Individual Implementation Assignment

Prepared for the Fulfillment of the

DANIDA's

Project Management Course

13 September – 03 December 2004

IIA Title:

In-situ conservation of endangered indigenous species in partnership between
the Forestry Administration and the Local Forest Community

Prepared by:

*Mr.**Uon Sam Ol***

Senior Counterpart Official of Cambodia Tree Seed Project

Official of the Forestry Administration

Ministry of Agriculture, Forestry and fishery, Cambodia

COPENHAGEN

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List of abbreviation

∗CTSP	Cambodia Tree Seed Project
∗DANIDA	Danish International Development Agency
∗FA	Forestry Administration
∗GIS	Geographical Information System
∗ITSP	Indochina Tree Seed Programme
∗MAFF	Ministry of Agriculture, Forest and Fishery
∗MoE	Ministry of Environment
∗NAF	National Armed Force
∗NFC	National Forest College
∗NGOs	Non-Government Organization
∗NPM	National Project Manager
∗PFAO	Provincial Forestry Administration Official
∗PMU	Project Management Unit
∗PSC	Project Steering Committee
∗RDE	Royal Danish Embassy
∗RGC	Royal Government of Cambodia
∗RUA	Royal University of Agriculture
∗SO	Seed Orchard
∗SPA	Seed Production Area
∗SS	Seed Source
∗SSO	Seed Seedling Orchard
∗TA	Technical Adviser
∗TO	Training Official

IIA General Information

*Title:	In-situ Conservation of Endangered Indigenous Species in Partnership between Forestry Administration and Local Forest Community
*Host Country:	Cambodia
*Implement Agency:	Cambodia Tree Seed Project
*Donor Agency:	DANIDA
*Beneficiaries:	Local Forest Community, Provincial Forestry Administration Official, National Armed Force and Staff of NGOs
*Other Stakeholders:	MAFF, FA, Local Authority and Related Institutes in forestry Area
*Target Area:	Five Provinces
*Duration of IIA:	9 months
*Stating Date:	Month 1
*Ending Date:	Month 9
*Cost of IIA:	USD 24,805

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Copenhagen, December 03, 2004

Uon Sam Ol

I-Executive Summary

When forest in the global has been losing, in particular in the Tropical forest area, Cambodia is considered as the country is going to lose their forest resource in record.
Cambodia is one of countries in South-East Asia. The country has population around 12 million with area of 181,035 km^2. Before 1970s the Cambodia forest covers is 73% of the whole country. The forest of Cambodia is significant economic renewable natural resource for the country. The forest ecosystem is rich in biodiversity as attributed through species richness and endemism. Last three decade, the Cambodia forest cover sharply declines from 73% to 60,2% (year, 2001). This change of forest cover is very deceptive and can lead to complacency on forest resource conservation.

Maintenance of forest genetic resource, especially endangered indigenous species is of very vital importance to sustainable development in the future. But Cambodia is no exception with several valuable indigenous tree species presently venerable to extinction at species, and in particularly at population level.
Therefore the RGC looks highly implementation on reforestation activities. The need in smooth is the supply and use seed of good quality, which are only available through the conservation and wise use of forest genetic resource.
The Forest gene Conservation of Cambodia highlights the need for participatory approaches in forest gene conservation, and is fully supported by the recent Statement on forest policy, and forest law.

In 1999 the Cambodia Tree Seed Project (CTSP) has been build with technical and financial development assistance of DANIDA. The project is apart of the Regional Tree Seed Program: Support to Institutional Capacity Building of the National Tree Seed Sectors in Indochina. Cambodia Tree Seed Project is institutionally anchored to the Ministry of Agriculture, Forest and Fishery through the Forestry Administration. The programme is founded by the Danish Government and technical assistance provided through Danish International Development Assistance DANIDA
There are four main aspects:

1. Institutional strengthening of the National Tree Seed Sectors
2. Training, Extension and human resource development
3. Knowledge and seed technology transfer
4. Formulation of national forest gene conservation strategies.

The IIA proposal is *In-situ* conservation of endangered indigenous species in partnership between Forestry Administration and Forest Community. The IIA proposes endangered indigenous species in order to conserver and protect them in the natural forest for some provinces in Cambodia. And the IIA will be submitted to the project management unit (project chief, national project manager and project adviser). The proposed IIA will be applied in years 2005, from month 1 to month 9. And number of trainees in each course at least 20-25, who can be able seed source management and seed collection.

The IIA is a part of CTSP's works, consisting of two unit, training & extension and seed source management and gene conservation *in-situ* and *ex-situ*. The IIA mainly focuses on conservation of indigenous species (methodology: setting up seed source in the natural forest) and training to stakeholders. We consider that provincial forest official, local forest community, NGOs and national armed forces are main partners in protection and

conservation of endangered species. A number of CTSP project counterparts have been directly practiced with the stakeholders and especially provided training course on forest gene conservation seed source establishment and management.

After the training course and practical work in the field, the local forest community and seed users will receive knowledge on forest gene conservation and practicing works of seed source establishment and management, especially they know how to reserve species have been going to endangered. Moreover the trainees will be played role a trainers in order to impart or transfer their knowledge and experience to local people and next offspring as well as. In immediate future, we expect that our endangered indigenous species will be improved and increased and their seed will be propagated and deployed them for establishing seed production area (SPA), seedling seed orchard (SSO) and seed orchard (SO).

II-IIA Analysis

2.1. IIA background

In June 1997, The Royal Danish Embassy is representative of the Royal Government of Denmark (RGD) and the Royal Government of Cambodia had been signed in agreement on Development Assistance. The development assistance focuses on building capacity to supporting National Tree Seed Sector in Cambodia. Unfortunately, July 1997 Cambodia met political crisis. The RGD/DANIDA postponed the fund until the second National Election was helped in November1998. In 1999 the Cambodia Tree Seed Project (CTSP) has been established with technical and development assistance from DANIDA. The Forestry Administration (FA) of Ministry of Agriculture, Forest and Wildlife (MAFF) through the CTSP is implemented agency.

The CTSP is one of components of the Regional Tree Seed Programme in Indochina (Cambodia, Viet Nam and Lao). The overall objective is to improve the institutional capacity for increasing the use quality seed countrywide with special emphasis on indigenous tree species and conservation of forest genetic resource.

To reform the forestry Area, the RGC through the MAFF and the FA gives highly priority to reforestation, besides this a strategy of forest gene conservation is also a main key in rehabilitation.
A number of related stakeholders who involved with IIA, consisting of provincial forest administration officials, local community, national armed force and NGOs, are a target group. The CTSP is responsible in training and extension, seed source establishment and management, *in-situ* and *ex- situ* gene conservation, seed lab and storage.

