

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT DOCUMENT

TITLE	FIRE-MANAGEMENT AND POST-FIRE RESTORATION WITH LOCAL COMMUNITY COLLABORATION IN GHANA
SERIAL NUMBER	PD 284/04 Rev.2 (F)
COMMITTEE	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY	GOVERNMENT OF GHANA
ORIGINAL LANGUAGE	ENGLISH

SUMMARY

This proposal is an output of a pre-project "FireFight initiative: prevention rather than cure" carried out in 2002-2003. The proposal is based on a national consultation identifying gaps in current fire management activities in Ghana as well as on the results of a stakeholder workshop organized in May 2003.

The project aims at increasing benefits for the local communities from forest products in Ghanaian fire prone areas by enhancing fire management activities and thereby protecting timber, NTFPs, and other resources as well as restoring fire damaged lands with local species. The project builds on previous and currently ongoing fire projects in the country and fills those gaps that are currently not sufficiently addressed. The project will be implemented by Ghanaian agencies added with an input of specific technical knowledge by international experts in fire ecology and management.

EXECUTING AGENCY IUCN - THE WORLD CONSERVATION UNION in collaboration with FORIG-GHANA and RMSC-GHANA

COOPERATING GOVERNMENTS ---

DURATION 36 MONTHS

APPROXIMATE STARTING DATE TO BE DETERMINED

BUDGET AND PROPOSED SOURCES OF FINANCE

Source	Contribution in US\$	Local Currency Equivalent
ITTO	585,894	
Gov't of Ghana In-kind	63,977	
IUCN In-kind	82,054	
TOTAL	731,925	

Table of contents

ABBREVIATIONS, LIST OF FIGURES, TABLES AND ANNEXES	4
PART I: CONTEXT	5
1 Origin	5
2 Sectoral Policies and Legislation in Ghana	6
3 Programmes and Operational Activities	7
Part II : The Project	9
1 Project Objectives	9
1.1 Development Objective	9
1.2 Specific Objectives.....	9
2 Justification	10
2.1 Problems to be addressed	10
2.2 Intended situation after Project completion	12
2.3 Project strategy.....	13
2.4 Target beneficiaries	15
2.5 Technical and scientific aspects	16
2.6 Economic aspects.....	16
2.7 Environmental aspects.....	17
2.8 Social aspects.....	17
2.9 Risks	18
3 Outputs	18
4 Activities.....	19
4.1 Output 1.....	19
4.2 Output 2.....	20
4.3 Output 3.....	20
4.4 Output 4.....	20
4.5 Output 5.....	21
5 Logical Framework Worksheets.....	22
6 Work Plan	24
7 Budget	26
7.1 Overall Project Budget by Activities.....	26
7.2 Consolidated Total and Yearly Project budget.....	31
7.3 Yearly Project Budget – ITTO.....	32
7.4 Yearly Project Budget – Government of Ghana.....	32
7.5 Yearly Project Budget – IUCN.....	32
7.6 Consolidated Yearly Project Budget – ITTO	33
7.7 Consolidated Yearly Project Budget – Government of Ghana.....	34
7.8 Consolidated Yearly Project Budget – IUCN.....	35
PART III: OPERATIONAL ARRANGEMENTS	36
1 Management Structure	36
2 Monitoring, Reporting and Evaluation	36
3 Future Operation and Maintenance.....	37
PART IV: TROPICAL TIMBER FRAMEWORK.....	38

ANNEX A: PROFILE OF THE EXECUTING AGENCY	41
ANNEX B: CURRICULA VITAE OF THE KEY STAFF	44
ANNEX C: TERMS OF REFERENCE FOR A national PROJECT COORDINATOR.....	45
ANNEX D: TERMS OF REFERENCE FOR AN INTERNATIONAL CONSULTANT ON FOREST ECOLOGY	46
ANNEX E: TERMS OF REFERENCE FOR AN INTERNATIONAL CONSULTANT ON FIRE MANAGEMENT.....	47
ANNEX F: TERMS OF REFERENCE FOR A national CONSULTANT ON COMMUNICATIONS	48
ANNEX G: TERMS OF REFERENCE FOR A NATIONAL TRAINING CONSULTANT.....	49
ANNEX H: BRIEF DESCRIPTION OF IUCN COMMISSIONS RELEVANT TO THIS PROJECT.....	50
ANNEX I: EXECUTIVE SUMMARY OF THE CONSULTANCY PREPARED PRIOR TO THE GHANA WORKSHOP.....	51
ANNEX J: SUMMARY OF THE PRE-PROJECT WORKSHOP IN GHANA and major results of the pre- project PPD 44/02 Rev.1 (F).....	52
ANNEX K: MEMBERS OF THE GHANAIAN PROJECT PREPARATION GROUP	53
ANNEX L:-SUBSTANCE AND FOCUS OF PROJECTS PD 32/98 REV.1 (F) AND WMTZ	54
ANNEX M: AMENDMENTS MADE TO THE PREVIOUS PROJECT PROPOSAL (27 th expert Panel).....	55
ANNEX M:-Unit cost table for budget justification.....	57
ANNEX O:-AMENDMENTS MADE based on the comments by the 28 th Expert Panel	63

ABBREVIATIONS, LIST OF FIGURES, TABLES AND ANNEXES

Abbreviations

CEESP	Commission on Environmental Economics and Social Policy
CEL	Commission on Environmental Law
CEM	Commission on Ecosystem Management
CRM	Collaborative Resource Management
DS	Dry semi-deciduous
DSFZ	Dry semi-deciduous fire zone
FC	Forestry Commission
FORIG	Forestry Research Institute of Ghana
HIPC	Heavily Indebted Poor Countries
ITTA	International Tropical Timber Agreement
ITTC	International Tropical Timber Council
ITTO	International Tropical Timber Organization
IUCN	The World Conservation Union
NTFPs	Non-Timber Forest Products
MSNW	Moist semi-deciduous forest north west subtype
PNDC	Provincial National Defence Council
PRSP	Poverty Reduction Strategy Paper
RMSC	Resource Management Support Center
TNC	The Nature Conservancy
WCPA	World Commission on Protected Areas
WMTZ	Wildfire Management Project in the Transition Zone
YPO	Yearly Plan of Operation

Tables

Table 1	Major currently ongoing forestry projects in Ghana supported by multi- and bilateral donors
Table 2	The major previous or currently ongoing ITTO supported projects in the forest sector
Table 3	Information on the project's target districts
Table 4	Project monitoring, reporting and evaluation.

Figures

Figure 1	Problem-tree
Figure 2	Objectives tree
Figure 3	Location of Transition Zone in Ghana
Figure 4	Organization chart

Annexes

ANNEX A	PROFILE OF THE EXECUTING AGENCY
ANNEX B	CURRICULA VITAE OF THE KEY STAFF
ANNEX C	TERMS OF REFERENCE FOR A NATIONAL PROJECT COORDINATOR
ANNEX D	TERMS OF REFERENCE FOR AN INTERNATIONAL CONSULTANT ON FOREST ECOLOGY
ANNEX E	TERMS OF REFERENCE FOR AN INTERNATIONAL CONSULTANT ON FIRE MANAGEMENT
ANNEX F	TERMS OF REFERENCE FOR A NATIONAL CONSULTANT ON COMMUNICATIONS
ANNEX G	TERMS OF REFERENCE FOR A NATIONAL TRAINING CONSULTANT
ANNEX H	BRIEF DESCRIPTION OF IUCN COMMISSIONS RELEVANT TO THIS PROJECT
ANNEX I	EXECUTIVE SUMMARY OF THE CONSULTANCY PREPARED PRIOR TO THE GHANA WORKSHOP
ANNEX J	SUMMARY OF THE PRE-PROJECT WORKSHOP IN GHANA AND MAJOR RESULTS OF THE PRE-PROJECT PPD 44/02 REV.1 (F)
ANNEX K	MEMBERS OF THE GHANAIAN PROJECT PREPARATION GROUP
ANNEX L	SUBSTANCE AND FOCUS OF PROJECTS PD 32/98 REV.1 (F) AND WMTZ
ANNEX M	AMENDMENTS MADE TO THE PREVIOUS PROJECT PROPOSAL

PART I: CONTEXT

1 Origin

This proposal is part of an integrated fire management project that will involve ITTO member countries from three regions: Asia Pacific, Africa and Latin America and the Caribbean. This integrated approach to forest fire management has been shaped in part by work carried out in the 1980s and 1990s by ITTO, which was one of the first international organizations to recognize the increasingly serious nature of the fire problem in Tropical Moist Forests. The ITTO mission to Kalimantan in 1989 to help the Indonesian Ministry of Forestry identify methods for post-fire forest rehabilitation, and the 1997 ITTO Guidelines on Fire Management in Tropical Forests were especially influential in this respect.

The 'FireFight' initiative was launched in 1998 with the intention of establishing a network of regional-level forest fire projects. The first of these projects, "FireFight South East Asia" ("Advancing policy reform for mitigating the adverse impacts of forest fires in South East Asia") - implemented by WWF in collaboration with IUCN and the Centre for International Forestry Research (CIFOR) and supported by the European Commission - ended in June 2003. "FireFight" will serve as a general model for the planned forest fire projects in the three regions. The initiative aims to help practitioners and policy makers in targeted ITTO member countries identify and secure the policy reforms and practical actions necessary to prevent and control harmful fires, and mitigate their negative impact on human societies and forest ecosystems.

In this regard, ITTO –funded pre-project activities have been carried out in Latin America, West Africa and South-East Asia during the years 2003 and 2004. The purpose of the pre-project has been to develop a series of complete project proposal documents actively supported by ITTO member countries in the above-mentioned three regions. Inputs for the complete project proposal documents have been obtained through a series of workshops for representatives of governments and other stakeholders. These workshops aimed at increasing interest in forest fires issues, initiating collaboration and sharing knowledge as well as building common understanding in the three sub-regions. Prior to the workshops consultancies on past and present fire management activities as well as gaps in these were conducted.

The *pre-project workshop for West Africa* was held in 22nd – 23rd May 2003 in Kumasi, Ghana. The meeting gathered some thirty experts from the region to address the prevailing causes of fires in Ghana, to evaluate suggestions to improve the situation, and to share experiences on forest fires in the sub-region. This project proposal derives from the outputs of the workshop as well as from a consultancy carried out prior to the workshop, which revealed the history of fire management in Ghana including identification of existing gaps in these activities. A short summary of the workshop and the major results of the pre-project PPD 44/02 Rev. 1 (F) can be found in Annex J. During the workshop, a Ghanaian project preparation group (Annex I) was formed with an assignment to shape the project proposal and refine the inputs, which were acquired during the stakeholder workshop. The project preparation group gathered in July 2003 when the major points of the proposal were finalized. Thereafter, the reference group has actively continued project formulation electronically. As preparation to the workshop, a review of forest fire management practices and strategies in Ghana has been conducted¹. An executive summary of this report can be found in Annex G.

The present proposal has been revised according to the comments made by the Twenty-seventh Expert Panel for the Technical Appraisal of Project Proposal. A table of the amendments made to the project proposal is presented in Annex M.

¹ Orgle, TK (2003). A Review of Forest Fire Management Practices and Strategies in Ghana. Pre-Project report prepared as a part of IUCN/WWF FireFight Initiative

2 Sectoral Policies and Legislation in Ghana

The Forest and Wildlife Policy of 1994 is the principal document from which all the forest management related legislation, strategies, programmes and projects in Ghana should derive². The government's sectoral policies, namely the Forestry Development Master Plan (1996-2020) as well as the Poverty Reduction Strategy Paper (PRSP) of Ghana³ both highlight the importance of Collaborative Resource Management (CRM). In this regard, the Forestry Commission (FC) of Ghana has developed a CRM Policy and Strategy in 2001, with a definition of

“Working partnership between different stakeholders which enhances the management and development of forest and wildlife resources and leads to equitable distribution of benefits”.

Further, the Ghana PRSP from May 2003 emphasizes the need to:

- Protect, rehabilitate and sustainably manage the national land, forest and wildlife resources through collaborative management and aimed at increasing the incomes of rural communities who own these resources.
- Enhanced community involvement in the management of forest and wildlife and savannah woodland resources and improve the benefit flows to communities from resource sales.
- Increased community and farmer adaptation of improved land and water management techniques.

The existing laws and policies that relate to forest fires in Ghana have been identified as being insufficient. The government enacted the first law, Provincial National Defence Council (PNDC) law 46, after the devastating fires during the 1982-83 droughts. This banned the starting of bush fires. Fire was allowed for clearing land on farms as long as it remained contained within the boundaries of each farm. The Chief Conservator of Forests or Chief Game and Wildlife Officer could permit the use of fire for management within conservation area. It included penalties for offenders, which included fines, imprisonment and covering the costs of any damage.

The process of decentralisation, which occurred in the late 1980's created a new institutional structure for the management of fires. As a consequence, PNDC law 46 was repealed in 1990 and the Control and Prevention of Bushfires Law 1990 was enacted. This put a requirement on the District Assemblies to establish Bushfire Control Sub-Committees. These sub-committees were made responsible for drawing up by-laws to ensure adequate prevention, control and monitoring of bushfires, specify periods when burning on farms shall be prohibited and where appropriate, draw up early burning programmes for the district. The law also included the establishment of Fire Volunteer Squads in every town, area or unit. It has been observed⁴ that in a sense these Fire Volunteer Squads have now become responsible for implementing and enforcing the by-laws developed by the district assemblies.

The weaknesses in the current law include⁵:

- The lack of legal backing for fire volunteers to arrest and prosecute culprits.
- The law does not recognize the traditional rulers, and the custodians of lands, in the management of bushfires.
- The district assemblies do not have the technical capacity to take on the responsibility to draw up by-laws as required.

² Forestry Commission, 2002. Overview of Collaborative Resource Management in Ghana: Perspective of the Forestry Commission.

³ International Monetary Fund (IMF), 2003. Ghana: Poverty Reduction Strategy Paper. IMF Country Report No. 03/56, March 2003.

⁴ Amanor, K.S. (2002). Bushfire Management, Culture and Ecological Modernisation in Ghana. *IDS Bulletin* 33 (1) p65 – 74.

⁵ Ampadu-Agyei, O. and Atsiatorme, L.D. (1998) Management and Support of Anti-bush fire Programmes. In Yankson, P.W.K., Kufogbe, S.K., Kofie, R., Atua, M. (Eds.) *Strategies for Bushfire Intervention in Ghana. Proceedings of the National Workshop, Accra 3rd – 4th February 1998*. Institute for Scientific and Technological Information, CSIR, Accra, Ghana.

- There is no medical insurance or compensation schemes to cover medical bills, which are accrued due to injury or death during fire fighting activities.

These weaknesses are mentioned also in Ghana's PRSP with the following recommendations:

- Review, strengthen and enforce the Bushfire Law.
- Strengthen programmes such as the community fire fighting volunteers.

The extracts pointed out in this chapter have direct or indirect linkages to forest fires and therefore the governing environment can be considered suitable for the project activities as described in this proposal.

3 Programmes and Operational Activities

The Forest and Wildlife Policy of 1994 is the cornerstone of the operational activities in Ghana. Various projects in this sense have been completed and are currently under completion. Tables 1 and 2 show the past and ongoing programmes and projects oriented to the development of Ghana's forestry sector (those related to fires are marked in bold). **Prior to the development of this project proposal, information on the relevant projects in the sector of forest fires has been collected by direct consultations with the project executors and taken into account accordingly to avoid overlapping and duplication.** For instance, the project leaders of the recently completed Forest Fire Management in Ghana (PD032/98 Rev.1 (F)) as well as the ongoing Wildfire Management in the Transition Zone – were part of the project preparation group, which drafted and commented on the current proposal with valuable knowledge on the existing gaps in fire management activities in the country. **The strategy and activities in this proposal are designed so as to complement these recent and ongoing fire management activities.**

Table 1: Major currently ongoing forestry projects in Ghana supported by multi- and bilateral donors:

Project	Agency	Donor
Natural Resources Management Programme (NRMP) - Ghanaian national forestry sector programme	Ministry of Lands & Forestry	Multi-donor supported programme implemented project-wise
Forest Sector Development Programme (FSDP) – part of the NRMP	Forestry Commission	DFID
Protected Area Development Programme (PADP) – part of NRMP - First phase has ended 2002	Wildlife Division	European Development Fund
The Forest Protection and Resource Use Management Project (FORUM)	Forestry Commission	GTZ
Wildfire Management in the Transition Zone (WMTZ) – part of NRMP	Forestry Commission, Resources Management Support Centre	The Government of Netherlands

Table 2: The major previous⁶ or currently ongoing ITTO supported projects in the forest sector (those in relation to fires are in red)

Project	Agency	Status (start /finish)
Evergreen Club of Ghana / ITTO Youth in Forestry Project PD008/94 Rev.2 (F)	Evergreen Club of Ghana	Completed (1995/)
Conservation and Provenance Plantings and Integrated Pest Management to Sustain Iroko Production in West Africa PD003/95 Rev.2 (F)	Forestry Research Institute of Ghana - FORIG	Completed (1995/)
Forest Fire Management in Ghana PD032/98 Rev.1 (F)	Forestry Research Institute of Ghana - FORIG	Completed (1998/2003)
Establishment of a Wood Workers and Craftsmanship	Furniture and Wood	Operational (1998)

⁶ The table is based on the ITTO Annual Report 2002, annex 3.

