
Project name: Sustainable management of resources in watershed areas of Dak Lak Province, Vietnam

Project purpose: Ecological/hydrological functions of upper watersheds in Dak Lak project area are improved and the income of the target group is increased.

Planned results: 1. Participatory approaches to land use planning and land allocation are jointly developed with relevant government organisations and communities;

2. Innovative, participatory forestland management systems are developed with all stakeholders;

3. Land rehabilitation and resource conservation measures in the project area are implemented/initiated;

4. Institutional and policy framework is strengthened to support the development of a participatory natural resource management;

5. Capacity of local authorities, institutions and villagers to adapt NRM strategies to a changing environment is increased.

Implementing agencies: MARD/DARD (from 1999 People’s Committee Dak Lak and DARD)

Duration: Phase I 12/95 – 12/97, Phase II 1/98 – 12/00, Phase I 1/01 – 12/03

Note: resulting from a progress monitoring mission, after the first project phase (12/95 – 12/97), members of this team proposed to lead the Dak Lak component, which is part of the overall regional project design, into a bilateral measure. This decision was discussed and decided upon during ZOPP5. For a limited period of about 24 months the Dak Lak component will continue to be an integral part of the regional MRC-GTZ ‘Sustainable Management of Resources in the lower Mekong Basin Project’. Subject to final decision of GoV and BMZ/Germany the Dak Lak component will become an integral part of a bilateral project in 1999.

PRESENT SITUATION (PROBLEM ANALYSIS)

General

Unlike other countries in the region, Vietnam’s natural resource base is insufficient to sustain long-term economic growth. The result has been a significant degradation and depletion of the natural resource base, which is threatening the livelihoods of large sections of society. In particular, there is an urgent need to restore upland areas. Forest cover, for example, has
shrunk from 44% of the total national area in 1943 to 28% of 9.3 Mio ha in 1995. Remote sensing data indicate that the remaining 2 Mio ha of primary forests are being reduced at a rate of 200,000 ha annually. In addition, most so-called forests are degraded, low volume and stripped of their valuable species, severely changing the forest ecosystem functions. As forestlands are degraded from primary to secondary or scrub forests, economic value is greatly reduced in terms of irreplaceable genetic resources, soil and water conservation functions, productivity and income potential. Most of the deforested areas are now barren. **Shifting cultivation, plantation/agricultural encroachment, increasing forest fires, fuel wood collection and unsustainable logging are considered to be the major reasons for the continuing loss of natural forest.**

**Dak Lak Province**

Born out of a regional perspective, i.e. management of watersheds of the Mekong basin, the planned project concentrates on the Central Highlands, focusing on Dak Lak province. Dak Lak province with its remaining forest areas, including several protected national parks of national importance is undergoing a **rapid deterioration of natural resources in its upper watersheds.** The province is characterised by its fertile basaltic soils, which are the basis of large-scale plantation crops like coffee (ca. 130,000 ha), mainly in the low lands, with an annual export value of ca US $ 180 Mio. **However, the rapid and uncontrolled encroachment of plantation crops into the uplands and upper parts of the forested watershed is partly responsible for the deterioration of natural resources, especially forests in the province.**

In general the following processes have led to the deterioration of natural resources:

- uncontrolled timber extraction in the past
- uncontrolled expansion of plantation, e.g. coffee
- shifting cultivation with shorter fallow periods
- increase in forest fires (462 ha in 1990 to 4001 ha in 1995, Dak Lak)
- uncontrolled in-migration into Dak Lak

In order to address the prevailing problems in the upper watersheds the project has started its activities in 11 hamlets in two communes Dak Phoi and Krong No, comprising ca. 7,400 persons and a total area of 42,400 ha. Nearly all project beneficiaries belong to the M’Nong ethnic minority group. These communities are still practising traditional shifting cultivation – officially prohibited - in the foothills of the watershed and are often held responsible for the destruction of forests. However, compared to the expansion of plantation crops, this traditional way of agriculture seems less detrimental in terms of forest degradation and area expansion. In any case, the communities, e.g. Dak Phoi, will continue shifting cultivation (SC), as the available official agricultural land resources are limited.