At the present, the planning programme focuses on indigenous species. But we frequently use seeds with bad genetic quality from unknown source. A growing is very low and a tree stem is not straight and short. Therefore, to successfully planting programme, seed is very important in first step.
Good trees come from good seeds, the good seeds come from good mother trees, and the mother trees are just available in the natural forest. So *in-situ* conservation of endangered indigenous species in the natural forest, are a vital strategy for restoring and increasing timber productions through re-improved genetic quality.

2.2. Beneficiaries and stakeholders involved

It is a number of stakeholders, ranging directly and indirectly in involved beneficiaries from activities of the project.

∗ FA: The forest Administration is the agency of the MAFF, monitoring the Cambodia Tree Seed Project and is responsible for forest gene conservation and tree planting. Reforestation office and Provincial forest officials are under the umbrella of supervision of FA. In the past and at the present they have carried out a lot of planting activities, but major officials often use bad seeds from unknown sources, resulting a slow growing, and no good stem performance, especially affected by diseases (pest). Currently, the degraded forest is in large scale, approximatelly around six million hectares must be rehabilitated. For immediate future, identifying area for long term planning has not been made. On the other hand, good seed quality is still not appearance, especially indigenous seed species. It is critical issues to be considerable.

∗Cambodia Tree Seed Project: The CTSP is playing a main role in building capacity to forest tree seed sectors. They must have established a number of seed sources in whole country, provided training course to seed users, done seed testing, produced extension materials and especially compiled research document. The CTSP officials are directly trained in and outside the country, up to now they can transfer knowledge how is a good seed to local level, including forest community, NGOs staff and National armed force. On the other hand the CTSP cooperates with other project and NGO in order to establish Village Seed Supply for a forest community. The purpose of establishment is that:

-The local forest community known, how to conserve the forest genetic
-The local forest community understands why seed source must be established in the natural forest?
-The local forest community know, how to earn income from their resource in the place
-The local forest community known why they must protect and preserve an endangered indigenous species?
-To promote a living of grass-root people in the forest community through selling good quality seeds to seed users in order to alleviate apart of poverty.

Additionally, the CTSP plays a role as facilitators in selling seeds between the forest community and seed users as well as.

∗Provincial Forestry Administration Officials: The provincial forest officials are practical agency in the field. They must directly manage a nurseries and plantations. Starting from this point, the officials need knowledge about seed, how to treat seeds and how many to product seedling for planting programme, especially how a good quality seeds is. Therefore, to acquire a knowledge and experience, they must connect with the CTSP in conservation of endangered indigenous species. Moreover they need to be trained on seed biology, collection, transportation, storage and seed treatment. It is very crucial for developing seedling and plantation in quantity and quality.

∗Local Forest Community: The local forest community is main stakeholders in forestry development. They live closely a forest area.
Their livelihood depends on forest and non forest productions. So they must actively take part in preservation and protection, use and development of the resource with

sustainability. But, unfortunately they are not awareness on use of the resource and have no knowledge for managing and developing it. Therefore, the resource is reduced gradually due to their using is in un-balance. To rehabilitate it, the LFC must collaborate with the forestry administration through the CTSP, especially Provincial Forestry Administration Officials. Moreover, the grass-root people need to be trained on forest management and development and impact on forest gene on the ground that un-balance use. Starting out from this point, the LFC should participate in activity of forest gene conservation through setting seed source in the natural forest in order to improve forest genetic resource (good quality seed) for increasing production from their plantation (Indigenous and Exotic species) within their LFC .

∗NGOs: Some NGOs have a lot experience with the forest community. They can promote and well manage the community in maintenance of resources in the place, especially environmental and forest resource protection. But their professional is not forestry, so they have no knowledge or experience on forest gene conservation and seed, including biology, collection, transportation seed storage and seed treatment that all this object are a vital key to develop forestry area, especially for planting programme. Therefore, staffs of NGOs must be trained in several topics by CTSP in order to restore green cover through developing the local forest community.

∗National Armed Force: After passing civil war, some of national arm force is demobilized by the Royal Government of Cambodia. Some others still serve as the national armed forces, must be building capacity in order to participate in works of civil society. In the moment Government focus on agriculture area, particularly forestry area. Now they are playing a main role as tree planters. Although they have good volition in participatory of civil works, but they have no knowledge or experience on tree planting area/ reforestation. Certainly, they failure meet in tree planting due to poor knowledge in nursery management, seedling production, perception of good seed collection and treatment. Therefore, to build their capacity, they must connect with the CTSP project. Then they need to be trained on how to manage seed source and seed procurement, nursery and plantation.

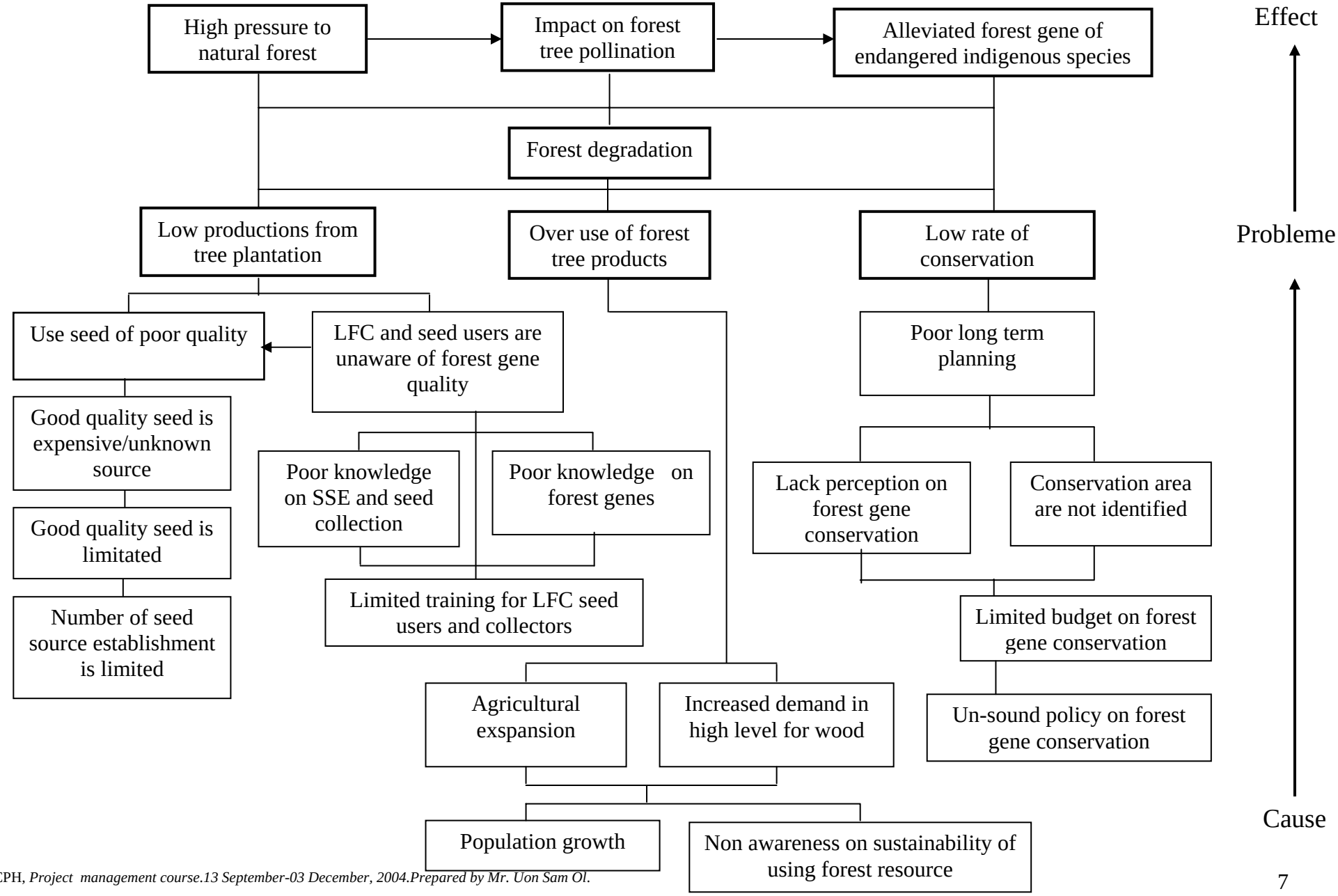
∗MAFF: The ministry of agriculture, forest and fishery is a main role in government line. The ministry is responsible for agriculture area in whole country such as forest, fishery, and veterinarian, etc. Moreover the ministry is government agency in controlling forest reform and coordinated to government for national budget in forest tree planting activities.