Village PD046/96 Rev.2 (I)	Products Association, Ghana	
Manpower Development for the Ghana Wood Industry Training Centre PD012/98 Rev.2 (I)	Timber Export Development Board (TEDB)	Operational (1998)
Silviculture and Economics of Improved Natural Forest Management in Ghana PD004/98 Rev.1 (F)	Forestry Research Institute of Ghana - FORIG	Operational (1999)
Reforestation of the Abutia Plains by Indigenous Communities in the Volta Basin PD048/98 Rev.1 (F)	African Environmental Regeneration Movement	Operational (1999)
Handbook on Tree and Wood Identification of 100 Lesser-Used and Lesser-Known Timber Species from Tropical Africa with Notes on Ethnography Silviculture and Uses PD044/98 Rev.2	Forestry Research Institute of Ghana - FORIG	Operational (1999)
Rehabilitating Degraded Forest through Collaboration with Local Communities PD030/97 Rev.6 (F)	Forestry Research Institute of Ghana - FORIG	Operational (2000)
Participatory Tropical Forest Development by Women in Indigenous Communities PD049/98 Rev.1 (F)	31 st December Women's Movement	Operational (2000)
Processing and Utilization of Logging Residues through Collaboration with Local Communities and Forest Industries PPD039/02 Rev.2 (I)	Forestry Research Institute of Ghana - FORIG	Operational (2002)
FireFight Initiative: Prevention Rather than Cure PPD044/02 Rev.1 (F) (Pre-Project with a component in Ghana)	IUCN	Completed (2002/2004)
Feasibility of Introducing and Developing Non-Destructive Testing Technologies and Methods for Assessment and Monitoring of Timber/Wood Structures in Various Structural and End-Use Applications in West Africa PPD004/00 Rev.3 (I)	Wood Industries Training Centre	Pending Finance
Development of the Integrated Forestry Compendium: a Knowledge Base for Forest Management and the Forest Industry PD087/01 Rev.1 (M)	Forestry Commission of Ghana	Pending Finance
Development of Energy Alternatives for the Efficient Utilization of Wood Processing Residue: Co-Generation and Briquette Production PPD053/02 Rev.2 (I)	Forestry Research Institute of Ghana - FORIG	Operational 2003
Investment Promotion and Enterprise Development of the Timber Industry in Ghana PPD063/02 (I)	Forestry Research Institute of Ghana - FORIG	Operational 2003

PART II : THE PROJECT

1 Project Objectives

1.1 Development Objective

- **Efficient community based forest fire management contributes to restoration and sustainable management of timber and other products in Ghanaian fire prone areas**

The Development objective emphasizes the key role of rural communities - the most vulnerable group within areas of uncontrolled fires - for the success of fire management activities in Ghana. This complies directly with Ghana's development goals, which state community participation as one of the preconditions for successful environmental and natural resources management implementation.⁷

1.2 Specific Objectives

The project's development objective is to be achieved through the following specific objectives:

- **Uncontrolled forest fires are reduced in the target communities' forests thus increasing their productive capacity**

The specific objective focuses on working with the local communities in order to stop the progress of forest loss due to uncontrolled fires. It recognized that not all fires are bad but emphasized the importance of integrated fire management to tackle the problem of uncontrolled forest fire - especially at local level. Despite efforts made so far, effectiveness of community based fire management in Ghana still requires improvement. This project builds on lessons-learnt from previous projects and addresses those aspects identified as most problematic.

⁷ International Monetary Fund (IMF), 2003. Ghana: Poverty Reduction Strategy Paper. IMF Country Report No. 03/56, March 2003.

2 Justification

2.1 Problems to be addressed

It is estimated that the overall fire load of the planet (the amount of yearly combustion) has increased. This increase is borne more in the developing world and especially in the tropics where each year about half of the world's forest fires occur. The resulting loss and degradation is estimated to be of the same order of magnitude as loss caused by destructive logging and conversion to agriculture together. Fires thus also have the potential to significantly affect the capacity of forests in the tropics to provide goods and services including tropical timber on a sustainable basis. This is having a major impact not only on timber industries but also on rural communities whose livelihoods depend on the forests.

In Ghana, fire is considered the most important single threat to the integrity of forests. It has severely reduced the productive capacity of many Ghanaian forests (3% loss in annual GDP), annually burning merchantable timber worth around \$24 million. Fire has severely reduced not only the productive capacity of the forests but has also had major impacts on the other benefits of forest cover such as water supply and quality as well as soil fertility⁸ and biodiversity.

The **main causes** of forest fires in Ghana are from under uncontrolled fire setting activities and inefficient management and control of fires. The former are mainly a result of human activities for example in farming, hunting and other rural based income generating activities. The latter are due to lack of technical capacity, insufficient community involvement as well as ineffective law enforcement. In addition, ignorance of the severity of fire (e.g. throwing of burning cigarettes during the dry season), as well as cultural beliefs and activities (e.g. fire festivals in the northern parts of Ghana) add to the problem. The **underlying causes** of forest fires in Ghana have been identified as including poverty, lack of education and awareness relating to forest fire impacts and the lack of strong legislative incentives to prevent burning. Currently, communities are involved in forest fire management through the fire volunteer squads and with various projects on fire prevention including green firebreak establishment around forest reserves. Community involvement in fire management activities in Ghana however is not sufficiently addressed, despite a strong emphasis especially at the policy level exists to involve local population more in the forest fire management activities (cf. Part I, Chapter 2: Sectoral Policies).

A review of past and present forest fire management strategies and practices in Ghana highlighted the direct and indirect causes of fires in the country, which were further examined during the pre-project workshop that was organized in May 2003 in Kumasi. During the workshop, the following issues were considered as key problems (see workshop report, Annex F):

- unclear institutional framework
- ineffective legal framework
- insufficient technical capacities to combat fire
- lack of awareness in relation to fires

In terms of fire management strategy, participants to the workshop also pointed out the need for more local community involvement.

The project formulators went through the consultancy work and the stakeholder workshop outputs and took into account the past and currently ongoing fire management activities in Ghana in order to develop a problem tree and corresponding objectives and outputs tree (Figure 1 and 2). The project intends to focus on five key underlying causes as indicated in objectives tree. Few other problems stood out during the stakeholder workshop and through the consultancy work. The choice to address the five specific problems was based on a review of undergoing projects in Ghana generally in forestry and particularly in fire management. Chapter three gives details on the outputs and activities.

⁸ Orgle, TK (2003). A Review of Forest Fire Management Practices and Strategies in Ghana. Pre-Project report prepared as a part of IUCN/WWF FireFight Initiative

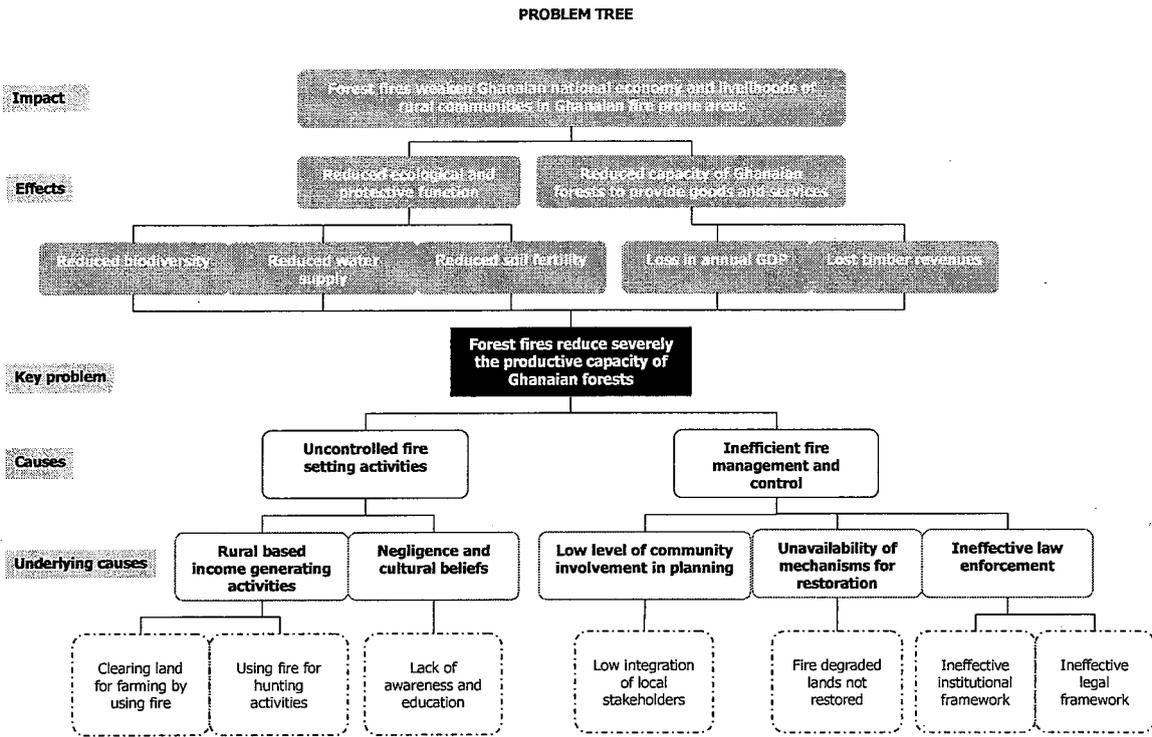


Figure 1. Problem-tree

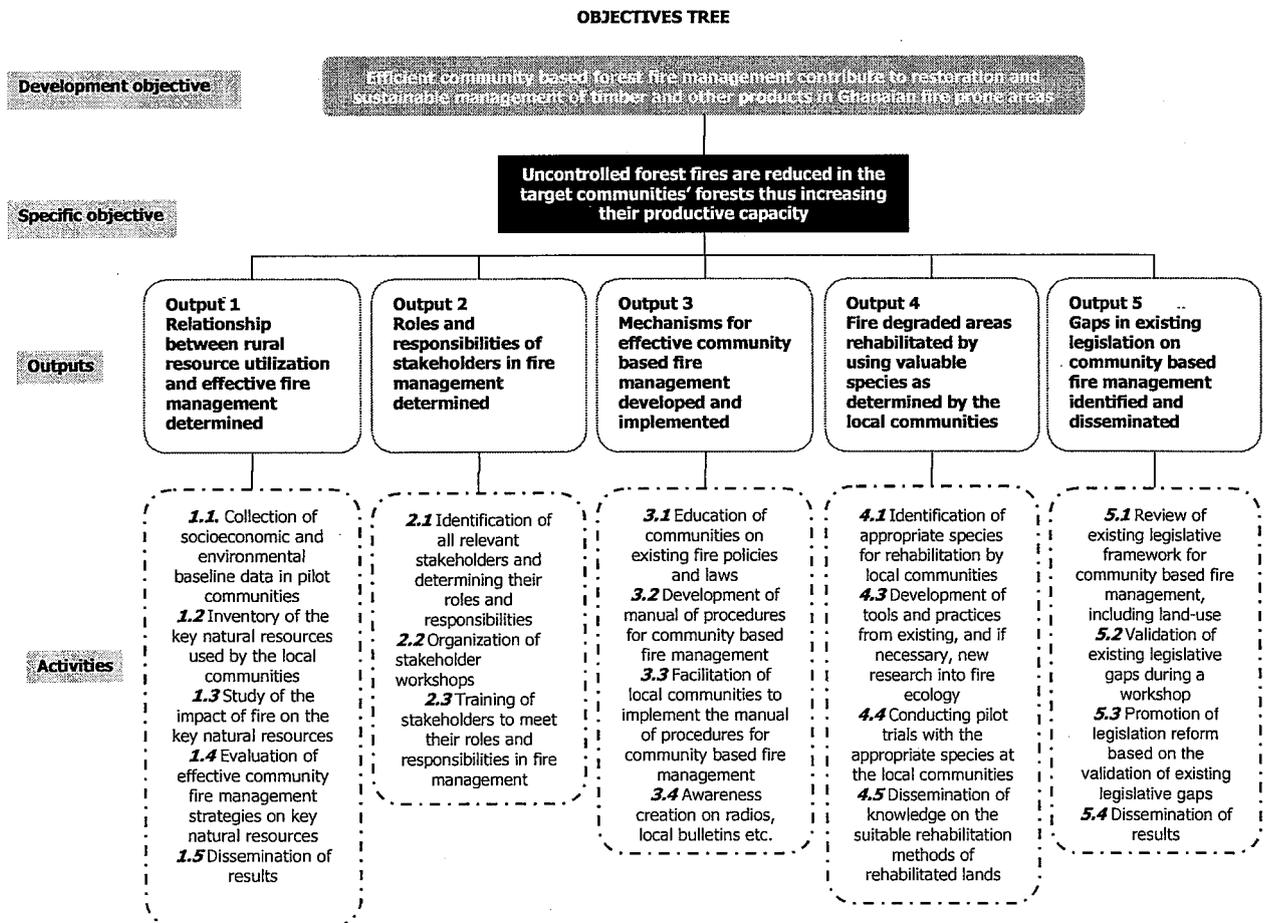


Figure 2. Objectives tree

As Dr. Orgle pointed out⁹, the transition zone in Ghana (between the savannah and rainforest zones) is the most seriously affected by bush fires and deforestation. This forest degradation is set to continue due to an increasingly shorter fire-return interval combined with continuous logging of these already fragile environs. The agricultural system along the zone is considered unsustainable due to shortened fallow periods causing damage to the soil structure and fertility, and consequently decreasing production. Due to the decreasing soil fertility, the pressure on forest reserves is increasing. It is estimated that the well-being of millions of people is at stake and that if no answer is found to the continuing degradation of the vegetation cover in the Transition Zone it faces a real risk of complete loss of forest cover.

Due to these factors, **the project will concentrate its activities in the Transition Zone** (Figure 2) from where four pilot districts are chosen for field activities.

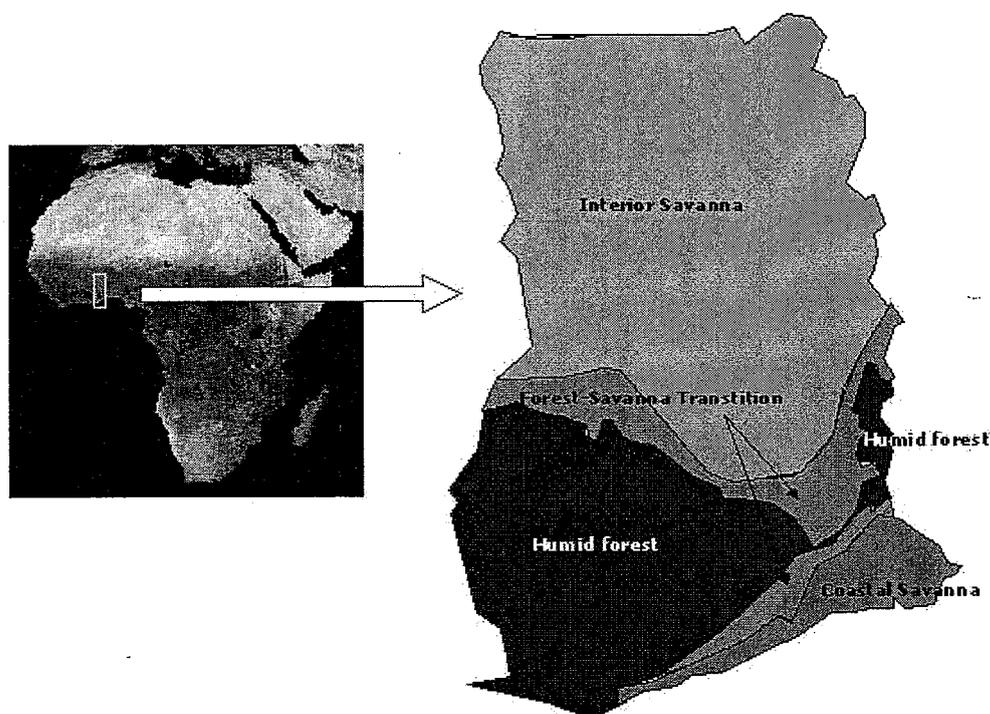


Figure 3. Location of Transition Zone in Ghana

2.2 Intended situation after Project completion

The relationship between the utilization of resources by rural communities and effective fire management will be determined and communicated among relevant stakeholders and interest groups with a special emphasis on raising awareness of decision makers. This will facilitate the harmonization of future fire related activities in the country and the utilization of the most suitable fire management methods at the community level.

Existing economic consequences caused by the yearly loss of timber and other forest products due to forest fires will be determined and the corresponding opportunities of restoring fire-damaged lands will be identified and prioritized in order to increase the economic benefits to local communities.

Plantation forestry is relatively new in Ghana. However, the government is currently investing 41 billion cedis (~ 4.7 million USD) through HIPC funds to plantations and thanks to the improved benefit sharing

⁹ Orgle TK (2000). Wildfire Management Project In the Transition Zone (Brong Ahafo, Ashanti and Eastern Regions). Natural Resource Management Programme Ghana.

framework, "taungya system", more benefits from plantations will be felt at the community level. According to the taungya system, 40% of the plantation revenues go to the Forestry Commission, 40% to the collaborative farmers, 15% to the stools (traditional authorities) and 5% to the forest fringe communities.

Methods for using commercially valuable local species for the restoration of lands that have already been degraded due to fires will be developed in the pilot sites. The results of suitable restoration methods will be distributed among relevant stakeholders for duplication of similar approaches in other damaged lands in Ghana or, if applicable, in neighboring countries.

By the end of the project completion the relevant stakeholders will be more aware of, and have more technical means to be responsible for, their role in fire management activities. This reduces the potential for overlapping activities that different agencies might otherwise carry out. For the sake of sustainability, it will be ensured that the village focal points will be members of existing and organized local structures.

The awareness of existing, sustainable incentive schemes that the communities have been trained in during the project intervention helps to better control fires in the villages.