The local **communities are aware of the deterioration of their traditional resources** like soil fertility, periodical drying up of streams, extinction of fish population, etc, which are directly linked to the ecological functions of the upper watersheds. Presently, local government organisations turn a blind eye to the continuous shifting cultivation – officially prohibited - realising the lack of alternatives for the communities.

In summary, agricultural production of the communities in the project area are mainly based on:
Traditional rotational shifting cultivation
- Supplementary shifting cultivation
- Upland based agriculture (transition between SC and upland cultivation)
- Irrigated rice systems

**Agricultural production is mainly subsistence-oriented** with the majority of the target group members having little or no access to irrigated lands. Additional income and food from forestland based sources are already being generated and should be intensified.

Large scale **Imperata grass infestation** is characteristic for the pilot areas and covers areas needed to allow for supplementary upland cultivation. In addition, the increasing pressure from biological constraints, i.e. spread of Imperata and declining soil fertility will cause the villagers to shift into forestland.

The **involvement of local communities in the decision-making process concerning land use, e.g. management and protection of their ‘traditional areas’ is far from satisfactory.** Official government programs designed to develop, manage and protect remaining forest resources (327 program) have often led to a contradictory result. This can partly be attributed to the top-down and non-participatory ways of implementation. In addition, the lack of transparent forest policies, classifications and institutional capabilities to implement them contribute towards the dilemma.

In summary, the major impacts caused by the on-going degradation of natural resources are as follows:

- **disruption of ecological watershed functions, e.g. change of hydrological regime,** which does not only affect the province but also the whole region incl. the lower Mekong basin and Mekong delta. Hereby, flash floods, droughts and soil erosion are the most important disturbances to mention. Decreasing soil fertility and reduced water retention capacity as well as depletion of bio-diversity are amongst the most serious symptoms.
- Ironically, this **loss of forested land**, i.e. conversion into cash crops, will have a negative effect on the success and expansion of existing and further planned plantation production systems in the lowlands as the major cash crop, i.e. coffee, heavily depends on supplementary irrigation.
- **Severe negative impact on the socio-economic conditions of the traditional local communities of ethnic minorities.** During the first phase the project has witnessed the reduction of available agricultural land area for annual crops in the fertile valley bottom. These areas are converted into coffee cultivation by, most often, non-community members. These communities, which already belong to the poorest in the district, experience reduced access to natural resources, and clearing of forestland is the only remaining alternative left as land resources are limited. Increased poverty is a direct result of this process. In general, the social costs of such economic developments and aspects of equity and access to resources within their traditional watershed need attention.
The core problem to be addressed by the project has been defined as follows: **The deterioration of natural resources and their functions of the upper watersheds in Dak Lak is progressing, simultaneously reducing the local population’s base of livelihood.** The project aims to contribute to the reduction of this process through the introduction and facilitation of participatory natural resource management approaches enabling the local communities to take an active part in land use planning/land allocation while generating additional income from forestland for local communities and the state.

The project will assist the Vietnamese government and its declared national forest programmes to integrate participatory methods to achieve a more efficient and effective implementation of such.

More specifically the project will address the following problems and constraints:

- Local people are insufficiently involved in decision-making processes, e.g. land use planning, allocation concerning forestland management, and they receive no direct benefits from forest production;
No sustainable forest production systems are implemented by state organisations so far; Limited institutional capabilities and resources to ensure sustainable management and technical soundness of forest production systems; Lack of appropriate and transparent implementation of forestry policies and government programs; Destruction of forest due to migration, encroachments and plantation development, i.e. coffee; Decreasing soil fertility leads to encroachment into forestland; Lack of awareness amongst line agencies for their changing role and tasks within the transformation process in Vietnam; Communities and line organisations are not fully aware of the impact of their actions, i.e. watershed-related down-stream effects;

PROJECT PURPOSE, TARGET GROUPS AND DEVELOPMENT POLICY

Project Purpose

Ecological/hydrological functions of upper watersheds in Dak Lak project area are improved and the income of the target group is increased.

