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The Meaning of Abbreviations Used

AFDB	African Development Bank
CFMCs	Collaborative Forest Management Committees (Village-level)
CIDA	Canadian International Development Agency
BDA	Biakoye District Assembly
DFID	Department for International Development (UK)
FORUM	Forest Protection and Resource Use Management Project
FSD	Forest Services Division (of the Forestry Commission, Ghana)
GTZ	<i>Deutsche Gessellschaft fur Technische Zusammenarbeit GmbH</i> (German Agency for Technical Co-operation)
KfW	<i>Kreditanstalt fur Wiederaufbau</i> (German Bank for Reconstruction & Development)
NTFP	Non-Timber Forest Product
PG	Picodev Ghana
PRA	Participatory Rural Appraisal
PSC	Project Steering Committee

PART I PROJECT CONTEXT

1.1 THE ORIGIN OF THE PROJECT

This is a modest 2-year pilot project with a title: '**Sustainable Mixed and Pure Forest Plantation Development in the Transitional Zone of Ghana's Biakoye District Assembly, Employing Poverty Reduction Strategies**'. The idea for the pilot project (2012-2013) came originally from members of the Tayi Collaborative Forest Management Committee (T-CFMC) about six years ago. The T-CMC, along with the nearby Collaborative Forest Management Committee at Bumbula (B-CFMC), rural villages with populations of 1,547 and 1,306 inhabitants respectively) later decided to transform themselves into viable community-based YOUTH GROUPS, and to approach Picodev Ghana (PG), a locally based N G O whose leader is a newly retired high-ranking forester with tremendous practical experience and high level professional training in forest management as well as project management. In collaboration with Biakoye District Assembly (BDA), a formidable team resulted to assist the concerned youth groups address their concerns. The youth groups and PG in collaboration with BDA have as their focus local employment generation, forest and savannah improvement issues, as well as specific local environmental matters including the prevention and control of sporadic wild bush fires and the cultivation of both indigenous and exotic forest tree species in the area. Biakoye is one of the newly constituted districts and has a huge responsibility of opening up the area and key among it's hydra-headed developmental issues is that of unemployment. Tree planting activities, as well as, addressing other environmental issues ,as enumerated above, have a multiplier effect of generating other industries thereby mitigating the unemployment and poverty alleviation concerns. This is how the ideas initiated by youth groups in two rural communities is vigorously spreading and embraced by others. Thanks, however, go to the erstwhile Forest protection and Resource Use Management (F O R U M) project that provided the initial support and formed the C F M Cs. Picodev Ghana, has a host of standby part-time professionals that complement it's permanent staff and a consortium of other N G Os associated with it. It is interesting also to note that the PG team leader has taken advantage of this existing consortium of N G Os to participate in various tree planting and cultural practice contracts, awarded by Ghana Government.

The project communities (Ahenkro, Tayi, Ntumda, Tepo, Bumbula and Akposo-Kabo), are part of the rich but dry high tropical forest zone of Ghana. These areas are only separated from the northern segment of the naturally lush Ashanti and Brong Ahafo high forest zone of Ghana by the man-made Volta Lake which was constructed in the early 1960s by Dr. Kwame Nkrumah's Regime. Thus, very many of the indigenous forest tree species that occur in the Ashanti and Brong Ahafo Regions also occur in these areas except that trees in the latter areas have been extensively destroyed through unplanned logging, including widespread slash and burn agriculture. After several discussion meetings in 2008 by youth members from the proposed project communities (both young men and young women between the ages of 17 and 37 years), with input advice from District Forestry Officers, it was decided that the chosen indigenous species be planted.

1.2 RELEVANCE OF THE PROJECT

The proposal is directly in compliance with the Objectives of the ITTA, 2006 in the sense that it puts emphasis on fundamental issues like:

- (a) Mixed tropical plantations and natural forests development that give priority to the use of proven indigenous local, tree species with local beneficiary rural indigenous people at the center of the project intervention effort.
- (b) Biodiversity questions in the improvement of local ecosystems.
- (c) Indigenous protection, conservation, and general natural resources and forest improvement policies. The proposal, The relevant ITTO ACTION Plan, one section of which says, "Expand the productive capacity of natural forests through intensified silvicultural practices such as better utilization of lesser-used species, promotion of Non-Timber Forest Products, guided natural regeneration, enrichment planting, and reforestation."

1.2.1 Conformity with ITTO's Objectives

This proposal is consistent with the following Objectives of ITTO as established under Article 1 of the ITTO Agreement 2006: Which states: "**The objectives of the International Tropical Timber Agreement, 2006 (here in after referred to as,"this Agreement") are to promote the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests and to promote the sustainable management of tropical timber producing by:**

- Contributing to sustainable development and to poverty alleviation; -The project incorporates an output (cassava production and processing for enhanced value), which will provide income for the short term needs of the target group so that they will survive to address the medium and long term out puts. Part of the income for the medium and long terms would be ploughed back into production

and management after project intervention ensuring sustainability. Incomes from the short, medium and long terms ensure poverty alleviation.

- Enhancing the capacity of members to implement strategies for achieving exports of tropical timber and timber products from sustainable managed sources;-Producing large areas of well managed forests qualifies members to export tropical timber and timber products.
- Promoting increased and further processing of tropical timber from sustainable sources in producer member countries with a view to promoting their industrialisation and thereby increasing their employment opportunities and export earnings;-The project promotes increased availability of wood thereby enhancing further processing, industrialisation, employment opportunities, and export earnings.
- Encouraging members to support and develop tropical timber reforestation as well as rehabilitation and restoration of degraded forest lands with due regards to the interest of local communities dependent on forest resources;-The project involves the youth in developing their degraded forests into profitable rich, timber and fuel wood forests for their own benefit as well as the nation and the rest of the world.
- Encouraging members to recognize the role of forest dependent indigenous and local communities in achieving sustainable forest management and develop strategies to enhance the capacity of these communities to sustainably manage tropical timber producing forests;-By involving the youth of indigenous, local forest dependent communities the project ensures that they are recognised as important partners in sustainable forest management. By employing poverty alleviation strategies the project enhances their capacity.

Furthermore, this proposal meets the following ITTO Criteria:

- It relates to the production and use of industrial timber through promoting reforestation of commercial species and their sustainable management.
- It yields benefits to the tropical timber economy as a whole, and is therefore relevant to both producing and consuming countries.
- It relates to maintaining and expanding the international trade in tropical timber by developing plantation technology which will assure higher commercial value.
- It offers reasonable prospects for positive economic returns in relation to cost.

The proposal is directly related to the following activities in the ITTO Action Plan:

- Arrest the decline and degradation of tropical forests and bring all productive forest estates as soon as possible under sustainable management so as to achieve ITTO's targeted objectives.
- Support national strategies or efforts in full conformity with ITTO's Principles.
- To instill a sense of urgency among consumer and producer nations to maintain tropical timber supply through sustainable forest management
- To encourage the development of sustainable timber production from tree plantation
- To rehabilitate and manage non-forest and degraded lands and to reduce dependency on natural forest for timber supply;
- To encourage the full participation of local institutions in the development and implementation of projects

Interpreted therefore with reference to the ITTO Action Plan, the proposal includes intervention issues that:

- Arrest sharp declines in the degradation of already heavily impoverished local tropical landscapes.
- Promote the gradual development of diverse commercial tropical timber species as a strategy to fully rehabilitate poorly managed and heavily burnt tropical forests.

- Add positively to global studies aimed at further enriching participatory resource management practices that encourage the full and active involvement of local people together with their proven or young institutional settings.

The planned interventions are therefore in line with, and very supportive to other on-going Ghana natural resource management policies and operational plans as outlined in this proposal.

1.2.2 Relevance to Ghana's Forest Sector Policies

“... in accordance with the provisions of the Forest and Wildlife Policy, a Forestry Sector Development Plan has been drawn up outlining the strategies by which to achieve the medium and long-term goals of forest management in Ghana. The previous administration even made many very laudable expansions to this national forestry plan ...” *Excerpts from the National Annual Budget of Ghana (2009), Ministry of Finance and Economic Planning, Accra, 2009.*

The International Tropical Timber Organization (ITTO) has been, especially over the past 15 years, one of the very crucial international development partners in the evolution of useful forestry policies in Ghana. Since the last decade and a half, forest sector policies in Ghana have enjoyed support from Cabinet level in all Governments that have ruled the country. Sub-sections of overall Ghana forestry policy include:

- (a) General awareness raising with regard to the phenomenon of unhealthy Global Warming.
- (b) Forestry and wildlife environmental law revisions, awareness raising, and education.
- (c) Forestry, wildlife, and environmental institutional capacity building.
- (d) Natural resources planning, data building, and documentation.
- (e) Co-management and struggles to ensure the sustainability of natural resources.
- (f) Increasing acreages under commercial timber plantations.
- (g) Fair sharing of benefits.
- (h) Greater respect for indigenous knowledge regarding forestry and environmental questions.
- (i) Cooperation between state forestry institutions and industry in promoting wood products.

The current project therefore adequately conforms to it's country's (Ghana) forest policies in as far as it helps to increase Ghana's commercial timber plantations (by 100acres/40hectares); involves youth groups of the indigenous local forest dependent communities in protecting and co-managing for sustainability of forest resources; it also ensures cooperation with state authorities by collaborating with the District Assembly. The project also ensures fair sharing both in responsibilities and benefits.

Essential state-backed sector policies and legislative reforms further include:

- The restructuring and strengthening of all forest sector state institutions under the umbrella of the Ghana Forestry Commission.
- The introduction of the 1994 Forest and Wildlife Policy.
- The drafting in 2004 of a Comprehensive National Wildfires Policy, geared towards an effective coordination and management of wild fires in the country.

The 1994 Forest and Wildlife Policy is key to Ghana's forest development endeavors. The aim of the (1994) Policy Document is the conservation and sustainable development of Ghana's forest and wildlife resources so as to ensure adequate environmental quality and perpetual flow of optimum benefits to all segments of society. Among other objectives, the 1994 Policy seeks to:

- (a) Manage and enhance Ghana's permanent estate of forest and wildlife resources so as to ensure the preservation of vital soil and water resources, conservation of biological diversity, as well as a sustainable production of domestic and commercial produce.
- (b) Promote the development of viable and efficient forest-based industries, particularly in secondary and tertiary processing, so as to fully utilize timber and other non-timber forest products (NTFPs) including health and wildlife resources that satisfy both domestic, (local, national), and international demand at competitive prices.
- (c) Promote public awareness and active involvement of rural people in forestry and wildlife conservation so as to maintain life-sustaining systems, preserve scenic areas, enhance the potential for recreation, tourism, and wealth creating opportunities.

The major policy issues currently confronting the forest and wildlife sector therefore can be summarized as follows:

- Natural resources protection to ensure their sustainability in the interest also of generations to come.
- Rehabilitating, enriching, or developing the resources (through, for example, plantation development and enrichment planting in forests).
- Optimizing revenue and other benefits that flow from the resources so as to alleviate poverty, especially within resource-owning communities.

In response to the above challenges, the country has undertaken a mixture of complementary measures and programs aimed at realizing the objectives and goals of sector policy. Recent reforms that have been backed by legislative enactments include:

- (a) Ensuring an equitable distribution of natural resource benefits to communities, resource owners, and farmers (among others) as a way of facilitating qualitative and effective participation of all relevant stakeholders in the sustainable management and development of resources.
- (b) Transparent and efficient allocation of timber resources through competitive bidding and controls against over-exploitation of timber.
- (c) Appropriate pricing of timber and other forest-based products in order to increase revenue, and thus address the problem of under-pricing of forest resources.
- (d) Review of the Annual Allowable Cut as a transitional measure in order to salvage valuable timber being destroyed in off-reserve timber utilization contract areas.
- (e) Mobilization of chainsaw operators into alternative productive ventures, and the control of illegal chainsaw logging and lumbering operations.
- (f) Rationalization of the timber industry and the adoption of fiscal as well as market-based incentives that improve the efficiency of the industry while at the same time encouraging down-stream processing of wood products.
- (g) The development of an extensive forest plantation program so as to bridge the wood deficit in the timber industry and while improving upon general environmental quality.
- (h) Improved incentives with respect to the co-management of forest resources so as to ensure sustainability.

The Ghana National Forestry Development Master Plan was inaugurated in 1996 so as to help implement some of the above reforms. The Master Plan was followed by a 10-year Natural Resources Management Program (NRMP): 1999 – 2008. The NRMP did not cover the Volta Region where this project is based. The said NRMP supports resource management initiatives in five different components, namely:

- High Forest Resources Management.
- Savanna Resource Management.
- Wildlife and Wetlands Resources Management.
- Biodiversity Conservation.
- Environmental Management Co-ordination.

Instead of the NRMP, the Volta Region enjoyed support from a GTZ-KfW-Ded-Government of Ghana project called “Forest Resource Use Management Project” (FORUM), with its initial improvement and reforestation emphasis on selected Volta Region forest reserves, woodlot establishment, as well as buffer-zone co-management initiatives.

There are some ITTO-funded projects currently in the Ashanti Region of Ghana, especially in the area of precision woodworks. The ITTO had also previously funded several important workshops on forest improvement and collaborative forest management with multiple divisions of the Ghana Forestry Commission.

1.3 Target Area

1.3.1 Geographical Location:

The chosen project area forms part of the (Eastern Portion) of Ghana’s High Tropical Forest Zone that begins in the Brong Ahafo Region of Ghana, and extends through Ashanti and Eastern Regions of the country. The topography is varied, with vast stretches of flat deforested land (in the main project area) with rolling hills in the eastern segment ending in the Togoland Mountain Ranges at the Eastern Country Border with Togo. Recent forest inventory performed in the farmed areas shows a rich collection (under natural regeneration conditions) of indigenous tree species like West African Mahogany, Wawa, Emire, Iroko, Ofram, Dahoma, Ceiba pentandra, and multiple Entandophragma species. The soil is black, loamy, and fertile, with isolated stone outcrops towards the east.

1.3.2 Social, Cultural, Economic, and Environmental Aspects

Project villages like Tayi, Ahenkro, Ntumda, Tepo, Bumbula and Akposo Kabo are predominantly Guan speaking with good Akan speaking background. The population of the six communities is approximately 12,563 people. Less than 10% are not Guan largely settlers and workers from other parts of the country including Ewes, Kokonbas, Basares, and Adeles. Land title therefore remains firmly in the hands of the indigenous Guan people. Most of the people are Christians or traditional belief holders. A few (6%) are Moslems. Traditional power is in the hands of local chiefs and sub-chiefs. Social organization comes in the form of extended families, sub-clans, clans, villages and towns. Society is basically male-dominated, with women being heavily overshadowed in most societal relation by men. Most segments of society are now convinced that, women should be emancipated in both social and economic aspects. It is mainly for this reason that a local decision was taken to institute this reforestation project in favor of both local young women and young men. All the six youth groups are therefore already existing, thriving socio-cultural units with multiple objectives (e.g. the CFMC objective) aimed at improving upon the social, economic, and environmental interests of their area.

The following schematic representation helps the reader to understand the local rural context that contributes to create the land degradation problems in the project target areas.

Social & Cultural Dimension	Brief Details
(a) Communities Participating:	(a) Tayi, Ahenkro, Ntumda, Tepo, Bumbula and Akposo Kabo all in the Biakoye District forest-savanna zone in the Volta Region of Ghana.
(b) Ethnicity:	All Guan.
(c) Demography:	(a) Ethnically homogeneous. (b) Approximately 12,563 overall population (that is, all six communities combined) according to a projected Ghana Population Census of 2000 . (c) Population growing at the rate of 1.9 per cent annually. (d) Women constitute 51 per cent of the total population, with a very high child dependency rate. (e) Average household size = 5 people . (f) High rural-urban migration rate as a result of depleted local natural resources, and high local unemployment and under employment rate.
(d) Major Occupations and Average Income:	(a) Peasant farmers = 80%; (b) Petty traders = 12%; (c) Public servants = 3%. (d) Petty artisans & others = 5%. Average disposable incomes per head range from \$300 - \$450 per year.
(e) Land Titles, and Present Status of Local Secondary Forests & Savanna	A mixture of allodial title and customary free-holdings (50%), Family land(40%) and individual holdings (10%). The secondary forest and savanna has been devastated and heavily degraded.. Local individuals, elders and village chiefs have agreed to provide all the project land (a minimum of 100 acres /40 hectares).