Figure 1: **Stakeholder Analysis**

Stakeholders	Strenght	Weakness	Opportunity	Threat
Forestry Administration (FA)	∗Formal management authority over 40% of land cover ∗FA manages seed sources within natural forest, and is responsible for forest gene conservation and tree planting ∗Technical expertise ∗Decentralization of FA	∗Limited knowledge ∗Unidentified land ∗ Limited participation	∗Adoption of government service role ∗Building capacity to official ∗Expected increase good quality seed due to government priorities for reforestation	∗More responsibility ∗Lack of perception of government role as a free service provider.
Cambodia Tree Seed Project(CTSP)	∗Materials ∗forest gene conservation strategy ∗Seed source establishment and management ∗Trainers ∗Fund	∗Lack of sharing information ∗ Limited staff ∗Can not prevent illegal logging in SS	∗Successfully transferred knowledge to FC and seed users ∗Increased number of SS in natural forest	∗Loss of seed source ∗Inconstantly connected with PFAO& FC
Provincial Forestry Administration Official(PFAO)	∗Human resource ∗Good participation ∗Experience	∗Limited knowledge ∗Lack of experience on forest gene conservation ∗Limited participation ∗Poor responsibility	∗Building capacity to forest tree seed sector ∗Gain knowledge on forest gene conservation	∗Work harder ∗Loss of benefits
Forest Community (FC)	∗Local and traditional knowledge ∗Supported by forest gene conservation strategy, statement of forest policy and forest law ∗Participatory seed source establishment and management ∗Interested in seed collection and sole proven through former laboring contrast, and informal seed sales	∗Extremely weak organizational structure ∗Lack of knowledge on SS establishment and management and seed collection. ∗Can not prevent exploitation by more powerful businessmen or elite- illegal companies.	∗Potential future SS within FC ∗Integration of SS management and seed collection into ongoing community development activities ∗Gain knowledge on forest gene conservation	∗Lack of village level interest in protecting SS without incentive ∗Loss of seed source ∗No clear of benefits sharing

	∗Income generation through seed sales ∗Selected villager trained in seed source establishment &management, seed collection and storage ∗Benefits to poor.	∗Lack of management level	∗Maintained the natural resource heritage for offspring	
NGOs	∗Good coordinator and relationship ∗Human resource ∗Experience on FC ∗Directly practiced with FC	∗Limited knowledge on forest area ∗Lack of knowledge on forest gene conservation ∗Poor experience on forestry	∗Building capacity to their staff ∗Gain experience on SS establishment an management	∗Unclear benefits sharing ∗No responsibility
National Army(NA)	∗Good participation ∗Manpower ∗Good physical body ∗Good body-guard	∗Poor knowledge on forest area ∗No experience of forest gene conservation	∗General knowledge on forest ∗ Gain experience on SS establishment and management	∗Poor responsibility ∗Poor benefits sharing

Figure2: **Problem Tree**



2.3. Problem analysis:

Cambodia is one of countries in South-Earth Asia. The country is considerable in rich natural forest in the world. Before years 1970, the forest covered around 73% of the whole country. After three decades, the Cambodia forest has sharply declined from 73% to 60.2% (years 2001). The declination of forest depends on some factors such as chronicle civil war, over exploitation, illegal logging, construction, agricultural expansion, shifting –agricultural practice, fuel-wood demand in raise, population growth, etc…
Certainly, the RGC has been reforming on policy of forestry Area: Forest Rehabilitation and Forest Gene Conservation. The reform has focused on reforestation and the regulation of seed use. But the policy is not so clear, which can be seen through no long term planning, low rate of forest gene conservation (Seed source in the natural forest).
On the other hand using seeds for forest tree planting, the seed users frequently have been collected from unknown source with bad quality, so that result receives from a plantation, is low and poor wood production, that not met to exploitation and harvesting cycle. Therefore this leads to irregularly produced in diary demand for supplying.
At the present, some seed sources are available for some species, but this is not enough for supplying seed to seed users and forest tree planting programme and seed quality is still not so good(genetic quality). Kicking out from this issue, methodology of seed collection is also a main key that we must consider.
As described above has reflected on low production from national and private tree plantation, resulting people to turn to disturbing natural forest for supporting their constructions and using (timber, furniture, fuel wood, charcoal...) in un-balance.

According to precise statistic, eighty five percent of Cambodian people are the farmers, living in rural and remote area. Their livelihood depend on natural resource, consisting of fishes and forest-non forest products, ect…Therefore the natural forest is dramatically pressured by them every day, leading to hard rape and indigenous species can be extinctions in the immediate future. Successfully and rapidly to meet the needs of grass-root people and using in the country, one of vital strategies is forest gene conservation through seed source establishment for indigenous species.
Due to three main problems mentioned above: Low production from tree plantation, over use of the natural forest and Low rate of forest gene conservation, causing to highly pressure on the natural forest and achieve to hard rape eco-system (Biodiversity) of forest and impact on out crossing of forest pollination. In result forest gene quality will be poor from day to day. Finally, the production of tree plantation is still poor in cycle.

