda Campus)	100%	--	-Classification and cataloguing on progress in both Campuses, new books are being purchased. In Pokhara Campus about 7000 book have been classified and computerized.
2. Faculty Research funding	100%	--	-10 Proposals were funded as recommended by IOF Res.Comm. Research report being collected and evaluated.
3. Faculty Training	100%	--	-A training on Scientific Report Writing was conducted in both campuses of IOF. Computer training for faculty was conducted in Oct/Nov, 1998 at Pokhara for a period of 4 weeks.
4. Curriculum Development (4 yr. B.Sc.)	100%	--	- A 3-day workshop was organized is to Oct 9-11, 1996 and next one on January 17-18, 1999 for final decision -
5. Workshop/Seminar	100%	--	- Three National workshops were organized, one in Ecotourism another in Agroforestry and third in Community Participatory Forestry Development Experience in the Terai Region of Nepal.
6. Training of Administrative staffs	100%	--	-A training program was organized for the administrative personnel of IOF, Pokhara and Hetauda campus in their respective field for a period of one week
7. Observation study tour	100%	--	-(a) Two administrative staffs of this project visited Bangkok, Kasetsart University for observation study for a period of 8 days in July/August, 1998 (b) 10 members of steering and consultative committees visited various academic organizations of Singapore, Malaysia and Thailand to Sept. 22-29, 1998
8. Publication	100%		-Publication of Brochure dispatches , teaching materials on NTFP and Timber , Proceeding of Ecotourism and International seminar completed and directly dispatched and distributed publication of compendium and proceeding of National workshop on Agroforestry and Community Forestry completed -Project provided financial support to 16 B.Sc. final year students to prepare research report which is part and parcel of fulfilling the course
9. Student support	100%	--	-Teaching materials prepared by non-counterpart faculty and research report prepared by visiting scholars and their counterparts were photocopies and binded in sufficient and provided to Libraries of both Pokhara and Hetauda campuses and academic and government organization.
10. Teaching and research reports	100%	--	-Became very helpful and useful for the implementation and conducted of academic and research programs
11. Procurement of 8 Computers, 7 Printers, 4 digitizers, 1 Zip drive, two fax machine 3 Overhead Projectors, GIS-hardware, Conference system for the Hall (1 computer and 1 printer have been sent to Hetauda Campus) and	100%	--	-- -has become very much helpful and being used by faculty, for research training and international linkage for various kinds of opportunities

Upgrading of 5 computers	100%	--	
12. Procurement of additional equipments, audio visual for the Hall and the GIS- software & equps. for Hetauda Campus	100%	--	----
13. Instalment of (E-MAIL)			
	100%	-----	
14. GIS -Lab established and training			

Appendix B

A. Visiting Scholar Program (Outputs/Achievement)

Activities	Visiting Scholar		
	1. Social/Community Forestry (Dr. John M. DeVilbiss)	2. Natural Resource Conservation with Wildlife Expertise (Dr. Kirti Man Tamang)	3. Silviculture/Agroforestry (Mr. Baban P. Kayastha)
1. Co-teaching Courses taught	-Resource Economics I-B.Sc. IIInd year -Resource Economics II-B.Sc.IInd year	-Wildlife conservation BSc.IIIrd.year -Protected Area and Ecotourism Management. B.Sc. III year (with ST V.S from New Zealand and Counterparts)	Silviculture BSc 2nd/3rd yr Agroforestry B.Sc. 3rd yr.
Prepared Workplan	- Yes	- Yes	- Yes
Classes /wk	- 4	- 10 Lecture Hours	- 10 Lectures Hours
Classes (Hours) taught	- 59	- 90 classes	- 70 classes
Field practical class	- x	- 6 days - field (in Bardia) two time	-attended 1 day excursions
Teaching Materials	- For two courses	- for above two courses completed	-done for above 3 courses
# of students benefited	- 80 total	> 120	- >120
2. Co-Research			
Identify relevant problem	-Completed	- Yes	- Yes
Design field study	-Completed	- Yes	- Yes
Conduct Research	-(could not start field work)	- Research report not yet submitted	- Research report submitted.
3. Seminars IOF	-x		
4. Library Development	-helped Librarian in Cataloguing & other works	-Organized the workshop on Ecotourim mgmt.(along with short term VS from NZ)	- Organized Agroforestry workshop in Feb.1997
5. Curriculum Development	-x	-x	- x
6. New Project formulation	-x	-involved	-involved
7. Training	-had developed a proposal for training in Applied Natural Resource Economics but could not start.	-x	-x
8. Paper presentation in International Seminar	- No	- presented	-presented