Target Groups

Primary target groups of the project are characterised by:

- Mainly members of ethnic minority groups;
- Living in the upper parts of watershed in the Lak district;
- Annual 3-5 months food deficiency
- Dependency on traditional/or supplementary shifting cultivation;

The direct target group are the communities of Dak Phoi and Krong No communes (ca. 7,400 people) consisting of ethnic minorities mainly M’Nong. The target groups practise mostly low input shifting or upland cultivation. Available irrigated rice areas are very limited. During regular annual food shortages of 3-5 months, the communities depend on non-timber forest products and hiring out their labour.

Special focus is needed on the women, who are addressed through, for example, advocating the traditional matrilineal ownership aspects during participatory LUP and land allocation, and the introduction of fuel-efficient stoves to reduce labour load.

The project will pursue the involvement of all stakeholder organisations, e.g. district and provincial government organisations relevant to the management of forestlands. Institutional strengthening and the creation of awareness for participatory natural resource management has, and will, help to create the political framework to allow for stakeholder based PNRM.

Development Policy

The project supports and assists declared Vietnamese government policies in the fields of
management and protection of upper watersheds, while contributing towards the development of ethnic minority communities.

The main elements of this support are as follows:

- **Principles of participatory management** of upper watershed resources should become an integral part of forest policies and natural resource management approaches.
- **Rehabilitation of watershed functions** should go in line with the socio-economic needs of local communities, i.e. ethnic minorities.
- **Guaranteed access of local communities to resources**, e.g. land use rights/allocation based on participatory land use planning,
- **Right to mid- long-term economic returns for the local communities** as a prerequisite for their identification with the objectives of sustainable management and protection on resources.

Based on these structural changes the project will contribute towards maintaining watershed functions while directly contributing towards poverty alleviation in the context of natural resource management.

The project purpose is in line with development policies of the Governments of Vietnam and Germany. The project focuses directly on environmental management and the protection of tropical forests as indicated in the principles of development policies of the government of Germany.

**DESIGN OF THE PROJECT**

**General Issues**

The change of concept decided during the project planning workshop (ZOPP5) of the MRC-GTZ overall project, **integrating and expanding the regional ‘pilot site’ into a more comprehensive bilateral project for the Dak Lak province** will create the freedom to plan and implement the strategies and activities in more situation specific context.

During the first two months of phase II a thorough reflection and evaluation of the project activities were conducted, documented, and lessons learned, in the context of the planned phase II, formulated. In addition, a progress review mission analysed and evaluated the process and result of phase I. Finally the expectations of all presently involved parties were reviewed and openly discussed during a pre-ZOPP5 event in Dak Lak. Expected fields of intervention were collectively ranked and provide the basis for the selection of planned strategies and methods. In addition, bilateral discussions were held and more organisation-specific expectations analysed, adding to the proposed concept. The major organisations involved are:

- DARD
- Political and administrative authorities
- Dak Phoi and Krong No Communities
- Lak forest enterprise
- Forest protection agency
Other relevant organisations (banks, university, women’s’ union, etc.)

Present Measures

Referring to the first project phase the Vietnamese partner proposed to select two communes in the Lak district, Dak Phoi and Krong No. **The objective has been to develop approaches and methods for participatory natural resource management jointly with communities and government organisations.**

Special emphasis was given to a process oriented approach to (a) analyse and document all steps of strategy implementation and activities to provide a comprehensive planning basis to allow for expansion in the future, (b) to build up confidence between all project actors, i.e. communities and Vietnamese officials. In addition, the activities were kept on a small scale as the human resources are limited and the establishment of similar pilot sites in Laos and Cambodia was planned with limited financial resources.

The joint identification of criteria led to the selection of two ethnic minorities’ communes (Dak Phoi and Krong No) and project activities have been implemented since 1/97. Initial PRA exercises, in co-operation with CARE, resulted in a relatively wide variety of perceived needs of the communities. Confronted with such diversified expectations, the project had to explain its focus, i.e. forest/watershed-based natural resource management. The villagers expressed very early their view that extensive PRA exercises, like meetings, could not be fitted into their busy schedule, especially as the cultivation season was to begin in February 1997.