The income of rural households will have increased due to the fact that communities will be able to sell timber, poles, rattans and other NTFPs, which would otherwise be consumed by fire.

2.3 Project strategy

The difficulties that the Fire and Forest Departments have experienced to limit the spread and minimise the damage of forest fires has challenged the assumption that effective fire control requires only firebreaks, early warning and adequate fire-fighting systems. Many organisations have now concluded that if harmful forest fires are to be contained then the fire-related behaviour of a whole range of stakeholders must be addressed and that attention has to be focused on policy reform and the removal of perverse economic incentives that encourage stakeholders to use fire irresponsibly.

Understanding the size of the fire problem and acknowledging the ongoing fire related activities in Ghana, the project has chosen to build its activities on existing structures and to provide assistance on technical aspects identified as the most problematic and currently under addressed during the different steps of project formulation.

In this context, the strategy developed for the project is based on a KEG (Knowledge-Empowerment-Governance) approach:

- Knowledge
Increase the level of **knowledge** by conducting studies on the underlying causes of fires both at the local level (i.e. community practice) and national level (i.e. institutional framework) as well as determining the existing knowledge on suitable restoration methods for fire damaged lands. The knowledge will be created by desk studies on existing literature, by interviewing key decision makers and experts as well as conducting pilot restoration trials. The results of the studies will be synthesized and put into a easily-understood format as well as distributed among all relevant stakeholders and international fora. Studies will be carried out by national consultants with the support of international experts.
- Empowerment
Improve training, education and awareness of stakeholders responsible for uncontrolled fire setting activities and/or involved in fire prevention and management activities. This component includes training sessions, workshops as well as awareness creation campaigns at the community level through local radio, bulletins and posters. During the workshops, participants from local to national level are brought together to discuss prevailing problems and latest achievements in relation to fire management issues. During campaigns at the local level, the project staff will act as facilitator while encouraging villagers to choose a focal person responsible for awareness raising activities and the project follow-up. The focal point will receive necessary training and support from the project to fulfill tasks and activities on a sustainable basis.

- **Governance**
Promote good governance - especially at the community level - by raising awareness and establishing by-laws on sustainable schemes for incentives. At the national level the drawbacks of existing legal and policy frameworks will be determined and suggestions for improvement will be made. Governance strategy includes desk studies to identify gaps and problems of existing legal frameworks. In relation to facilitation of by-laws, the project will organize training sessions in the villages on different possibilities and ways to create by-laws. Existing sustainable incentive schemes will be introduced to the local communities (note, the project WMTZ is developing an incentive scheme for the community level) during village meetings and training sessions.

The project strategy presented above follows the **ITTO guidelines on fire management in tropical forests**¹⁰, in particular principle 4 concerning community participation, fire pre-suppression, law enforcement and training as the main management measures. The strategy also includes recommended actions from the following principles:

Principles (P)	Recommended Action (RA)
P 8: "... An efficient fire prevention strategy -...- requires an initial understanding of the cultural and socio-economic background of the tropical fire scene. The fire prevention program relies heavily on a positive relationship between the rural community and the forest-fire manager..."	RA 8.c: "... Stimulate community cooperation in fire prevention through various incentive measures..."
P 10: "... Basic scientific and applied research are the fundamental sources of information needed for tropical forest fire management..."	RA 10.b: "... Study the dynamics of swidden lands ...- ... as well as timber and non-timber products, which are used by the local communities and are likely to contribute to the cause of fires..."
P 12: "... Fire management actions affect various sectors of the society and fall within the responsibilities of a variety of government agencies and land users. Therefore, a national interagency structure must coordinate the various responsible agencies involved..."	RA 12.a: "... Establish or strengthen structures at the national level which are responsible for preparing and implementing national fire policies...", RA 12.e: "... organizations with fire management expertise should offer advice in building institutional frameworks and capacities; to provide technical assistance..."
P 16: "... The causes of forest fires, and the underlying reasons for them, need to be determined before effective prevention plans can be made. The general public can be an important cause of wildfire. One reason for that is a lack of understanding on the importance and value of forests..."	RA 16.d: "... Develop and promote an environmental awareness program on the relation between social, economic, and environmental benefits derived from forests, and the negative impacts associated with wildfires..."
P 20: "... Fire risk may be reduced by practicing increased forest diversity..."	RA 21.b: "Give priority to rehabilitation measures of fire damaged forests"
P 24: "... Communities living in and around forest areas have long-established traditions to hunt, to fish, and to collect food, medicinal plants and other products from forest areas."	RA 24.d: "Assist communities in their efforts to enhance respect for traditional values and customs which have historically preserved natural resources."
P 25: "... Managers at various levels need to acquire and maintain knowledge of all aspects of forest fire management..."	RA 25.a: "Identify the information and training needs for relevant managers -...- conduct seminars, workshops, short courses and field training sessions..."
P 26: "... People living near forests are often unaware that their activities may cause forest fires and -...- result in the destruction of forest ecosystems..."	RA 26.c: "Prepare and conduct basic education programs -...- to increase their awareness on the importance of the forest environment and the role of fire..."
P 27: "... Communities living near the forest have traditional values which affect their attitude toward the forest as a living entity."	RA 27.a: "Seek the cooperation of the community and spiritual leaders in fire management programs."

Further, the project strategy utilizes the **ITTO guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests**¹¹ following the principles:

¹⁰ ITTO (1997). ITTO Guidelines on Fire Management in Tropical Forests, ITTO Policy Development Series No 6.

¹¹ ITTO (2002). ITTO guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests, ITTO Policy Development Series No 13.

Principles (P)	Recommended Action (RA)
P 1: "Landscape context"	RA 3: "Explore options for restoration and rehabilitation before allocating degraded and secondary forests to non-forest uses".
P 8: "Stakeholder participation"	RA 24: "Create opportunities for the economic empowerment of all forest-dependent local stakeholders."
P 10: "Traditional knowledge"	RA 32: "Ensure that the restoration, management and rehabilitation of degraded and secondary forests build on the body of knowledge held by local stakeholders, including indigenous communities and farmers."
P 31: "Knowledge sharing"	RA 102: "Ensure that information on all aspects of restoration, management and rehabilitation programs is carefully maintained and continuously available to all stakeholders."

The choice of **building on existing fire activities is the most cost-effective as this will allow continuation of the activities after the project intervention.** In this relation, the project works in close collaboration with a major ongoing fire project in the country, the Wildfire Management Project in the Transition Zone (WMTZ), which is a 10 – year project supported by the Government of the Netherlands and executed by the Resource Management Support Center (RMSC) of the Forestry Commission. The project will provide above-mentioned technical assistance while the RMSC will be in charge of implementing activities in the field in accordance with the WMTZ activities.

The research components will be carried out in close collaboration with the Forestry Research Institute of Ghana (FORIG), which is the research body of the Forestry Commission of Ghana and has a strong proven background and competence on conducting studies in various forestry issues. This organization will be in charge of the project activities in Ghana in terms of overall coordination.

2.4 Target beneficiaries

- Rural communities in Ghana are the main target beneficiaries. This includes different groups, such as community based organizations and women's associations who will be empowered and trained in different technical aspects of fire and natural resources management.
- Traditional Authorities (stools) are other beneficiaries through increased level of knowledge as well as increased power over fire management activities in the communities.
- District Assemblies and fire volunteers will benefit from the project through training to meet their respective roles in community based fire management. In addition, their workload will be released through improved community involvement in fire prevention activities.
- The communities will benefit due rehabilitated lands while the Government of Ghana will benefit indirectly due to the increased timber yields.

The dissemination of results will be done through yearly stakeholder workshops as well as awareness raising campaigns at the village level. The results of different studies will be disseminated among relevant bodies in form of publications, e-mails and web page.

The beneficiaries have been consulted during the review that was conducted on fire management strategies and practices in Ghana. Further, representatives of the beneficiaries were attending the pre-project stakeholder workshop and their comments were taken into account during the group discussions. The Ghanaian project preparation group (see Annex K) that was formulated during the stakeholder workshop has linkages to the different stakeholders through their daily activities in the field and therefore comprehensively reflects the different points of view from the field to the governmental agencies. A comprehensive peer review for this project proposal was organized in early November 2003 with comments from various Ghanaian stakeholders.

2.5 Technical and scientific aspects

The fire management and restoration activities will follow the ITTO guidelines on fire management in tropical forests as well as the ITTO guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests as indicated in paragraph 2.3 above.

The project will network with other ongoing fire and restoration projects and will closely collaborate with existing partnerships, such as the TNC/WWF/IUCN Global Fire Partnership and the Global Partnership on Forest Landscape Restoration.

Expertise of Ghanaian research organizations, such as FORIG, will be enhanced by drawing on relevant IUCN commissions, such as the Commission on Ecosystem Management (CEM) as well as on work of highly respected authorities such as Hawthorne¹² on fire damage and forest regeneration in Ghana. In addition, results of a project "FireFight South-East Asia" will be utilized as appropriate in the project activities¹³.

The results of the previous ITTO -funded forest fire project have been taken into account by including aspects from the « Manual of procedures forest resource management planning in the HFZ » as appropriate. The major ongoing forest fire related projects in the country have been consulted throughout the project formulation in order to avoid overlap and duplication. Collaboration with fire-related projects is a key element of the project implementation strategy.

The post-fire rehabilitation will be based on existing literature and scientific work in the field, such as Lamb and Gilmour (2003)¹⁴. The rehabilitation will aim at re-establishing the productivity of the original land. This might include planting and introducing original as well as new species into the degraded lands as most appropriate in economic and ecological terms.

- Firstly, the project will concentrate on examining appropriate species for planting as identified by the local communities. The choice of species will be facilitated by a fire ecologist who will introduce the different choices of plants depending on what the desired result will be (i.e. enhanced biodiversity, improving soil fertility or providing economic goods).
- Secondly, the project will develop rehabilitation tools and practices. The type of intervention will be chosen between passive restoration, enrichment planting, direct seedling, scattered tree plantings, close-spaced plantings using limited number of species and intensive ecological reconstruction using dense plantings of many species. The choice of the intervention will be made after a study by an international fire ecologist of the sites to be rehabilitated and consultation with the local communities on methods that best suit for their needs.
- The next step is to conduct pilot trials with species and methods as identified with the fire ecologist as well as the local communities. At the end of the project, the results of the pilot trials will be disseminated among different stakeholders with the intention that the successful approaches be duplicated in other fire degraded areas.

2.6 Economic aspects

The project's economic benefits will be felt at two levels:

- Long-term benefits on Ghana's GDP due to increased timber revenues, and
- Immediate economic benefits to the rural communities due to the improved livelihoods.

To give an example of the importance of forestry sector to Ghana's national economy, in 1994 timber exports contributed 18 percent to total export earnings of Ghana. In 1990, the overall contribution of

¹² Hawthorne, W. D. (1994). Fire Damage and Forest Regeneration in Ghana, ODA Forestry Series No 4.

¹³ Bibliographic references: Simorangkir D. & Sumantri (2002). A Review of Legal, Regulatory and Institutional Aspects of Forest and Land Fires in Indonesia; Abdullah A. (2002). A Review and Analysis of Legal and Regulatory Aspects of Forest Fires in South East Asia; Karki S. (2002). Community Involvement in and Management of Forest Fires in South East Asia; Guyon A., Simorangkir D. (2002). The Economics of Fire Use in Agriculture and Forestry – A Preliminary Review for Indonesia. For more references, see (www.pffsea.org/frame1.asp?fl=publication.htm).

¹⁴ Lamb D., Gilmour D. (2003). Rehabilitation and Restoration of Degraded Forests, IUCN, Gland, Switzerland.

the forestry sector to GDP was 5.1 percent. In 1995, timber exports alone contributed US\$ 230 million which was 11 percent total export earnings. Export earnings from Non-Timber Forest Products (NTFPs) are rising steadily and constitute a new area of employment for Ghanaians.¹⁵

In addition to the economic aspects, improved livelihoods through reduced number of uncontrolled fires have socioeconomic as well as cultural value, which are hard to measure in any currency.

2.7 Environmental aspects

The project will concentrate on the transition zone, with an emphasis on four districts to be chosen among the seven districts as illustrated in Table 3. All of the districts rank high in classification of environmental condition score indicating very bad environmental degradation¹⁶.

The project will have positive impacts on the environment conditions of these districts through increased vegetation cover and genetic diversity, improved soil fertility and recovery of original species composition of forests.

2.8 Social aspects

The negative social effects of forest fires are felt most at the community level. A study of five communities in Ghana adjacent to forest reserves¹⁷ reveals the different negative effects of forest fires. Within these communities, encroachment by the acheampong weed (*Chromolaena odorata*) and elephant grass (*Panicum maximum*) sees them becoming the dominant species within the forest areas. People linked this change in vegetation to increased poverty and malnutrition due to the fact that these vegetation prevented the growth of different food crops apart from cassava thus promoting an increasingly dependence on 'cassava-based' diet as a result of reduced alternatives. In these villages, fire has also resulted in the destruction of cocoa farms, without the means for re-establishment. The communities also stated changes in rainfall patterns and adsorptive capacity of soils as well as increased effects of the drying north-easterly winds from the Sahara (harmattan) as a result of the reduced forest cover due to fire. Farmers were also very aware of the risk to life, property and standing crops from fire. No one in these communities had insurance to cover fire loss, and so a devastating fire can result in the complete loss of livelihoods.

The project's target districts as proposed by FORIG are presented in Table 3 below among which four to five target districts will be identified at the beginning of the project. The communities in these districts get their livelihoods mostly from farming. The level of fire usage for livelihood is high from 73.5% to 87% thus indicating a high risk for anthropogenic fires. All of the districts have a fire volunteer group to some extent, but levels of activity vary from 17.5% to 57.5% indicating some type of problem in their proper functioning.

Table 3. Information on the project's target districts¹⁸.

District	Forest reserve	Area	Vegetation zone	Communities	Population	Major occupation	Level of fire usage in livelihood	Fire volunteer presence and activeness
Kumawu	Boumfum	114 km ²	DS	Dagomba Mamprusi James Town Temate	550 450 150 1700	Farming	69.5	22.5
Begoro	Worobong South (Akim Portion)	106 km ²	DS	Besebuom Ahomasu Kumfere Busanko	600 400 100	Farming	86	57.5

¹⁵ FAO (1997). Update on sustainable forest management and certification. Example from a developing country – Ghana. Advisory committee on paper and wood products, thirty-eight session, Rome 23-25 April 1997.

¹⁶ Rf. Table 3. Data from Forestry Research Institute of Ghana (FORIG), October 2003

¹⁷ Orgle, TK (2003). A Review of Forest Fire Management Practices and Strategies in Ghana. Pre-Project report prepared as a part of IUCN/WWF FireFight Initiative.

¹⁸ Data from Forestry Research Institute of Ghana (FORIG), October 2003.

Mpraeso	Worobong North (Kwahu Portion)	28 km ²	DS	Maiso Osuaban Oworobon-Atifi Odumasi Twewaa Aworoso Oframase	1,500 600 500 200 200 60 500	Farming	87	45
Dormaa Ahenkro	Mpameso	323 km ²	MSNW	Nsuhia Kokoorasu Diabakrom	5,000 800 6,000	Farming	78	17.5
Offinso	Afram H'Waters	201 km ²	DSFZ	Beme Boayaase Yamoakrom Asuboi Agogo	700 600 400 300 300	Farming	73.5	47.5
Juaso	Bandai Hills	161 km ²	DSFZ	Kowereso Aberewapong Bebome Ofeikrom Nyamebekyere	1,200 732 300 250 200	Farming	85.7	27.5
Bechem	Bosomkese	138 km ²	MSNW	Yamfo	1,500	Farming	79.4	2.5

DS = dry semi-deciduous

DSFZ = dry semi-deciduous fire zone

MSNW = moist semi-deciduous forest north west subtype

Representatives from these districts participated at the pre-project workshop held in Kumasi in May 2003 and contributed actively during the group work sessions, which formed the resulting project proposal.

Being the main target group of the project, the districts and communities will be strongly involved throughout the project cycle. This will be ensured through different activities, especially those related to outputs (rf. Chapter 3 below). Since the project builds on existing structures and aims at empowering local communities they should be able to carry on fire management activities after the project intervention. Other project activities, such as promoting good governance at the local level, will provide tools for the local communities to use in these ongoing efforts.

2.9 Risks

It is assumed that the Government of Ghana remains responsive to the threat of forest fires in the country and that the corresponding legislative and economic measures are taken. If the economic development in the country fails in the coming years one might risk of displacement of funds from the environmental field to other activities, such as more direct poverty alleviation.

An enabling environment for community participation is essential to the implementation of the project activities. Therefore, complications in the governmental - community level relations may compromise the fulfillment of the project activities. This risk is minimized by working through already existing governmental structures, which already have a good working relationships and experience in implementing activities at the community level.

3 Outputs

Specific Objective: *Uncontrolled forest fires are reduced in the target communities' forests thus increasing their productive capacity*

Output 1: Relationship between utilization of resources by rural communities and effective fire management determined

Although the relationship between resource utilization by rural communities and fire has been part of several studies in Ghana the review of past and present fire management activities in the country as well as the discussion during the workshop makes it evident that a lot of this information is contradictory and not agreed with. For example, estimates

of the damage that fire causes the national economy are often cited, but no figures exist for the loss of revenues and livelihoods of rural communities caused by fire. Output 1 is seeking this information, which will help in promoting the importance of community involvement in fire management, especially among decision makers. This will support recognition and promotion of the role of rural communities in effective fire management policies and strategies.