LAND MATTERS: In Ghana (just as in the project area), interest in land originates from three main sources

- *Ghanaian traditional and customary law;*
- *Parts of English Common Law assimilated into Ghana Common Law; and*
- *The 1992 Ghana National Constitution and related promulgated laws.*

Relevant land holding in Ghana (for a project like this) could be of several types, namely:

- **allodial title holding, (which is the highest land title existing in the country;**
- **long-term freehold interest; or**
- **long-term leasehold.**

THE PROJECT LANDS – whether for DEMONSTRATIVE PLOTS or INDIVIDUAL YOUTH APPLICATION, are conflict-free long-term leasehold land granted by their parents, or grandfathers, or family heads who are the rightful allodial land title holders. All project lands in all the participating communities (customary freehold lands for that matter) have ALREADY been SECURED from the community allodial land owners. A LEGAL and LONG-TERM LAND TENANCY AGREEMENT has also been drafted by a local philanthropist lawyer and discussed at all community levels. A COPY of this

LEGAL and LONG-TERM LAND TENANCY AGREEMENT is shown as ANNEX 3 to this proposal. LOCAL CONTRIBUTION will be partly in the form of project land, valued at US \$500.00 per acre, per year. The basis of this valuation is based on a 2011 Land Valuation Document addressed to a local traditional head, and which applies to the project-sub-district. A COPY of this Land Valuation Board Document is REPRODUCED in the ANNEX 5 to this project proposal. This confirms a TOTAL VALUE OF US\$50,000.00 as LOCAL GHANA CONTRIBUTION FROM LAND, TO THE PROJECT. The land to be used for the mixed timber tree stands and the pure teak and cassia siamea plantations totaling 100 acres will be in the form of contiguous family land units to be used as the demonstration plots.

In the case of the cassava forms, a more liberal, largely, individual free- hold fallow system is the order. Each family group usually male and female and also members of the CFMC will cultivate up to two acres each for a couple of years until they soil is rendered infertile, which they abandon for another piece while the former is left fallow.

It is cassava from these two acre forms, independent of the 100 acres (in aggregate) demonstrative plot, that will be used for the training of the target youth for the processing and packaging component. There is no benefit sharing in the cassava farming as the target youth individual units are hundred percent beneficiaries of the cassava produce and products. This is a special incentive package for the target youth groups to motivate them for the maintenance of the mixed and pure plantations.

Since all the youth beneficiary owners are resident indigenous citizens in their communities, the leased lands [2acres / 0.8 Ha in the average per head, for cassava], as well as 30 acres / 12 Ha for exotic teak, 20 acres (8 Ha for cassia (fuel wood) and the 50 acres / 20 hectares mixed plantation demonstration plots constitute a crucial local contribution in an otherwise patriarchal society.

Land, Land Use and Land Tenure in the Project Area: Immigrant farmers are fairly common in the area: about 20 % of the population. Many indigenous local land-owners are prepared to share the benefits of their land with immigrant farmers (including a percentage of ownership in trees) provided the latter are prepared to genuinely add value to the land in an honest manner. Where secondary land has been cultivated, they are often done either by indigenous dependants of family members who are lawful successors of customary freeholds, or by immigrant farmers under a traditional land use agreement. The indigenous dependants are legally free to use the land for as long as they please as long as they follow local fallow instructions. Most family lands have however been seriously abused and diminishing returns have dangerously set in.

Land Use Patterns: Most land in the project area is used for the cultivation of subsistent crops like cassava, maize, vegetables, oil palm, and to a lesser extent, cocoa a tree cash crop that reached It's cultivation heydays in the 1960s and has since been on a persistent decline.

Target Beneficiaries

Specific Beneficiary Target Groups	Products or Results that the Beneficiaries Will Use	How Will Project Information & Experience Be Disseminated To Stakeholders?
<p>(2.4.1) A minimum of 100 rural self-organized village male and female youngsters in 6 rural communities, namely: Tayi, Ahenkro, Ntumda Tepo, Bumbula, and Akposo Kabo in the Biakoye District of the Volta Region of Ghana.</p>	<p>(2.4.1a) Emire, Ofram, Wawa, Dodowa Sofo, Papao and Teak poles & timber for household construction, furniture, and for sale (both domestically and for export) (2.4.1b) Fuel wood from <u>Cassia siamea</u> (2.4.1c) Cultivated fresh and edible cassava plus processed edible and demand-driven cassava products like dough, garri, and dried cassava chip, interplanted with ofram seedlings .</p>	<p>Through, for example:</p> <ul style="list-style-type: none"> • House-to-house project community animators. • Meetings & Training Sessions. • Whole community meetings/Forestry Forums that discuss forestry resources. • Local school assemblies. • Local church assemblies. • Local mosque meetings. • Project Open Days. • Project's own newsletter. • Local FM radio/newspapers • Traditional methods.

(2.4.2) Six relevant project communities and neighboring sub-districts in general plus agricultural and forestry extension officers	- Ditto -	- Ditto -
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THE ECONOMIC benefits and advantages of the project can be quantitatively and qualitatively described and assessed in different ways, forms, and levels as follows.

Economic Benefits From The Project's Timber Products

Long-Term Economic Benefits: *Emire, Papao, Dodowa sofo, Wawa, Ofram, West African Mahogany, and Teak*, rank as the leading sawn timber types in Ghana's export trade at present (according to a Forestry Commission Newsletter, "*The Ghana Gazette*"). The same applies to sliced and rotary veneer, flooring wood, furniture parts, plywood, machined timber, moulds, and profiled boards. Between January and December 2008, for example, Ghana received **\$105,890,400** revenue from such external trade in wood products. Within the next 25 to 45 years, the project's timber outputs will therefore modestly contribute to Ghana's external trade (particularly when one looks at it from the angle of the economic multiplier effect that the plantations will generate). **Faster short term benefits** from the project's ***Emire, Papao, Dodowa sofo, Wawa, Ofram, West African Mahogany, and Teak***, (for the youth groups and the community (especially after plantations are pruned or thinned) include:

- Construction poles or young timber materials.
- Building poles, Village roofing wood
- Fuel wood, Propping poles.
- Wood for essential furniture parts, among others.

Rural Poverty Alleviation Benefits

The self-sponsored cassava cultivation and (project-supported) small-scale processing component constitute an important rural poverty reduction segment of the project. Based on the project principles of livelihood approach, people (or specifically targeted village youths) are at the center of the reforestation effort. The project's economic benefits described above therefore contribute to the development of the rural villages' target resources in terms of (a) *local human capital*, (b) *local natural capital*, (c) *local social capital*, and (d) *local financial capital*. Local human capital represents the skills, knowledge, and good health of rural people to labor, improve, and prosper. Local social capital refers to project-related networks and relationships of trust that are nurtured and developed which form the enhanced basis for present and future individual, group, and societal advancement. Local natural capital refers (in our context) to natural resource stocks like non-timber forest products (NTFPs) and precious timber resources, from which other useful benefits and services emerge. Local financial capital refers to project-related savings, regular money income flows, and useful petty credit possibility networks that open up for the six village youth groups and their communities at large.

Although it can be academically argued that such a small project contributes to ENVIRONMENTAL improvement in principle, it is a bit of an exaggeration to attribute significant environmental gains to small reforestation projects like this one. At the environmental front however, the project's promotional slogans ought to encourage very many local youths and farmers to plant commercial indigenous trees, teak, and *Cassia siamea*. Collectively, such an approach will make modest improvements in the local ecology.

1.4 EXPECTED OUTCOMES AT PROJECT COMPLETION:

BY EXPECTED OUTCOMES AFTER PROJECT COMPLETION, we are here putting EMPHASIS ON CHANGED ATTITUDES IN THE RIGHT DIRECTION, within and among project stakeholders - first-level STAKEHOLDERS ESPECIALLY, numbering 1,200 in the aggregate, with respect to practical project-related issues like:

- **Local forest resources use,**
- **Protection and rehabilitation strategies, as well as**
- **Reforestation development strategies that are SUSTAINABLE among all stakeholders.**

At the end of the project, the beneficiary first-level targeted youth stakeholders would have effectively known how to select deforested local sites, known how to prepare the land for professional reforestation, known how to nurse and plant selected seedlings, known how to maintain them, as well as known how to process and package cassava produce into profitable value added

products of different kinds. IN OTHER WORDS, EFFECTIVE PROJECT OUTCOMES DO EMPOWER AND GALVANIZE PROJECT TARGET YOUTH STAKEHOLDERS INTO RIGHT ACTIONS regarding planned project objectives, turning them into reality that changes their lives, and the lives of other local target groups.

In the project area therefore, the youth (women and men), the target beneficiaries and primary stakeholders will immediately after project completion, commence a chain of productive ventures that will raise domestic incomes and food necessary for their sustenance so that they will as the say “live happily to maintain the planted trees”!

These include harvesting of fire wood from the pure plantation of cassia siamea in addition to any thinning from the mixed stand and the pure teak stand for both domestic use and for sale. Some charcoal may be produced both for smoking fish procured from the nearby Volta Lake for domestic protein needs and for sale.

Then also the target youth will continue to engage themselves in the cultivation, processing and packaging of the various cassava products, utilizing the skills gained as a result of the thorough and special training during project intervention, for both their own use and for sale.

Besides, the impact of project intervention having sharpened their awareness with respect to non timber forest produce (NTFPs) development and utilization as well as behavioral change in favour of forest protection, will enable them continue not only with the production and harvesting of NTFPs for local use and for sale, but also to continue with forest and environmental protection.

NTFPs such as; marantaceae, black pepper, collection of snails, fruits of high demand trees like the black and miracle berries among others. Such livelihoods and income derived from them as well as those from firewood, cassava and smoked fish described above, will motivate the youth to carry out forest protection tasks like; fire prevention, control of illegal felling (chain sawing) control of illegal hunting (poaching), prevention of soil erosion and maintenance of the mixed indigenous timber and pure teak plantations. All these measures have an over all long term impact of enhancing environmental quality for the benefit of all stake holders while providing the desired end product which is timber.

Dimension Improved Upon	Brief Explanation
Forestry and Ecology	<p><u>CHANGED ATTITUDES among project beneficiaries that lead to:</u></p> <ul style="list-style-type: none"> • <u>Better, more comprehensive view of life, attitudes, and handling of local trees, forests, savannah lands, and the local ecology.</u> • <u>More skillful, empathic, proficient, and professional collaborative management, protection, rehabilitation, conservation, and improvement of project plantations (100 acres in the aggregate) and other vital local forest resources.</u> • <u>Effective local ABILITY and CAPACITY that completely eradicates wild bush fires,</u> • <u>More professional, tolerant, and collaborative behavioral tendency to eliminate or significantly minimize natural resource conflicts at the local level.</u>
Biodiversity	<p><u>Demonstrable APPRECIATION of biodiversity, or higher BIODIVERSITY CONSCIOUSNESS among primary project stakeholders with respect to local trees, forests, and local natural resources.</u> Participatory ownership and management of 50 acres in the aggregate, of <i>mixed Emire, Dodowa Sofo, Onyina, Papao, Wawa, Ofram, and West African Mahogany plantations</i> to yield ecological and economic needs of young rural youths.</p>
Economic Dimension	<p><u>(1) From Trees:</u> Vibrant, rural-community level mixed plantations of important, fast-growing, exportable tropical wood, namely <i>Emire, Dodowa Sofo, Onyina, Papao, Wawa, Ofram, and West African Mahogany, Teak, as well as Cassia siamea (fuel-wood)</i> to alleviate the poverty of local disadvantaged rural youths in the project communities. FOUR thousand planted trees, estimated conservatively at</p>

	<p>US\$250 per (long-term) matured timber tree, the project will bring US\$1,000,000 income to the local area.</p> <p><u>(2) THE MAJOR DIMENSIONS of the PROJECT'S ECONOMIC OUTCOMES INCLUDE THE REALIZATION THAT RURAL WEALTH CREATION IS WELL WITHIN THE POWER and DOMAIN of all the targeted first-level local youth stakeholders.</u></p> <p><u>(3) ACTION-ORIENTED proficiency (among targeted youths) regarding simple market research regarding multiple local cassava products, and HOW TO DEVELOP NEW CASSAVA PRODUCTS to satisfy the market in a profitable manner. This point therefore implies proficiency regarding an efficient establishment of an innovative, small-scale DEMAND-DRIVEN LOCAL CASSAVA PROCESSING SYSTEM THAT SIGNIFICANTLY ADDS EXTRA MARKET VALUE to raw cassava.</u></p> <p><u>(4) DEMONSTRABLE PROFICIENCY (AMONG TARGETED YOUTHS) regarding the PACKAGING, LABELING, MARKETING, DISTRIBUTION, and ADVERTISEMENT for targeted multiple cassava products, the prompt sale of which raised local beneficiary incomes from current US\$350 per household, per year, to US\$700 by the end of project period and thereby reducing local rural poverty.</u></p>
Agricultural Dimension	- As above -
Socio-Cultural	DEMONSTRABLE PRIDE that cassava can be extensively grown in the communities to stabilize social relations.
Local institutional capacity building for participating local institutions, e.g. the diverse community youth groups, and the Local Executing Agency	<p>(i) Improved management and reforestation capacity of local implementing institutions including the Executing Agency;</p> <p>(ii) Greater coordination of activities for the local target youth groups.</p>

PART 2 PROJECT RATIONALE AND OBJECTIVES

2.1 RATIONALE

2.1.1 Stakeholders Analysis:

Project stakeholders are individuals, households, groups, private or public organizations and institutions that are affected by, and who in turn affect the processes, activities, outputs, and outcomes of a project. In other words, project stakeholders are project intervention actors who have an interest (positive or negative) in the outcomes and results of the program. The stakeholders in this project can be described along several dimensions, namely: **(a)** traditional politico-administrative power-owning elites, **(b)** powerful land resource-owning groups, both traditional and newly-arrived "landowners-through-outright-purchases", **(c)** Women and girls as land-resources most ubiquitous users (although women and girls are NOT front-line land resource owners), **(d)** migrant farmers, **(e)** multiple local land-use groups like farmers, hunters, and NTFP collectors, as well as **(f)** local and district state-sector forestry officials. We can identify **(a) Prime stakeholders, (b) Secondary stakeholders, and (c) Tertiary stakeholders.**

The prime target beneficiary stakeholders of this project include 1,200 target area Youth groups—both male and female, and very often landless— but who are registered members of the local forestry registered village-based Collaborative Forest Management Committees (CFMCs). They stand to gain directly from this project in multiple ways: namely, forest tree resources enhancement, part-time employment, as well as household livelihoods expansion. Also in this prime category are the Family heads of these **CFMC-Youths who have agreed to provide land for both the project demonstration plots, as well as individual youth plots.** These land providers will also GAIN in terms of project forest tree resources benefits sharing. Local environmental micro-climate improvements will further enhance the land resources of the land-owners. About 90 per cent of the project youths (both young men and young women) **have already been allocated project land by their respective family heads or parents who are allodial land title holders.** The project therefore will introduce the principle of justice, greater access, and fairness in local family land ownership matters. This fact explains the reason behind the current popularity of the project among first- and second-level stakeholders in the target communities. For purposes of this analysis, we will include **the NGO (Picodev Ghana) and the Biakoye District Assembly Offices in Nkonya the project's**

executing agencies, as prime and crucial stakeholders, to be considered as a collaborative unit promoting the target area's long-term forestry and agricultural programs.

The secondary stakeholders include local and district state-sector forestry officials, as well as other local District Assembly officials concerned with reforestation, environmental improvement and staple food production. The project will provide a useful learning opportunity for these secondary stakeholders to (work with primary stakeholders and) devise alternative and sustainable resource management plans for the locality.

The tertiary stakeholders include the Member of Parliament for the project area, the local political Unit Committee, the Assembly man, the chief farmer, as well as local religious bodies. When the project formulators (initially from the primary- and secondary-level stakeholder groups) first decided on the project, it was the local churches that offered to announce or publicize it in their respective churches..