Therefore, with the consent of all actors it was decided to start with confidence-building measures (CBM), which allowed the staff to create an understanding of the assistance needed and simultaneously start a hands-on co-operation with the target groups. The methodical approach was to initiate CBM, which, however, provided a direct link to natural resource management. Initial co-operation was based on the following areas:

1. Introduction of participatory land use planning
2. Assistance in land allocation
3. Agricultural service package
4. Assistance in forest survey
5. Introduction of efficient wood stoves

Early on, the project paid attention to the women in the pilot area for which a gender specific target group analysis was conducted. The wood stove program is directly designed to reduce the burden of the women in the pilot area, simultaneously reducing the pressure on forest resources.

Besides the successful co-operation in the various fields, the most important result was the creation of confidence between communities and project staff. It provided the project staff with first hand experience in working with minority groups. **Extensive efforts were made to create understanding for, and introduce participatory approaches that were new to most Vietnamese officials.**

The project focused very early on its integration into local institutions and government programs. This has proven to be successful as the DARD financed accompanying measures (road construction, water supply). Through the project’s effort to facilitate ‘round tables’, all
relevant government organisations are presently involved in the activities. The establishment of an LUP working group, consisting of all members of relevant organisations and communities resulted in a forum allowing the incorporation of different points of view concerning appropriate land use planning. In addition, the contribution of funds from the national government (327) to implement activities in LUP and agroforestry was agreed.

**Intensive exposure, training and supervision of partner and project staff in the fields of participatory methods and approaches and technical issues in LUP formed an important component during phase one of the project.** Hereby, the focus was on national available resources as well as intermittent short-term consultants with extensive regional experience.

| Note: Specific efforts had to be made during the first phase: (a) to explain the regional approach of the project which was difficult to understand on provincial level; (b) to explain and clarify misunderstandings from the partner side concerning the concept and nature of technical co-operation. This effort will continue, as there is a need for such information especially on district and commune level. In addition, the partner and collaborating organisations frequently requested the project for strict planning procedures and anticipated results. Thereby, the emphasis was given to large-scale measures being symbols of success and funds spent. Again, the project had to carefully balance results and process and at the same time elaborately create awareness for its approach. Officially there was no specific orientation phase planned but a reflection of the first phase shows that the purposely careful intervention activities of phase I can, retrospectively, be seen as such a period. The special institutional environment, its total capabilities, and the initial resentment of the ethnic minority communities against external interventions in Dak Lak needed special attention by the project staff. |

**Links with other Measures**

One principle of implementation during phase one was to actively look for promising regional experiences in the field of participatory natural resource management relevant to the specific conditions of the Dak Lak province. The most significant partners identified are:

- DANIDA funded Rural Development Project in Dak Lak (data supply, LUP, mapping)
- Song Da Social Forestry Project (LUP/LA)
- CARE International (PRA)
- Forestry Science and Technology Institute (wood stoves program)
- Sweden – Vietnam Highland Development Project (LUP, agroforestry)
- Regional Community Forestry Training Centre, Bangkok (training, community forestry)
- Ha Bac Afforestation project (LUP/LA)
- Nam Ngum/Laos Watershed Management Project (LUP/LA)
- Thai-German Highland Development Programme (participatory watershed management)
- Forest Cover Monitoring Project (forest inventory maps and data)

It is worth noting that the co-operation with some of the above organisations includes the exchange of staff members and will continue – co-operation agreements being one option.

**Conceptual Issues**
Experiences made in Dak Lak during phase I, concerning present upland cultivation/conservation and co-operation with ethnic minorities have led to the selection of the integrated watershed management approach. This approach - tested in Vietnam and South-east Asia - provides a conceptual framework for planned interventions and expected results contributing to sustainable management of natural upland resources by involving all stakeholders.

Note: a WSM approach considers uplands as productive areas of natural resource development, but also realises that the actions of upland farmers affect those living downstream. With only a local farmer perspective, downstream effects of land use are overlooked. Uplands must be viewed as critically important watersheds that can provide environmental and hydrologic stability for society in general.

Similarly, upland areas that are critical habitat for certain plant and animal species require a regional or national response; otherwise, the food and resource needs of subsistence farmers will naturally take precedence.