2.4. Objective analysis

To response to the problem that has been addressed above, the objective of the IIA is to increase budget on forest gene conservation, improve awareness on sustainability of using forest resource, increase training course for Local Forest Community and seed users and improve forest gene of endangered indigenous species through increasing seed source establishment in the natural forest. Therefore the IIA activity will conduct training course to the some related stakeholders on the improvement of forest gene thought *In-situ* conservation of endangered indigenous specie, which we focus on seed source establishment and management and directly practiced work in the natural forest. The trained people will provide the knowledge to others in whole forest community.
So the idea will be wide speared to seed users, seed producer and tree planters.

Figure 3: **Objective Tree**

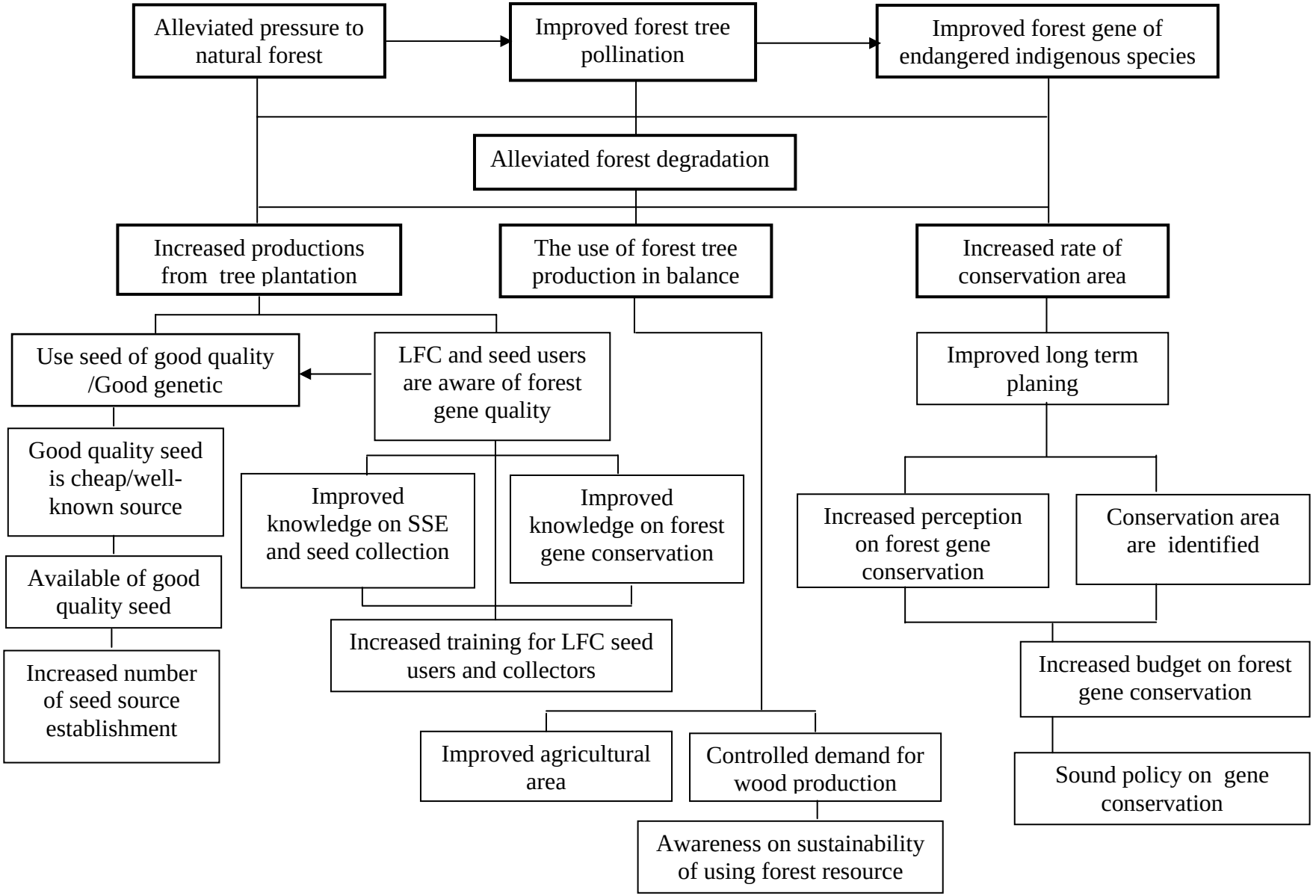


Figure 4 : **Clustering**

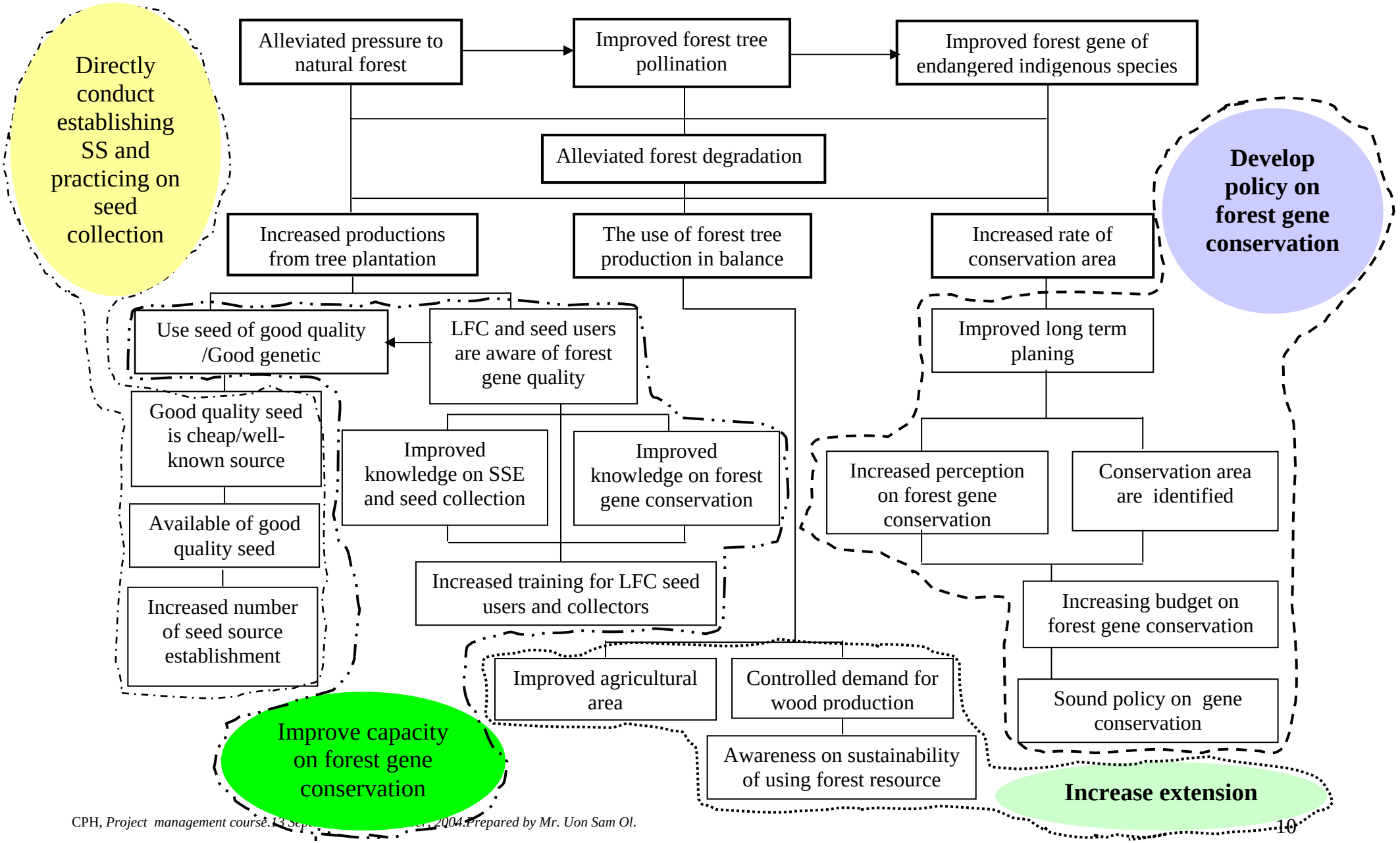


Figure 5: **Choise Analyses**

Immediate objectives	Strategy to achieve Immediate objective	Who will take the ownership of the immediate objective	Primary target group	Main problem , Area addressed
∗Increased production from tree plantation	∗Improve capacity on forest gene conservation through Increasing training for LFC, seed users and seed collectors	∗FA ∗CTSP	∗PFAO ∗LFC ∗NGOs ∗NAF	∗Limited knowledge on forest gene conservation ∗Limited knowledge on in-.situ conservation ∗Limited knowledge on seed improvement.
∗Increased production from tree plantation	∗ Directly conduct establishing SS and collecting seeds in the natural forest	∗FA ∗CTSP	∗PFAO ∗LFC ∗NGOs ∗NAF	∗Poor knowledge on good seed. ∗No use seed of good quality for forest rehabilitation and forest tree planting
∗Use of forest tree production in balance	∗Increase extension material	∗FA ∗CTSP	∗PFAO ∗LFC ∗NGOs ∗NAF	∗Lack of perception on conservation and protection of forest gene ∗Lack of knowledge on information of conservation.
∗Increased rate of forest gene conservation area	∗Develop policy on forest gene conservation	∗MAFF ∗FA	∗FA ∗PFAO ∗LFC ∗NGOs ∗NAF	∗No long term planning ∗Limited budget on forest gene conservation.

2.5. Choice analysis

The analysis of the problem have shown that the high pressure to natural forest genes and low productions from forest tree plantation caused through three main problems: good quality seed is not produced(use of bad seed with unknown source) for planting programme, over use of natural forest and low rate of indigenous species conservation(see problem tree). Below is the table of a Scenario Comparison Matrix.

Scenario Comparison Matrix

Criteria	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Cost	Low	Low	Medium	High
Chance of success	High	Medium	Medium	Medium
Cost/Benefits	High	High	Medium	Medium
Time horizon	High	High	High	Low
Priority to get support	High	High	High	Medium

Scenario 1: Improve capacity on forest gene conservation
Scenario 2: Directly establishing SS and collecting seed in the natural forest
Scenario 3: Improve extension materials,
Scenario 4: Develop policy on forest gene conservation.

Scenario 1: The strategy is able to carry out through building capacity on training course: forest gene conservation, seed source establishment and management and seed collection. The FA through the CTSP highly supports for this kind of the training and the expenditure is lightly low. The chance of success of the training is high, since PFAO, LFC, NAF, NGOs and tree planters acquire the knowledge to apply their work.