Output 2: Roles and responsibilities of key stakeholders in fire management determined

Though various fire projects have been implemented over the last decade, the problem of fires remains an important issue in Ghana and a large portion of forests is lost yearly because of uncontrolled fires. The lack of coordination between the various projects on the one hand and among the various agencies and stakeholders - especially between the rural and governmental agencies - on the other hand, has been clearly pointed out during the stakeholder workshop. Output 2 addresses this fundamental problem by clarifying roles and responsibilities of stakeholders in fire management and disseminating the results through stakeholder workshops and training sessions. This project is building on the currently ongoing fire project (WMTZ) so that the two projects work on the same problem but that this project provides the technical support to the WMTZ, which – in turn - has the capability to act efficiently at the village level and therefore takes responsibility especially for field activities.

Output 3: Mechanisms for effective community based fire management developed and implemented

The lack of awareness and education was mentioned a number of times as being the main constraint to successful fire management especially at the rural level. This output addresses this firstly, by building awareness of the existing policies and laws and secondly, by facilitating the creation of the missing elements, such as a manual of procedures for community based fire management.

Output 4: Fire degraded areas rehabilitated by using valuable species as determined by the local communities

This output arises from a gap noticed by the project formulators. Though projects have already worked on the fire problem in Ghana, one important aspect, restoration of the fire degraded lands, has been almost completely neglected. Due to the community approach that this project has, the restoration activities will be done in close collaboration with the local communities and in this way further add to the alleviation of rural poverty.

Output 5: Gaps in existing legislation on community based fire management identified and disseminated

Even though a detailed analysis of the institutional framework is beyond the scope of this project, Output 5 aims at clarifying legal and institutional gaps related to community involvement in fire management – and in particular the question of land-use and land ownership and to promote legislation reforms in fire related policies at local and national level

4 Activities

4.1 Output 1

Output 1 *Relationship between utilization of resources by rural communities and effective fire management determined*

Activity 1.1: To collect socioeconomic and environmental baseline data in pilot communities
The activity allows us to measure the effect of the project at its end.

Activity 1.2: To inventory key natural resources used by the local communities

Activity 1.3: To study the impacts of fire on the key natural resources and on the livelihood of rural communities

Activity 1.4: To evaluate effective community fire management strategies on key natural resources

During the stakeholder workshop it was noted that there are few communities with successful fire management schemes whereas the neighboring community may be totally devastated by fires. It is crucial to study what leads to the success of certain communities in fire management and distribute this information among other stakeholders.

Activity 1.5: To publish and disseminate the results of the studies

4.2 Output 2

Output 2 *Roles and responsibilities of key stakeholders in fire management in Ghana determined*

Activity 2.1: To identify all relevant stakeholders in fire management and determine their respective roles and responsibilities

Activity 2.2: To organize stakeholder workshops

Activity 2.3: To train stakeholders to meet their roles and responsibilities in fire management

4.3 Output 3

Output 3 *Mechanisms for effective community based fire management developed and implemented*

Activity 3.1: To inform rural communities about existing fire policies and laws

Activity 3.2: To develop a manual of procedures for community based fire management

Activity 3.3: To facilitate the implementation of community based fire management

Activity 3.4: Awareness creation on radio, local bulletins, and other means

4.4 Output 4

Output 4 *Fire degraded areas rehabilitated by using valuable species as determined by the local communities*

Activity 4.1: To identify appropriate species for rehabilitation by local communities

Activity 4.2: To develop tools and practices from existing, and if necessary, new research into fire ecology

Activity 4.3: To conduct pilot trials with the appropriate species at the local communities

Activity 4.4: To disseminate knowledge on the suitable rehabilitation methods of degraded lands

4.5 Output 5

Output 5 Gaps in existing legislation on community based fire management identified and disseminated and legislation reforms are promoted

Activity 5.1: To review existing legislative framework for community based fire management, including land-use and property rights

Activity 5.2: To validate existing legislative gaps and problems through an expert workshop

Activity 5.3: To promote legislation reform based on the validation of existing legislative gaps

Activity 5.4: To disseminate main findings and results

5 Logical Framework Worksheets

Project Element	Indicators	Means of Verification	Assumptions
<p><u>Development objective</u> Efficient community based forest fire management contributes to restoration and sustainable management of timber and other products in Ghanaian fire prone areas</p>	<p>Harmful anthropogenic burning of primary and secondary forest in Ghana reduced by 50 % of the average for the period 1993-2003 by 2013</p> <p>Ghana puts in place policies and legislation and allocates additional resources to address underlying causes of harmful forest fires by 2013.</p> <p>Revenues from timber and other forest products from fire prone zones increased by 20% of the average for the period 1993-2003 by 2013.</p>	<p>Press reports.</p> <p>Reports of international organisations on rural development.</p> <p>NGOs and other secondary sources.</p> <p>Timber export reports.</p>	<p>Ghana's national legislatures respond to public and international concern.</p> <p>Necessary funds will be available for an integrated response to harmful forest fires.</p>
Specific Objective			
<p><u>Specific Objective</u> Uncontrolled forest fires are reduced in the target communities' forests thus increasing their productive capacity</p>	<p>50% of local community members partake in fire management activities.</p>	<p>Field visits</p> <p>Workshop reports.</p> <p>MoUs.</p> <p>Training workshop reports.</p> <p>Community based fire management activities.</p> <p>List of participants and people involved with various activities.</p>	<p>The Government of Ghana remains responsive to the need for action to prevent and control harmful forest fires and rehabilitation of degraded forests lands.</p>

Project Element	Indicators	Means of Verification	Assumptions
<u>Output 1</u> Relationship between utilization of resources by rural communities and effective fire management determined	The impact of effective fire management on rural resource utilization determined.	Research reports including case studies from the communities and villages.	Data on rural resource utilization is available at the village level. Communities remain responsive to the need for action to prevent and control harmful forest fires.
<u>Output 2</u> Roles and responsibilities of key stakeholders in fire management determined	Awareness and capacity of stakeholders to implement their roles and responsibilities in fire management enhanced.	Field visits. Stakeholder workshop reports. Signed MoUs between different stakeholders.	Key stakeholders in Ghana willing to participate in process.
<u>Output 3</u> Mechanisms for effective community based fire management developed and implemented	Effective community based fire management activities in place.	Field visits. Manual of procedures for community based fire management developed. Posters, bulletins, radio programs.	Community/government relations in Ghana provide an enabling environment for enhancing and utilizing traditional fire management skills and practices.
<u>Output 4:</u> Fire degraded areas rehabilitated by using valuable species as determined by the local communities	At least four pilot areas of 1 ha are each rehabilitated using 100% indigenous species.	Pilot trials with 100% local species. Reports including information on suitable restoration methods.	Communities remain willing to rehabilitate degraded lands. Good quality local species for planting are available.
<u>Output 5:</u> Gaps in existing legislation on community based fire management identified and disseminated and legislation reforms are promoted	Fire related policies and legislation are revised and reformed to support effective community based fire management	Reports identifying inconsistencies in the legislation on fire or the implementation of policies. Reforms in fire related policies and legislation	Basic data on legislation and policies is available. Local and national key actors are responsive to the reform process

6 Work Plan

		Jan-Dec 2005												Jan-Dec 2006												Jan-Dec 2007													
<i>OUTPUTS/ACTIVITIES</i>	<i>Respons.</i>	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D		
OUTPUT 1: Relationships between rural resource utilization and effective fire management are determined																																							
1.1 Collection of socioeconomic and environmental baseline data in pilot communities	FORIG, RMSC																																						
1.2 Inventory of the key natural resources used by the local communities	FORIG																																						
1.3 Study on the impact of fire on the key natural resources	FORIG																																						
1.4 Evaluation of effective community fire management strategies on key natural resources	FORIG																																						
1.5 Dissemination of the results	FORIG, IUCN																																						
OUTPUT 2: Roles and responsibilities of stakeholders in fire management determined																																							
2.1 Identification of all relevant stakeholders and determining their roles and responsibilities	FORIG, RMSC																																						
2.2 Organization of stakeholder workshops	FORIG, RMSC																																						
2.3 Training of stakeholders to meet their roles and responsibilities in fire management	RMSC, FORIG, IUCN																																						
OUTPUT 3: Mechanisms for effective community based fire management developed and implemented																																							
3.1 Education of communities on existing fire policies and laws	RMSC, IUCN																																						
3.2 Development of manual of procedures for community based fire management	FORIG, RMSC																																						
3.3 Facilitation of local communities to implement the manual of procedures for community based fire management	RMSC, FORIG																																						
3.4 Awareness creation on radios, local bulletins etc.	RMSC, FORIG																																						

7 Budget

7.1 Overall Project Budget by Activities

		ITFO	Ghana	IUCN				Quarter Year	GRAND
OUTPUTS/ACTIVITIES - Activity Based Expenses	10. Project Personnel	20. Sub- Contracts	30. Duty Travel	40. Capital Items	50. Consumable Items	60. Miscellan eous		TOTAL	
O1 Relationships between rural resource utilization and effective fire management are determined									
A1.1 Collection of socioeconomic and environmental baseline data in pilot communities		4,500	2,400				Q1/Q2, 2005	6,900	
	1,600		600					2,200	
A1.2 Inventory of the key natural resources used by the local communities	10,000	4,500	5,583				Q3/Q4, 2005	20,083	
	1,600		800					2,400	
	1,000							1,000	
A1.3 Study on the impact of fire on the key natural resources	10,000	4,500	5,583				Q1/Q2, 2006	20,083	
	1,600		800					2,400	
	1,000							1,000	
A1.4 Evaluation of effective community fire management strategies on key natural resources		4,500	2,400				Q3/Q4, 2006	6,900	
	1,600		600					2,200	
								0	
A1.5 Dissemination of the results	1,500				10,000		Q1, 2007	11,500	
								0	
								0	
subtotal 1	21,500	18,000	15,966		10,000			65,466	
	6,400		2,800					9,200	
	2,000							2,000	
								76,666	

ITTO	Ghana	IUCN
------	-------	------

O2	Roles and responsibilities of stakeholders in fire management determined	10. Project Personnel	20. Sub-Contracts	30. Duty Travel	40. Capital Items	50. Consumable Items	60. Miscellaneous	Quarter Year	GRAND TOTAL
A2.1	Identification of all relevant stakeholders and determining their roles and responsibilities	3,000	400	2,400				Q1, 2005	5,800
		400		600					1,000
A2.2	Organization of yearly stakeholder workshops		2,700	4,428			15,000	Q1, 2005	22,128
		2,400							2,400
		2,000							
A2.3	Training of stakeholders to meet their roles and responsibilities in fire management	4,500	2,400	4,000		6,000		Q1, 2005	16,900
		1,200		1,000					2,200
	subtotal 2	7,500	5,500	10,828		6,000	15,000		44,828
		4,000		1,600					5,600
		2,000							2,000
									52,428

ITTO	Ghana	IUCN
------	-------	------

O3	Mechanisms for effective community based fire management developed and implemented	10. Project Personnel	20. Sub-Contracts	30. Duty Travel	40. Capital Items	50. Consumable Items	60. Miscellaneous	Quarter Year	GRAND TOTAL
A3.1	Education of communities on existing fire policies and laws	4,000	1,600	4,000		6,000		Q1/Q2, 2005	15,600
		800		1,000					1,800
A3.2	Development of manual of procedures for community based fire management	18,000	1,600	5,583				Q1/Q2, 2005	25,183
		800		800					1,600
		1,000							1,000
A3.3	Facilitation of local communities to implement the manual of procedures for community based fire management	4,000	1,600	4,000		6,000		Q1/Q2, 2005	15,600
		800		1,000					1,800
A3.4	Awareness creation on radios, local bulletins etc.	4,000	1,600	4,000		7,000		Q1/Q2, 2005	16,600
		800		1,000					1,800
	subtotal 3	30,000	6,400	17,583		19,000			72,983
		3,200		3,800					7,000
		1,000							1,000
									80,983

O4	Fire degraded areas rehabilitated by using valuable species as determined by the local communities	10. Project Personnel	20. Sub-Contracts	30. Duty Travel	40. Capital Items	50. Consumable Items	60. Miscellaneous	Quarter Year	GRAND TOTAL
A4.1	Identification of appropriate species for rehabilitation by local communities	10,000	4,500	6,766				Q3/Q4, 2005	21,266
		1,600		800					2,400
		2,000							2,000
A4.2	Development of tools and practices from existing, and if necessary, new research into fire ecology	10,000						Q4, 2005/Q1, 2006	10,000
		1,000							1,000
A4.3	Conducting pilot trials with the appropriate species at the local communities		3,600	2,400		10,000		Q1/Q2, 2006	16,000
		800		600	2,000				3,400
A4.4	Dissemination of knowledge on the suitable rehabilitation methods of rehabilitated lands	3,000				10,000		Q3, 2006	13,000
		1,000							1,000
	subtotal 4	23,000	8,100	9,166		20,000			60,266
		2,400		1,400	2,000				5,800
		4,000							4,000

70,066

O5	Gaps in existing legislation on community based fire management identified and disseminated	10. Project Personnel	20. Sub-Contracts	30. Duty Travel	40. Capital Items	50. Consumable Items	60. Miscellaneous	Quarter Year	GRAND TOTAL
A5.1	Review of existing legislative framework for community based fire management, including land-use	5'000		2'045			5'000	Q2/Q3, 2006	12'045
									0
		1'000							1'000
A5.2	Validation of existing legislative gaps during a workshop		1'100					Q4, 2006	1'100
									0
		550							550
									0
A5.3	Promotion of legislation reform based on the validation of existing legislative gaps	3'000						Q2/Q3, 2007	3'000
									0
									0
A5.4	Dissemination of the results	4'000				10'000		Q3, 2007	14'000
									0
		1'000							1'000
	subtotal 5	12'000	1'100	2'045		10'000	5'000		30'145
									550
									2'000
									32'695

ITTO	Ghana	IUCN
------	-------	------

NON-ACTIVITY BASED EXPENSES	10. Project Personnel	20. Sub-Contracts	30. Duty Travel	40. Capital Items	50. Consumable Items	60. Miscellaneous	Quarter Year	GRAND TOTAL
(1) Project coordination and management							2005, 2006, 2007	
	75'000	32'400	14'890	30'000				152'290
	13'500							13'500
(2) Premises (40)							2005, 2006, 2007	
				6'000				6'000
(3) Fuels and Utilities (50)							2005, 2006, 2007	
					15'000			15'000
(4) Office supplies (50)							2005, 2006, 2007	
				7'000	12'000			19'000
					1'500			1'500
					2'400			2'400
(5) Steering committee (60, 40)							2005, 2006, 2007	
						3'000		3'000
				750				0
(6) Internal evaluation (30)							Q4, 2005	
			2'000					2'000
(7) Contingencies (60)							2005, 2006, 2007	
						26'264		26'264
subtotal 6	75'000	32'400	16'890	37'000	27'000	29'264		217'554
				6'750	1'500			7'500
	13'500				2'400			15'900
SUBTOTAL ITTO	169'000	71'500	72'478	37'000	92'000	49'264		491'242
SUBTOTAL GHANA	16'550	0	9'600	8'750	1'500	0		36'400
SUBTOTAL IUCN	24'500	0	0	0	2'400	0		26'900
TOTAL	210'050	71'500	82'078	45'750	95'900	49'264		554'542

7.2 Consolidated Total and Yearly Project budget

	TOTAL	YEAR 1 2005	YEAR 2 2006	YEAR 3 2007
10 Project Personnel				
11. National Experts	5'850	2'800	2'650	400
12. National Consultants	44'000	12'500	23'500	8'000
13. Other labour	10'700	4'400	5'100	1'200
14. Fellowships and Training				
15. International Experts (IUCN Staff)	99'500	34'167	33'167	32'167
16. International Consultants	50'000	30'000	20'000	
19. Component Total	210'050	81'067	84'417	41'767
20 Sub-contracts				
21. Sub-contract with FORIG	71'500	28'000	30'200	13'300
29. Component Total	71'500	28'000	30'200	13'300
30 Duty Travel				
31. Daily Subsistence Allowance	38'078	16'092	17'244	4'743
32. International and Regional Travel	15'200	5'600	7'200	2'400
33. Transport Costs	28'800	12'400	13'900	2'500
39. Component Total	82'078	34'092	38'344	9'643
40 Capital Items				
41. Premises	6'750	2250	2250	2250
42. Land	2'000		2'000	
43. Vehicles	30'000	30'000		
44. Capital Equipment	7'000	7'000		
49. Component Total	45'750	39'250		
50 Consumable Items				
51. Raw materials	10'000		10'000	
52. Spares				
53. Fuels and Utilities	15'000	5'000	5'000	5'000
54. Office Supplies	15'900	5'300	5'300	5'300
55. Publication and education	55'000	8'000	11'500	35'500
59. Component Total	95'900	18'300	31'800	45'800
60 Miscellaneous				
61. Sundry	20'000	5'000	10'000	5'000
62. Auditing				
63. Steering Committee	3'000	1'000	1'000	1'000
64. Contingencies	26'264	8'755	8'755	8'755
69. Component Total	49'264	14'755	19'755	14'755
SUBTOTAL 1	554'542	215'463	204'515	125'264
70 Executing Agency Management Cost				
71. Executing Agency Management Cost = 15% of subtotal 1	82'731	27'577	27'577	27'577
79. Component Total	82'731			
80 ITTO Monitoring, Evaluation and Administration				
81. Monitoring and Review Costs	30'000			
82. Evaluation Costs (ex-post evaluation)				
SUBTOTAL 2	667'273			
83. Programme Support Costs =8% of (subtotal 1 + subtotal 2) of the total consolidated budget	41'699			
89. Component Total	41'699			
90 Refund of Pre-Project Costs				
91. Refund of Pre-Project Costs = 1/3 of the Pre-Project Total budget per IUCN Regional Project	22'953			
99. Component Total	22'953			
100 GRAND TOTAL	731'925			