In addition to intensive discussions about expectations of all stakeholders the following 'sources' provided the basis for the design of concept and strategies for phase II:

- UNDP/FAO report "watershed management and ethnic minorities", which provides a comprehensive analysis of the Vietnamese uplands situation and proposes strategic elements for project design;
- Experiences from ongoing NRM projects in the region, which support and complement fundamental strategic components outlined in the report;
- Situation-specific adaptations of major participatory WSM components based on the projects' own experience during phase I in Dak Lak.

Three immediate objectives were addressed by the project and discussed with all stakeholders:

- Development of appropriate participatory methods and techniques for integrated watershed management for the particular ethnic, cultural and socio-economic conditions of the region;
- Improved ecological condition and functions of natural resources in the watershed areas as a result of forest land development and management, which will help to increase food security and living conditions in the watershed itself, and improve downstream conditions, e.g. irrigation demands
- Contribute to dissemination of approaches, methods, and techniques on participatory and integrated management of upland areas.

The following figure and detailed list describe the methodological components and main activities of the project are the result of experiences made in phase I, external recommendations and requests from the stakeholders:
Planned Results and Activities for second phase 01/98 – 12/00 (does not constitute PPM!)

R 1. Participatory approaches to land use planning and land allocation are jointly developed with relevant government organisations and communities.

1.1. Develop and demonstrate participatory approaches to land use planning

1.1.1. Assess institutional and policy framework for PLUP

1.1.2. Facilitate organisational (multi-party) and technical preparation of process;

1.1.3. Assess present classification, land use, LUP/LA situation on commune level;

1.1.4. Jointly develop criteria and assess land suitability;

1.1.5. Identify and reclassify areas for agriculture (additional), agroforestry and forestry;

1.1.6. Carry out LUP on village level;
1.1.7 Monitor and document results and process (technical, financial, participation);
1.1.8 Convey results and experiences of suitable approaches to provincial and national policy level.

1.2. Support and improve present land allocation process
1.2.1 Assess institutional and policy framework for agriculture/forestland allocation
1.2.2 Identify villagers’ expectations on land allocation policies;
1.2.3 Support land allocation and forest assignment on village level;
1.2.4 Assist LND to survey area to be allocated to households and produce map;
1.2.5 Facilitate approval and issuing of certificates;
1.2.6 Planning for further development and dissemination in Lak District;
1.2.7 Convey suitable approaches to policy level.

2.1 Establish farmer-implemented ecologically and economically feasible agroforestry systems
2.1.1 Establish agroforestry models on selected area(s);
2.1.1.1 Jointly identify area for development of agroforestry model;
2.1.1.2 Jointly identify components and suitable agroforestry systems for the model area;
2.1.1.3 Jointly implement and monitor selected models;
2.1.1.4 Disseminate promising agroforestry models in the project area.

2.2 Promote and assist community forestry and collaborative forest management systems
2.2.1 Assess institutional and policy framework for innovative ecological and economical forest management;
2.2.2 Conduct stakeholder analysis and facilitate regular exchanges between and amongst them;
2.2.3 Identify traditional customs and indigenous knowledge relevant to WSM and incorporate them in newly developing approaches;
2.2.4 Start dialogue, discuss favourable framework for innovative forest management (production/protection) with decision-makers on all levels;
2.2.5 Jointly identify sustainable technical and managerial prerequisites for participatory forestry-based production/protection systems;

2.2.7 Assist implementation (technical and managerial) of innovative forest management practices;

2.2.8 Integrate results into institutional (DARD, LFE) and policy framework (327) for further development and dissemination in Dak Lak province and beyond;

2.2.9 Explore possibilities of capitalisation of forest commodities for community-based development of complementary resources (e.g. infrastructure, health).