TABLE 2.1.1 ON STAKEHOLDER ANALYSIS

Project to Expand Commercial Indigenous Timber Supply Base in the six pilot communities in the Biakoye Forest-Savanna Area

Stakeholder Group	Characteristics	Problems, Needs and Interests	Potentials	Involvement in Project
PRIMARY STAKEHOLDERS				
Project-registered youth members (men & women) who belong to local Collaborative Forest Management Committees (CFMCs)	(a) Young in age: 18 – 30 years. (b) Both men and women. (c) Heir-apparent to land owners. (d) Petty local farmers. (e) Have potential to enhance their livelihoods.	(a) Poverty-stricken. (b) Finding fair ways to derive benefits from family land. (c) Interested in sustainable medium-term local investment.	(a) Burning interest to receive reforestation assistance and invest it to great advantage. (b) Have the potential to acquire reforestation skills. (c) Love for both individual and group action.	PRIMARY PROJECT BENEFICIARY
Family heads who provide local project land	(a) Usually 45 years and above. (b) They hold effective allodial title to local land. (c) Are the parents of project youths. (d) local farmers by profession.	(a) Bearing the weight of household budget. (b) (c) Interested in sustainable medium-term local investment.	(a) Potential new recruits to indigenous species reforestation. (b) Will share in project BENEFITS.	DIRECT PROJECT BENEFICIARY
The Project Executing Agency: that is, Picodiv Ghana & Biakoye D A Offices in Nkonya (Ghana)	Local NGO.with the required skills and training as well as the will and motivation to advance the course of emancipation of the rural poor and also restore environmental quality and economic security for all. (b) Enjoys a special local good-will as an objective social helper	Does not seek monetary profits in programs in the literal sense, although the body is very interested in creating wealth and adding-value to resources.	(a) Capable of galvanizing local youth for effective reforestation. (b) Capable of organizing effective youth training and empowerment programs like this project.	DIRECT PROJECT BENEFICIARY

SECONDARY STAKEHOLDERS				
District Forestry Office	(a) Public sector institution, (b) Bureaucratic. (c) Has qualified forestry technocrats.	(a) Under-staffed. (b) Cash-strapped. (c) Money-conscious (d) High staff turnover.	(a) Good partner in sustainable forest management (SFM) (b) Capable of training project beneficiary youths	Capable of training project beneficiary youths on reforestation skills or provide seed inputs. Good SFM Partners
District Agric. Office	(a) State organ. b) Has agric. Experts	- DITTO -	- DITTO -	- DITTO -
Community's Traditional and Opinion Leaders	(a) Power-drunk. (b) Interested however in projects. (c) Bureaucratic. (d) holds fast to land titles.	(a) Poverty-stricken. (b) Interested in sustainable medium-term local investment, including reforestation.	Burning interest to receive reforestation assistance and invest it to community advantage.	Capable of releasing very vast stretches of suitable local land for the success of the project.

The project stakeholders described above have all played very constructive and active roles at different phases of the project cycle as described below.

Project Cycle Phase	Prime Stakeholders	SECONDARY and TERTIARY Stakeholders
Problem Identification & Project Identification	(a) Targeted Community Youths and Farmers (both local young women and young men) who are registered MEMBERS of the local village-level Collaborative Forest Management Committees – CFMCs. (b) Family heads or parents who are allodial land title holders. (c)Picodev Ghana & BDA Offices in Nkonya Ghana	(a) Local community chiefs. (b) District Forestry Officer (c) District Agric. Officer (d) District Assemblymen and assemblywomen (e) Member of Parliament for the target area.
Project Formulation	(a) Targeted Community Youths and Farmers (both local young women and young men) who are registered MEMBERS of the local village-level Collaborative Forest Management Committees – CFMCs. (b) Family heads or parents who are allodial land title holders. (c) Picodev Ghana& BDA Offices in Nkonya..	(a) Local community chiefs. (b) District Forestry Officer (c) District Agric. Officer (d) District Assemblymen and assemblywomen (e) Member of Parliament for the target area.
Project Submission	-As Above-	-As Above-
Project Appraisal & Approval	(a) Targeted Community Youths and Farmers (both local young women and young men) who are registered MEMBERS of the local village-level Collaborative Forest Management Committees – CFMCs. (b) Project land owners. (c) The Executing Agency, i.e. Picodev Ghana & BDA Offices In Nkonya	<ul style="list-style-type: none"> • Allodial land title holders and family heads of the landowning families • District Forestry Officer • District Assembly
Project Funding	<ul style="list-style-type: none"> • Project landowners • The local CFMC. • ITTO Focal Point (Ghana) 	<ul style="list-style-type: none"> • Landowning families • Project participating youths within the local CFMCs.

	<ul style="list-style-type: none"> • ITTO (RFM Division) • The Executing Agency, i.e. Picodev Ghana & BDA Offices in Nkonya. 	<ul style="list-style-type: none"> • Ghana Forestry Commission • Government of Ghana
Project Implementation Monitoring Evaluation, & Review	<ul style="list-style-type: none"> • The Executing Agency • Project registered youth beneficiary groups and the CFMCs • ITTO (RFM) 	<ul style="list-style-type: none"> • Project land owners. • ITTO Focal Point • Government of Ghana

In the past, these rural forest-area dwellers looked upon district forestry officials as police men, always out to intimidate rural dwellers whose ideas on forest improvement are looked mean upon by forestry technocrats. This hide-and-seek approach, among other issues, led to the depletion of rural forests as it encouraged a spirit of deep distrust and isolation. The Ministry of Lands and Natural Resources made several forest policies and laws which always remained at head-quarters, and thus remained unknown and unintelligible to rural land owners and farmers. Forestry extension services never fully percolated to the typical enthusiastic youth-farmer, who was eager to engage in meaningful reforestation programs. In the meantime, harmful farming practices continued, leading to gradual but persistent worsening of rural forest ecosystems.

2.1.3 PROBLEM ANALYSIS: The Problem Tree

Biakoye Project to Restore and Expand Indigenous Commercial Timber Supply Base

Category 1 EFFECTS:	Category 2 EFFECTS	Category 3 EFFECTS	Category 4 EFFECTS
The hitherto rich and diversified forest RESOURCE BASE is being degraded at an alarming rate.	The frontiers of erratic traditional slash and burn agriculture are WIDENING very rapidly.	Biakoye forest and forest-savanna HABITATS are being speedily lost.	The LIVELIHOODS of the local forest-dwelling people are CRUMPLING and DISASTROUSLY UNDERMINED.
↑↑	↑↑	↑↑	↑↑
KEY PROBLEM = The forests in the Biakoye area are heavily degraded.			
<u>MAIN CAUSE (1):</u> ↑↑ The stakeholders CANNOT AGREE on viable FOREST MANAGEMENT OPTIONS to follow.		<u>MAIN CAUSE (2):</u> ↑↑ A proven integrated LAND and LAND RESOURCE USE Management Plan is non-existent.	<u>MAIN CAUSE (3):</u> ↑↑ Multiple forest-savanna resource harvesting systems are woefully sub-optimal, inefficient, and counter-productive.
<u>SUB-CAUSE (1):</u> ↑↑ There is no steadfast policy to galvanize relevant stakeholders.		<u>SUB-CAUSE (1):</u> ↑↑ Local LAND TENURE systems are un-clear and often very INEQUITABLE.	<u>SUB-CAUSE (1):</u> ↑↑ Resource creation rights, disposal rights, and user rights are un-clear, unfair, and contentious.
↑↑	↑↑	↑↑	↑↑
<u>SUB-CAUSE (2):</u> ↑↑		<u>SUB-CAUSE (2):</u> ↑↑	<u>SUB-CAUSE (2):</u> ↑↑

There are conflicting stakeholder interests co-existing with unfair master-servant RELATIONSHIPS.		Deep-seated DISTRUST among land owners and local users regarding land resource BENEFIT SHARING issues.		High TURN-OVER among local LANDLESS LAND-USERS, sub-farmers, and migrant settler-farmers.
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2.1.4 Logical Framework Matrix

Strategy of Intervention	Measurable Indicators	Means of Verification	Key Assumptions
<p><u>Development Objective:</u> To contribute to the sustained socio-economic development and environmental protection in the Biakoye area in Ghana's Volta Region.</p> <p><u>Specific objective.</u> To initiate a participatory, poverty alleviation approach (innovative value adding cassava processing and sale) to bring about sustainable forest enrichment and plantation development using tropical timber species in mixed</p>	<p><u>Impact indicators</u> By 2012, forests in project sites have been enriched in timber and fuel wood by 80acres /32Ha and 20acres /8Ha respectively. By 2013, sustained increases in livelihoods of target groups ensured through developed cassava cultivation (20acres/8Ha) and processing. By 2013 - Rotation, sustained enrichment and protection of forests achieved. Volta region's forestry sector potential products' contribution in Ghana's inter-regional domestic and export trade expands, even if very minimally, by the year 2034.</p> <p><u>Outcome indicators</u> By March 2013 planting sites for cassava (totaling 20acres/8Ha) are ready for planting by youth groups (target groups). By 30th April 2013,</p>	<p>Periodic official publications from the Economic & Markets Bureau of the State Ministry of Food and Agriculture (MOFA), The Forestry Commission and the Ghana Statistical Services. Periodic reports of Picodev Ghana.</p> <p>Periodic state-of-the-arts reports at Government Ministerial levels.</p> <p>Periodic reports of Picodev Ghana and field visits.</p>	<p>That Ghana's forest sector policies and enabling factors' promotion programs are maintained or further expanded with emphasis on collaborative forest management, participation of rural youths, forest fringe-populations, and sustainable forest growth and development.</p> <p>That the Ghana Forestry Commission, the Ministry of Food and Agriculture, and the Ministry of Health pursue and strengthen the policies of sustained rural development program (with emphasis on good nutrition and preventive medicine).</p>

<p>stands and exotic teak (for timber and poles) and <u>Cassia siamea</u> (for fuelwood) in pure stands at selected sites in the Biakoye District Assembly area of Ghana's Volta Region.</p>	<p>cassava plots (totaling 20acres/8Ha) have been planted. By May 2013, planting sites for the mixed tropical timber spp.(totaling 50acres/20Ha) have been prepared and pegged for outplanting by the youth groups. By June 2013, planting stock of mixed tropical timber spp.(totaling 50,000 seedlings) at project nurseries are ready for out planting by the youth groups. By June 2013, planting sites of teak (30acres - 12Ha) and <u>Cassia siamea</u> (20acres/8 Ha) have been prepared and pegged for outplanting by the youth groups. By 15th August 2013,,50acres/ 20Ha mixed tropical timber spp., 30acres/ 12Ha teak and 20acres/ 8Ha <u>Cassia siamea</u> demonstration plots have been planted and beaten-up by the youth groups. By October 2013, cassava processing and sale are in progress by the youth groups.</p>		
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2.1.4 Logical Framework Matrix (Continued)

Project Elements	Indicators	Means of Verification	Assumptions
<p><u>Output 1:</u> <u>One thousand and two hundred (1,200)- in the aggregate - young women and young men) of the six (6) pilot project communities have successfully established and are professionally managing six (6) mixed</u></p>	<p>(a) Targeted areas of mixed plantations of specified indigenous</p>	<p>(a) Guided field visits. (b) Project progress</p>	<p>a) That planned and approved project funds are released on time.</p>

<p><u>plantation demonstration plots of popular, indigenous, and commercial trees of <i>Emire, Ofram, Dodowa Sofo, Onyina, Papao, Wawa, and West African Mahogany species (50 acres minimum, and in the aggregate) – along with lifelong valuable multiple plantation, forestry, and bush fire prevention skills. These reforestation skills also include seeds collection and treatment, nursery making, seedlings transplanting, maintenance, and effective plantation management.</i></u></p>	<p>species professionally established with good quality seedlings or cuttings stock.</p>	<p>reports.</p>	<p>(b) That required project inputs are made available, especially indigenous tree seeds.</p>
<p>Output 2:</p> <p><u>One thousand and twenty (1,200)- in the aggregate - young women and young men) of the six (6) pilot project communities have established and are professionally managing six (6) demonstration plots of commercial teak (for timber and poles) and commercial <i>Cassia siamea</i> (for fuel-wood), 50 acres in the aggregate (that is, 30 acres of teak, plus 20 acres of <i>Cassia</i> fuel-wood).- along with lifelong valuable multiple plantation, forestry, and bush fire prevention skills. These reforestation skills also include seeds collection and treatment, nursery making seedlings transplanting, maintenance, and effective plantation management.</u></p>	<p>Targeted mono-culture stands of professionally planted teak, and <i>Cassia siamea</i>.</p>	<p>(a) Guided field visits. (b) Project progress reports.</p>	<p>- As above -</p>
<p>Output 3:</p> <p><u>One thousand and twenty (1,200) youth members (that is, young women and men) have gained highly proficient multiple cassava processing skills that add value to raw cassava, the efficient pursuit of which can significantly raise their income level from the current US\$350 per household per year to US\$700 by the end of project period) and thereby significantly reducing local rural poverty in the target area.</u></p>	<p>Published information from the Ghana Ministry in charge of Youth Affairs and the Department of Employment and Social Welfare.</p>	<p>(a) Forest Services Division's Progress Reports. (b) Project Progress Reports.</p>	<p>That complementary (and enabling factors' promoting) policies are vigorously followed at relevant State Ministerial levels, particularly those that encourage sustainable collaborative forest management and rural small-scale reforestation.</p>

2.2 OBJECTIVES

2.2.1 Development Objective and impact indicators:

To contribute to the sustained socio-economic development and environmental protection in the Biakoye area in Ghana's Volta Region: seeks to; restore precious indigenous and exotic timber supply base and nurture diversified local natural habitats, expand timber-sale revenues and incomes while widening multiple domestic livelihoods opportunities on a sustainable basis (short rotation cassia fuel wood and cassava value adding processing).

The estimated untapped Ghana internal provincial market value of such processed cassava products is placed at **1.6 million USA dollars** per year by the Ghana Ministry of Food and Agriculture (MOFA).

2.2.2 Specific Objective and outcome indicators:

To initiate a participatory, poverty alleviation approach (innovative value adding cassava processing and sale) to bring about sustainable forest enrichment and plantation development using tropical timber species in mixed stands and exotic teak (for timber and poles) and *Cassia siamea* (for fuel wood) in pure stands at selected sites in the Biakoye District Assembly area of Ghana's Volta Region.

The SPECIFIC OBJECTIVE was arrived at by re-examining the PROBLEM TREE very closely and (a) turning the KEY PROBLEM to be the SPECIFIC OBJECTIVE, the CAUSES into OUTPUTS, and the SUB-CAUSES into PROJECT ACTIVITIES. An Objective Tree so described provides a vision of the future when specified project problems will have been solved. An objectives tree enables a verification of relevant issues in a step-by-step transparent manner. An Objective Tree analysis therefore helps us to capture the very important questions that enable us to adopt very realistic project implementation platforms and tactics that maximize outputs and outcomes, as well as minimize implementation costs, hazards, and risks.

PART 3: DESCRIPTION OF PROJECT INTERVENTIONS

3.0 OUTPUTS AND ACTIVITIES

3.1 OUTPUTS

1st Level Project Outputs and OUTCOMES:

One thousand and two hundred (1,200)- in the aggregate - young women and young men) of the six (6) pilot project communities have successfully established and are professionally managing six (6) mixed plantation demonstration plots of popular, indigenous, and commercial trees of *Emire, Ofram, Dodowa Sofo, Onyina, Papao, Wawa, and West African Mahogany species (50 acres minimum, and in the aggregate) – along with lifelong valuable multiple plantation, forestry, and bush fire prevention skills. These reforestation skills also include seeds collection and treatment, nursery making, seedlings transplanting, maintenance, and effective plantation management.*

2nd Level Project Outputs and OUTCOMES:

One thousand and twenty (1,200)- in the aggregate - young women and young men) of the six (6) pilot project communities have established and are professionally managing six (6) demonstration plots of commercial teak (for timber and poles) and commercial *Cassia siamea* (for fuel-wood), 50 acres in the aggregate (that is, 30 acres of teak, plus 20 acres of *Cassia* fuel-wood).- *along with lifelong valuable multiple plantation, forestry, and bush fire prevention skills. These reforestation skills also include seeds collection and treatment, nursery making seedlings transplanting, maintenance, and effective plantation management.*

3rd Level Outputs and OUTCOMES:

One thousand and twenty (1,200) youth members (that is, young women and men) have gained highly proficient multiple cassava processing skills that add value to raw cassava, the efficient pursuit of which can significantly raise their income level from the current US\$350 per household per year to US\$700 by the end of project period) and thereby significantly reducing local rural poverty in the target area.