Scenario 2: The strategy is able to conduct stakeholders in practical work for establishing seed source and collecting seeds in the natural forest. The training is very vital to improve capacity through theory, but practicing field is important too for stakeholders that can be inevitable. Because it reflects on the theory that stakeholders have been trained.

The strategy is highly supported by FA and CTSP due to the expenditure is low.

Scenario 3: The strategy is able to carry out through producing the extension materials, consisting of posters, leaflets and TV spot. The expenditure is bit costly in order to support activities and needed time and skilled people. For improving agricultural area is undertaken by MAFF. But the CTSP also produced some extension materials; however it is to focus on seed procurement, ecological zone map, mating planting site and calendar of flowering and fruiting of indigenous species. The extension materials are promoted on perception of all kind of people. Although it has sharply supported both from government and donors, but it needs a long time to meet a destination and the chance of its success is medium.

Scenario 4: The strategy "developed policy on conservation of endangered indigenous species '' is out of the CTSP project, but it is very vital and main task of reforestation office, research institute science forest and wildlife, FA and MAFF in order to review the current policy on forest gene conservation and forest rehabilitation…etc.

*Choice: The best way for the IIA to apply, is **scenario 1** and **2** because it is the best of best selections due to low expenditure, successful chance and high support.

3. IIA Intervention

3.1. IIA LFA matrix

IIA LFA Matrix

IIA Element	Indicator	Mean of verification	Assumption
Development Objective: ∗Improved forest gene of endangered indigenous species through(alleviating pressure to the natural forest) increasing production from tree plantation	∗By year 2006 the quality of forest gene should be improved due to forest cover and rate of *in-situ* conservation should be increased.	∗Report from Reforestation office ∗Report from GIS office ∗ Report from FA	.
Immediate objective: ∗Increase production from tree plantation	∗By 2006, production from tree plantation should be increased due to good quality seed will be produced and used.	∗ Report from Reforestation office ∗ Report from FA	∗ Policy on forest gene conservation must be developed. ∗Fund available for development activities. ∗Strongly supported by MAFF, FA and PFAO.
Output 1: LFC, seed users are aware of forest gene quality. **Act. 1.1.** Training course on *in-situ* and *ex-situ* conservation of forest gene to potential stakeholders and organizations. **Act .1.2.**Training course on establishment of SS and seed collection to potential stakeholders	∗ By year 2005, at least 80 Potential stakeholders understand how to conserve forest gene of endangered indigenous species through methodology establishing seed source in the natural forest.	∗ Progress report ∗ Training report ∗Training Photos ∗ Interview/ Observation	∗Improve extension works ∗Workshop on Comparing Economic effect between Exotic and Indigenous Species ∗Increase *ex-situ* conservation (Demonstration plot of endangered indigenous species)?