Note: 'x' denotes no activity performed

A. Visiting Scholar Program (Outputs/Achievement) Contd.

Activities	Visiting Scholar			
	4. Social/Community Forestry Dr. Tej B.S. Mahat	5. Tropical Forest Resource Management (Dr. Shobha Nath Rai)	6. Sustainable Resource Management (Mr. D.P. Parajuli)	7. Watershed Management / Environment Science (Mr. K.M. Sthapit)
1. Courses taught Prepared Workplan Classes /wk Classes (Hours) taught Field practical class Teaching Materials # of students benefited	- x - Yes - x - x - x - Compiled Reference materials in community forestry - x	- Mensuration B.Sc. III Year - Yes - 6 Lecture Hours+ Practical - 40 classes - Two time excursion - for above course compiled references > 42 students	-x -Yes -x -x -Complied reading materials for both campuses. Prepared two sets of 'User' Manual for Timber and NTFP species. -Yes, through teaching materials and manuals but not class teaching -Yes -Yes -Completed Data analysis. -Write up phase (continuing)	- Watershed Mgmt. B.Sc. 3 Yr -Yes, -14 hrs. -40 classes -visited field twice with students. -Prepared 6 reports altogether -53 students -Yes -Yes -Data collection completed. -Write up on progress. -One seminar in Hetauda and two in Pokhara. -x
2. Co-Research Identify relevant problem Design field study Conduct Research Data analysis/write up	-Completed -Data collection -Completed -On process	- Yes - Yes - Data collection completed and new research started. - 4 draft report submitted on research - One seminar in Hetauda and two in Pokhara -x	-Yes -Yes -Yes -Completed Data analysis. -Write up phase (continuing) -One seminar in Hetauda and two in Pokhara. -x	-Yes -Yes -Data collection completed. -Write up on progress. -One seminar in Hetauda and two in Pokhara. -x
3. Seminars IOF, both Hetauda + Pokhara campuses 4. Workshop	Delivered seminars. - One National Workshop in Terai Community Forestry as a source of data collection for research	- One seminar in Hetauda and two in Pokhara -x	-One seminar in Hetauda and two in Pokhara. -x	-One seminar in Hetauda and two in Pokhara. -x
5. Publication	-Papers presented in workshop	-Paper prepared and sent for publication in National Journals (Banko Jankari)	-Paper sent for publication in National Journal (Banko Jankari).	-x -assisted in soil lab upgrading
6. Laboratory support 1. Training	-x -Conducted FUG, CFM Feb. '98	-x -x	-Upgraded lab with samples+manuals. -Conducted NTFP Training, Feb. '98	-involved in Survey Design & Estimation for Watershed Mgmt. by DANIDA
8. Research in Int.Sem.	not submission of research paper	-Not attended but sent 4 papers	Presented paper	Presented paper

Appendix C

Other activities:

i. Faculty Research:

Following 10 Research Proposals submitted by IOF Faculty (besides those done by Visiting Scholars and counterparts) were funded as per the decisions of Consultative and Steering Committees. The final evaluation of the research proposals was done by the IOF Research Committee. Altogether 24 faculty have been involved in research as the Principal and Co-investigators. All of them have completed their reports.

1. People's Participation in Bio-diversity Conservation
2. Farmers' knowledge and preference for fodder trees management in Makawanpur District Central Development Region Nepal.
3. An investigation of land soil erosion, gender issues and people's participation in soil conservation and watershed management activities.
4. Management system for Sal community forests of Palpa district.
5. Comparative analysis of Urban and Rural FUGs.
6. Development of Sustainable Management and Conservation of Non-Timber Forest Products in User Group Community Forestry.
7. Economic Analysis of Agroforestry System in Tropics of Nepal.
8. Assessment and Classification of Agroforestry System in the Western Terai of Nepal.
9. Indigenous Knowledge, Use, Extraction and Marketing of NTFPs in the Middle Hills of Nepal.
10. Problem and Prospect for Participatory Buffer Zone Management in Shivapuri Watershed and Wildlife Reserve.