3.1.1 Information on How the (Self-Financed) Private Cassava Tubers Will Be Cultivated:

At least TWENTYACRES/8 HECTARES of private cassava will be cultivated (in the aggregate) by the project individual members and on wholly-individual farms. The FULL COST of cultivating such private cassava farms WILL BE BORNE ENTIRELY by the individual youth members of the project. It is from these beneficiary-cultivated cassava farms that CASSAVA-TUBER SAMPLES will be supplied (free of charge) for

use in the PRACTICAL CASSAVA PROCESSING TRAINING PROJECT WORKSHOPS. Some of the cassava species take only six to eight months to mature. ITTO funds will THEREFORE NOT BE USED in cassava cultivation during the entire project.. IT IS ONLY UNDER THE INNOVATIVE DEMAND-DRIVEN CASSAVA PROCESSING TRAINING SYSTEM TO ADD EXTRA MARKET VALUE that very modest pre-approved ITTO funds will be applied. Such planned value adding (THROUGH TRAINING) processed cassava products will include: (a) cut-to-customer-specification-dried cassava chips, (b) innovatively-packed tapioca, (c) cassava-neat-fufu flour, (d) cassava-plantain-fufu flour, (e) cassava-yam-fufu flour, (f) cassava-cocoyam-fufu flour, (g) multiple ready-to-eat pre-mixed garri (with different popular flavours such as soya flavour, miracle-berry flavour, or cocoa-milo-flavour), as well as (h) fresh cassava dough for niche regional and local domestic household uses. The training sessions will be under a qualified and experienced CASSAVA PROCESSING AND TRAINING MANAGER with excellent certification from other successful internationally-funded projects.

3.1.2 ACTIVITIES

3.1.2 Output 1.1	Inputs and Remarks
<p><u>One thousand and two hundred (1,200)- in the aggregate - young women and young men) of the six (6) pilot project communities have successfully established and are professionally managing six (6) mixed plantation demonstration plots of popular, indigenous, and commercial trees of Emire, Ofram, Dodowa Sofo, Onyina, Papao, Wawa, and West African Mahogany species (50 acres minimum, and in the aggregate) – along with lifelong valuable multiple plantation, forestry, and bush fire prevention skills. These reforestation skills also include seeds collection and treatment, nursery making, seedlings transplanting, maintenance, and effective plantation management.</u></p>	<p>Youth members' labor, <i>Emire, Papao, Dodowa sofo, West African Mahogany, Wawa, Ofram, Cassia siamea and Teak</i> seedlings and other financial inputs</p>
<p>Activity 1.1.1: Participatory Land Securing, site selection, site surveying, demarcation, indenture preparation, and pillaring.</p>	<p>Labor and pillaring wooden pegs</p>
<p>Activity 1.1.2 Preparation of appropriate individual site maps and ownership site plans.</p>	<p>Labor from the youth group members, implementing agency staff, and local traditional land owners and chiefs who give out the land.</p>
<p>Activity 1.1.3 Major seeds collection (e.g. <i>Emire, Papao, Dodowa sofo, West African Mahogany, Wawa, Ofram</i>), extraction, drying, purchasing, testing and storage</p>	<p>Labor, and financial inputs. Kindly Note: All Cassava cultivars (or seeds) cost will be borne by the youths and the local Executing Agency (& not ITTO)</p>
<p>Activity 1.1.4 Establishment of 2 small seed NURSERIES to produce needed seedlings to complement supplies from FSD. These include land preparation, sowing, fertilization, watering, shading, purchasing of polythene bags, and seedling bagging.</p>	<p>Trained youth group labor, plus seeds and financial resources</p>
<p>Activity 1.1.5 Adequate preparation of the main field plots for plantation planting activities i.e. pegging, hole digging, etc.</p>	<p>Wooden pegs and digging implements.</p>
<p>Activity 1.1.6 Major raining season transplanting of seedlings and follow-up beating up (or re-planting).</p>	<p>Labor and adequate water.</p>
<p>Activity 1.1.7 Making of borderline anti-fire strips (where necessary)</p>	<p>Youth groups. Sub-contracted local male labor.</p>
<p>Activity 1.1.8 MAINTENANCE of plantations (e.g. Weeding, tending, spraying, pest control, further beating-up, and other professional activities as advised by project management and FSD.</p>	<p>Guided labor.</p>

3.1.2 Output 1.2	
<p><u>One thousand and twenty (1,200)- in the aggregate - young women and young men) of the six (6) pilot project communities have established and are professionally managing six (6) demonstration plots of commercial teak (for timber and poles) and commercial Cassia siamea (for fuel-wood), 50 acres in the aggregate (that is, 30 acres of teak, plus 20 acres of Cassia fuel-wood).- along with lifelong valuable multiple plantation, forestry, and bush fire prevention skills. These reforestation skills also include seeds collection and treatment, nursery making seedlings transplanting, maintenance, and effective plantation management.</u></p>	<p>Youth group labor</p>
<p>Activity 1.2.1 Establishment of 2 small seed NURSERIES to produce needed seedlings to complement supplies from FSD. These include land preparation, sowing, fertilization, watering, shading, purchasing of polythene bags, and seedling bagging.</p>	<p>Youth group labor</p>
<p>Activity 1.2.2 Actual TRANSPLANTING, followed by field inspection and beating up where necessary.</p>	<p>Seedlings, plus labor.</p>
<p>Activity 1.2.3 Construction of borderline anti-fire strips where appropriate.</p>	<p>These help plantation patrol groups to function effectively.</p>
<p>Activity 1.2.4 MAINTENANCE of plantations (e.g. Weeding, tending, spraying, pest control, further beating-up, and other professional activities as advised by project management and FSD.</p>	<p>Youth group labor, plus seedlings.</p>
<p>Output 1.3</p>	<p>Inputs and Remarks</p>
<p><u>One thousand and twenty (1,200) youth members (that is, young women and men) have gained highly proficient multiple cassava processing skills that add value to raw cassava, the efficient pursuit of which can significantly raise their income level from the current US\$350 per household per year to US\$700 by the end of project period) and thereby significantly reducing local rural poverty in the target area.</u></p>	<p>The target groups here are basically local youth groups in the target area, namely: Dormabin, Kunda, and Adumadum communities implementing the project.</p>
<p>Activity 1.3.1 General information provision and discussion forums with the youth groups and the gathering of necessary equipment and inputs in the respective 6 villages.</p>	<p>Trained implementing agency staff. Effective communication of meeting times, venues, and dates.</p>
<p>Activity 1.3.2 Organization of several “learning-by-doing” training workshops where participants actually learn to process, make, manufacture, pack, label and sell creatively processed cassava products.</p>	<p>The target groups here are basically local youth groups in the target area, namely: Tayi, Ahenkro, Ntumda Tepo Bumbula and Akposo-Kabo communities implementing the project.</p>
<p>Activity 1.3.3 Periodic organization of formal networking and training workshops, Open Days, and Cassava promotion days for the target groups.</p>	<p>Trained implementing agency staff. Invited resource persons from other relevant institutions including agricultural, nutrition, and health institutions.</p>
<p>Activity 1.3.4</p>	<p>These visits help the rural youth plantation development and</p>

Arranging planned field visits to institutions that have relevant services to offer the project in terms of output 1.3 above.	cassava processing groups to build professional networks and function effectively as professional profit-making groups.
Activity 1.3.5 Promoting other target area private seedlings producers (that is, private nurseries) that are professionally sound enough to supply approved seedlings for targeted fast-growing indigenous timber species.	Such private nurseries must have been trained by FSD in the District.
Activity 1.3.6 Organization of project monitoring exercises along with the participating groups and ITTO officials.	Accommodation and transport.

3.2 IMPLEMENTATION APPROACHES AND METHODS

3.2.1 Project Strategy

In order to ensure a participatory implementation of the project, the project owners and stakeholders have discussed and adopted a **multi-dimensional project strategy** that aims at achieving maximum results. Some aspects of this participatory strategy include:

- (a) *Organizational strategy.*
- (b) *Rural private timber cultivation strategy in terms of land preparation, seedlings procurement and seedlings production, seedlings planting, as well as over all plantation maintenance.*
- (c) **Strategy to promote fully self-financing (by local beneficiaries) of cassava cultivation.**
- (d) *Cassava part-processing and management strategy.*
- (e) *Cassava products promotion, marketing, and sales strategy.*
- (f) *Project benefits sharing, conflict prevention & conflict mediation strategy.*
- (g) *Project information, dissemination strategy.*
- (h) *Overall community participation in implementation strategy.*

The basic objective of the above sub-strategies is to ensure active (cross-segment) involvement in decision-making by stakeholders, leading to greater local actor commitment, supportive and responsible behavior, as well as sustainability of interactive operations, outputs, and outcomes. The details of these diverse aspects of project strategy are further explained below.

3.2.2 Organizational Strategy

In each of the six rural communities, the target youth groups already exist as thriving (Forestry Commission-recognized) **Collaborative Forest Management Committees (CFMCs)** with their own bye-laws, management structures, and sets of meeting times. The project will only strengthen and enrich these useful and committed old links to the socio-economic advantage of the members. In each of the six target communities, the members will operate the following types of plantations:

- (a) **The first plantation category** will be **Six Mixed Plantation Demonstration Plots** 50acres 20Ha aggregate) of indigenous locally popular timber species like **Emire, Ofram, Wawa, Dodowa Sofo, Onyina, Papao, and West African Mahogany**. These will be owned jointly by the land-giving families and the various youth groups
- (b) **The second type of plantation** will be teak plantations in pure stands owned jointly by the land-giving families and the various youth groups.
- (c) **The third type of plantation** will be Cassia siamea fuel-wood plantations in pure stands owned jointly by the land-giving families and the various youth groups.
- (d) The fourth type of cultivated plots will be COMPLETELY SELF-FINANCED *Cassava farm crops* (with boundary planting of ofram tree seedlings} for future processing into multiple local demand-driven cassava products, and owned privately by individual youth group members.

The youth members will work on these diverse plantations with technical direction from the Project Executing Agency.

3.2.3 Timber Trees Cultivation Strategy:

The initial land clearing and preparation function will be through project-hired labor drawn from the target youth groups and (sometimes) from the local communities at large. Seedlings will come from three sources: namely, **(a) District (FSD) Central Nursery** especially for the indigenous tree species; **(b)** the project's own seed nurseries; and **(c)** FSD-approved private nurseries owned and managed by trained operators. **Seedlings transplanting and maintenance** will be carried out by a combination of hired local labor and target women's own labor as far as possible with technical advice from the project. The philosophy is learning by doing, having in mind post-project maintenance period.

3.2.4 Completely Self-Financed Cassava Cultivation and Processing Strategy

We have already said that the fourth type of cultivated plots will be individually-owned *Cassava farm crops* for future processing into multiple local demand-driven cassava products, and owned privately by individual youth group members. The individual private owners will bear **100 per cent of the cost of initial cassava land clearing (and future cassava maintenance weeding cost)**. A small ITTO Project Funding Budget (about 5 per cent of the total ITTO budget) will be used to (a) procure essential initial cassava cultivars or planting materials, (b) train the individual youth members on how to process demand-driven cassava products like "cut-to-customer-specification-dried cassava chips", "innovatively-packed tapioca", "cassava-neat-fufu flour", "cassava-plantain-fufu flour", "cassava-yam-fufu flour", "cassava-cocoyam-fufu flour", "multiple ready-to-eat pre-mixed garri", - with different popular flavors such as soya flavour, miracle-berry flavor, or coco-milo-flavor) - as well as "fresh cassava dough" for niche regional and local domestic household uses". (c) pay for a very modest list of locally proven cassava processing tools and simple equipment, and (d) promote the local use and profitable sale of the final cassava products. Because cassava is a root tuberous crop and highly nutrient demanding ofram tree seedlings will largely be used as boundary plantings with sparse inter plantings as cover trees on fallows after final harvesting of cassava.

3.2.5 Project-Taught Cassava Products Promotion, Sales, and Marketing Strategy

Owing to the fact that cassava is a staple food component in most local lunch or dinner recipes for most households in the target area, cassava processing, storage, packaging, marketing and promotion activities will constitute an important part of project implementation. The cassava products will therefore be partly for household use and partly for sale to the general public at a profit for the youth group members.

3.2.6 Project and Plantations' Benefits Sharing Issues

The project will have multiple levels of project plantations in each of the six communities as follows: There will be mixed plantation of popular indigenous timber species like ***Emire, Ofram, Wawa, Dodowa Sofo, Onyina, Papao, and West African Mahogany***. There will also be mono-culture plantations of teak and ***Cassia siamea*** fuel wood. These project outputs will be shared according to the following proportions below:

Project Ownership Shares (in percentages) (These percentages apply to all the six target communities)

Rural Community Beneficiary	Percentage Owned
(a) The target YOUTH GROUP (with respect to the relevant Mixed Plantation Demonstration Plots)	45 per cent of the proceeds of the relevant demonstration plot
(b) The LOCAL FAMILY that provides land for the relevant Mixed Plantation Demonstration Plots	45 per cent of the proceeds of the relevant demonstration plots
(c) The Project Executing Agency (with relevance ONLY to each of the said Mixed Plantation Demonstration Plots)	10 per cent of the proceeds of each of the relevant mixed plantation demonstration plots
(d) Individual target youth member with relevance only to the mono-culture TEAK Plantation	60 per cent of the holding to the individual private youth owner

(e) Individual target youth member with relevance only to the mono-culture <i>Cassia siamea</i> FUEL-WOOD Plantation	70 per cent of the holding to the individual private youth owner
(f) Individual youth member with relevance only to the cassava farm holdings and its processed cassava products	100 per cent of the holding to the individual private youth owner
Table continued	
(g) <u>The local Family that provides land for the relevant Teak mono-culture plantation</u>	40percent of the proceeds of the demonstration plots.
(h) <u>The local Family that provides land for the mono-culture cassia Fuel Wood Plantation</u>	30 percent of the proceeds of the demonstration plots

OUTPUT BENEFITS and OWNERSHIP: PROJECT DEMONSTRATION PLOTS will therefore be OWNED by the CFMCs as a group, but extra individually-cultivated reforestation plots will BE INDIVIDUALLY OWNED.

3.2.7 Conflict Handling Mechanisms

The project shall have a **PROJECT STEERING COMMITTEE (PSC)** made up of local or district eminent persons, selected leaders of the target youth groups, a representative of the project executing agency, as well as one or two hard-working public-sector district forestry personnel. The Project Steering Committee shall remain the project's advisory board as well as the chief mediator among project stakeholders in cases of project disputes and conflicts.

3.2.8 Project Information Dissemination Strategy

An appropriate implementation of this strategy also includes respectful exchange of ideas and findings by all relevant stakeholders, effective listening, communication and joint action, public relations, promotion, and general public education. These multiple dimensions of information dissemination are captured in the following **Information Dissemination Strategy Chart**.

Information Type	Target Audience	Communication Media & Method
(1) General information about the project area environment.	(a) The general public (b) Chiefs and elders (c) Local opinion leaders (d) Farmers, land owners (e) The Youth, Collaborative Forest Management Committees (CFMCs) (f) District Assembly Officers.	(a) Whole-community general open meetings. (b) Traditional dawn message disseminators. (c) Rural FM Radio.
(2) Pre-Project information to the general community.	As above, plus District-level Forestry, and Agricultural Ministry Officials.	As above, plus popular local newspaper written insets and official invitation letters to public officials.
(3) Specific Project-Related Production, Management, Technical, and Collaborative Forest Management Information.	(a) Target youth group members (b) Other local level project stakeholders as might be found relevant.	(a) Use of project animation personnel on house-to-house missions; Planned meetings, (b) On-the-job project information dissemination.
(4) Project Animation, Promotion, Early Warning, Good News, and Replicable Information.	As Above, plus Other non-project local youths, local women, local farmers, migrant workers, local Churches, mosques, and Schools.	- Ditto -

(5) Wild (Bush) Fire Information.	<ul style="list-style-type: none"> • The whole Community. 	Traditional village dawn informants
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3.2.9 Youth Group EMPOWERMENT and Overall Community Participation

*(Kindly see further expansions on this topic under the **Operational Arrangements Section**)*

The concept of active participation in project implementation is a king-pin in the wider concept of rural stakeholder empowerment. **Empowerment** is a vital element of modern project environment. Getting closer to targeted rural beneficiaries, project customers, improving project service delivery or productivity, as well as continuous innovation and creativity promotion are all possible only when local project executing agencies (and stakeholders) find new ways to empower their people. To ensure the active participation, interest, and commitment of all segments of the community, an implementation mechanism will be adopted whereby useful contributions will come from a clever use and blend of multiple participation sub-strategies as follows:

- (a) Friendly consultations and advisory services involving relevant stakeholders, especially the beneficiary village youth groups.
- (b) Training, human resource development, and capacity building roles.
- (c) Direct materials supports (for example, vibrant supply of seedlings to enthusiastic youths of the project).
- (d) Relevant information sharing roles especially between project implementing beneficiary target groups, technical forestry and advisory officials, as well as relevant community non-project segments of the local community.