Output 2: Available of good quality seed **Act .2.1.** Increase number of seed source establishment through directly conducting potential stakeholders to practice in field work. **Act .2.2.** Directly conduct potential stakeholders for practicing field work in seed collection.	∗By year 2005 at least 4 seed source must be set up with different species. ∗By year 2005, trained person understand how to collect good quality seeds and use them for National tree planting, developing their LFC and private planting.	∗ Progress report ∗Field work, Photos ∗Document(SS registration)	∗Money available for protecting SS All those seed sources must be associated to manage and protected By PFAO, LFC and NAF. ∗Increase collaboration with PFAO,LFC, NAF and NGOs for forest gene conservation
		Budget: ∗USD **24,805**	

3.1.1 Development objective

The development objective of the IIA is improved forest tree gene of endangered indigenous specie through alleviating pressure to the natural forest with increasing *in-situ* conservation area (Methodology: setting up seed source in the natural forest) in order to re-improve good quality seed for increasing production from tree plantation

3.1.2. Immediate objective

The immediate objective of the IIA is increased perception of PFAO, LFC ,NGOs and NAF on aware on forest tree gene and use seed of good quality for forest rehabilitation and forest tree planting at the present and achieved to establish Seed Production Area, Seedling Seed Orchard and Seed Orchard with different species in the immediate future as well as.

The immediate will be completed through two expected outputs, consisting of LFC and seed users are rawness on forest gene and seed collectors and available of good quality seed, as mentioned in the LFA matrix. To be aware of forest genetic quality, the community and tree planters must know on in-situ and ex-situ conservation is a stage of genetic inheritage from one to others. Therefore they should be trained and directly practiced works in establishing seed source in the natural forest (Theory with practical work in the field). The training and practiced work will illustrate them how to improve good quality seed. After that, the IIA expected all participants will receive the new knowledge and impart it to others, especially forest lovers.

3.2. Risk and flexibility

Whilst, the training officials are the counterparts staff of the CTSP and staff of FA, tripped out the city to the province and remote area, they must get official approval letter (mission letter) from head of FA. It does mean that they can go after the FA approves and releases the authorized mission letter. The letter will compromise for the CTSP staff in co-cooperation between PFAO, NGO, NAF and all kind of authorities.

Therefore the MAFF and FA should make clearly on policy of forest gene conservation and budget should be increased and firstly flowed. On the other hand the MAFF and FA should increase a conservation area and identify and clarify it. In addition the nationalized center must push and promote activities of in-situ and ex-situ conservation through setting up seed sources to be produced quality seed.
Finally, the MAFF should support statement of all establishment of seed sources that submitted by the CSTP through the FA, particularly collaboration with Donors, all local and international related institution in forestry area.

4. Implementation of the IIA

4.1. Description of the IIA

The proposed IIA should be applied by two officials from the CTSP, and it is under umbrella of Forestry Administration, Chief, National Project Manager (NPM) and Technical Adviser (TA) of the project.

The IIA activity will directly work with LFC, PFAO, NGOs and NAF in five different provinces where have been considered as potential area with abundance of natural forest (for setting up a seed source) and potential LFC. Each course will be 20-25 trainees and women are encouraged to take part. Then practical work will be appeared in the field.
Duration of the proposed IIA should be carried from month 1 to month 9 in 2005. The areas or provinces will conduct the activities, are listed in the IIA plan. But by the way they could entail in practical situation and time.

4.2. Input and budget

The inputs needed for this IIA are that the two CTSP trainers, one car is responsible by the CTSP driver, computer, LCD for presentation and extension materials for distribution. And equipment for seed source establishment consisting of digital camera, GPS, Icon, measuring tap 5m and 50m, compass, paints…ect. Those sources need to be drought from CTSP office to field. The budget for supporting the IIA is funded by CTSP project/DANIDA and amount is estimated in table as below.

4.3. IIA organization

The CTSP office locates in Phnom-Penh, based in The FA. The project consists of one project chief, one national project manager, one technical adviser; project assistance is hired by project and five counterparts who have been developed to be trainers.
The proposal IIA will be conducted by training officials from training and extension unit and seed source management and gene conservation, *in- situ* and *ex -situ* unit, the both are component of CTSP.

4.4. Indicator and monitoring

The indicators of development objective, immediate objective and activities are listed in the LFA matrix. These indicators can be looked implementation the monitoring process, how the project will be carried out and measured to achieve the result after completing.
The monitoring process can be controlled by the project chief, the national project management and project adviser or training & extension unit and seed source management & gene conservation, *In-situ* and *Ex-situ* unit.

4.4.1. Evaluation

Evaluation is integral part of the monitoring process (system) of the project. It can be run both during the implementation stage and during the phase out stage.
In the IIA, evaluation will be controlled by project team, following up a standard methodology against the indicators. At the end of the IIA(last month 9), by physical verification, surveying, progress report reviewing prepared be project management.