Out of these 10 research funded, one report has been submitted in draft where as final version of all others have already been submitted to the project.

ii. Student research: A total of 16 B.Sc. Forestry students (batch of 1995 and 1996) were funded to carry-out their project (which is a requirement for partial fulfillment of B.Sc. Forestry Degree). Following are the titles of their research works:

1. Status and possibility of Community Forestry in Terai through Users Groups.
2. Existing Agroforestry Practices in Mid-Hills of Western Development Region, Nepal.
3. Distribution and Status of Rattan in Nepal
4. People's participation in Buffer Zone Management in the Royal Chitawan National Park. (a case study from Bacchauli and Patihani
5. Farmer's Knowledge towards indigenous Agroforestry practices in the mid-hills of Nepal.
6. Scope and prospects of multipurpose tree plantations.
7. An assessment of visitors and their satisfaction with current condition of central zoo.
8. Ecotourism in Bhadgaun-(a case study of Bhaktapur District)
9. An assessment of Distribution pattern of forest products from Community forest (a case study of Lamachaur VDC, Kaski)
10. Status & prospect of silvicultural system in community forestry

11. Utilization of Bamboo Marketing & scope of sustainable Management of Community Forestry.
12. Community Forestry for Socio-economic improvement
(Four additional students have just completed their projects).
13. Impact of Improved Cook Stoves on Forest Conservation (A Case study of Phujet VDC, Gorkha District).
14. Effectiveness of Women's Leadership in Community Forestry (A case study of Majuwa User Group, Hungi VDC, Palpa District)
15. Sustainable Management of Community Forest (A case study of Duwar Ban,

Nirmal Pokhari VDC, Kaski District).

16. Degraded Land Rehabilitation Works in Nuwakot, Nepal (A case study of Trishuli Demonstration Centre, Pipaltar VDC, Nuwakot District).

iii. Trainings conducted:

- A Four day Training/workshop in "Scientific Report Writing" was conducted in both the Hetauda & Pokhara Campuses of IOF for the faculty as a joint effort with Nepal-UK Forestry Project in October 1996.
- National Training on NTFP Marketing and Sustainable Management, Feb. 1-14, 1998
- Community Forestry Management Training/Workshop (FUG Training) Feb. 4-13, 1998
- Training on Survey, Design, and Cost estimation for Watershed Management was organized by the Department of Watershed, Pokhara campus. The cost was supported by the DKWM Project. The training was based on the manual prepared by the VS Mr. Sthapit and his counterpart and Head of Department, Mr. Balla.
- A nine days observation study tour was organized for 2 administrative staff of the Project in Kesetsart University, Bangkok during July/August, 1998.
- A eight days observation study tour was organized for 10 members of steering and consultative committees in Singapore, Malaysia, and Thailand during September 22 to September 29, 998.
- A seven days training on administrative management, record, and office management, computer, vehicle repair and maintenance study tour etc. was organized for all level of the administrative personnel of IOF, Pokhara and Hetauda campuses (204 personnels during July to September, 1998).
- A four week computer training on SPSS, Windows 95, Microsoft, Excel-7 and MS Word program was organized for 29 faculties of Pokhara campus and IOF during October/November, 1998.

iv. Workshops/Seminars conducted by the Project.

- Revision of IOF Research policy, by a three members team was also supported by the project.
- Ecotourism Management Workshop (19-21 June 1995), organized in Pokhara, IOF by IOF/ITTO Project.
- A three-day curriculum workshop was also conducted at IOF Pokhara, involving the faculty of both campuses, Pokhara and Hetauda.1996. (to be continued and completed)
- A National Workshop on "Agroforestry for Sustainable Development in Nepal was organized by this Project during February 17-18, 1997. (proceedings to be published-almost ready to go to the press)
- A national workshop on Community Participatory Forestry Development Experience in the Terai Region of Nepal, Nov. 8-10, 1997 at IOF, Pokhara. (proceedings to be published almost ready to go to the press)
- A National Networking Workshop on ITK for Watershed Management, December 25 to 27, 1997 Pokhara Nepal jointly organized by DOSC, IOF, PWMTA and IOF/ITTO with the involvement of the visiting scholar Mr. Sthapit.
- A Workshop on development of curriculum related to watershed management was also organized on June 15, 1998 at IOF Pokhara.
- International Seminar on Sustainable Forest Management was organized during August 31-Sept 2, 1998 (proceedings of seminar has already been printed and distributed and dispatched to respective participants, Government organization, officials and international and non government organizations).
- A two day curriculum workshop was organized on January 17 to 18, 1999 finalize the curriculum of B.Sc. 4th year.

v. Paper presented by Visiting Scholars on Seminars/Workshops.