7.3 Yearly Project Budget – ITTO

ITTO CONTRIBUTION

	Total	Year 1	Year 2	Year 3
10. Project Personnel	169'000	67'500	68'500	33'000
20. Subcontracts	71'500	28'000	30'200	13'300
30. Duty travel	72'478	29'958	33'710	8'809
40. Capital items	37'000	37'000	0	0
50. Consumable items	92'000	17'000	30'500	44'500
60. Miscellaneous	49'264	14'755	19'755	14'755
Subtotal 1	491'242	194'213	182'665	114'364
80. ITTO Monitor., Evaluat. and Administ. Costs				
81. Monitoring and Review Costs (effective estimation)	30'000			
82. Evaluation Costs (effective estimation)				
Subtotal 2	521'242			
83. Programme Support Costs =8% of (subtotal 1 + subtotal 2) of the total consolidated budget	41'699			
90. Refund of Pre-Project Costs	22'953			
ITTO TOTAL	585'894			

7.4 Yearly Project Budget – Government of Ghana

Ghana Contribution

	Total	Year 1	Year 2	Year 3
10. Project Personnel	16,550	7,200	7,750	1,600
20. Subcontracts	-	-	-	-
30. Duty travel	9,600	2,733	4,633	2,233
40. Capital items	8,750	2,250	4,250	2,250
50. Consumable items	1,500	500	500	500
60. Miscellaneous	-	-	-	-
70. Executing Agency Management Costs (15% of Total of Overall Project Budget by Activity)	27,577	9,192	9,192	9,192
GHANA TOTAL	63,977	21,876	26,326	15,776

7.5 Yearly Project Budget – IUCN

IUCN Contribution

	Total	Year 1	Year 2	Year 3
10. Project Personnel	24,500	9,167	8,167	7,167
20. Subcontracts	-	-	-	-
30. Duty travel	-	-	-	-
40. Capital items	-	-	-	-
50. Consumable items	-	-	-	-
54. Office supplies	2,400	800	800	800
60. Miscellaneous	-	-	-	-
70. Executing Agency Management Costs (15% of Total of Overall Project Budget by Activity)	55,154	18,385	18,385	18,385
IUCN TOTAL	82,054	9,967	8,967	7,967

7.6 Consolidated Yearly Project Budget – ITTO

	TOTAL	YEAR 1 2005	YEAR 2 2006	YEAR 3 2007
10 Project Personnel				
11. National Experts				
12. National Consultants	44'000	12'500	23'500	8'000
13. Other labour				
14. Fellowships and Training				
15. International Experts (IUCN Staff)	75'000	25'000	25'000	25'000
16. International Consultants	50'000	30'000	20'000	
19. Component Total	169'000	67'500	68'500	33'000
20 Sub-contracts				
21. Sub-contract with FORIG	71'500	28'000	30'200	13'300
29. Component Total	71'500	28'000	30'200	13'300
30 Duty Travel				
31. Daily Subsistence Allowance	38'078	16'092	17'244	4'743
32. International and Regional Travel	15'200	5'600	7'200	2'400
33. Transport Costs	19'200	8'267	9'267	1'667
39. Component Total	72'478	29'958	33'710	8'809
40 Capital Items				
41. Premises				
42. Land				
43. Vehicles	30'000	30'000		
44. Capital Equipment	7'000	7'000		
49. Component Total	37'000	37'000		
50 Consumable Items				
51. Raw materials	10'000		10'000	
52. Spares				
53. Fuels and Utilities	15'000	5'000	5'000	5'000
54. Office Supplies	12'000	4'000	4'000	4'000
55. Publication and education	55'000	8'000	11'500	35'500
59. Component Total	92'000	17'000	30'500	44'500
60 Miscellaneous				
61. Sundry	20'000	5'000	10'000	5'000
62. Auditing				
63. Steering Committee	3'000	1'000	1'000	1'000
64. Contingencies	26'264	8'755	8'755	8'755
69. Component Total	49'264	14'755	19'755	14'755
SUBTOTAL 1	491'242	194'213	182'665	114'364
70 Executing Agency Management Cost				
71. Executing Agency Management Cost = 15% of subtotal 1				
79. Component Total	0			
80 ITTO Monitoring, Evaluation and Administration				
81. Monitoring and Review Costs	30'000			
82. Evaluation Costs (ex-post evaluation)				
SUBTOTAL 2	521'242			
83. Programme Support Costs =8% of (subtotal 1 + subtotal 2) of the total consolidated budget	41'699			
89. Component Total	41'699			
90 Refund of Pre-Project Costs				
91. Refund of Pre-Project Costs = 1/3 of the Pre-Project Total budget per IUCN Regional Project	22'953			
99. Component Total	22'953			
100 GRAND TOTAL	585'894			

7.7 Consolidated Yearly Project Budget – Government of Ghana

	TOTAL	YEAR 1 2005	YEAR 2 2006	YEAR 3 2007
10 Project Personnel				
11. National Experts	5,850	2,800	2,650	400
12. National Consultants				
13. Other labour	10,700	4,400	5,100	1,200
14. Fellowships and Training				
15. International Experts (IUCN Staff)				
16. International Consultants				
19. Component Total	16,550	7,200	7,750	1,600
20 Sub-contracts				
21. Sub-contract with FORIG				
29. Component Total				
30 Duty Travel				
31. Daily Subsistence Allowance				
32. International and Regional Travel				
33. Transport Costs	9,600	2,733	4,633	2,233
39. Component Total	9,600	2,733	4,633	2,233
40 Capital Items				
41. Premises	6,750	2250	2250	2250
42. Land	2,000		2,000	
43. Vehicles				
44. Capital Equipment				
49. Component Total	8,750	2,250	4,250	2,250
50 Consumable Items				
51. Raw materials				
52. Spares				
53. Fuels and Utilities				
54. Office Supplies	1,500	500	500	500
55. Publication and education				
59. Component Total	1,500	500	500	500
60 Miscellaneous				
61. Sundry				
62. Auditing				
63. Steering Committee				
64. Contingencies				
69. Component Total				
SUBTOTAL 1	36,400	12,683	17,133	6,583
70 Executing Agency Management Cost				
71. Implementing Agency Management Cost = 5% of the total consolidated budget	27,577	9,192	9,192	9,192
79. Component Total	27,577			
80 ITTO Monitoring, Evaluation and Administration				
81. Monitoring and Review Costs				
82. Evaluation Costs (ex-post evaluation)				
SUBTOTAL 2	63,977			
83. Programme Support Costs =8% of (subtotal 1 + subtotal 2) of the total consolidated budget				
89. Component Total	0			
90 Refund of Pre-Project Costs				
91. Refund of Pre-Project Costs = 1/3 of the Pre-Project Total budget per IUCN Regional Project				
99. Component Total	0			
100 GRAND TOTAL	63,977			

7.8 Consolidated Yearly Project Budget – IUCN

	TOTAL	YEAR 1 2005	YEAR 2 2006	YEAR 3 2007
10 Project Personnel				
11. National Experts				
12. National Consultants				
13. Other labour				
14. Fellowships and Training				
15. International Experts (IUCN Staff)	24,500	9,167	8,167	7,167
16. International Consultants				
19. Component Total	24,500	9,167	8,167	7,167
20 Sub-contracts				
21. Sub-contract with FORIG				
29. Component Total				
30 Duty Travel				
31. Daily Subsistence Allowance				
32. International and Regional Travel				
33. Transport Costs				
39. Component Total				
40 Capital Items				
41. Premises				
42. Land				
43. Vehicles				
44. Capital Equipment				
49. Component Total				
50 Consumable Items				
51. Raw materials				
52. Spares				
53. Fuels and Utilities				
54. Office Supplies	2,400	800	800	800
55. Publication and education				
59. Component Total	2,400	800	800	800
60 Miscellaneous				
61. Sundry				
62. Auditing				
63. Steering Committee				
64. Contingencies				
69. Component Total				
SUBTOTAL 1	26,900	9,967	8,967	7,967
70 Executing Agency Management Cost				
71. Executing Agency Management Cost = 10% of the total consolidated budget	55,154	18,385	18,385	18,385
79. Component Total	55,154			
80 ITTO Monitoring, Evaluation and Administration				
81. Monitoring and Review Costs				
82. Evaluation Costs (ex-post evaluation)				
SUBTOTAL 2	82,054			
83. Programme Support Costs =8% of (subtotal 1 + subtotal 2) of the total consolidated budget				
89. Component Total	0			
90 Refund of Pre-Project Costs				
91. Refund of Pre-Project Costs = 1/3 of the Pre-Project Total budget per IUCN Regional Project				
99. Component Total	0			
100 GRAND TOTAL	82,054			

PART III: OPERATIONAL ARRANGEMENTS

1 Management Structure

The project will be implemented in collaboration with three major agencies. The executing agency will be IUCN – The World Conservation Union. At the national level, the Forestry Research Institute of Ghana (FORIG) will coordinate project activities and carry out most of the research work. Implementation of the activities in the field will be under the responsibility of the Resource Management Support Center (RMSC) of the Forestry Commission of Ghana. The two latter organizations are based in Kumasi. The organization chart below (Figure 3) shows the responsibilities of the three agencies.

National and international consultants will be recruited on a competitive basis to carry out various project components.

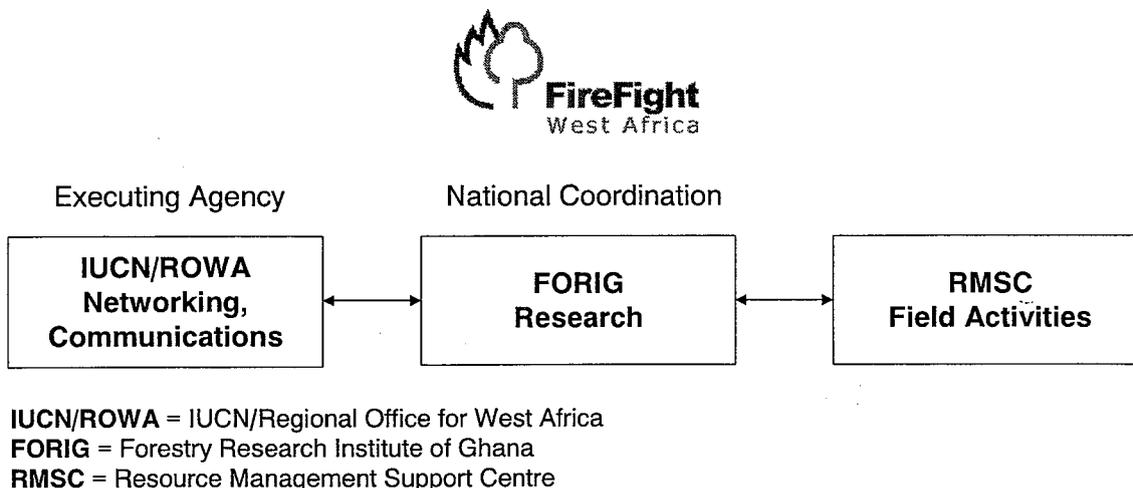


Figure 4. Organization chart

A project steering committee will be constituted with representatives from:

- The Ministry of Lands and Forestry
- The Ministry of Agriculture
- The Ministry of Environment and Science
- The Ministry of Interior
- The Forestry Commission
- Traditional Authorities
- NGO Representatives
- Representatives from major ongoing forest projects in the country
- Representative from FORIG
- Representative from the Institute for Renewable Natural Resources.
- Representative from IUCN.

The steering committee will meet once a year throughout the project execution.

2 Monitoring, Reporting and Evaluation

(a) Project Progress Report

The project coordinator will be responsible for preparing project process reports minimum four weeks before each ITTO monitoring visit and two months before ITTC sessions.

(b) Project Completion Report

The project coordinator will be responsible for compiling the project completion report and submit it to ITTO within three months of the project completion.

(c) *Project Technical Report*

Project technical reports will be prepared by project staff responsible for specific technical activities, peer reviewed by other project staff and submitted to ITTO by the project coordinator. Technical reports are expected from outputs 1, 4, and 5. In addition, a development of manual of procedures for community based fire management is expected from output 2 and circulated among various stakeholders in Ghana for review and comment. All technical reports will be disseminated at the national, sub-regional as well as international level in order to share lessons learnt by this project with other actors in forest fire management.

(d) *Monitoring, Review and Steering Committee's visits*

ITTO monitoring visits will be carried out every 12 months, a total of 3 visits throughout the project cycle. An internal monitoring and self-evaluation for the project will be carried out after 11 months of activities and will be conducted by the IUCN West African Regional Office responsible for monitoring and evaluation. The results of the self-evaluation will be utilized in fine-tuning the activities foreseen for the rest of the project cycle. The project steering committee will meet once a year to discuss project technical details as well as to approve certain documents, such as the yearly plan of operations (YPO).

(e) *Evaluation*

Mid-term evaluations will be carried out if the ITTO monitoring mission sees it necessary. The project will be subject to *ex-post* evaluation in accordance with Guidelines established by the ITTO Manual of Project Monitoring, Review and Evaluation and the IUCN Monitoring and Evaluation Unit.

IUCN is subjected to an external audit in a yearly basis.

The following table (Table 4) indicates project monitoring, reporting and evaluation activities chronologically:

Table 4. Project monitoring, reporting and evaluation.

Activity	Date	Notes
Disbursement (1 st)	January 2005	
Steering committee meeting (1 st)	April 2005	
Project Progress Report (1 st)	August 2005	By project coordinator
External monitoring mission (1 st)	November 2005	By ITTO
Internal monitoring / self-evaluation	December 2005	By IUCN M&E staff
Steering committee meeting (2 nd)	March 2006	
Project Technical Reports 1 & 2	November 2006	
Project Progress Report (2 nd)	August 2006	By project coordinator
Project Technical Report 3	September 2007	
External monitoring mission (2 nd)	November 2007	By ITTO
Steering committee meeting (3 rd)	March 2008	
Project Progress Report (3 rd)	August 2008	By project coordinator
Project Technical Report 4	November 2007	
External monitoring mission (3 rd)	November 2007	By ITTO
Ex post evaluation	January 2008	By ITTO and IUCN M&E staff
Project Completion Report	February 2008	By project coordinator

3 Future Operation and Maintenance

The project will build on existing structures in Ghana, namely those of FORIG and RMSC. The latter is executing a ten year project on wildfire in the transition zone and it is reasonable to expect that activities will continue after the finalization of this project and that they will collaborate with the local communities on the implementation of the results of the project. FORIG has also continuously carried out activities in the transitional zone and it is expected they will continue research to provide information on any other issues that might arise during the implementation of the project.

Similar activities are foreseen in Côte d'Ivoire under the execution of WWF should the political situation in the country stabilizes. In that case close collaboration between these two neighboring countries will be maintained throughout the project cycle.

PART IV: TROPICAL TIMBER FRAMEWORK

The following tables demonstrate how the project contributes to the Tropical Timber Framework.

Compliance with ITTA 1994 Objectives

The project complies with the following objectives, as set forth in the International Tropical Timber Agreement (ITTA, 1994), *Article 1*:

	Definition	How the project addresses the objective
(c)	To contribute to the process of sustainable development.	The project contributes to the sustainability of Ghanaian forests by reducing the number of uncontrolled fires thus contributing positively to their productivity and biodiversity.
(f)	To promote and support research and development with a view to improving forest management and efficiency of wood utilization as well as increasing the capacity to conserve and enhance other forest values in timber producing tropical forests.	The project has various research components, which aim at producing information for better community fire management as well as alternative livelihood methods for local communities.
(j)	To encourage members to support and develop industrial tropical timber reforestation and forest management activities as well as rehabilitation of degraded forest land, with due regard for the interests of local communities dependent on forest resources.	The project has a component for rehabilitating fire degraded lands as well enhanced community based fire management activities.
(i)	To encourage members to develop national policies aimed at sustainable utilization and conservation of timber producing forests and their genetic resources and at maintaining the ecological balance in the regions concerned, in the context of tropical timber trade.	The project will demonstrate the linkages between rural activities and fires (practice) and identify the gaps in current legislation (policy) providing important information for decision makers and encourage revision of current national policy in terms of fire management, though not working directly on legislation at the national level.

The project is in harmony with the project activities: reforestation and forest management, of the organization as stated in *Article 25.1* of the agreement. Further, it will contribute to the following functions of The Committee of Reforestation and Forest Management as stated in *Article 27*:

	Definition	How the project addresses the objective
(b)	Encourage the increase of technical assistance and transfer of technology in the fields of reforestation and forest management to developing countries.	The project has various research components where the most distinguished forest and fire ecologists at the international level will provide input to the project beneficiaries.
(e)	Facilitate the transfer of knowledge in the field of reforestation and forest management with the assistance of competent organizations.	The participating local organizations (FORIG, RMSC) have comprehensive experience in both reforestation and forest management in Ghana. Their participation in the project will ensure that the knowledge is transferred to the community level.

As well as the following function of The Committee on Forest Industry:

	Definition	How the project addresses the objective
(a)	Human resources development and training.	The project has a strong component on human resources development and training.
(ii)		

Additionally, the project will contribute to ITTO's work in relation to statistics, studies and information as stated in *Article 29* by generating new knowledge in relation to communities and fire management including rehabilitation trials of fire degraded lands.