2.3 Support the utilisation and management of NTFP

2.3.1 Jointly identify present use and potential of NTFP in the project area;

2.3.2 Support assessment of marketing potential of NTFP.

2.3.3 Support income generation through NTFP;

2.4 Assist the PC in the development of eco-tourism

2.4.1 React to official requests to support the identification/analysis of eco-tourism potential in the project area based on natural resources and PC Lak request;

2.4.2 Analyse potential with focus on community involvement and benefits in terms of income as well as environmental issues;

2.4.3 Conduct environmental impact assessment of proposed ventures

2.4.4 Prepare documentation and report and submit to PCs.

3.1. Assist in the reclamation of bare lands (Imperata control)

3.1.1. Reclamation of land under Imperata;

3.1.1.1. Identify affected areas and their potential for reclamation in project areas

3.1.1.2. Jointly identify Imperata-affected areas for trials;

3.1.1.3. Jointly develop and implement trials;

3.1.1.4. Monitor and document results, costs/benefits and process in respect of dissemination;

3.1.2. Improve management of cultivated areas with reduced productivity due to Imperata;

3.1.2.1. Jointly identify, develop areas and implement trials;

R 3. Land rehabilitation and resource conservation measures in the project area are implemented/initiated

3.1. Assist in the reclamation of bare lands (Imperata control)
3.1.2.2. Monitor and document results, costs/benefits and process in respect of dissemination;

3.2. **Develop further and disseminate the wood stove program (WSP)**

3.2.1. Monitor dissemination and adaptation of ongoing WSP

3.2.2. Learn from WS users (construction, maintenance, adaptations)

3.2.3. Facilitate promotional events for WSP

3.2.4. Expand WSP in project area;

3.2.4.1. Identify demand for WS

3.2.4.2. Investigate in self-help opportunities in WSP;

3.2.5. Incorporate WSP in government programs;

3.2.5.1. Investigate potential to integrate WSP into national resource management programs and/or related projects;

3.2.5.2. Investigate co-financing of WSP through government programs;

3.2.6. Support national programs and organisations in dissemination of WSP on a larger scale (process and quality control);

3.2.7. Introduce and facilitate output and process monitoring of all aspects of the WSP, assist documentation and promotion.

3.3. **Assess the role and value of biodiversity and ecological functions in the context of environmental and economic values**

3.3.1. Support the assessment of biodiversity and ecological functions in the project area;

3.3.2. Define value for assessed biodiversity and ecological functions and identify implications for sustainable watershed management.

R 4. Institutional and policy framework is strengthened to support the development of a participatory NRM

4.1. **Establish partnerships with national programs and projects to address complementary needs in integrated watershed management for project area.**

4.1.1. Conduct organisational landscape analysis with special focus on key players in different sectors in Dak Lak

4.1.2. Prepare agricultural development related proposals and submit to DANIDA assisted large-scale rural development project;
4.1.2.1. Extension

4.1.2.2. Credit

4.1.3. Assist communities to prepare proposals for infrastructure and submit to people’s committees for financing;

4.1.4 Facilitate joint monitoring and evaluations of all measures

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**Note:** During the first phase the project assisted the local communities in related fields like agricultural service packages (input supply, credit, extension) through CBMs. These activities were evaluated after phase I and it became clear that the project does not have the human and financial resources to cover such a wide range of activities. However, planning of phase II acknowledges such need by the communities. Therefore, the project is initiating collaborative partnerships with organisations and projects in Dak Lak to facilitate access of the TG to such services. In order not to duplicate development efforts, e.g. extension, in Dak Lak, it is desirable to co-operate with organisations specialising in such issues, thereby providing a critical mass needed to generate impacts. As the DANIDA supported rural project has begun operation in 1997, and extension and credit components are implemented province-wide, the project will elaborate proposals to provide complementary assistance to the TG for the agricultural season 1998. In return DANIDA expressed interest in agroforestry production systems, which will be elaborated by the project in phase II. The strategy of co-operating partners has proven successful in phase one as, for example, infrastructure in the pilot site was provided by state organisations.

4.2. Document and disseminate lessons learnt at provincial and national level to address policy constraints and opportunities.

4.2.1. Facilitate regular round table meetings with relevant stakeholders in Dak Lak;

4.2.2. Document and disseminate information of processes and results of initiated participatory NRM to all levels;

4.2.3. React on information requests of decision-makers and actively propose innovative participatory NRM approaches;

4.2.4. Provide regular "voices from the field" based on beneficiaries’ viewpoint to officials in charge of government programs.

4.2.5. Provide communities with relevant information on policies, degrees, etc.

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R 5. Capacity of local authorities, institutions and villagers to understand and jointly
implement participatory natural resource management is increased.