1. Conservation of endangered species in protected areas by Dr. Kirti M. Tamang.

2. The conservation versus use dilemma: Protected natural area management and the challenges associated with tourism
3. Some thoughts for tourism beyond the year
4. The recreation opportunity spectrum: a framework
5. For considering diversity in the provision of tourism And recreational opportunities by Mr. P.J. Devlin.
6. The need for diversity in protected area legislation
7. The limits of acceptable change
8. In search of excellence in tourism by Mr. R.J. Ryan
(Paper # 1-8 were presented Eco-tourism Management Workshop June 19-21, 1995 Pokhara)
9. Future trends in utilizing forestry Biomass as an energy source in Nepal: A suggestion for Priority activities by, Mr. Damodar P. Parajuli (May 13, 1997 Hetauda and Pokhara)
10. Outline of an on-going Community Participatory Forestry Development in The Terai region of Nepal : problems And Prospects by Dr. T.B.S. Mahat (July 10, 1997 Pokhara)
11. Private Land Forestry (Agroforestry/ Farm Forestry Etc.) Development Potentials in the Teria Region of Nepal by Dr. T.B.S. Mahat (July 24, 1997 Pokhara) and (July 28, 1997 Hetauda)
12. Cultivation of Dalchini (Cinnamomum Tamala) trees in the benefits : A study In the Palpa district by Mr. Damodar P. Parajuli (Nov. 1997 in Pokhara+ Hetauda campuses)
13. Volume Production and Dimension Analysis in Tropical Evergreen Forest Of India by Dr. S.N. Rai (Dec. 5, 1997 Pokhara)
14. Sedimentation Monitoring of Kulekhani Reservoir by Mr. K.M Sthatpit (Dec.19, 1997 Pokhara)
15. Sedimentation Monitoring of Kulekhani Reservoir by Mr. K.M Sthatpit (Feb. 6, 1998 Hetauda)
16. Wind thrown Tree Root Survey Eastern and Central Terai Nepal by Mr. K.M.Sthatpit (March 23, 1998 Pokhara)
17. Sedimentation Monitoring of Phewa Lake by K.M. Sthatpit (June 30, 1998, Pokhara)

vi. Preparation of Teaching Materials:

Faculties who did not get opportunities to work as counterpart of the visiting scholar were encouraged to develop teaching materials on their respective courses. 30 faculties involved in the program and prepared the following 22 teaching materials during October 1998 to June 1999.

1. Lab Manual for Forest Botany.
2. Reading materials for Technical Communicative English at the B.Sc. Forestry Course.
3. A Manual at understanding Statistics.
4. Lab Manual for Physics.
5. A Handbook of Mathematics.
6. Physics Laboratory Manual for students of IOF, Nepal.
7. A Teaching Manual for Forest Ecology.
8. Lecture Manual in Physics for Bachelor Level Forestry.
9. Facts about Game.
10. Introduction to Physical Training
11. A Notebook on the Magic of words for TCL 1st year
12. Handbook of Forest Zoology for B.Sc. Forestry 1st year 2nd half.
13. Teaching Terms in Forestry.
14. Fundamentals of Technical Writing
15. Forest Zoology Practical Manual Part 1 for B.Sc. Forestry 1st year 1st half
16. Manual of Health and Hygiene for TCL level IOF.
17. A Handbook of statistics for Beginners in Forestry
18. Manual of Physical Exercise and Games.
19. Lecture Manual on Surveying and Mapping (Forest Surveying).
20. Teaching Manual on "Eco-tourism and Recreation Management" as a teaching support on TCL at the IOF Pokhara.
21. PRAVIDHIK PRAMANPATRA TAHAKO LAGI ANIBARYA NEPALI (PATHAN RA VIVACHANA)

22. Slides and Transparency of Teaching Materials for Biology.

vii. Participation in International Seminar:

Dr. Hari D. Lekhak, Dean, IOF & Shailendra N. Adhikary, the Project Manager participated the ITTO Council Session held in Yokohama during 13-20 Nov. 1996.

One of our senior faculty, Dr. I.C. Dutta, was funded by this project to present his paper entitled

" Ecological Effects of Afforestation of Inoculated Dalbergia sissoo DC. Seedlings on a Degraded Site" in the Pre-IUFRO XX World Congress meeting and also attended IUFRO XX Conference, and this has also helped to expose IOF to the International Community. Such participation has definitely helped the IOF to get International recognition.

Mr. Damodar P. Parajuli, the Visiting Scholar Natural Resource Conservation (with expertise in Utilization of Timber Non-timber Forest Products) and two faculty counterparts Mr. Achyut R. Gyawali and Mr. Ramesh C. Trivedi, participated International Conference on Medicinal Plants, in Bangalore, held during Feb. 16-19, 1998

viii. Affiliation with International Organizations/Universities and mutual collaboration:

The IOF is attempting to develop linkage with International Universities and Organizations. Student and faculty exchange programs as well as collaborative research joint training programs and consultancies are the major focus.

MOU was signed between Tribhuvan University and the University of Philippines, Los Banos (UPLB), Philippines and Kasetsart University, Bangkok.