4.5. Time table for project activities

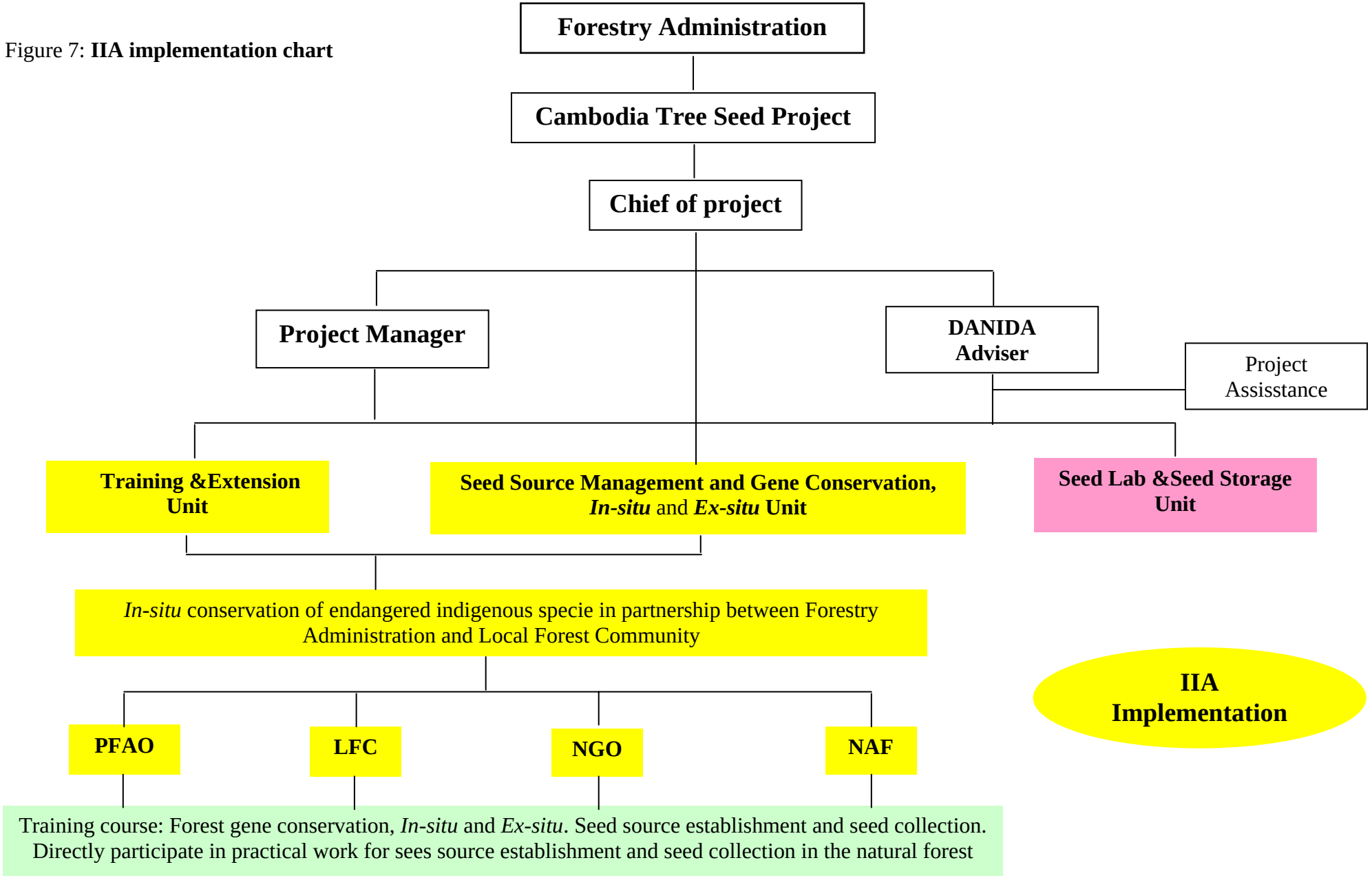
The timeframe of the IIA is scheduled for 9 months in 2005, that will kick off from month 1 to month 9, as descried and shown in the table (figure 8).

Figure 6: **Input and estimated budget**

Activities	Inputs			
	Responsible person	**Materials needed**	**Estimated budget ,USD**	**Remark**
A. Training course: ∗Data have been collected and analyzed ∗Training curriculum and plan must been developed.	Two TO	∗Papers, markers, flipchart, print turner Stationeries, Computer, LCD	1,100	**Inception phase**
Rel.outp1.Conducte training on: **1.1.** Training course on *in-situ* and *ex-situ* conservation of forest gene to potential stakeholders and organizations. **1.2.** Training course on establishment of SS and seed collection to potential stakeholders ∗ The activities are run in five different provinces: Koh Kong, Mondulkiri, Steung Treng, Preah Vihear and Siem Reap. ∗Each course should be 20-25 participants and women are encouraged to join.	Two TO	∗Transport(car) Papers, markers, stationary, flipchart, handout, print turner, LCD, computer, car.	6,000	
B .Training must be follow up ∗The training should be followed up by CTSP official in each training place and training curriculum must be developed for future effectiveness.	Two TO	∗ Transport(car) papers, print turners, transport,	1,400	

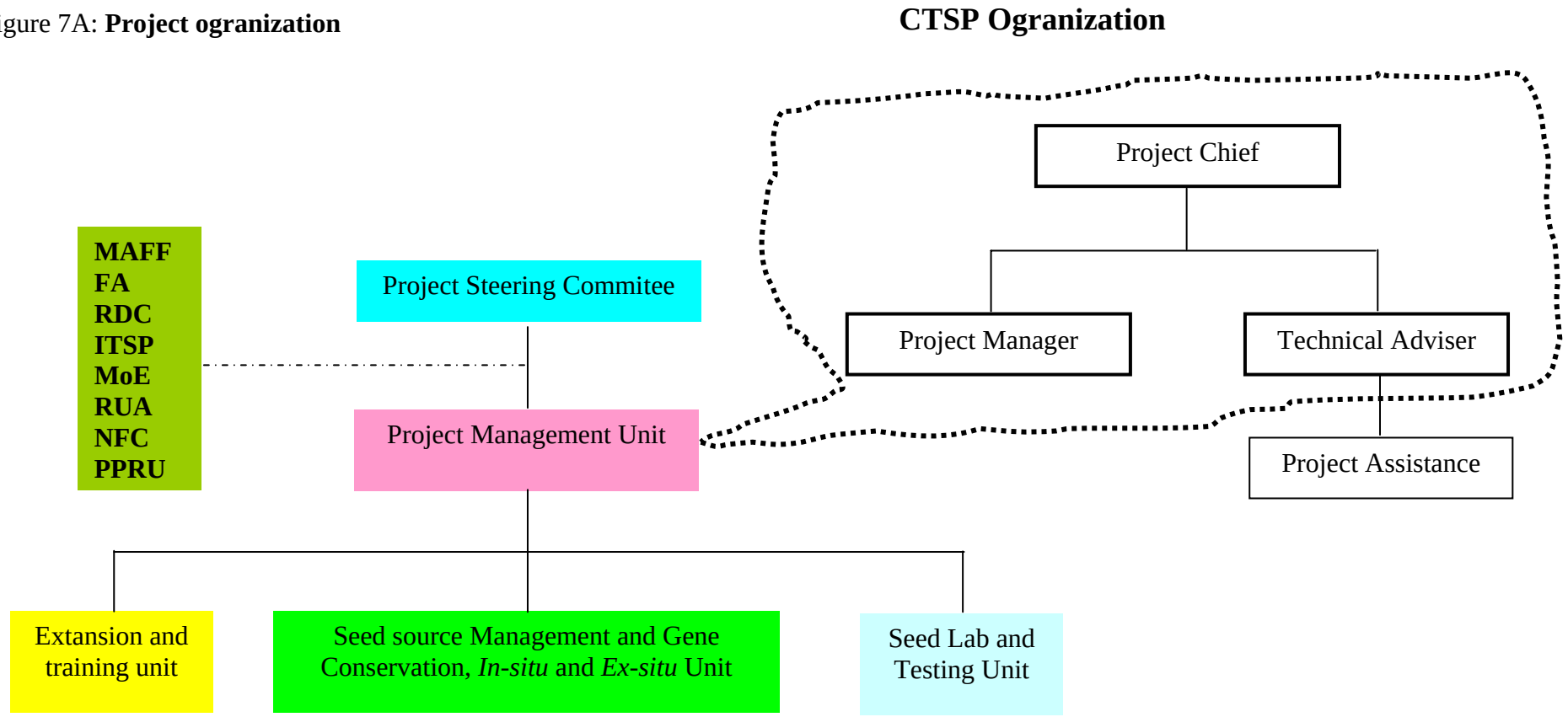
C. Pre-Seed source establishment: c.1. Information must been collected c. 2. Natural forest site must been surveyed.		∗ Transport(car) digital camera, GSP, icon, topographical map	3,000	**Inception phase**
Rel. outp2. Increase number of seed source establishment: **2.1.** Directly conduct potential stakeholders in setting up seed source in the natural forest. ∗Five seed sources will be established in five provinces: Koh kong, Mondulkiri, Steung Treng, Preah Vihear and Siem Reap	Two TO	∗Digital camera, Transport (car), icon, compass, GPS, topographical map, color paint, number plate, measuring tap 5m and 50m, two sing board.	7,500	
2.2. Directly conduct potential stakeholder in practicing seed collection in the natural forest five provinces	Two TO	∗Transport, cloth bags, buckets, plastic tap, seed registration sheet, seed cutting, cutting pole	1500$	**Sub total:20,500**
D. Administrative expense ∗Invitation letter must be prepared and distributed. Communication, authoring mission letter for trainers has been arranged and confirmed to all trainers	∗10%		2050	**Sub total:22,550**
E. Chance expenditure	∗10%		2255	
F. Total			**24,805**	