Empowering the project's target rural youths collectively as a group and individually as active and focused members is the **CENTRAL THEME** in the **Projects' Operational Arrangements**. Project target rural youth's empowerment is therefore a process of progressively encouraging all project staff and the rural youth beneficiaries at all levels to become actively involved in all aspects of the project cycle. By giving project members greater responsibility, and letting them play very concrete and active role, the project can expect the rural youngsters to become more enthusiastic, keenly motivated, analytical, and cooperative. The youngsters would take greater pride in their work and consistently perform as planned.

3.2.10 Project Advisory Bodies and Their Specific Empowering Mechanisms

All the *above* stakeholder-empowering strategies will be creatively put in practice by (a) the Picodev Office in collaboration with the Biakoye District Assembly Office of Nkonya Ahenkro, the Project's Executing Agency, (b) the Project Steering Committee (PSC), the Forestry Research Institute of Ghana (FORIG), and the Ghana Forestry Commission, especially the Forest Services Division (FSD) in their various capacities as *Project Advisory Bodies*, through their various specialty and professionally-qualified intervention areas as follows:

Project Advisory Bodies and Their Specific Empowering Mechanisms

Project Advisory Body	Empowering Intervention Mechanisms, Processes, & Specific Strategies
<p>(a) The Forestry Research Institute of Ghana (FORIG),</p> <p style="text-align: center;"><i>and</i></p> <p>(b) The Ghana Forestry Commission (especially Forest Services Division, FSD)</p>	<p>(a) Advice on Sites Selection: FORIG and FSD will provide adequate advice to the project beneficiaries on appropriate sites for the indigenous plantations (as well as teak and Cassia plantations) in the communities.</p> <p>(b) Advice on the Project Planning: Including advice on fuel-wood selection at village level.</p> <p>(c) Forestry Research Information Sharing: FORIG has a wealth of relevant knowledge to share on the indigenous species (<i>Ofram & Wawa</i>) selected for planting</p> <p>(d) Providing Virile & Subsidized Seeds and Seedlings: Especially for the project's indigenous tree species.</p> <p>(e) Reforestation & Empowerment Training: FORIG and FSD will provide experienced personnel as Resource Persons for project's reforestation and empowerment training sessions.</p> <p>(f) Helping to provide adequate Project Monitoring & Evaluation Resources and Facilities: e.g. Chairmanship, ICT, and Stenography resources and conference room facilities during quarterly Project PTC Meetings.</p> <p>(g) Assisting in Project Promotion and Publicity: e.g. Using the Newsletters, journals, and other publicity media available to FSD and FORIG.</p> <p>(e) Include this ITTO Biakoye project in extension service delivery: Particularly field services executed by the Forest Services Division (FSD) from its Jasikan District Office in the Volta Region of Ghana.</p>

3.2.10 Project Advisory Bodies and Their Specific Empowering Mechanisms (Continued)

Project Advisory Body	Empowering Intervention Mechanisms, Processes, & Specific Strategies
<p><u>The Project Steering Committee (PSC)</u></p>	<p>(a) Advice on Project Policy Determination and Broad Goal Setting: The PSC will use its broad-based composition to do this work. The PSC members include Project Youth's Executives, Community Members, Chiefs, Local Land-Owners, FSD Technocrats, local politicians, District Assembly Officials, and selected Executing Agency Staff.</p> <p>(b) An Important Player in Project-Related Conflict Handling: The PSC will play the role of arbiter in all project-related conflicts. Conflict prevention is an enviable and empowering implementation ideal. Conflict mediation is however, and very often, the obvious practical avenue towards effective project implementation.</p> <p>(c) Help Establish Social and Technical Links and Project Development Networks: Especially among all project stakeholders (social, political, economic, professional, technical and international).</p> <p>(d) Appoint an Independent Financial Auditor: who will audit the books of project management for on-ward submission to the PTC, the PSC, and the ITTO.</p> <p>(f) Helping to provide adequate Project Monitoring & Evaluation Resources and Facilities: e.g. Chairmanship, ICT, and Stenography resources, conference room, and restaurant facilities during quarterly</p>

	<p>Project PTC Meetings.</p> <p>(g) Assisting in Project Advertisement and Open Day Celebrations at the Local and District Levels: e.g. Using the PSC's broad-based reputation, and access to multiple local publicity media, including traditional methods of effective local communication.</p>
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3.3 Work Plan

3.3 Work Plan

Outputs/ Activities	Responsible Party	Year 1												Year 2											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
NB. Land acquisition cost is local expense. (1) LAND Demarcation, Legal Documentation	Project coordinator & Youth Group leaders	█	█	█	█									█	█	█	█								
(2) Preparation of Site Plans and Location Maps	Project coordinator & Group leaders	█	█	█	█									█	█	█	█	█							
(3) Relevant Skills & Skills Building Training Workshops for Youth Groups	Project coordinator & Training Manager				█	█	█	█	█								█	█	█	█	█				
(4) Seeds Purchases: collection, grading	Nurseries Officers	█	█	█	█									█	█										
(5) Establishment of Village Nurseries	Nurseries Officers & Community Animators	█	█	█	█									█	█	█	█								
(6) Land Clearing and detailed preparation, pegging, hole digging.	Project coordinator & Youth Group leaders		█	█	█	█									█	█	█	█							

3.3 Work Plan (Continued)

Outputs/ Activities	Responsible Party	YEAR 1												YEAR 2											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
(7) Transplanting of Seedlings.	Project coordinator & Nursery Officers																								
(8) First and second weeding with hoes																									
(9) Beating up or replanting to replace dead seedlings.																									
(10) Further Cassava Processing Skills & Skills Building Training Workshops for Youth Groups	Project coordinator & Training Manager																								
(11) Plantation Maintenance: Further Weeding, and young plants tending	Project coordinator & Youth Group leaders																								
(12) Training on new products labeling/packaging																									

3.3 WORK PLAN (Continued)

Outputs/ Activities	Responsible Party	Year 1												Year 2											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
(21) Further youth training & skills acquisition workshops	Project coordinator & Youth Group leaders																								
(22) Networking with local forestry offices and other planters on mixed plantation development experiences	Community Animators																								
(23) Final Project Monitoring, Participatory Evaluation, & Review	Project coordinator & Youth Group Leaders																								
(24) Participatory project winding up activities and writing of project Completion Report	Project coordinator & Youth Group Leaders																								

3.4 BUDGET

3.4.1 Master Project Budget By Activity (USA Dollars)

	BUDGET COMPONENTS						Quarter Year	Grand Total
	10 Project Personnel	20 Sub- Contract	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscel- laneous		
OUTPUT: Land Preparation for mixed plantations of indigenous exportable timber species, teak under mono-culture, Cassia siamea fuel-wood in pure stands, and local self-grown cassava processing, use, and sale, to alleviate rural poverty among target youths (100 ACRES (40HECTARES) in the aggregate)								
Activity 1.1: LAND Demarcation & Documentation	3,100	2,000	1,200	28,450	1,000	540	Done in Quarters 1 & 2 Yearly	36,290
Activity 1.2: Preparation of a working plan based on findings of Activity 1.1. above	2,408	1,236	724	545	2,203	826	-Ditto-	7,942
Activity 1.3: Train Youth on responsibilities, rights, & skills	1,054	4,919	878	2,108	1,719	1,075	-Ditto-	11,753
Activity 2.1: Quality Seeds collection, buying, testing (enough to plant target acreage)	2,272	4,324	809	253	378	693	-Ditto-	8,729
Activity 2.2 Make two Community nurseries: Namely, beds preparation, black soil topping, seeding, sprouts and shoots nurturing; watering, transferring into poly bags. Secure quality cassava cultivars.	499	6,020	1,037	1,232	2,599	1,889	-Ditto-	13,276
Sub-Total	9,333	18,499	4,648	32,588	7,899	5,023		77,990

3.4.1 Master Project Budget By Activity (USA Dollars) /Continued

	BUDGET COMPONENTS							Quarter Year	Grand Total
	10 Project Personnel	20 Sub- Contract	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscel- laneous			
<u>OUTPUT:</u> Land Preparation for mixed plantations of indigenous exportable timber species, teak under mono-culture, <u>Cassia siamea</u> fuel-wood in pure stands, and local self-grown cassava processing, use, and sale, to alleviate rural poverty among target youths (100 ACRES (40HECTARES) in the aggregate)									
<u>Activity 2.3:</u> Further nurturing of the community nurseries (After a major transfer of seedlings for field planting)	675	575	410	14,252.5	1,000	490	Q1, & Q2, Yearly	17,402.5	
<u>Activity 3.1:</u> Multiple Plantation Establishment: Land clearing & preparation, pegging, hole digging, seedlings transplanting, replanting or beating up, pest control.	650	3,850	1,400	1,612.5	4,550	325	- Ditto -	12,387.5	
<u>Activity 3.2:</u> Workshop training on planting & processing skills	1,012	2,424	843	2,930	2,564	632	- Ditto -	10,405	
<u>Activity 4.1:</u> Multiple Plantations Protection & Maintenance: Periodic weeding, tending, cultivation of effective anti-fire green belt if necessary, fire prevention, pests control, early thinning.	1,800	2,625	500	3,000	1,550	1,200	All year round	10,675	
Activity 4.2 Cassava processing & marketing	260	1,000	200	400	600	200	3 rd & 4 th Quarter Yearly	2,660	
Activity 4.3: Planned Meetings	240	1,500	360	1,000	600	250	- Ditto -	3,950	
Sub Total	4,637	11,974	3,713	23,195	10,864	3,097		57,480	

3.4.1 Master Project Budget By Activity (In US Dollars)/Continued

	BUDGET COMPONENTS						Quarter Year	Grand Total
	10 Project Personnel	20 Sub- Contract	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscel- laneous		
OUTPUT: Land Preparation for mixed plantations of indigenous exportable timber species, teak under mono-culture, Cassia siamea fuel-wood in pure stands, and local self-grown cassava processing, use, and sale, to alleviate rural poverty among target youths (100ACRES (40 HECTARES) in the aggregate)								
<u>Non-Activity Based Expenses:</u>								
1. Fuel for vehicle					4,000		Year 1 – Y2	4,000
2. Office Stationery & Supplies					3,600		Year 1 – Y2	3,600
3. Electricity & Water					1,600		Year 1 – Y2	1,600
4. Equipment spare parts					17,500		Year 1 – Y2	17,500
5. Auditing						2,400	Year 1 – Y2	2,400
Sub-Total					26,700	2,400	Year 1 – Y2	29,100
Sub-Total (ITTO)	36,240	14,060	36,720	66,684	32,000	6,400	Year 1 – Y2	192,104
ITTO Monitoring, Review, and Evaluation Costs						35,000		35,000
ITTO Program Support Costs	18,168							18,168
Sub-Total (Executing Agency/Host Government Contribution)	28,816 (Executive Agency Admin.)	(Executive Agency sub contract)		50,000 (Value of local land)			Year 1 –Y2	78,816
GRAND TOTAL (US\$)	83,224,	14,060	36,720	116,684	32,000	41,400	Y1 – Y2	324,088

3.4.2 Consolidated Yearly Project Budget (USA Dollars)

No	COMPONENT	Unit	Quantity Per Year		Unit Cost	Year 1	Year 2	ITTO's Contribution	Project Executing Agency's Contribution	TOTAL
			1	2						
10	PROJECT PERSONNEL									
11	NATIONAL EXPERTS (Extra Duty Allowance)									
	11.1 Project Manager (PM)	24 Months	12 Months Yearly		250	3,000	3,000	6,000		6,000
	11.2 Cassava Processing & Training Manager (CPTM)	24 Months	12 Months Yearly		200	2,400	2,400	4,800		4,800
	11.3 Community Animators (Two Positions)	24 x 2 Months	12 Months Each Yearly		100	2,400	2,400	4,800		4,800
	11.4 Nursery Officers (Two Positions)	24 x 2 Months	12 Months Each Yearly		100	2,400	2,400	4,800		4,800
12	Administrative Staff & Manual Plantation Workers									
	12.1 Administrative Accountant	24 Months	12 Months Each Yearly		150	1,800	1,800	3,600		3,600
	12.2 Project Secretary	24 months	12 Months Yearly		150	1,800	1,800	3,600		3,600
	12.4 Reforestation Manual Laborers (Total = 6)		6 Months Yearly 6 x 6 x 120			4,320	4,320	8,640		8,640
19	Component Total					18,120	18,120	36,240		36,240

3.4.2 Consolidated Yearly Project Budget (USA Dollars)/Continued

No	Component	Unit	Quantity Per Year		Unit Cost	Year 1	Year 2	ITTO's Contribution	Project Executing Agency's Contribution	TOTAL
			1	2						
20	SUB-CONTRACT		1	2						
21	Preliminary clearing of degraded forest bush	100acres (40Ha) in the aggregate	50 acres (20Ha)	50 acres (20Ha)	1820 2,000per year aggregate	1,820	1,820	3,640		3,640
22	Pegging & Seedlings Transplanting	100 acres (40Ha) In the aggregate	50acres (20Ha)	50acres (20Ha)	335per Village	2,010	2,010	4,020		4,020
23	Programmed Training Workshops (Organized by District Forestry Officials for the Youth)	2 programmed workshops yearly	2	2	800	1,600	1,600	3,200		3,200
24	Plantation Routine Quarterly Maintenance Weeding	100acres (40Ha) in the aggregate	4	4	400	1,600	1,600	3,200		3,200
29	Component Total					7,030	7,030	14,060		14,060

3.4.2 Consolidated Yearly Project Budget (USA Dollars) /Continued

N o	Component	Unit	Quantity Per Year		Unit Cost	Year 1	Year 2	ITTO's Contribution	Project Executing Agency's Contribution	TOTAL
			12m (Y1)	12m (Y2)						
30	DUTY TRAVEL		12m (Y1)	12m (Y2)						
31	Daily Subsistence Allowance									
	31.1 Project Manager (PM)	Month	12 Times Yearly		520	6,240	6,240	12,480		12,480
	31.2 Cassava Processing & Training Manager (CPTM)	Month	12 Times Yearly (Minimum)		350	4,200	4,200	8,400		4,320
	31.3 Community Animators (2 positions)	Month	As often as necessary to the five other project communities as well when necessary		180	4,320 (2 positions)	4,320 (2 positions)	8,640		8,640
	31.4 Nursery Officers (2 positions)	Month	As often as necessary to the other five project communities where the nursery officer does not live.		150	3,600 (2 positions)	3,600 (2 positions)	7,200		7,200
39	Component Total					18,360	18,360	36,720		36,720

3.4.2 Consolidated Yearly Project Budget (USA Dollars)/Continued

No	Component	Unit	Quantity Per Year		Unit Cost	Year 1	Year 2	ITTO's Contribution	Project Executing Agency's Contribution	TOTAL
			1	2						
40	CAPITAL ITEMS									
41	Value of 100 ACRES (40 hectares) of Project Land to be used in terms of estimated current 2012 VALUE				500 per acre	50,000	50,000	0	50,000	50,000
42	Project Equipment, Tools and Accessories									
	42.1 <u>Project Transport:</u> One good quality 4x4 Pick-up vehicle: e.g. Toyota or Nissan	1	1		34,900	34,900	-	34,900		34,900
	42.2 <u>ONE QUALITY Motorbike for the Cassava Processing Manager to Achieve the Poverty Reduction Objective in six communities:</u>	1	1		4,900	4,900		4,900		4,900
	42.2 Locally-built cassava crushers	3	3		1,500	4,500	-	4,500		4,500
	42.3 Locally-built Cassava Dough Presses	3	3		1,200	2,400	1,200	3,600		3,600
	42.4 Locally-built Garri Roasting Pans	12			70	420	420	840		840
	42.5 Iron Coal-Pots for Garri roasting (Large sizes)	12			50	600	-	600		600
	42.6 Nursery equipment and accessories	3 sets			800	1,200	1,200	2,400		2,400

	42.7 Large silver bowls for storage of peeled cassava	30			20	600	-	600		600
	42.8 Cutlasses	150			10	750	750	1,500		1,500
	42.9 Hoes	150			10	750	750	1,500		1,500
	42.10 Hand (Publicity) Megaphones	4			100	400		400		400
	42.11 Wheel barrows	6			200	600	600	1,200		1,200
	42.12 Wellington Boots	100 pairs			20 per Pair	1,000	1,000	2,000		2,000
	42.13 Watering cans	24			20	480		480		480
	42.14 Tarpaulins for drying fresh cassava	3			600	1,200	600	1,800		1,800
	42.15 Garden lines	24			6	144		144		144
	42.16 Measuring tapes	6			20	120		120		120
	42.17 Medically-Stocked First Aid Boxes	3			300	600	300	900		900
	42.18 Knapsack sprays	4	2	2	180	360	360	720		720
	42.19 Personal Computer	1			1,500	1,500	-	1,500		1,500
	42.20 Laser Printer	1			1,700	1,700	-	1,700		1,700
	42.21 Voltage stabilizer	1			380	380	-	380		380
49	Component Total					59,504	7,180	66,684	50,000	116,684