There is a faculty exchange program with Lincoln University, Department of Parks &

Recreation. As an exchange for hiring two Lincoln Professors, one more faculty Mr. Bob Ryan was supported by the Lincoln University to work at IOF in the area of Parks Recreation and Management for three months. One of our senior faculty & Head Department of Park Recreation and Wildlife Management Mr. Suresh Shrestha was also supported by Lincoln University for a six week's training in New Zealand. There is plan for one more faculty to go to Lincoln University, for a similar training. The then Dean Mr. Toran Bahadur Karki and the Project Manager also visited Lincoln University for one week, under similar program. Lincoln University signed MOU with Tribhuvan University for mutual collaboration in academic activities. The signing of MOU has been done by the Vice chancellor of Tribhuvan University and Lincoln University in 1997.

ix. Some of the activities which had been facilitated in various ways by the Project but without the financial involvement are given below. However, these activities also show the Linkage that has been established and the academic and other activities going on at the IOF.

Johnstone Center of Parks Recreation and Heritage, Charles Sturt University (Australia) and La Trobe University (Australia) have shown interest in collaborative works with IOF. Students (MS and Ph.D.) from Johnstone Center, are doing their research work in Nepal and hopefully, some of the IOF faculty and students will be involved in the field research. Opportunities for training and higher studies for IOF faculty are also being explored in these Universities.

Similarly, FAO, RAPA have agreed to provide funding for IOF faculty in some of their training and research activities. One of our faculty was funded by FAO/RAPA for a short training course in **Wood Energy** held in Bangladesh in October of last year.

Also, last year RECOFTC funded three faculty to attend their training programs, held in Bangkok funding was also done to attend various meetings and training's to the faculty.

As regards to GIS lab establishment, ICIMOD (International Center for Integrated Mountain Development) has assured us to provide software and other assistance. IDRC has also shown interest to start collaborative research with IOF with the development of GIS component in it.

Since 1997 Michigan State University students of multidisciplinary areas were trained at IOF for 3 months (Approximately from January to March. Emphasis was given on "Community Forestry", natural resources management and cultural aspects. This project was involved indirectly in various stages from the development of this program. All the project facilities (including the conference hall) were used during the training. Also, Visiting Scholars took some of classes and were involved field activities. 22 students in 1997, 28 in 1998 and 32 in 1999 respectively participated in the training program

Tribhuvan University and Michigan State University have signed MOU for collaborative works.

The IOF and RECOFTC (Regional Community Forestry Training Center), Bangkok have jointly organized a training on "Participatory tools and techniques in Community Forestry" from September 23 - October 12 , 1996. Some of our senior faculty were actively involved in it.

Thirteen Vietnamese foresters including (Government Planning Officers) visited IOF and ITTO Project last year. They were interested to learn about Community Forestry Education at IOF.

National Training on Eco-tourism was organized by the Department of Wildlife, Pokhara Campus, IOF Dec.28, 1997 to January 14, 1998.

A number of national/international Training & Workshops were organized at IOF last year and this year. Forestry officials of different levels from Governmental & non

governmental organizations as well as faculty participated in those activities.

- Two international workshop/meetings in " Role of Bamboo, Rattan and Medicinal Plants in Mountain Development" organized by INBAR/IFGRI/ICIMOD/IOF and in " Role of Science, Information, Technology & Extension of Community Based Forestry Management" by FAO/FAD was organized during May 1996 in the Conference Hall of IOF/ITTO Project. Also our VS Mr. Baban P. Kayastha was involved in the Nepal team to develop a project during the workshop. It was a good opportunity for this project to host an international conference in the new building and get involved in it.
- Environmental impact Assessment training/workshop, 25 April to 1 May, 1995
- Refining Appraisal Methodologies' 1-3 Sept, 1995, organized by IOF/Ford Project.
- Training on: Application of Rapid and Participatory (RRA/PRA) Methodologies in Community Forestry" from Sept. 22-25, 1995 was organized by IOF/Ford Foundation Community Forestry Management Project.
- A training was also conducted in Community forestry program supported by ANSAB (Asia Network for Small Scale Agricultural Biotechnologies)
- A seminar was organized on research works completed by faculty under the Ford Foundation program in March 12, 1996. About 15 small research was granted to Faculty of both campus Hetauda & Pokhara.
- A workshop on training course "Curriculum Development on Ecotourism was held in September,1997.

Thus most of the above activities and outputs achieved are verifiable indicators with respect to achieving main objectives of this project. It helps to enhance teaching & research capability, to establish linkage with Schools of International reputation & obtain recognition from them as well as better equip IOF graduates to implement Community Forestry practices.