5.1. Qualify members of relevant government/private organisations in the field of participatory natural resource management

5.1.1. Facilitate regular information events for decision-makers in Dak Lak to inform and discuss participatory process and results.

5.1.2. Assess training priorities of practitioners and officials in the field of participatory NRM/LUP and provide assistance take part in such training events;

5.2. Enhance training (technical and managerial) opportunities in natural resource management for formal and informal community groups

5.2.1. Identify opportunities for the development of community based training activities;

5.2.2. Support selected training initiatives for community representatives in the field of participatory NRM/LUP;

5.2.3 Support dissemination of knowledge and experience amongst community members.

Time Frame

The first project phase (12/1995 – 12/1997) will be followed by a second one of two years (01/1998 - 12/99). During the second phase the transformation of the present field component into a bilateral measure will be assessed, which would – if approved - be considered phase III (01/00 – 12/03). A detailed time based planning will be elaborated during the formulation of the operational plan.

Implementing Partner

Proposed partners are the Department for Forestry Development part of the Ministry of Agriculture and Rural Development (MARD) and, from 1999 onwards the People's Committee of Dak Lak province. However, project co-operation with other relevant organisations will be necessary throughout the whole project.

Continuation after external Assistance

For the continuation of the Dak Lak component, the need for medium-term external support beyond the third phase is recognised. In principle, the chances for third party assistance are likely, provided the solutions for alternative forestland management in the watershed context are not only of ecological but also of an economic nature. In addition, the project will focus on the acquisition of complementary funds from provincial and national sources, allowing the expansion in a cost-effective way.
PROJECT EFFECTS

Economic Assessment

The economic effects can be summarised as follows:

- **Short term and medium term savings of government** funds through introduction of participatory protection schemes combining protection and production;
- **Long term economic gain through sustainable forestland management systems** generating income for communities and state revenues;
- **Short and medium term economic benefits from improved, i.e. more efficient and effective, implementation of forestland-based national rehabilitation and conservation programs**;
- **Medium and long term ‘down stream’ economic gains through sustained watershed functions**, e.g. provision of perennial water supply for irrigation, energy, etc.

In general, the expected long-term effects, both ecological and economical can be seen as positive as the project will contribute towards a sustainable and participatory natural resource management of the upper watershed in Dak Lak. This will improve the opportunities for sustained and productive natural resource based livelihoods.

Socio-cultural Assessment

The project will contribute towards:

- **Increased understanding of local ethnic minority communities**, their traditional gender-specific access and use of forest land, their acceptance as equal partners in the planning and decision-making process;
- **Assistance to reduce and mitigate the obvious erosion of women’s’ status and decision-making** in ethnic minority society as a result of the implementation of government programs;
- **Development and implementation of gender oriented measures to** reduce workload and pressure on natural resources, e.g. firewood collection;
- **Awareness and provisions for the socio-cultural traditions of ethnic minorities**, thereby contributing to ensure the unique cultural diversity of Vietnam and the region;
- **Awareness and understanding amongst the communities for internal and external environmental aspects**, i.e. outside ‘their watersheds’. The awareness of environmental causal links and so-called downstream effects should become an integral part of the TG's attitude towards the functions and management of "their watershed".

Ecological Assessment

The project is designed to address the **rehabilitation of watersheds to maintain their long term ecological and hydrological functions**. In addition, the protection and management of tropical forestlands as well as conservation efforts in areas of significant biodiversity, including
protected areas such as Chu Yang Sin Nature Reserve and the upper watersheds will ensure that the project – if successful – has a significant positive environmental impact.

The selected strategies will contribute towards sustainable NRM by introducing innovative approaches and supporting promising forestland management practices of an participatory nature. The project will concentrate on the rehabilitation and management of upper watersheds, directly furnishing the preservation of natural resources like soil fertility, perennial water quantity and quality, and the protection of the remaining national flora and fauna. However, these anticipated positive effects can only be measures in the medium and long term.

"Forest is gold. If we know how to conserve it well, it will be very precious. Destruction of the forest will lead to serious effects on both life and productivity" (Ho Chi Minh, 1963).

BMT/Hanoi, January 1998