3.4.2 Consolidated Yearly Project Budget (USA Dollars)/Continued

No	Component	Unit	Quantity Per Year		Unit Cost	Year 1	Year 2	ITTO's Contribution	Project Executing Agency's Contribution	TOTAL
			1	2						
50	CONSUMABLES									
51	Raw Materials									
	51.1 Very good quality (FSD-collected) seeds of selected indigenous timber species, teak, and <i>Cassia siamea</i>	To plant 100 acres; and to supply local, trained, Project Outgrowers				2,000	2,000	4,000		4,000
	51.2 Approved Pesticides and Fungicides	50			10	500		500		500
	5.1.3 Assorted essential ingredients for cassava processing					2,500	2,500	5,000		5,000
	5.1.4 Packaging materials, advertisement and marketing of processed cassava products					2,400	2,400	4,800		4,800
	51.3 Wooden pegs for pre-planting pegging					700	700	1,400		1,400
	51.4 Small poly bags for use at the seedlings' nursery.	Enough to achieve project objective				600	600	1,200		1,200

	51.6 Plastic packaging materials for fresh unprocessed cassava	Ditto				450	450	900		900
	52 Vehicle (pick up) spares	1				500	1,000	1,500		1,500
	52.3 Cassava crusher & cassava press spares					400	1,200	1,600		1,600
	53. Cost of Fuel for Running project transport				2,000 per year	2,000	2,000	4,000		4,000
54	Office Supplies:									
	54.1 Computer Printer Cartridges	2			350	700	700	1,400		1,400
	54.2 Simple Office Furniture				500	500	-	500		500
	53.3 Stationery for ITTO reports & project office use					1,800	1,800	3,600		3,600
	54.4 Electricity					500	500	1,000-		1,000
	54.5 Water					300	300	600 -		600
59	Component Total					15,850	16,150	32,000		32,000

3.4.2 Consolidated Yearly Project Budget (USA Dollars)/Continued

No	Component	Unit	Quantity Per Year		Unit Cost	Year 1	Year 2	ITTO's Contribution	Project Executing Agency's Contribution	TOTAL
			1	2						
60	Miscellaneous									
	61 External Auditing					1,200	1,200	2,400		2,400
	62 Steering Committee Meetings (STM)					1,500	1,500	3,000-		3,000
	63 Sundries					500	500	1,000		1,000
69	Component Total					3,200	3,200	6,400		6,400
70	Executing Agency Management Cost: <i>(15 per cent of Total of Overall Project Budget by Activity)</i>								28,816	28,816
	SUB-TOTAL (1)/ITTO:							192,104	78,816	270,920
80	ITTO Monitoring, Evaluation, & Admin.									
	81. Monitoring & Review Costs (for 2 years @ \$10,000 per year).	2	1	1	10,000	10,000	10,000	20,000	-	20,000
	82. Mid-term, Final, and Ex-post evaluation costs	1		1	15,000	-	15,000	15,000	-	15,000
	SUB-TOTAL (2)	-	-	-	-	-	-	227,104		305,920,
	83. Program Support Costs (i.e. 8% of Sub-Total 2 above)	-	-	-	-	-	-	18,168	-	18,168
	GRAND TOTAL							245,272	78,816	324,088

3.4.3 Yearly Project Budget By Source: ITTO

	Budget Components/Annual Disbursements	TOTAL	Year 1	Year 2
10	Project Personnel	36,240	18,120	18,120
20	Sub-Contract	14,060	7,030	7,030
30	Duty Travel	36,720	18,360	18,360
40	Capital Items	66,684	59,504	7,180
50	Consumable Items	32,000	15,850	16,150
60	Miscellaneous	6,400	3,200-	3,200
SUB-TOTAL (1)		192,104	122,064	70,040
80	<u>I.T.T.O Administration, Monitoring & Evaluation:</u>			
81	ITTO Monitoring & Evaluation & Review	35,000		
SUB-TOTAL (2)		227,104		
83	Program Support Costs: (8% of Sub-total 2)	18,168		
90	Refund of Pre-Project Costs	-		
ITTO Total (in US\$)		245,272		

3.4.4 Project Budget By Source: Executing Agency/Host Government

	Budget Components	TOTAL	Year 1	Year 2
10	Project Personnel			-
20	Sub-Contract	-	-	-
30	Duty Travel	-	-	-
40	Capital Items: <i>(Estimated current 2012 value of project land)</i>	50,000	25,000	25,000
50	Consumable Items		-	-
60	Miscellaneous	-	-	-
70	Executing Agency Management Costs: <i>(15% of overall project budget by activity)</i>	28,816	14,408	14,408
TOTAL: Executing Agency/Host Government		78,816	39,408	39,408

3.5 ASSUMPTIONS, RISKS, AND SUSTAINABILITY

3.5.1 Assumptions and Risks

During the execution of the project, the management will try as far as possible to eliminate project risks, or minimize their effect to the advantage of stakeholders.

Risk	Implementation Assumption	Planned Project Action To Eliminate Or Minimize Risk
(a) Changing and erratic rainfall pattern in that part of Ghana <i>(i.e. forest-savannah land)</i>	That minimal rainfall patterns necessary for the good growth of <i>Wawa, Ofram Emire, Papao, Mahogany, and Teak</i> will continue during the project period and after.	The project is lucky in terms of rainfall. For, while yearly rainfall patterns are drastically declining in some parts of Ghana, the actual yearly rainfall volume in the project area increased in 2010-2011. Early planting of seedlings will be the norm.
(2) Destructive Wild Bush Fires <i>(especially in the grass-covered project aresa)</i>	That wild bush fires in parts of the project areas can be prevented, minimized, or completely eliminated. Youth groups at Tayi and Bumbula have formed active anti-wild fire volunteers clubs. This idea will be replicated at the other areas also.	(a) Preventive community education, especially for fire risk groups, e.g. hunters, NTFP collectors, palm-wine tapers. (b) Border planting, using fire-resistant shrubs and trees. (c) Construction of fire-belts around target plantations to prevent fire outbreaks, and facilitate dry-season fire patrols. (d) Motivating implementing communities to aim at 100 per cent anti-fire regimes.

3.5.2 PLANNED PROJECT SUSTAINABILITY MATTERS

What are the crucial issues that throw light on the fact that the main FUNCTIONS, ACTIVITIES, and SERVICES of this YOUTH PROJECT will continue to flourish in future, particularly AFTER FUNDING from the ITTO has stopped?

It is the opinion of project stakeholders that, rural community-level youth groups should not end at mere formation. They must be assisted to function as intended, grow, mature, and be sustainable. This implies that, youth groups should be able to gradually acquire effective working capacities like active leaders and members, appropriate meeting times and meeting places, simple financial resources, as well as promoting the basic OBJECTIVES that brought the groups into existence in the first place. This means that, **PROJECT SUSTAINABILITY** has many dimensions or aspects: namely: *(a) Management Sustainability (b) Financial and Resource-Input Sustainability (c) Technical Sustainability; as well as (d) Networking Sustainability; among others*

Furthermore, **SUSTAINABILITY** also implies that, coordinating or executing agency staff, or extension officers' ranks, or external project support staff, will, in the case of this project, gradually work themselves out of the rural community, and their departure should lead to the strengthening of the groups, and **NOT** to their disintegration. This is easier said than done.

The following are some **MEASURES** to put in place to ensure **SUSTAINABLE EXISTENCE** and **GROWTH of the project's rural community youth groups**:

- Good ideas and objectives worth promoting through group activity.
- Relevant, diversified, and interesting activities.
- Meaningful meetings at regular intervals.
- Setting of meaningful and achievable targets and challenges.
- The keeping of simple, relevant, and useful records.

- Gradual development of the assets of the group, especially financial and relevant physical assets.
- Effective communication.
- Accountability.
- Creative networking.
- Continuous TRAINING of leaders and members.

After the initial hired local village labor for tough bush clearing after which seedlings are transplanted, the second, third, and fourth plantation weeding will be done with hoes and paid for by the project. The idea is to ease future weeding burdens for the youth target members. After the sixth weeding, all subsequent weeding will be performed very easily and promptly by the target youth group members (both young men and women) themselves with supervision from the Executing Agency. A special membership maintenance savings fund will be established at the local rural bank to pay local youth members who will continue to bear the maintenance burdens of the project under the supervision of the Executing agency. This approach should be possible to implement since all the six communities would already have active Collaborative Forest Management Committees (CFMCs) in place.

3.5.3 Future Operations, Maintenance, and Sustainability Chart

Maintenance Activity <u>OR</u> Future Operation	Work to be done BY WHOM?	How Often? (When?)	Consideration for Doing a Specific Re-Forestation Work or Assignment		
			Work for Free, or Communal Labor.	Work for Cash	Flexible, in-kind, or time-specific consideration
(1) Future planning and liaison work with Ghana Forestry Commission, especially FSD.	(a) Youth Groups' executives, & EA; (b) CFMC	As and when necessary	Free		Sometimes negotiated settlement in kind.
(2) Legal representation on village reforestation matters	- As above -	As and when necessary			Time-specific negotiated settlement in kind.
(3) Legal representation on project reforestation matters	- As above -	As and when necessary			Beneficiaries to make contributions to defray costs.
(4) Land or plot boundary demarcation and maintenance issues.				Cash by the beneficiaries	Sometimes as above

3.5.3 Future Operations, Maintenance, and Sustainability Chart (*Continued*)

Maintenance Activity <u>OR</u> Future Operation	Work to be done BY WHOM?	How Often? (When?)	Consideration for Doing a Specific Re-Forestation Work or Assignment		
			Work for Free	Work for Cash	Flexible, in-kind, or time-specific consideration
					<u>OR:</u>

(5) Periodic weeding, re-planting, enrichment planting, pruning, and tree tending	Youth beneficiaries since they will learn how to do it during normal project period.	Periodic, as necessary	Free	Cash if trained hired labor is used	use hired local labor for an agreed settlement in-kind.
(6) Protection and monitoring against pests and plant diseases	(a) Executing Agency, (with) (b) Plantation owners	As necessary	Free	Cash if trained hired labor is used	Time-specific negotiated settlement.
(7) Protection and monitoring against wild bush fires.	(a) Youth Executives and Beneficiaries; (b) CFMC; (c) Community chiefs	As necessary			Time-specific negotiated settlement, based on roles played
(8) Timber & wood related regulatory functions	(a) Plantation Owners; & (b) CFMC; (c) District Office of FSD	As necessary			

Meaning of Abbreviations Used in the Chart Above:

(a) PEA = Project Executing Agency;

(b) CFMC = (Community Level) Collaborative Forest Management Committee;

(c) FSD = Forest Services Division of the Ghana Forestry Commission.

To facilitate the operations and monitoring of all the plantation maintenance activities in future, there will be the need to keep alive all the existing community-based Collaborative Forest Management Committees (CFMCs) in each of the six target communities alive, namely, Tayi CFMC, Bumbula CFMC, Akposo - Kabo CFMC, as well as those for Ahenkro, Ntumda and Tepo. The recently inaugurated Biakoye District Forestry Forum will also work vigorously in all the six project areas to strengthen the C F M Cs. The broad-based CFMCs will always exhibit several conflicting interests in local forestry, hence the need for frank discussions, informed compromise, and negotiated land use settlements that will stand the test of time. The CFMCs will therefore be made up of the following categories of local land users:

- Selected members and executives of the youth groups;
- Representatives of the communities major land-owning clans and families, local indigenous farmers, local migrant farmers, and other important local land users like palm-wine tapers, hunters, timber cutters, and dealers in local non-timber forest products (NTFPs);
- Community-level wild bush fire preventing volunteers.

A strong, active, well-informed, and well-resourced CFMC at rural community level is half the battle when it comes to needed cooperation regarding post-project maintenance and sustainability questions.

PART 4: IMPLEMENTATION ARRANGEMENTS

4.1 Organizational Structure and Stakeholder Involvement Mechanisms

4.1.1 Executing Agency and Partners

NAME: The Picodev, Ghana Office of Nkonya – Ahenkro. P. O. Box 24.
E-mail Address: <picodev2010@yahoo.co.uk > Telephone: 0245429200, 0207551636 (Mobile)

The Mission of the Executing Agency:

Picodev Ghana strives to be a non- governmental organization (N G O) of high repute providing excellent services that contribute to the developmental agenda of the government of Ghana under the aegis of the United Nations for the welfare of all segments of society, more specifically;

- To engage in reforestation and forest management services,
- To provide employable skills training for rural youth and women,
- To promote mother - child health and community health services.
- To promote agro – forestry and related rural micro credit schemes

The Facilities and Resources of the Executing Agency:

The N G O is currently at the premises of house number N T E-H 518/10 near the Nkonya Ahenkro Senior High school Junction on the left along the Nkosec - Tayi road. There are other arrangements to use the premises of the Biakoye District Assembly and District Agricultural offices when necessary until the N G O's permanent offices have been built.

The forestry-related professionals on this ITTO pilot project have over 36 years reforestation experience among them drawn mainly from a 15-year D M 2.5 million GTZ-KfW-DED and the Government of Ghana Project called FORUM (“Forest Resource Use Management Project”), with its initial improvement and reforestation emphasis on selected Volta Region forest reserves, woodlot or fuel-wood establishment, rural poverty alleviation, as well as buffer-zone co-management initiatives. The Project Coordinator of this ITTO Pilot Project Mr. John K. Ellety was the Project Director of the said DM 2.5 million very successful GTZ-Government of Ghana FORUM (Reforestation) Project in the Volta Region of Ghana. Mr. J. K. Ellety is the greatest asset of this planned ITTO Pilot Project.

Past Successful Projects Conducted By Key Staff of the Executing Agency

Project (and time frame)	Beneficiary Group(s)	Donor Who Funded the Project
“Forest Resource Use Management Project” in the Volta Region of Ghana (DM2.5million)(FORUM Project)Reforestation emphasis on selected Volta Region forest reserves, woodlot or fuel-wood establishment, rural poverty alleviation, as well as buffer-zone co-management initiatives.	<ul style="list-style-type: none">• 60 Rural forest-fringe communities around selected forest reserves in the Volta Region.• Community-based Collaborative Forest Management Committees	GTZ and the Government of Ghana

The FORUM BUDGET Led By Mr. J. K. Elleley (The Substantive Project Coordinator of this planned ITTO Project) In Deutsch Marks)

Year	Total Received Revenue	Portion of Revenue Earmarked for Some Specific Items, e.g. Project Personnel, Sub-Contracts, Duty Travel (T & T), Capital Items, Consumables, Miscellaneous Items	Percentage of Total
1997-2007	DM 2.5 million	Personnel: Sub-Contracts Duty Travel: Capital Items: Consumables: Miscellaneous:	12 21 7 30 29 1

Executive Agency Personnel in Quantitative Terms

Level	Quantity	Remarks
Experts With Post-Graduate Qualifications	3	
Experts With First University Degree	7	Including accounting and general management.
Middle Level Technicians	5	
Administrative Staff	4	
Total Number of Personnel in Forestry-Related Fields	3	One staff has an MSc Degree in Forestry (University of Wales, UK)

4.1.2 The Project Management Team

The project management team will include the project manager (with wide experience in rural reforestation), a cassava cultivation, processing, and training manager, two experienced nurseries officers (with experience from the Forest Services Division), an accounting officer, and two experienced community animators. The project's financial procedures and transactions shall be subjected to the scrutiny of a qualified external auditor at least once every year.

4.2.1 Suggested Monitoring, Reporting, and Evaluation Schedule

Description	Dates
1 st Disbursement Request	As soon as the Project Contract is signed hopefully between April and June 2012.
1 st Monitoring Mission	90 days after the transfer of the first installment of ITTO Funds
1 st Progress Report	October 2012 (approximately)
1 st Project Technical Report	January 2013
1 st Financial Audit Report	March 2013
2 nd Progress Report	March 2013
3 rd Progress Report	August 2013
2 nd Project Technical Report	October 2013
4 th Progress Report	December 2013
Project Completion Report	January 2014
Final Audit Report	February 2014

All project progress reporting activities will be prepared in approved ITTO formats, and submitted by the project management in good time before Council Sessions. It is very much expected that the project monitoring mission will always include one ITTO senior staff who will visit Ghana for that purpose.