Compliance with ITTO Yokohama Action Plan 2002-2006

The project will contribute to the following *cross-cutting actions* of the action plan:

	Definition	How the project addresses the objective
(a)	Encourage and assist producing member countries to identify and address constraints in their implementation of sustainable forest management and the sustainable development of the forest industry to enhance the contribution of the forest sector to national objectives.	The project aids Ghana to address the most fundamental problem of fire management, i.e. the lack of community participation in fire management activities. When this constrain is turned into opportunities, it has a significant impact on the productive capacity of the Ghanaian forests both at the local and national level contributing to poverty alleviation, one of Ghana's most important national objectives.

The Project focuses on the Reforestation and Forest Management aspects of the ITTO Action Plan, including:

	Definition	How the project addresses the objective
GOAL 1, Action 1	Support the effective enforcement of forest laws and regulations that ensure sustainable forest management and secure the production base.	The project will work with the communities on creation of by-laws as well as introduction of the most applicable incentive schemes. Both activities will contribute to sustainable forest management by transferring the existing fire related laws and regulations into formats that are utilizable by the local communities.
GOAL 1, Action 2	Support networking and the exchange of information with relevant international organizations to maintain the integrity of the resource base, including protected area networks.	The project will be managed by IUCN – The World Conservation Union, through its commissions, global network, the TNC/IUCN/WWF Global Fire Partnership, ITTO members and the networks of Ghanaian project partners – FORIG and RMSC there will be extremely strong networking and information exchange on the progress made in reducing forest fires and enhancing restoration of degraded forests in Ghana.
GOAL 1, Action 4	Promote the conservation, rehabilitation and sustainable management of threatened forest ecosystems...	The project has a component on rehabilitation of fire degraded lands and the project contributes as a whole to sustainable management of threatened forests in Ghana.
GOAL 1, Action 5	Asses opportunities for, and promote development of, non-timber forest products and forest services which can improve the economic attractiveness of maintaining the forest resource base.	The rehabilitation component of the project includes studying the market potential of restored lands both at the local and national levels. At the local level, rehabilitation may provide alternative livelihoods depending on the species identified as the most useful for restoration by the local communities.
GOAL 1, Action 6	Review the current situation regarding any undocumented forestry activities relating to the objectives of the Organization.	The project will carry out an inventory of the key forests and natural resources used by the local communities as well as an evaluation of effective community fire management strategies on them.
GOAL 1, Action 7	Identify shortcomings in enforcement of forest law and regulations, and overcome them.	The project will review the existing legislation in terms of community based fire management and identify gaps.
GOAL 2, Action 3	Develop and promote the implementation of guidelines for the management of secondary tropical forests, the restoration of degraded tropical forests and the rehabilitation of degraded forest land.	The project will produce an easy-to-use manual of procedures for community based fire management. While using existing materials in part the manual, it will pay special attention to applicability at the community level and the different beneficiaries there.
GOAL 2, Action 7	Contribute appropriately to national and international efforts in the area of prevention and management of fire in relation to tropical-timber producing forests.	The whole project contributes to fulfilling this goal.
GOAL 2, Action 10	Improve the productive capacity of natural forests, ..., better utilization of lesser used-species, ..., guided natural generation, ..., and reforestation;	The project aims at generally on improving the productive capacity of Ghanaian forests, with a special emphasis on the communities.
	Implement research and development activities	The project follows ITTO Guidelines in its

	<p>in the management of secondary tropical forests, restoration of degraded tropical forests and rehabilitation of degraded forest land, taking into consideration ITTO guidelines;</p> <p>Undertake measures for the prevention and management of fire relating to tropical timber-producing countries;</p> <p>Intensify training of forestry personnel and other stakeholders in the, ..., management of both natural forests and timber plantations.</p>	<p>rehabilitation and fire management activities as appropriate (please refer to 2.3 "Project strategy")</p> <p>The whole project contributes to this goal.</p> <p>The project has a complete output on training and capacity building.</p>
--	---	---

Further, the project has the following Forest Industry component:

	Definition	How the project addresses the objective
GOAL 2; Action 8	Undertake research into wood properties and end-use requirements, paying particular attention to the properties and availability of lesser-used species and timber plantation species and the potential markets for them.	The project, through its rehabilitation component, will examine different possibilities for using lesser-used species where these are supported by the local communities. The project will also study the market potential of the restored lands including the species used.

ANNEX A: PROFILE OF THE EXECUTING AGENCY

Expertise of IUCN- The World Conservation Union

IUCN - The World Conservation Union was founded in 1948 and brings together 78 states, 112 government agencies, 735 NGOs, 35 affiliates, and some 10,000 scientists and experts from 141 countries in a unique worldwide partnership. Its members are States, government agencies, and non-governmental bodies, as well as individual experts constituting its Commissions, making it a distinctive forum for inter-institutional cooperation and dialogue.

IUCN's **mission** is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. As such, IUCN caters to the knowledge needs of its members as well as supporting a wide variety of activities ranging from implementation of field projects, to supporting the development of national-level environmental policy or strategies, through to participation in international policy development.

IUCN's activities can be grouped into three main categories of action: **knowledge** (generating, integrating, managing and disseminating knowledge for the conservation, sustainable and equitable use of nature and natural resources); **empowerment** (enhancing the willingness, responsibility, exercise of rights, capacity and skills of people and institutions to plan, manage, conserve and use nature and natural resources in a sustainable and equitable manner); and **governance** (achieving systemic improvement of and coherence between law, policy and economic instruments for the conservation, sustainable and equitable use of nature and natural resources).

IUCN's **Forest Conservation Programme** (FCP) supports action that tackles the problems at their root through addressing the underlying causes of forest loss and degradation. It links policy with practice by implementing field-based projects that test and demonstrate key forest management and conservation issues. Lessons from field projects are used to influence decision-makers at all levels and to design future projects and activities. All work of the IUCN Forest Conservation Programme is designed to contribute to the 'Forests for Life' vision, goal and objectives - which it shares with WWF. The vision is that *the world will have more extensive, more diverse and higher quality forest landscapes. These will meet human needs and aspirations fairly, while conserving biological diversity and fulfilling the ecosystem functions for all life on earth.*

Overall guidance to the FCP is provided by its External Advisory Committee, which meets annually to review and provide direction for all programme activities. Examples of work in the Forest Conservation Programme (and donors) include:

<p>Forests Reborn Multi-regional forest restoration and rehabilitation initiative that will complement and reinforce achievements made with respect to protected areas and sustainable forest management. Forests Reborn will aim to facilitate the implementation of forest restoration as a tool for safeguarding livelihood security, protecting biodiversity and ameliorating lost or impaired forest ecosystem function. It will focus on how to go about restoration and rehabilitation, taking into account regional circumstances and opportunities, and how to monitor progress towards restored and/or rehabilitated forest ecosystems.</p>	<p>Implementation supported by: Inter alia, the Royal Netherlands Government (DGIS) and the US Voluntary Contribution to IUCN</p>
<p>Seeking Connections project of the Working Group on Community Involvement in Forest Management - recently completed To identify both practical and policy lessons on community involvement in forest management, and translate them to the national and local levels as well as across regions.</p>	<p>Implementation supported by: Ford Foundation (USA) Department for International Development Cooperation (UK)</p>
<p>Forest Innovations Project - recently completed</p>	<p>Implementation supported by:</p>

<p>The aim of the Forest Innovations Project is to stimulate the conservation community to think and act more effectively, both in the field and at policy level. The project operates by:</p> <p>(1) developing and refining toolkits for planning and assessing progress towards sustainable forest management, and testing them on the forest floor;</p> <p>(2) spreading the message by researching, communicating and implementing effective forest policy;</p> <p>(3) working closely with partner organisations involved in regional policy initiatives, such as the Central American biological corridor and the Brazzaville Process in Central Africa (CEFDHAC).</p>	<p>German ministry of foreign affairs (BMZ) - Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung</p>
---	--

The Infrastructure of IUCN

IUCN has a presence in 181 countries and has approximately 1000 staff, most of whom are located in 42 regional and country offices (in Africa, Asia and the Pacific, the Americas, Europe and West/Central Asia and North Africa). 100 work at its Headquarters in Gland, Switzerland.

IUCN's Forest Conservation Programme (FCP) has a small secretariat unit in IUCN Headquarters in Switzerland and a network of forest conservation officers in 9 regional offices. It has also developed partnerships for both field and policy work with regional institutions such as the Southern Alliance for Indigenous Resources (SAFIRE) in Zimbabwe, and global organisations such as WWF and the World Bank.

The total area of the IUCN Headquarters building in Gland, Switzerland, is 6,650 square metres on three levels. The total area this building occupies is 8,500 square metres (including the gardens). In addition there are 42 regional and country offices which range in size. All offices have email access as well as fax and phone capabilities.

Budget

The work of IUCN is made possible through the dues of its members, sales of publications and funding from partners including governments, bilateral aid agencies, multilateral and inter-governmental institutions, international conventions, non-governmental organizations (NGOs), foundations, corporations and individuals.

IUCN Income 1998 - 2000

Income by Type of Funding	2000		1999		1998	
	Swiss francs (thousands)	%	Swiss francs (thousands)	%	Swiss francs (thousands)	%
Unrestricted	12,479	14	13,815	15	14,079	17
Programme restricted	9,464	10	8,102	9	8,472	10
General programme	11,517	13	9,355	10	7,943	9
Projects	56,806	63	60,939	66	53,466	64
TOTAL	90,266	100	92,211	100	83,960	100

Personnel

For this specific project, IUCN will draw most heavily upon its Forest Conservation Programme staff, positioned at the global HQ and in the regional office in West Africa. The core team includes the following full-time project and programme management staff at Headquarters and in the West Africa Regional Office (all are backed up by additional support staff):

Global Forest Conservation Programme - 3 full-time professional officers
West African Regional Office – 1 regional coordinator, 1 technical advisor

The full team (country and field office staff, as well as core support staff) is shown in Annex B.

Quantitative of experts with post-graduate degrees	Most programme officers and project managers
Quantitative of experts with graduation degrees or middle level technicians	Technical advisors, and some of the programme officers/project managers
Quantitative of administrative personnel	There are dedicated or shared support staff for all forest professionals
Total number of personnel in the forestry related fields (all of IUCN)	More than 50 programme officers, project managers or technical advisors in forestry related fields

The Forest Conservation Programme works most closely with the following four volunteer Commissions of experts: CEESP - Commission on Environmental Economics and Social Policy, CEL - Commission on Environmental Law, CEM - Commission on Ecosystem Management and WCPA - World Commission on Protected Areas. They are described below the CVs for key staff.

ANNEX B: CURRICULA VITAE OF THE KEY STAFF

Dominic BLAY – Senior Research Scientist – Forestry Research Institute of Ghana

Dr. Blay is the senior research scientist at the Forestry Research Institute of Ghana with an expertise on restoration of degraded lands, forest fires, rural forestry and local community collaboration as well as monitoring and evaluation. He has a wide scientific experience on forestry including field experience from different parts of Ghana, Nigeria, Papua New Guinea, Brazil and Austria. He has been the project leader of numerous researches and field projects in his country and is a member of various forestry related professional associations.

Date and place of birth and nationality: 04 August 1950 Ghana, Ghanaian

Field and institution of graduation: Botany and Biochemistry, University of Ghana, Legon, Ghana

Field and institution of post-graduation: M.Sc. Forestry Resources Management, University of Ibadan, Nigeria, Dr. rer. nat. tech. Forestry Ecology, Universitat fur Bodenkultur, Vienna, Austria.

Jean-Marc GARREAU – Regional Programme Coordinator – West Africa Regional Office

Jean-Marc Garreau joined IUCN Regional Office for West Africa in 2001 and currently is in charge of programmatic and organizational coordination of six country offices and three thematic regional programmes at the IUCN Regional office in West Africa. He has over 20 years of experience on natural resources management in Africa including Central African Republic, Guinea, Madagascar, Burkina Faso and Côte d'Ivoire.

As a graduate from land planning and utilization as well as agricultural techniques for tropical areas, Garreau has expertise on capacity building, environmental education, participatory ecological-monitoring systems as well as integrated conservation and development projects among others.

Date and place of birth and nationality: 1957 Niger, French

Field and institution of post-graduation: Land Planning and Utilisation, Rennes University, France.

Field and institution of other studies: Agricultural Techniques for Tropical Areas at National Centre for Agronomic Studies for Tropical Areas, Montpellier, France

Stewart MAGINNIS – Head Forest Conservation Programme

Stewart Maginnis joined IUCN in December 2001 after working with the Worldwide Fund for Nature (WWF) for three years as deputy director of the international forest programme. While at WWF he worked on both policy and programme development issues. He has thirteen years of field experience in forest conservation and management in Tanzania, Sudan, Costa Rica, Mexico and the United Kingdom, gained while working with the UK's Department for International Development (DFID), a development NGO and the private sector.

His areas of expertise include community forest management; forest policy analysis and development; design, implementation and review of forest management systems; applied forest growth and yield research; project planning, monitoring and evaluation. He holds a M.Sc. in Forestry and Land Use from the University of Oxford and has been a study fellow at the University of Manchester. He has a keen interest in the linkage between forest conservation and livelihood security of the rural poor, the practical application of ecosystem approaches and on the role of civil society in forest management.

Date and place of birth and nationality: 03 January 1963 (Northern Ireland), British

Field and institution of graduation: General Agriculture, University of Belfast

Field and institution of post-graduation: Forestry and Land Use, University of Oxford

Carole SAINT-LAURENT - Policy Advisor - Forests, IUCN and WWF

Carole Saint-Laurent joined the Forest Conservation Programme in 1997 as Senior Forest Policy Adviser. She is responsible for promoting the objectives of the Forest Conservation Programme in international policy fora. This work is carried out jointly with WWF International. Saint-Laurent has extensive experience coordinating policy development and advocacy on a broad range of conservation issues and in the management of field projects. She brings both a national and international conservation perspective to her work, based on her experience as Director of the Species Programme of WWF Canada and Senior Adviser on Conventions to WWF International.

ANNEX C: TERMS OF REFERENCE FOR A NATIONAL PROJECT COORDINATOR

Period: 3 years

Country: Ghana

Supervisor: Regional Programme Coordinator (IUCN/ROWA)

Responsibilities and Duties

The National Co-ordinator will supervise the work of the 2 major Ghanaian agencies and of national and international consultants working on specific themes. S/he is specifically responsible for:

1. Implementation of the project activities as detailed in the project document and liaising with participating organizations.
2. Developing and maintaining contacts with a broad range of national partners, actors and stakeholders.
3. Take responsibility for the development of annual work programmes.
4. Take responsibility for the preparation and delivery of bi-annual reports to ITTO.
5. Respond to inquiries on forest fire related issues on behalf of the project.
6. Other duties in consultation with the IUCN West African Regional Programme Co-ordinator.
7. The National Co-ordinator will be required to travel within Ghana to visit stakeholders, field sites and undertake project activities. Some international travel outside Ghana may also be required.

ANNEX D: TERMS OF REFERENCE FOR AN INTERNATIONAL CONSULTANT ON FOREST ECOLOGY

Period: 60 days

Country: Ghana/abroad

Supervisor: National Programme Coordinator (Ghana), IUCN (Regional Office for West Africa and Forest Conservation Programme)

Responsibilities and Duties

The consultant will be responsible for carrying out research activities related to forest ecology and restoration. S/he will be specifically responsible for:

1. To carry out an inventory of the key natural resources used by the local communities.
2. To develop tools and practices from existing, and if necessary, new research into fire ecology.
3. To identify appropriate species for restoration by local communities.

Additionally providing support and guidance in:

- a. The collection of socioeconomic and environmental fire related baseline data in pilot communities
- b. The evaluation of effective community fire management strategies on key natural resources
- c. The preparation of this information for distribution among other stakeholders.

The consultant will work in close collaboration with a national researcher and the local field team and is responsible for providing written reports of the research activities.

The duration of the consultancy is 60 days and will be carried out as indicated in the workplan.

ANNEX E: TERMS OF REFERENCE FOR AN INTERNATIONAL CONSULTANT ON FIRE MANAGEMENT

Period: 40 days

Country: Ghana/abroad

Supervisor: National Programme Coordinator (Ghana), IUCN (Regional Office for West Africa and Forest Conservation Programme)

Responsibilities and Duties

The consultant will be responsible for components dealing with the rural resource utilization and effective community based fire management. S/he will be especially responsible for:

1. Determination of the impact of fire on the key natural resources.
2. Development of manual of procedures for community based fire management.

Additionally providing support and guidance in:

- d. The collection of socioeconomic and environmental fire related baseline data in pilot communities
- e. The evaluation of effective community fire management strategies to identify what leads to the success of certain communities in fire management
- f. The preparation of this information for distribution among other stakeholders.

The consultant will work in close collaboration with the national researchers and field staff. The consultant will provide well-written reports of the research activities carried out under the consultancy assignment.

The total duration of the consultancy is 40 days and will be carried out as indicated in the workplan.

ANNEX F: TERMS OF REFERENCE FOR A NATIONAL CONSULTANT ON COMMUNICATIONS

Period: 25 weeks

Country: Ghana

Supervisor: National Programme Coordinator (Ghana), IUCN (Regional Office for West Africa and Forest Conservation Programme)

Responsibilities and Duties

The consultant will be responsible for components dealing with the dissemination of results. S/he will work on the layout and design of reports to be published based on material provided by the project staff and other international consultants.

The total duration of the consultancy is 25 weeks and will be carried out as indicated in the workplan.