Figure 7: **IIA implementation chart**



CPH, *Project management course.13 September-03 December, 2004.Prepared by Mr. Uon Sam Ol.*

Figure 7A: **Project ogranization**



***Note:**

-**MAFF:** Ministry of Agriculture, forest and fishery
-**FA** **:** Forest Administration
-**RDR** **:** Royal Danish Consular In Phnom-Penh
-**ITSP** **:** Indochina Tree Seed Programme
-**MoE** **:** Ministry of Environment
-**RUA** **:** Royal University of Agriculture
-**NFC** **:** National Forest College
-**PPRU:** Phnom-Penh Royal University

Figure 8: **Timetable for project Implementation Plan in year, 2005**

Project Implementation Plan	Resp.Pers	Sup.Asst	1	2	3	4	5	6	7	8	9	Duration
Duration of IIA implementation activities												**9months**
A. Inception phase: Training need assessment	TO/CTSP	FA-CTSP										**3 weeks**
A.1. Data collection and analysis	TO/CTSP	FA-CTSP										3 days
A.2.Develop curriculum and lesson plan	TO/CTSP	FA-CTSP										2 days
A.3.Prepare training schedule and budget	TO/CTSP	FA-CTSP										2 days
A.4. Submit training proposal to NPM and TA	TO/CTSP	FA-CTSP										2 days
Rel. Output 1. Conduct training course												**5 weeks**
1.1. Condduct training course to LFC in Koh Kong	TO/CTSP	FA-CTSP										2 days
1.2. Condduct training course to LFC in Mondulkiri	TO/CTSP	FA-CTSP										2 days
1.3. Condduct training course to LFC in Steung Treng	TO/CTSP	FA-CTSP										2 days
1.4. Condduct training course to LFC in Preah Vihear	TO/CTSP	FA-CTSP										2 days
1.5. Condduct training course to PFAO,NGO and NAF in Siem Reap	TO/CTSP	FA-CTSP										2 days
B. Training follow - up												**4 weeks**
B.1. Follow up trainees in Koh kong	TO/CTSP	FA-CTSP										2 days
B.2. Follow up trainees in Mondulkiri	TO/CTSP	FA-CTSP										2 days
B.3 .Follow up trainees in Steung Treng	TO/CTSP	FA-CTSP										2 days
B.4. Follow up trainees in Preah Vihear	TO/CTSP	FA-CTSP										2 days
B.5. Follow up trainees in Sim Reap	TO/CTSP	FA-CTSP										2 days
C. Inception phase: Pre-seed source establishment	TO/CTSP	FA-CTSP										**6 weeks**
C.1. Information need collection and analysis	TO/CTSP	FA-CTSP										5 days
C.2. Natural forest site need survey(5 provinces)	TO/CTSP	FA-CTSP										**5 weeks**
Rel. Output 2. Available of good quality seed												
2.1. Conduct seed source establishment in participation of stakeholders												**7 weeks**
2.1.1. Establishing seed source in Koh Kong	TO/CTSP	FA-CTSP										6 days
2.1.2. Establishing seed source in Mondulkiri	TO/CTSP	FA-CTSP										6 days
2.1.3. Establishing seed source in Steung Treng	TO/CTSP	FA-CTSP										6 days
2.1.4. Establishing seed source in Preah Vihear	TO/CTSP	FA-CTSP										6 days
2.1.5. Establishing seed source in Siem Reap	TO/CTSP	FA-CTSP										6 days
2.2 Conduct seed collection in participation of stakeholders												**5 weeks**
2.2.1. Collecting seed in Koh Kong	TO/CTSP	FA-CTSP										2 days
2.2.2. Collecting seed in Mondulkiri	TO/CTSP	FA-CTSP										2 days
2.2.3. Collecting seed in Steung Treng	TO/CTSP	FA-CTSP										2 days
2.2.4. Collecting seed in Preah Vihear	TO/CTSP	FA-CTSP										2 days
2.2.5. Collecting seed in Siem Reap	TO/CTSP	FA-CTSP										2 days

5. Recommendation

The IIA can be run in smooth, depends on:

- Fund must be timely available
- Strongly supporting by Forestry Administration
- Project Chief, National Project Manager and Project Adviser are a main driving force
- CTSP staff is qualified and responsible
- Willing participation and sharp support of Provincial Forestry Administration Officials
- Potential stakeholders is a key of implementation, especially Provincial Forestry Administration Officials and Local Forest Community
- Collaboration with local, international organization and institution involved in forestry sector.

Refference

∗Hand out and lectures from tutor during the class session and group discussion

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∗Anonymous: DANIDA TNA course, Copenhagen Development Consulting.

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∗Anonymous: Cambodia Tree Seed Project, Institute Capacity Building of the Tree Seed Sector, December 2003

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