4.3 DISSEMINATION AND MAINSTREAMING OF PROJECT LEARNING

Empowering the project's target rural youths together as a group and individually as active and focused stakeholders is a fundamental guiding principle of this project's operational arrangements. The project youths have been greatly encouraged by the success of ITTO Project PD 393-06 Rev. 1(F) in the Ashanti and Eastern Regions of Ghana. Project target rural youths empowerment therefore is the process of encouraging project staff and the rural youth beneficiaries to become actively involved in project planning and project decision making activities that affect their work. By giving project members more responsibility, and letting them play a more meaningful and active role, the project can expect the target youth to become enthusiastic, motivated, and cooperative in terms of working to meet the stated objectives of the program.

Apart from the increased productivity and performance of the individual or the collective youth group, empowered project staff and members can also bring the entire ITTO Youth Project closer to the rural communities, to other project stakeholders, and to project customers by improving service, ensure continuous resourcefulness and innovation, and thus help gain wider recognition and competitive advantage. Youth empowerment in project implementation therefore has individual, group, economic, social, cultural, and environmental dimensions as follows.

- Individual and the (youth) group's active involvement and participation.
- Recognition and respect for rural values and cultural bonds.
- Promotion of self-reliance (in terms of individual self reliance and reliance on local resources).

- Promotion of community justice and social fairness.
- The ensuring of local ecological balance in the sense that, environmental resources are utilized in full awareness of the potentials and limits of the local ecosystem with a mind also on the needs of future generations.

Rural north Volta youths are traditionally marginalized and disadvantaged. How do we give them a level play field in their continuous interaction with high-placed formal sector forestry institutions, professionals, and administration officials, including project executing agency staff, with the intention of planting and managing mixed indigenous plantations and teak, that eventually lead to individual, group, community, and environmental advantages? This is the challenge. Youth empowerment therefore implies the creation of effective project working relationships by adopting and applying the following important issues:

- (a) Keeping always in focus, a simple set of project aims and specific objectives.
- (b) Application of transparent financial accountability strategies that are simple and responsive to suggestions and revision.
- (c) Effective interactive communication where each actor has equal access to speech and receive respect and good consideration for project suggestions made.
- (d) Genuine stakeholder commitment and participation at all levels, especially the individual project youth level.
- (e) Learning, training, instructing, and facilitating strategies that are all-inclusive.
- (f) Positive information feed-back loops that are transparent and seen to be truly functional.
- (g) Equitable and just motivational and rewarding systems that are all-inclusive.
- (h) Truly participatory project decision-making processes, including participatory monitoring, action reviews and evaluation strategies.

ANNEXES

ANNEX 1:

Profile of the Executing Agency (Picodev Ghana.)

The Picodev Ghana is a recently registered NGO at the Registrar General's Office, Accra but with a Management and Professional Team comprising of competent well trained and experienced staff drawn from various sectors of the economy. The office is based in house number NTE –H 518/10 near the Nkonya Senior High School with an existing MOU with the BDA for office space when necessary.

Kindly see Part 4, Sections 4.1.1 and 4.1.2 for more details on the Executing Agency

ANNEX 2:

Curriculum Vitae: KEY STAFF (of the Project Executing Agency)

1st Key Executing Agency Staff (Project Manager)

Name and surname:	John Stanislaus Komla Elletey
Profession:	Forest Project Officer (Forest Conservation, Management & Development)
Date of Birth:	3 rd June 1947 (62 years old)
Nationality:	Ghanaian
Gender:	Male

Education

1988	M.Sc. Environmental Forestry, University of Wales (UCNW) Bangor, U.K.
1986	B.Sc. Natural Resource Management, University of Science and Technology, Kumasi, Ghana
1979	Diploma in Forestry, University of Science and Technology, Kumasi, Ghana
1971	Certificate in Forestry, Forestry School Sunyani, Ghana
1967	School Certificate, West African Examinations Council, Bishop Herman College, Kpando, Ghana

Mr. John Stanislaus Komla Elletey, who is now newly retired after long service as outlined here by his profile, holds an M.Sc. Environmental Forestry qualification, having earlier obtained a B.Sc. Renewable Natural Resource Management. He has also undertaken various professional enhancing studies, including the under mentioned:

Key Qualifications

- Methods and Techniques of Project Management course,
- Objectives oriented project planning training,
- Strategic Planning and budgeting,
- Communication skills training,
- Wildfire Management training,
- Experiences in buffer zone Management,
- Training of trainer and design and development of collaborative/participatory forest management training programmes,
- Participatory natural resources management promotion, planning and implementation,
- Environmental and Social impact assessment,
- Participatory project identification, appraisal, design, planning and management,
- Experiences in Facilitation and Moderation techniques,
- Experiences in Participatory Rural Appraisal (PRA) techniques,
- Community development planning and implementation,
- Computer literate: skills in word processing.

EMPLOYMENT RECORD OF PROJECT MANAGER

2007-2011	Picodev, - Ghana Executive Director, Atidev Initiatives - Project Officer, Forest Consult – Contracts Director.
2006-2007	Regional Manager (Operations), Ghana Forestry Commission, Forest Services Division Headquarters, Accra.
1999-2006	Regional Manager, Volta and Central Regions of Ghana, Project Director FORUM Project.
1994-1999	Regional Forestry Officer, Upper and Volta Regions of Ghana, District Forestry Officer, Bawku District, Ghana.
1987-1989	(University Education)
1986-1997	District Forestry Officer, Yendi District, Ghana.
1983-1986	(University Education)
1979-1983	Tutor School of Forestry, Sunyani, Ghana.
1977-1979	(University Education) Forest ranger/Technical Officer, various ranges in Central Region, Ghana.

Experience Relevant to the Project

Mr. John Stanislaus Komla Elletey, born in 1947 in Ghana, with MSc degree in Forestry (University of Wales, UK), has 36 years continuous working experience in forestry in Ghana, rising from the post-training position of Forestry officer, to District Manager, and finally to Regional Forestry Manager (FSD). He has also attended several high-level Management Training Workshops and was Project Director (for 10 years) of the DM 2.5 million very successful GTZ-Government of Ghana FORUM (Reforestation) Project in the Volta Region of Ghana with reforestation emphasis on selected Volta Region forest reserves, woodlot or fuel-wood establishment, rural poverty alleviation, as well as buffer-zone co-management initiatives.

Also as **Regional Manager** for Central Region and Line Manager of forestry related Projects, Mr. Elletey co-organised and participated in various workshops including the following:

- November 2006: Review Workshop on participatory planning and establishment of a Regional customer service office;
- 15th December 2003: Workshop to Review the state of knowledge on the Globally significant Biodiversity Areas GSBAs.

As **Project Director** for the FORUM Project, together with other management team members, Mr. Elletey organised and participated in numerous workshops and training sessions including the following:

- October 1996-1999 (reviewed annually): Participatory planning risk group workshop to formulate strategies for preventing bush fire;
- October-November 1996-1999 (annually): Training of fire volunteers in fire prevention and fighting and First Aid;
- 3rd-5th December 1996: Gender training and Planning Workshop for the FORUM Project Team;
- 1995 and 1996: KFW sponsored Project Review Seminar for mid-term review of the FORUM Project;
- 1995: Workshop on Experiences in Buffer Zone Management.

As **Regional Forestry Officer** for the Upper East and West Regions, Mr Elletey participated in various workshops, including being a resource person for the following:

- 18th-22nd November 1991: Workshop for Monitoring Assistants for the Desertification Control Programme Navrongo, Ghana.

ANNEX 3:

OVAL ASSESSMENT AND SPECIFIC RECOMMENDATIONS OF THE 43RD EXPECT PANEL AND RESPECTIVE MODIFICATIONS

**PD 653-12 (F):
REVISED PROJECT SEGMENTS IN MATRIX FORM:
(The Modifications Matrix)**

Specific Recommendation Made By The 43 rd Expert Panel for Technical Appraisal of Project Proposals	SPECIFIC REVISIONS, MODIFICATIONS, and IMPROVEMENTS MADE	SPECIFIC PAGE or PAGES where the modifications can be SEEN
<p>Specific Recommendation 1: Further elaborate the expected outcomes AFTER project completion, in accordance with the guidance provided in the ITTO Manual for Project Formulation</p>	<p><u>BY EXPECTED OUTCOMES AFTER PROJECT COMPLETION, we are here putting EMPHASIS ON CHANGED ATTITUDES IN THE RIGHT DIRECTION, within and among project stakeholders - first-level STAKEHOLDERS ESPECIALLY, numbering 1,200 in the aggregate, with respect to practical project-related issues like:</u></p> <ul style="list-style-type: none"> • <u>Local forest resources use,</u> • <u>Protection and rehabilitation strategies, as well as</u> • <u>Reforestation development strategies that are SUSTAINABLE among all stakeholders.</u> <p><u>At the end of the project, the beneficiary first-level targeted youth stakeholders would have effectively known how to select deforested local sites, known how to prepare the land for professional reforestation, known how to nurse and plant selected seedlings, known how to maintain them, as well as known how to process and package cassava produce into profitable value added products of different kinds. IN OTHER WORDS, EFFECTIVE PROJECT OUTCOMES DO EMPOWER AND GALVANIZE PROJECT TARGET YOUTH STAKEHOLDERS INTO RIGHT ACTIONS regarding planned project objectives, turning them into reality that changes their lives, and the lives of other local target groups.</u></p> <p><u>In the project area therefore, the youth (women and men), the target beneficiaries and primary stakeholders will immediately after project completion, commence a chain of productive ventures that will raise domestic incomes and food necessary for their sustenance so that they will as the say “live happily to maintain the planted trees”! These include harvesting of fire wood from the pure plantation of cassia siamea in addition to any thinning from the mixed stand and the pure teak stand for both domestic use and for sale. Some charcoal may be produced both for smoking fish procured from the nearby Volta Lake for</u></p>	<p>Kindly see page xi</p>

	<p><u>domestic protein needs and for sale. Then also the target youth will continue to engage themselves in the cultivation, processing and packaging of the various cassava products, utilizing the skills gained as a result of the thorough and special training during project intervention, for both their own use and for sale. Besides, the impact of project intervention having sharpened their awareness with respect to non timber forest produce (NTFPs) development and utilization as well as behavioral change in favour of forest protection, will enable them continue not only with the production and harvesting of NTFPs for local use and for sale, but also to continue with forest and environmental protection. NTFPs such as; marantaceae, black pepper, collection of snails, fruits of high demand trees like the black and miracle berries among others. Such livelihoods and income derived from them as well as those from firewood, cassava and smoked fish described above, will motivate the youth to carry out forest protection tasks like; fire prevention, control of illegal felling (chain sawing) control of illegal hunting (poaching), prevention of soil erosion and maintenance of the mixed indigenous timber and pure teak plantations. All these measures have an over all long term impact of enhancing environmental quality for the benefit of all stake holders while providing the desired end product which is timber.</u></p>	
<p><u>Specific Recommendation 2:</u> Provide under sub-section 1.3.2, a clear explanation on LAND ISSUE, as land will be part of the in-kind counterpart contribution expected from Ghana through the Executing Agency</p>	<p><u>Relevant land holding in Ghana (for a project like this) could be of several types, namely:</u></p> <ul style="list-style-type: none"> • <u>allodial title holding, (which is the highest land title existing in the country;</u> • <u>long-term freehold interest; or</u> • <u>long-term leasehold.</u> <p><u>THE PROJECT LANDS – whether for DEMONSTRATIVE PLOTS or INDIVIDUAL YOUTH APPLICATION, are conflict-free long-term leasehold land granted by their parents, or grandfathers, or family heads who are the rightful <i>allodial</i> land title holders. All project lands in all the participating communities (customary freehold lands for that matter) have ALREADY been SECURED from the community allodial land owners. A LEGAL and LONG-TERM LAND TENANCY AGREEMENT has also been drafted by a local philanthropist lawyer and discussed at all community levels. A COPY of this LEGAL and LONG-TERM LAND TENANCY AGREEMENT is shown as ANNEX 3 to this proposal. LOCAL CONTRIBUTION will be partly in the form of project land, valued at US \$500.00 per acre, per year. The basis of this valuation is based on a 2011 Land</u></p>	<p>Kindly see page ix</p>

	<p><u>Valuation Document addressed to a local traditional head, and which applies to the project-sub-district. A COPY of this Land Valuation Board Document is REPRODUCED in the ANNEX 5 to this project proposal. This confirms a TOTAL VALUE OF US\$50,000.00 as LOCAL GHANA CONTRIBUTION FROM LAND, TO THE PROJECT. The land to be used for the mixed timber tree stands and the pure teak and cassia siamea plantations totaling 100 acres will be in the form of contiguous family land units to be used as the demonstration plots.</u></p> <p><u>In the case of the cassava forms, a more liberal, largely, individual free- hold fallow system is the order. Each family group usually male and female and also members of the CFMC will cultivate up to two acres each for a couple of years until they soil is rendered infertile, which they abandon for another piece while the former is left fallow.</u></p> <p><u>It is cassava from these two acre forms, independent of the 100 acres (in aggregate) demonstrative plot, that will be used for the training of the target youth for the processing and packaging component. There is no benefit sharing in the cassava farming as the target youth individual units are hundred percent beneficiaries of the cassava produce and products. This is a special incentive package for the target youth groups to motivate them for the maintenance of the mixed and pure plantations.</u></p>	
<p>Specific Recommendation 3a: Revise the ITTO Budget in line with the above overall assessment and specific recommendations, and also in the following way:</p> <p>(3a) Tables and budget by COMPONENTS, and by SOURCE (ITTO and Executing Agency), deriving from the master budget, and should be DETAILED at the level of sub-items under each budget item</p>	<p>Already done.</p> <p>This modification has been done in line with recommendations of the 43rd Expert Panel</p>	<p>Kindly see pages 46 and 47</p>
<p>Specific Recommendation 3b: Revise the ITTO Budget in line with the above overall assessment and specific recommendations, and also in the following way:</p> <p>(3b) Adjust the budget Sub-Component 81 to the standard rate of US\$10,000.00 per year</p>	<p>This modification has been done in line with recommendations of the 43rd Expert Panel</p>	<p>Kindly see page 45</p>

<p>for the monitoring and evaluation costs (US\$20,000.00 for a 2-year project)</p>		
<p><u>Specific Recommendation 3c:</u> Revise the ITTO Budget in line with the above overall assessment and specific recommendations, and also in the following way:</p> <p>(3c) Adjust the budget item 82 to the standard rate of US\$15,000.00 for the mid-term, final, and ex-post evaluation costs.</p>	<p>This modification has been done in line with recommendations of the 43rd Expert Panel</p>	<p>Kindly see page 45</p>
<p><u>Specific Recommendation 3d:</u> Revise the ITTO Budget in line with the above overall assessment and specific recommendations, and also in the following way:</p> <p>(3d) Re-calculate the ITTO Program Support Costs (subsection 83) so as to conform with the standard rate of 8% of the total ITTO costs (on the sum budget items 10 to 82)</p>	<p>This modification has been done in line with recommendations of the 43rd Expert Panel</p>	<p>Kindly see page 45</p>
<p><u>Specific Recommendation 4:</u> Include an ANNEX that shows the overall assessment and specific recommendations of the 43rd Expert Panel and respective modifications in tabular form. Modifications should also be highlighted (BOLD and UNDERLINED) in the text.</p>	<p>This modification has been done in line with recommendations of the 43rd Expert Panel</p>	

ANNEX 4:
SPECIMEN LAND TENANCY AGREEMENT
ITTO Project PD 653-12 (F), Ghana
COMMUNITY-LEVEL YOUTH REFORESTATION WITH
POVERTY REDUCTION

THIS LEASE is made the day of 2012, **BETWEEN**

.....
(hereinafter referred to as “**The Lessor**” which expression shall where the context so admits or requires include its successors in title) of **ONE PART, AND**
ITTO-Funded COMMUNITY YOUTH BENEFICIARY GROUP MEMBERS (Guided and Supervised by PICODEV NGO GHANA) at in the **VOLTA Region of Ghana headed by the Community Traditional Chief** (hereinafter referred to as “**The Lessor**” which expression shall where the context so admits, or requires, include its successors in title and assigns) of the **OTHER PART:**

WHERE AS:

1. **The Lessor** owns that tract of land situated at
.....
2. **The Lessee** requires part of the tract of land aforesaid (hereinafter called “**the Land**”) for small-scale village reforestation and agro-forestry purposes.
3. **The Lessor** has agreed with the **Lessee** to grant a lease to the **Lessee** hereinafter provided for on the terms herein stated:

NOW THEREFORE IT IS HEREBY AGREED as follows:

In pursuance of the said Agreement and in consideration of terms for the sharing of the reforestation **BENEFITS** described below the Lessee hereby leases and the Lessee accepts a lease of **acres** of the piece of land aforesaid, described in the

Schedule hereto **TO HOLD to the Lessee** for a term of forty-nine years (49) years

Certain in the first instance commencing from the 2012..