ANNEX G: TERMS OF REFERENCE FOR A NATIONAL TRAINING CONSULTANT

Period: 25 weeks

Country: Ghana

Supervisor: National Programme Coordinator (Ghana), IUCN (Regional Office for West Africa and Forest Conservation Programme)

Responsibilities and Duties

The consultant will be responsible for training of stakeholders. S/he will be especially responsible for:

- Training of stakeholders to meet their roles and responsibilities in fire management.
- Facilitation of local communities to implement the manual of procedures for community based fire management.

The consultant will work in close collaboration with the field team and is expected to produce a manual on facilitation at the community level.

The total duration of the consultancy is 25 weeks and will be carried out as indicated in the workplan.

ANNEX H: BRIEF DESCRIPTION OF IUCN COMMISSIONS RELEVANT TO THIS PROJECT

CEESP - Commission on Environmental Economics and Social Policy

The Commission on Environmental Economics and Social Policy (CEESP) It is an inter/disciplinary commission, which act as a source of expertise on economic and social factors that affect natural resources and biological diversity. CEESP has Working Groups on Gender, on Economic Policy, on Trade and Sustainable Development, on Ethics, on Collaborative Management, on Strategies and on Coastal Zone. The Collaborative Management Working Group secretariat's is provided by the Social Policy Program.

CEL - Commission on Environmental Law

The Commission on Environmental Law (CEL) was established in 1960 to promote a progressive conceptual base for environmental conservation law. Its mission is to assist in laying the strongest possible legal foundation for the conservation of the natural environment, both internationally and nationally. CEL serves as the principal source of technical advice to the Union, its members and its collaborating institutions on all aspects of environmental conservation law. It supports action by international governmental organisations, governments and non-governmental organisations to improve or develop legal and institutional tools best attuned to, and conducive of, environmental and natural resources conservation in the framework of sustainable development. CEL aims to demonstrate the vital importance of such tools within national and international strategies for environmental conservation, including the sustainable use of natural resources within and beyond national jurisdictions. The current needs of the global, regional and national environmental legal systems provide a considerable challenge to the Commission on Environmental Law, one that the Commission has been addressing successfully for over 30 years and one which it hopes to continue to meet well into the next century.

CEM - Commission on Ecosystem Management

The IUCN Commission on Ecosystem Management will provide expert guidance on integrated ecosystem approaches to the management of natural and modified ecosystems. To further the IUCN mission, CEM will link science, society and ecosystem management. CEM helps make the latest thinking in ecosystem science accessible and useable to decision-makers and resource managers. It provides assistance to the Conventions on Biological Diversity, Sustainable Development and to Combat Desertification and the Ramsar Convention on Wetlands of International Importance.

WCPA - World Commission on Protected Areas

The World Commission on Protected Areas (WCPA) is the world's leading global network of protected area specialists. The IUCN Programme on Protected Areas (PPA) is the focal point within the IUCN Secretariat for Protected Areas and serves as the Secretariat for WCPA. WCPA's international mission is to promote the establishment and effective management of a world-wide representative network of terrestrial and marine protected areas, as an integral contribution to the IUCN mission. WCPA has some 1,000 members from over 140 countries. WCPA is centrally coordinated by a steering committee and supported by the Programme on Protected Areas. It is organised geographically, thematically and functionally.

ANNEX I: EXECUTIVE SUMMARY OF THE CONSULTANCY PREPARED PRIOR TO THE GHANA WORKSHOP

Forest fires are having a national impact on Ghana's environment and economy. It is estimated that 2% of Gross Domestic Product (GDP) is lost annually as a result of forest fires. Changes in the composition of forests as a result of fire are being observed, with conversion to grassland in the transition zone an increasing problem.

The main causes of forest fires in Ghana are as a result of human activities in farming, hunting and other rural based income generating activities. The underlying causes of forest fires in Ghana were identified as poverty, lack of education and awareness relating to forest fire impacts and the lack of strong legislative incentives to prevent burning. Communities are involved in forest fire management with the fire volunteer squads and with various projects on fire prevention including green firebreak establishment around forest reserves.

There are a number of themes covering the issues identified for further research and development. These focused around the need for accurate, readily available statistics into fire incidence, economic loss and risk periods; the need for stronger national policy and a more coordinated approach to forest fire management, continued education and awareness raising on a national scale, the development of appropriate fire detection and suppression strategies and an urgent need to develop alternatives to the use of fire by rural communities for maintaining their livelihoods.

ANNEX J: SUMMARY OF THE PRE-PROJECT WORKSHOP IN GHANA AND MAJOR RESULTS OF THE PRE-PROJECT PPD 44/02 REV.1 (F)

The West African pre-project workshop was held in 22-23 May 2003 in Kumasi, Ghana. The meeting gathered some thirty participants from Ghana, Burkina Faso and Côte d'Ivoire to address the prevailing causes of fires in Ghana, to find suggestions to improve the situation, and to share experiences on forest fires in the sub-region.

The workshop aimed on increasing interest in forest fire management and building common understanding of fire management problems. Two objectives, namely sharing knowledge on fire management practices and strengthening collaboration between different stakeholders, were set prior to the workshop. The following expected outputs were to be reached during the two-days meeting:

- 1) Creating a national forest fire knowledge map for Ghana.
- 2) Gathering elements for an ITTO project proposal.
- 3) Acting as a starting point for forest fires network the sub-region.

The workshop consisted of presentations, plenary discussions as well as group works. At the very beginning, the participants' expectations were written down and read aloud in order to point out the most emerging fire problems in Ghana and in the sub-region according to participants' point of view. Prior to the workshop a review of forest fire management strategies and practices in Ghana was conducted and distributed among the participants to act as a starting point and baseline document for discussions.

Workshop participants were together able to identify the gaps in the current practices at the beginning of a project identification process by combining a review of forest fire management strategies and practices in Ghana (prepared prior to the workshop and distributed among the participants) with their own knowledge and experience.

One of the workshop purposes was to acquire inputs for the development of a complete project proposal document. The workshop provided essential material for the first phase of the project development. During the workshop a project preparation group consisting of six workshop participants was formed and appointed with a task of formulating, reviewing and commenting the project proposal. The reference group met at the end of July 2003 to finalize the major project elements.

More information of the workshop (including the list of participants) is available from:
<http://www.iucn.org/brac/eng/programmes/forets/firefight/ghanaworkshop.htm>

The pre-project PPD 44/02 Rev.1 (F) laid the groundwork for an integrated fire management project involving ITTO member countries from three regions: Asia Pacific, Africa and Latin America and the Caribbean. In West Africa (Ghana), four main results were achieved:

- A consultation "Overview of past and current fire management strategies in Ghana including initial categorization of underlying causes of forest fires" was carried out.
- Local communities and other key stakeholders interested in taking part in project activities (forest fire management planning and implementation) were identified.
- A stakeholder workshop for formulating a complete project proposal was organized.
- The proposal was finalized, peer reviewed and submitted to the Expert Panel in November 2003.

ANNEX K: MEMBERS OF THE GHANAIAI PROJECT PREPARATION GROUP

Name	Organisation
Dr. J. Cobbinah	Forestry Research Institute of Ghana
Mrs. Lucy Amissah	Forestry Research Institute of Ghana
Mr. Oheneba Agyemang/ Mr. Edward Obiaw	Resource Management Support Centre
Dr. Dominic Blay	Forestry Research Institute of Ghana
Dr. Kwesi Orgle	Ministry of Lands and Forestry
Dr. SK Kufogbe	University of Ghana, Legon

ANNEX L:-SUBSTANCE AND FOCUS OF PROJECTS PD 32/98 REV.1 (F) AND WMTZ

The project **PD 32/98 Rev 1 (F)**¹⁹ aimed at collecting baseline information for use by policy makers and forest managers as well as reducing current rates of natural depletion by developing efficient fire management systems.

The project's intended outputs were the following:

1. Public awareness, knowledge and warning system for fire risks and hazard implemented.
2. Rule of fire in farming systems understood and improved systems developed.
3. Incentives for reduction of fire incidence established.
4. Effective fire detection and communication systems implemented
5. Capacity for interagency support and active fire suppression in forest fringe communities increased.

The project produced useful information on effect of fire on forest vegetation and animals as well as on forest disturbance and susceptibility to fire. In addition to this, burning trials and forest convalescence studies were conducted. The socioeconomic surveys carried out by the project staff revealed which incentives were the most suitable for each stakeholder group (ie. money, boots, food). Economic studies gave indication on the cost of fire management programmes as well as the costs of different fire management input units.

Mrs. Lucy Amissah, the project manager, participated at the **PPD 44/02 Rev.1 (F)** pre-project workshop as well as at the Ghanaian project formulation group meetings. She gave insight on what problems had already been addressed by the previous project and what points needed more attention by the project under development. She also gave suggestions on how to take into consideration the results of the previous project at the new project.

The project **Wildfire Management in the Transition Zone (WMTZ)**²⁰ focuses on rehabilitating fire-degraded forest as well as recovering economic, social and environmental benefits. The project is implemented by the Resource Management Support Centre (RMSC) of the Forestry Commission (FC). The project has started in May 2002. The WMTZ project leader participated at the **PPD 44/02 Rev.1 (F)** pre-project workshop as well as at the project preparation group meetings. It was agreed on that WMTZ would be responsible for carrying out the field activities whereas the project currently under development would provide the necessary technical backstopping, which currently is missing from the RMSC.

¹⁹ Amissah, L. (2002). *Results of the ITTO-funded forest fire management in Ghana project*. Forestry Research Institute of Ghana, 2002.

²⁰ Orgle, T. K. (2000). *Wildfire Management Project In the Transition Zone*. Natural Resource Management Programme, Ghana, March 2000.

**ANNEX M: AMENDMENTS MADE TO THE PREVIOUS PROJECT PROPOSAL
(27TH EXPERT PANEL)**

Comments by the expert panel:	Old pg.	New pg.	Notes
1. Further elaborate on the problem analysis, provide adequate associated problem tree unifying the causes and showing the effects, and strengthen the consistence between problem analysis, objectives and outputs	9-10	11	The problem tree, the corresponding objective tree as well as the justification have been revised.
2. Reformulate the development objective and the specific objectives based on the revised problem tree	9	9	The development objective, specific objective, outputs and activities have been revised according to the new problem tree.
3. Provide the technical and scientific information on how to conduct the post-fire restoration		16	The technical and scientific information on post-fire restoration is provided.
4. Explain the incentive scheme to be employed		-	The project is aiming on educating communities on <i>already existing incentive schemes</i> , not to create a new one (rf. Activity 3.1).
5. Describe adequately the compliance with the Tropical Timber Framework	29-30	39	Compliance of the project with the ITFA has been described more clearly and strengthened.
6. Present in the annex the substance of the focus and the results of the pre-project PPD 44/02 Rev. 1 (F) and preceding project PD 32/98 Rev. 1 (F), and the background information on the 10-year programme "Wildfire Management in the Transition Zone of Ghana"		53	
7. Revise the budget in the following way: <ul style="list-style-type: none"> • Transfer the detailed budget tables to the core part of the proposal • Scale down the costs of IUCN personnel, international consultants, duty travel, and raw materials • National experts who are not in the category of sub-contracts should be paid by the Government of Ghana • Adjust the budget for ITTO Monitoring and Review to US\$ 10,000/year\$Recalculate the 		28-36	<ul style="list-style-type: none"> • Has been done. • Has been done. For what comes to the IUCN personnel, the budget only covers the technical support of IUCN staff to the national project manager. It should be noted that the project has a unique approach where the Ghanaian government collaborates with an International NGO. The project manager will be Ghanaian but IUCN staff brings to the project essential support both in terms of technical and project management related matters. • The budget has been modified to account for this. • The budget has been modified to account for this.

ITTO Programme Support Costs specified in the budget so as to conform with new standard rate of 8% of the total ITTO project costs, as decided by the 35 th ITTC.			
Other changes to the proposal:	Old pg.	New pg.	Notes
The terms of references have been modified to correspond the new project document	35-39	46-50	
The logical framework has been modified to correspond the modified objectives and outputs	18-19	22-25	
The work plan has been modified to correspond the modified objectives and outputs	21-22	26-27	

ANNEX M:-UNIT COST TABLE FOR BUDGET JUSTIFICATION

Budget following the Work Breakdown Structure									
O1	Relationships between rural resource utilization and effective fire management are determined	INPUTS	AMOUNT	UNIT	FINANCED BY	UNIT COST, USD	QUARTER, YEAR	BUDGET COMPONENT	TOTAL COST, USD
A1.1	Collection of socioeconomic and environmental baseline data in pilot communities	1 Local Researcher (FORIG)	5	months	ITTO	500	Q1, 2005	21	2'500
		1 Local Researcher (FORIG)	2	months	Ghana in-kind	400	Q2/2005	11	800
		2 Local Field Staff (FORIG, RMSC)	5	months	ITTO	200	Q1, 2005	21	2'000
		2 Local Field Staff (FORIG, RMSC)	2	months	Ghana in-kind	200	Q2, 2005	13	800
		Field travel, transp.	12	times (3 persons, 4 villages=12)	ITTO	100	Q1/Q2, 2005	33	1'200
		Field travel, DSA	12	times (3 persons, 4 villages=12)	ITTO	100	Q1/Q2, 2005	31	1'200
		Field travel, transp.	12	Using 4WD trucks	Ghana in-kind	50	Q1/Q2, 2005	33	600
A1.2	Inventory of the key natural resources used by the local communities	1 Local Researcher (FORIG)	5	months	ITTO	500	Q3/Q4, 2005	21	2'500
		1 Local Researcher (FORIG)	2	months	Ghana in-kind	400	Q3/Q4, 2005	11	800
		1 International Forest Ecologist	20	days	ITTO	500	Q3/Q4, 2005	16	10'000
		IUCN/FCP staff reviewing the inventory results	2	days	IUCN in-kind	500	Q3/Q4, 2005	15	1'000
		2 Local Field Staff (FORIG, RMSC)	5	months	ITTO	200	Q3/Q4, 2005	21	2'000
		2 Local Field Staff (FORIG, RMSC)	2	months	Ghana in-kind	200	Q3/Q4, 2005	13	800
		International travel (intl forest ecologist)	1	flight, economy class	ITTO	1'200	Q3/Q4, 2005	32	1'200
		International travel (intl forest ecologist), DSA	7	days, 169\$/day	ITTO	169	Q3/Q4, 2005	31	1'183
		Field travel, transp.	16	times (4 persons, 4 villages=16)	ITTO	100	Q3/Q4, 2005	33	1'600
		Field travel, DSA	16	times (4 persons, 4 villages=16)	ITTO	100	Q3/Q4, 2005	31	1'600
		Field travel, transp.	16	Using 4WD trucks	Ghana in-kind	50	Q3/Q4, 2006	33	800
A1.3	Study on the impact of fire on the key natural resources	1 Local Researcher (FORIG)	5	months	ITTO	500	Q1/Q2, 2006	21	2'500
		1 Local Researcher (FORIG)	2	months	Ghana in-kind	400	Q1/Q2, 2006	11	800
		1 International Fire Expert	20	days	ITTO	500	Q1/Q2, 2006	16	10'000
		IUCN/FCP staff assisting in the study	2	days (staff time)	IUCN in-kind	500	Q1/Q2, 2006	15	1'000
		2 Local Field Staff (FORIG, RMSC)	5	months	ITTO	200	Q1/Q2, 2006	21	2'000
		2 Local Field Staff (FORIG, RMSC)	2	months	Ghana in-kind	200	Q1/Q2, 2006	13	800
		International travel (intl fire expert)	1	flight, economy class	ITTO	1'200	Q1/Q2, 2006	32	1'200
		International travel (intl fire expert), DSA	7	days, 169\$/day	ITTO	169	Q1/Q2, 2006	31	1'183
		Field travel, transp.	16	times (4 persons, 4 villages=16)	ITTO	100	Q1/Q2, 2006	33	1'600
		Field travel, DSA	16	times (4 persons, 4 villages=16)	ITTO	100	Q1/Q2, 2006	31	1'600
		Field travel, transp.	16	Using 4WD trucks	Ghana in-kind	50	Q1/Q2, 2007	33	800
A1.4	Evaluation of effective community fire management strategies on key natural resources	1 Local Researcher (FORIG)	5	months	ITTO	500	Q3/Q4, 2006	21	2'500
		1 Local Researcher (FORIG)	2	months	Ghana in-kind	400	Q3/Q4, 2006	11	800
		2 Local Field Staff (FORIG, RMSC)	5	months	ITTO	200	Q3/Q4, 2006	21	2'000
		2 Local Field Staff (FORIG, RMSC)	2	months	Ghana in-kind	200	Q3/Q4, 2006	13	800

Q2	Roles and responsibilities of stakeholders in fire management determined	INPUTS	AMOUNT	UNIT	FINANCED BY	UNIT COST, USD	QUARTER, YEAR	BUDGET COMPONENT	TOTAL COST, USD
A2.1	Identification of all relevant stakeholders and determining their roles and responsibilities	1 National Consultant	6	weeks	ITTO	500	Q1, 2005	12	3'000
		2 Local Field Staff (FORIG, RMSC)	1	month	ITTO	200	Q1, 2005	21	400
		2 Local Field Staff (FORIG, RMSC)	1	month	Ghana in-kind	200	Q1, 2005	13	400
		Field travel, transp.	12	times (3 persons, 4 villages=12)	ITTO	100	Q1, 2005	33	1'200
		Field travel, DSA	12	times (3 persons, 4 villages=12)	ITTO	100	Q1, 2005	31	1'200
		Field travel, transp.	12	Using 4WD trucks	Ghana in-kind	50	Q1, 2006	33	600
A2.2	Organization of yearly stakeholder workshops	1 Local Staff (FORIG)	3	months (1 month/year)	ITTO	500	Q3, 2005/2006/2007	21	1'500
		1 Local Staff (FORIG)	3	months (1 month/year)	Ghana in-kind	400	Q3, 2005/2006/2007	11	1'200
		2 Local Support Staff (FORIG)	3	months (1 month/year)	ITTO	200	Q3, 2005/2006/2007	21	1'200
		2 Local Support Staff (FORIG)	3	months (1 month/year)	Ghana in-kind	200	Q3, 2005/2006/2007	13	1'200
		Workshop facilities*	3	times (1 workshop/year)	ITTO	5'000	Q3, 2005/2006/2007	61	15'000
		Travel costs from Burkina Faso (IUCN Regional Office), flight ticket	3	times	ITTO	800	Q3, 2005/2006/2007	32	2'400
		Travel costs from Burkina Faso (IUCN Regional Office), DSA	4	days, 169\$/day	ITTO	169	Q3, 2005/2006/2007	31	2'028
		IUCN/BRAO staff participating at the workshop	4	days (staff time)	IUCN in-kind	500	Q3, 2005/2006/2007	15	2'000
A2.3	Training of stakeholders to meet their roles and responsibilities in fire management	1 National Training Consultant	9	weeks (3 weeks per year)	ITTO	500	Q4, 2005, 2006, 2007	12	4'500
		4 Local Field Staff (2 from FORIG, 2 from RMSC)	3	months (1 month/year)	ITTO	200	Q4, 2005, 2006, 2007	21	2'400
		4 Local Field Staff (2 from FORIG, 2 from RMSC)	1.5	months (1/2 month/year)	Ghana in-kind	200	Q4, 2005, 2006, 2007	13	1'200
		Field travel, transp.	20	times (5 persons, 4 villages=20)	ITTO	100	Q4, 2005, 2006, 2007	33	2'000
		Field travel, DSA	20	times	ITTO	100	Q4, 2005, 2006, 2007	31	2'000
		Field travel, transp.	20	Using 4WD trucks	Ghana in-kind	50	Q4, 2005, 2006, 2008	33	1'000
		Training material and facilities**	120	participants (40/year)	ITTO	50	Q4, 2005, 2006, 2007	55	6'000
TOTAL OUTPUT 2									52'428

* Includes workshop venue, facilitation, material, local travel costs, accommodation

** Includes training material (papers, pens, photocopies) as well as lunch/drinks during the training

		INPUTS	AMOUNT	UNIT	FINANCED BY	UNIT COST, USD	QUARTER, YEAR	BUDGET COMPONENT	TOTAL COST, USD
03	Mechanisms for effective community based fire management developed and implemented								
A3.1	Education of communities on existing fire policies and laws	1 National Training Consultant	8	weeks	ITTO	500	Q1/Q2, 2005	12	4'000
		4 Local Field Staff (2 from FORIG, 2 from RMSC)	2	months	ITTO	200	Q1/Q2, 2005	21	1'600
		4 Local Field Staff (2 from FORIG, 2 from RMSC)	1	month	Ghana in-kind	200	Q1/Q2, 2005	13	800
		Field travel, transp.	20	times (5 persons, 4 villages=20)	ITTO	100	Q1/Q2, 2005	33	2'000
		Field travel, DSA	20	times	ITTO	100	Q1/Q2, 2005	31	2'000
		Field travel, transp.	20	Using 4WD trucks	Ghana in-kind	50	Q1/Q2, 2005	33	1'000
		Educational material*	120	participants (30 participants, 4 villages)	ITTO	50	Q1/Q2, 2005	55	6'000
A3.2	Development of manual of procedures for community based fire management	1 National Consultant	16	weeks	ITTO	500	Q4/2005, Q1/2006	12	8'000
		1 International Fire Expert	20	days	ITTO	500	Q4/2005, Q1/2006	16	10'000
		IUCN/FCP staff reviewing the manual	2	days (staff time)	IUCN in-kind	500	Q4/2005, Q1/2006	15	1'000
		2 Local Field Staff (FORIG, RMSC)	4	months	ITTO	200	Q1/Q2, 2006	21	1'600
		2 Local Field Staff (FORIG, RMSC)	2	months	Ghana in-kind	200	Q1/Q2, 2006	13	800
		International travel (intl fire expert)	1	flight, economy class	ITTO	1'200	Q1/Q2, 2006	32	1'200
		International travel (intl fire expert), DSA	7	days, 169\$/day	ITTO	169	Q1/Q2, 2006	31	1'183
		Field travel, transp.	16	times (4 persons, 4 villages=16)	ITTO	100	Q1/Q2, 2006	33	1'600
		Field travel, DSA	16	times (4 persons, 4 villages=16)	ITTO	100	Q1/Q2, 2006	31	1'600
		Field travel, transp.	16	Using 4WD trucks	Ghana in-kind	50	Q1/Q2, 2006	33	800
A3.3	Facilitation of local communities to implement the manual of procedures for community based fire management	1 National Training Consultant	8	weeks	ITTO	500	Q2/Q3, 2006	12	4'000
		4 Local Field Staff (2 from FORIG, 2 from RMSC)	2	months	ITTO	200	Q2/Q3, 2006	21	1'600
		4 Local Field Staff (2 from FORIG, 2 from RMSC)	1	month	Ghana in-kind	200	Q2/Q3, 2006	13	800
		Field travel, transp.	20	times (5 persons, 4 villages=20)	ITTO	100	Q2/Q3, 2006	33	2'000
		Field travel, DSA	20	times	ITTO	100	Q2/Q3, 2006	31	2'000
		Field travel, transp.	20	Using 4WD trucks	Ghana in-kind	50	Q2/Q3, 2006	33	1'000
		Training material*	120	participants (30 participants, 4 villages)	ITTO	50	Q2/Q3, 2006	55	6'000
A3.4	Awareness creation on radios, local bulletins etc.	1 National Communications Consultant	8	weeks	ITTO	500	Q4/2006, Q1/2007	12	4'000
		4 Local Field Staff (2 from FORIG, 2 from RMSC)	2	months	ITTO	200	Q4/2006, Q1/2007	21	1'600
		4 Local Field Staff (2 from FORIG, 2 from RMSC)	1	month	Ghana in-kind	200	Q4/2006, Q1/2007	13	800
		Field travel, transp.	20	times (5 persons, 4 villages=20)	ITTO	100	Q4/2006, Q1/2007	33	2'000
		Field travel, DSA	20	times	ITTO	100	Q4/2006, Q1/2007	31	2'000
		Field travel, transp.	20	Using 4WD trucks	Ghana in-kind	50	Q4/2006, Q1/2008	33	1'000

O4	Fire degraded areas rehabilitated by using valuable species as determined by the local communities	INPUTS	AMOUNT	UNIT	FINANCED BY	UNIT COST, USD	QUARTER, YEAR	BUDGET COMPONENT	TOTAL COST, USD
A4.1	Identification of appropriate species for rehabilitation by local communities	1 Local Researcher (FORIG)	5	months	ITTO	500	Q3/Q4, 2005	21	2'500
		1 Local Researcher (FORIG)	2	months	Ghana in-kind	400	Q3/Q4, 2005	11	800
		International Consultant in Forest Ecology	20	days	ITTO	500	Q3/Q4, 2005	16	10'000
		IUCN/FCP staff reviewing the identification results	4	days (staff time)	IUCN in-kind	500	Q3/Q4, 2005	15	2'000
		2 Local Field Staff (FORIG, RMSC)	5	months	ITTO	200	Q3/Q4, 2005	21	2'000
		2 Local Field Staff (FORIG, RMSC)	2	months	Ghana in-kind	200	Q3/Q4, 2005	13	800
		International travel (intl forest ecologist)	1	flight, economy class	ITTO	1'200	Q3/Q4, 2005	32	1'200
		International travel (intl forest ecologist), DSA	14	days, 169\$/day	ITTO	169	Q3/Q4, 2005	31	2'366
		Field travel, transp.	16	times (4 persons, 4 villages=16)	ITTO	100	Q3/Q4, 2005	33	1'600
		Field travel, DSA	16	times (4 persons, 4 villages=16)	ITTO	100	Q3/Q4, 2005	31	1'600
		Field travel, transp.	16	Using 4WD trucks	Ghana in-kind	50	Q3/Q4, 2005	33	800
A4.2	Development of tools and practices from existing, and if necessary, new research into fire ecology	International Consultant in Forest Ecology	20	days	ITTO	500	Q4/2005, Q1/2006	16	10'000
		IUCN/FCP staff reviewing the consultancy	2	days (staff time)	IUCN in-kind	500	Q4/2005, Q1/2006	15	1'000
A4.3	Conducting pilot trials with the appropriate species at the local communities	1 Local Researcher (FORIG)	4	months	ITTO	500	Q1/Q2, 2006	21	2'000
		1 Local Researcher (FORIG)	1	month	Ghana in-kind	400	Q1/Q2, 2006	11	400
		2 Local Field Staff (FORIG, RMSC)	4	months	ITTO	200	Q1/Q2, 2006	21	1'600
		2 Local Field Staff (FORIG, RMSC)	1	months	Ghana in-kind	200	Q1/Q2, 2006	13	400
		Field travel, transp.	12	times (3 persons, 4 villages=12)	ITTO	100	Q1/Q2, 2006	33	1'200
		Field travel, DSA	12	times (3 persons, 4 villages=12)	ITTO	100	Q1/Q2, 2006	31	1'200
		Field travel, transp.	12	Using 4WD trucks	Ghana in-kind	50	Q1/Q2, 2006	33	600
		Purchasing seedlings for 4 pilot sites	2'500	seedlings	ITTO	1	Q1/Q2, 2006	51	10'000
		Land for pilot sites		lump sum	Ghana in-kind	2'000	Q1/Q2, 2006	42	2'000
A4.4	Dissemination of knowledge on the suitable rehabilitation methods of rehabilitated lands	National Communications Consultant	6	weeks	ITTO	500	Q3, 2006	12	3'000
		IUCN/FCP staff assisting in the work	2	day (staff time)	IUCN in-kind	500	Q3, 2007	15	1'000
		Publication and postage costs	1'000	copies	ITTO	10	Q3, 2007	55	10'000
TOTAL OUTPUT 4									70'066

O5	Gaps in existing legislation on community based fire management identified and disseminated	INPUTS	AMOUNT	UNIT	FINANCED BY	UNIT COST, USD	QUARTER, YEAR	BUDGET COMPONENT	TOTAL COST, USD
A5.1	Review of existing legislative framework for community based fire management, including land-use	National Consultant	10	weeks	ITTO	500	Q2/Q3, 2006	12	5'000
		IUCN/FCP staff reviewing the consultancy results	2	day (staff time)	IUCN in-kind	500	Q2/Q3, 2006	15	1'000
A5.2	Validation of existing legislative gaps during a workshop	Local Workshop organiser (FORIG)	1	month	ITTO	500	Q4, 2006	21	500
		Local Workshop organiser (FORIG)	0.5	months	Ghana in-kind	500	Q4, 2006	11	250
		2 Local Support Staff	1	month	ITTO	300	Q4, 2006	21	600
		2 Local Support Staff	0.5	month	Ghana in-kind	300	Q4, 2006	13	300
		Workshop facilities*	1	workshop	ITTO	5'000	Q4, 2006	61	5'000
		Travel costs from abroad, ticket (for an International Legal Expert)	1	flight, economy class	ITTO	1'200	Q4, 2006	32	1'200
		Travel costs from abroad, DSA (for an International Legal Expert)	5	days, 169\$/day	ITTO	169	Q4, 2006	31	845
A5.3	Promotion of legislation reform based on the validation of existing legislative gaps	National Consultant	6	weeks	ITTO	500	Q2/Q3, 2007	12	3'000
A5.4	Dissemination of the results	National Communications Consultant	8	weeks	ITTO	500	Q3, 2006	12	4'000
		IUCN/FCP staff assisting in the work	2	day (staff time)	IUCN in-kind	500	Q3, 2007	15	1'000
		Publication and postage costs	1'000	copies	ITTO	10	Q3, 2007	55	10'000
TOTAL OUTPUT 5									32'695

* Includes workshop venue, facilitation, material, local travel costs, accommodation

Project Coordination Costs	INPUTS	AMOUNT	UNIT	FINANCED BY	UNIT COST, USD	QUARTER, YEAR	BUDGET COMPONENT	TOTAL COST, USD
	Technical and project management supervision for national project coordinator (IUCN HQ and regional office staff)	150	days	ITTO	500	2005, 2006, 2007	15	75'000
	IUCN/FCP and BRAO in-kind contribution for supervising the national project manager	27	days, staff time, 9 days a kind year	IUCN in-kind	500	2005, 2006, 2007	15	13'500
	Office supplies (phones, faxes, computers etc.)		lump sum, 700\$/year	IUCN in-kind	2'400	2005, 2006, 2007	54	2'400
	Regional travel (IUCN/BRAO staff)	6	trips	ITTO	800	2005, 2006, 2007	32	4'800
	DSA (IUCN/BRAO staff)	6	trips	ITTO	1'200	2005, 2006, 2007	31	7'200
	Travel costs from abroad, ticket (IUCN/FCP staff)	1	flight	ITTO	1'200	Q2, 2006	32	1'200
	Travel costs from abroad, DSA (IUCN/FCP staff)	10	days, 169\$/day	ITTO	169	Q2, 2006	31	1'690
	National Project Coordinator	36	months	ITTO	700	2005, 2006, 2007	21	25'200
	Administrative Personnel for the National Project Coordinator	72	months	ITTO	100	2005, 2006, 2008	21	7'200
	Office rental	3	years	Ghana in-kind	2'000	2005, 2006, 2008	41	6'000
	4WD Trucks	1		ITTO	30'000	Q1, 2005	43	30'000
	Vehicle running costs	1		ITTO	15'000	2005, 2006, 2007	53	15'000
	Computer and printer	1		ITTO	7'000	Q1, 2005	44	7'000
	Consumables		lump sum	ITTO	12'000	2005, 2006, 2007	54	12'000
	Consumables		lump sum	Ghana in-kind	1'500	2005, 2006, 2008	54	1'500
TOTAL PROJECT COORDINATION COSTS								209'690

Monitoring and evaluation	INPUTS	AMOUNT	UNIT	FINANCED BY	UNIT COST, USD	QUARTER, YEAR	BUDGET COMPONENT	TOTAL COST, USD
Internal evaluation	Return ticket Burkina Faso-Ghana (IUCN/BRAO M&E expert)	1	ticket	ITTO	800	Q4, 2005	32	800
	DSA (IUCN/BRAO M&E expert)	1	travel	ITTO	1'200	Q4, 2005	31	1'200
Steering Committee meetings		3	times	ITTO	1'000	Q1, 2005, 2006, 2007	63	3'000
	Steering Committee meeting venue	3		Ghana in-kind	250	Q1, 2005, 2006, 2008	41	750
TOTAL MONITORING AND EVALUATION								5'750

SUB-TOTAL 1 528'278

Miscellaneous	FINANCED BY	QUARTER, YEAR	BUDGET COMPONENT	TOTAL COST, USD
Contingencies, 5%	ITTO	2005, 2006, 2007	64	26'414
TOTAL MISCELLANEOUS				26'414

SUB-TOTAL 2		554'692
Executing agency administration costs, 10%	IUCN in-kind	70 55'469
Implementing agency administration costs, 5%	Ghana in-kind	27'735
External monitoring → Fixed sum of 30 000 USD	ITTO	80 30'000
Programme support costs, 8%	ITTO	83 46'775
Refund from pre-project costs	ITTO	91 22'953
GRAND TOTAL		737'624

ANNEX O:-AMENDMENTS MADE BASED ON THE COMMENTS BY THE 28TH EXPERT PANEL

Comments by the expert panel:	Old pg.	New pg.	Notes
1. Improve the consistency between Activities 1.1, 1.2, 1.4 & 1.5 and the terms of reference of the international consultants	43/44	46/47	<ul style="list-style-type: none"> Terms of references of the international consultants have been revised accordingly
2. Consider an additional activity regarding the promotion of legislation reform based on the validation of existing legislative gaps in order to support the achievement of Output 5	20 10 18 20 22 24 27 29 30 31	21 11 19 21 23 25 29 31 32 33	<ul style="list-style-type: none"> Activity 5.3 to promote legislation reform based on the validation of existing legislative gaps has been added to Output 5 <p>The flowing amendments has been made to adapt the proposal according to the new activity</p> <ul style="list-style-type: none"> <u>Objective tree</u> amended to include activity 5.3 <u>Output 5</u> amended to include activity 5.3 <u>Activities 5.3</u> see above <u>Logical Framework</u> amended to include activity 5.3 <u>Work plan</u> amended to include activity 5.3 <u>Overall Project Budget by Activities</u> amended to include activity 5.3 <u>Total and Yearly Project budget</u> amended to include activity 5.3 <u>Yearly Project Budget – ITTO</u> amended to include activity 5.3 <u>Yearly Project Budget – ITTO</u> amended to include activity 5.3
3. Revise the budget in the following way:			
a) Provide the unit costs table for budget justification;	--	57	<ul style="list-style-type: none"> Unit cost table is proved in Annex M
b) Recalculate the ITTO Programme Support Costs specified in the budget so as to conform with new standard rate of 8% of the total ITTO project costs, as decided by the 35th ITTC.	29	--	<ul style="list-style-type: none"> The Programme Support Costs specified in the budget were already calculated with the standard rate of 8% (no modification)
4. Include an Annex, which shows the recommendations of the 28 th Panel and the respective modifications in tabular form. Modifications should also be highlighted in the text.	--	63	<ul style="list-style-type: none"> See Annex O