LEASING CONDITIONS

There is NO periodic or yearly rent to be paid to the Lessor by the Lessee. The commercial tree planted on the land shall be 100 per cent **OWNED** by each respective **Lessee**. The **LESSEE** shall pay for the maintenance costs of the said plantation..

THE LESSEE COVENANTS WITH THE LESSOR AS FOLLOWS:

- (a) To share the benefits of the reforestation (that is, the commercial trees) in the manner previously discussed and mutually agreed. stated.
- (b) To contribute in meeting the maintenance costs of the reforestation in the manner herein stated.

To use the land for reforestation and agro-forestry in the manner stated.
- (c) To give the residents of the community (including the Youth Group members (as far as possible) preference in employing farmhands and workers for the Project
- (d) That the **Lessee** shall not sublease or otherwise part with possession of the whole or any part of the land so leased without the prior written consent of the **Lessor**.
- (e) Generally to observe and perform all implied covenants contained in **Section 23 sub-section (1) of the Conveyancing Decree, 1973 (NRCD 175)** on the part of a Lessee.

THE LESSOR CONVENANTS WITH THE LESSEE AS FOLLOWS:

- (a) The **Lessee** having signed to observe the terms governing the reforestation maintenance and sharing of plantation benefits herein stated shall peaceably hold and enjoy the land hereby leased during the term hereby granted without any unlawful disturbance from or by the **Lessor** or any person lawfully claiming under him, through him, or in trust for him or her.
- (b) Generally to observe or perform all the implied covenants contained in **Section 22 (1) of the Coveyancing Decree, 1973 (NRCD 175)** on the part of a **Lessor**.

PROVIDED ALWAYS that:

(b) If the **Lessee** desires to exercise the option to renew this lease for an extra reasonable number of years (having the full growth and maturity of the commercial trees planted, the **Lessee** shall give the **Lessor** six (6) months notice in writing prior to the effluxion of the term hereby granted of his intention to exercise the option and his preparedness to be negotiate a fair deal.

(d) Any notice required to be served under this lease shall be sufficiently served if it complies with the provisions in **Section 39 of the Conveyancing Decree, 1973 (NRCD 175)**.

(c) Any **notice** required to be given by either the **Lessor** or the **Lessee** shall be in writing and shall be deemed by hand, mail, or registered post at their respective addresses.

This Agreement made IN WITNESS WHEREOF the parties hereto have set their respective hands the day and year first above written.

SIGNED by the LESSOR:

(Signature, or Right Thump Print, and Full Name and Title)

In the presence of WITNESS:

(Signature, or Right Thump Print, and Full Name and Title)

AND

SIGNED by the LESSEE:

(Signature, or Right Thump Print, and Full Name and Title)

In the presence of WITNESS:

(Signature, or Right Thump Print, and Full Name and Title)

ANNEX 5: LAND VALUATION BOARD DOCUMENT



Land Valuation Board Volta Regional Office

P. O. Box HP 646 Ho
Volta Region, Ghana

E-mail: lvb.gvg@gmail.com

Telephone: +233 (0)209 355 026

17th February 2011

Attention: The Council Chairman
Nkonya Wurupong Traditional Council
P. O. Box 28
Nkonya Wurupong (VR)

Dear Sir,

Standard Land Valuation For Agricultural, Forestry, and Agro-Forestry Programs

We refer to your letter of Monday 24th January 2011 on the above subject, and would like to inform you that, as at now, the standard value of one acre land in the Nkonya-Sub District is US\$ 500.00 (five hundred US dollars). That valuation, which is still a conservative figure, is relevant for agricultural, forestry, and agro-forestry purposes. You will be informed later in future through the District Planning Officer when changes occur. Thank you.

Yours Sincerely

Handwritten signature of Togbe Atsu Anikpi II in blue ink.

Togbe Atsu Anikpi II
Chairman

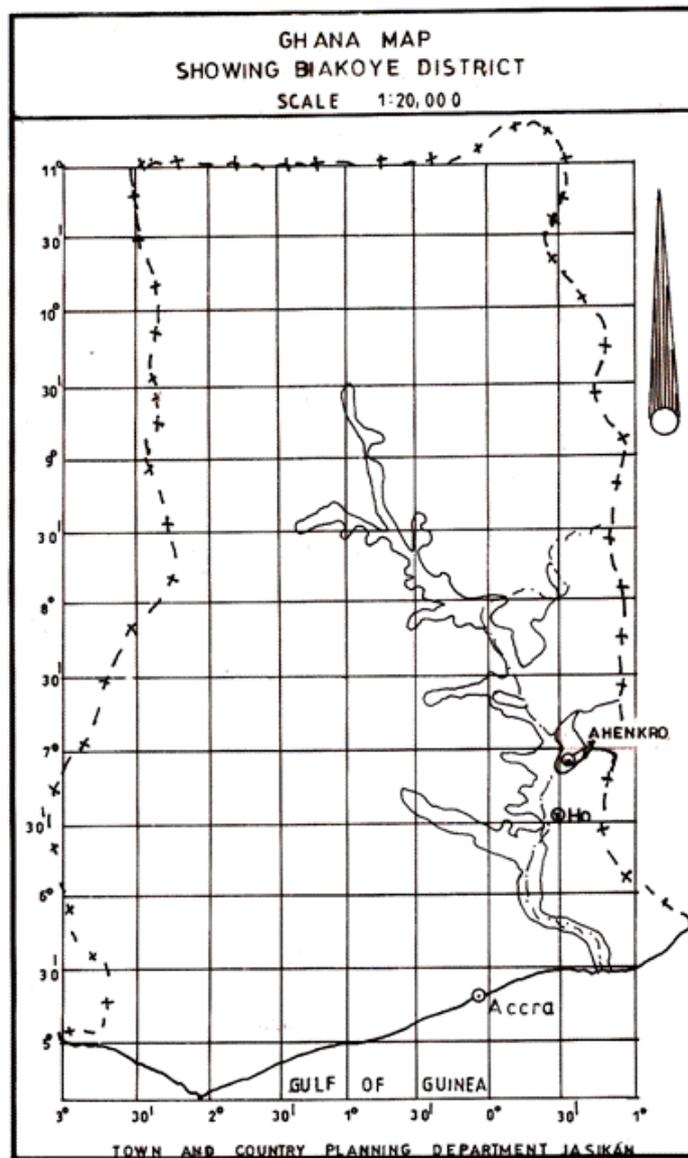


APPENDICES

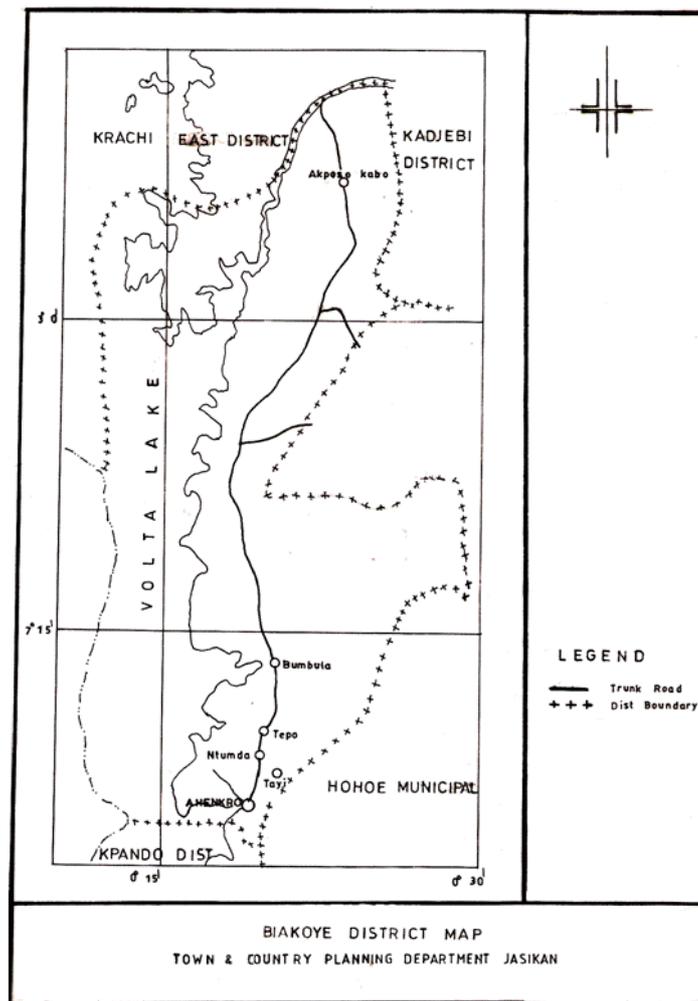
Appendix 1(a): MAP OF GHANA (in WEST AFRICA)



Appendix 1(b) MAP OF GHANA SHOWING BIAKOYE DISTRICT



Appendix 1 (c): MAP OF BIAKOYE DISTRICT SHOWING PROJECT COMMUNITIES



Appendix 2: Further Technical and Scientific Information (on Some Tree Species)

All the indigenous timber species selected for this project have been tried and proven to be viable mixed plantation material by multiple scientific departments under the Ghana Forestry Commission, especially the Forestry Research Institute of Ghana at Fumesua near Kumasi.

Serial No.	Timber Species	Habitat	Technical Details	Commercial Timber Uses
1	Khaya senegalensis (Kuga, Korobaa, or West African Mahogany)	Usually found in fringing dry-deciduous forests and savannah. Often in low-lying places beside streams	It grows pretty well from the seed. It is recommended as an excellent plant for reforestation on a large scale. Its rate of natural regeneration is however rather poor.	Furniture making. General construction. High-class joinery. High-class interior and exterior decorations.
2	Khaya ivorensis (or Dubini, one of the West African mahogany species)	Usually found in fringing dry-deciduous forests and savannah. Often in low-lying places beside streams	The seeds germinate rather well (70-80%), and they transplant pretty well. The seedlings are however sometimes attacked by the gall insect.	Furniture making. General construction. High-class joinery. High-class interior and exterior decorations.
3	Khaya anthotheca (Kruben)	Usually found in the dry and wet limits of moist-dry tropical deciduous forests.	Flowers in March. Its natural regeneration properties are fairly good. It reproduces itself by seed and root-suckers.	Furniture making. Interior and exterior decorations. Boat building. Decorative veneer. High-class joinery. Very durable wood.
4	Triplochiton scleroxylon (Wawa)	Usually in moist-dry and dry deciduous tropical forest. Often absent in the very wet segments	Flowers in November to February. Fruits in March. The seedlings grow rather rapidly up to 6 feet per annum in fertile soil.	Interior and exterior decoration. Furniture. General construction.
5	Terminalia ivorensis (Emire)	It is found in most parts of the moist-dry tropical deciduous forest.	It flowers in February to August, and fruits from January to February. Some experts say its properties are superior to <i>T. superba</i> . Wood density (Kg/m³) = 546. Mechanical Properties: C₁₁- 47; B – 81; E – 9,755	Furniture making. Interior and exterior decorations. High-class joinery. Very durable wood.

***Triplochitons scieroxylon* (Wawa)**

Triplochitons scieroxylon (known in local Ghanaian language as **Wawa**) grows naturally in the original high forest and secondary vegetation in the project area. Before the present massive deforestation in the project zone, Wawa grew side by side with other forest species like *Milicia exelsa*, *Alstonia boonei*, *Ficus spp.*, *Ceiba pentandra*, *Terminalia ivorensis*, *Albizia zigia*, *Morinda*L., *Antiaris Africana*, *Celtis spp.*, *Sterculia tragacantha*, *Tarrietia u.*, *Khaya ivorensis*, *Cola cordifolia*, *Trema guineense*, *Lonchocarpus sericeus*, *Anogeissus leiocarpus*, and others.

The public sector technical officers and range supervisors of the Forest Services Division of the Ghana Forestry Commission are very well versed with the technical and silvicultural needs of *Wawa* as well as local farmers. Top-quality *Wawa* seedlings can be easily purchased from the Forest Research Institute of Ghana in Kumasi. Mean annual rainfall in the project area is above 2600 mm, with soil texture alternating from light loamy soil, through medium loamy, to light clayey.

Planting and Spacing (for *Wawa* and *Ofram*): *Wawa* seedlings shall be planted at distances of 6m x 6m. The seedlings will be planted early in the year to allow for maximum supply of rain water. A survival count shall be undertaken after six weeks. Weeding shall be carried out monthly to protect the young trees.

Diseases of *Wawa*: *Wawa* is relatively disease resistant assuming good quality soil, regular weeding, and protection from wild fires. Early pruning is advisable for the two species (*Wawa* and *Ofram*), when necessary. Recommendation for final harvesting will vary from 15 to 25 years. ***Wawa* produces medium-density wood** with high market value in Ghana and overseas. They are used as construction material, poles and posts, veneer and plywood inputs, carvings and turnery, versatile packaging material, as well as furniture inputs.

***Ceiba pentandra* (Silk Cotton Tree)**

“In several parts of Ghana, ***Ceiba pentandra*** has very many uses to households apart from the fact that its wood is used to make very high-quality plywood. ***Ceiba pentandra***’s fruits (especially in many parts of the Volta Region of Ghana), are used in medicines, domestically for pillow making, and commercially sold to help plug holes in traditional local canoes. Its seed oil is taken against rheumatism, sold commercially for soap-making, and used to ignite fires. The leaves are consumed in soups and also provide fodder for goats; its (leaf) ashes provide a good mulch for farm crops, and a special favored mushroom grows at the base of its stems. *Ceiba pentandra*’s roots are used for the treatment of leprosy. Finally, the tree is regarded as a sacred tree and the leaves and bark are believed to expel evil spirits”. (By R. K. Asamoah 1985: “Uses of fallow trees in the Ho District of Ghana”, KNUST, Kumasi)

Ceiba pentandra is a large tree, growing up to a height of 60 meters, and a girth of up to 11 meters. Old trees have very large buttresses, often with prickles confined to edges. The flowers are 2.5 centimeters long, in clusters: five white petals with densely silky hairs outside, apparently five stamens, but each filament with three anthers. The fruits are dark, ellipsoid pendulous capsules with five valves 10 to 30 centimeters long. The inside has dense flossy white kapok with many seeds. In Ghana, sawn wood from *Ceiba pentandra* is used for making high-quality plywood for both local and export market.

***Terminalia superba* (Ofram)**

Ofram*, *Wawa*, and teak** rank as the top three timber species that Ghana exports most to Europe, America and Asia. ***Ofram therefore is a very popular tree type to have on a Ghanaian plantation at present. ***Ofram*** will be planted alongside *wawa* and the project’s plant-vegetable (*Moringa oleifera*) in a **professionally mixed manner**. ***Terminalia superba*** (known in local Ghanaian language as ***Ofram*** (like *Wawa*) grows naturally in the original high forest and secondary vegetation in the project area. Before the present massive deforestation in the project zone, *Ofram* grew side by side with other forest species like *Milicia exelsa*, *Alstonia boonei*, *Ficus spp.*, *Ceiba pentandra*, *Terminalia ivorensis*, and *Albizia zigia*, *Morinda*, among others. Field officers of the Ghana Forestry Commission are very well versed with the technical and silvicultural needs of *Ofram*. At present, top-quality *Ofram* seedlings can be easily purchased from the Forest Research Institute of Ghana in Kumasi. Planted seedlings survival rate for FORIG’s *Ofram* inputs have been reported to average 85 per cent provided they are planted in May or June. Mean annual rainfall in the project area is ideal for *Ofram* cultivation. Mean annual rainfall is above 2600 mm, with soil texture alternating from light loamy soil to medium clayey.

Planting and Spacing: Seedlings shall be planted at distances of 3m x 6m. The seedlings will be planted early in the year to allow for maximum supply of rain water. A survival count should be undertaken after 6 to 7 weeks. Beating up should be undertaken within seven weeks of initial planting.

Diseases of Ofram: Ofram, like Wawa, is relatively disease resistant assuming good quality soil, regular weeding, and protection from wild fires. However, some minimal level (less than 8 per cent of examined quantities) of branch dieback, bark necrosis, and sapwood staining have been discovered in *Terminalia ivorensis* (Emire) and *Terminalia superba* (Ofram) near the Ghana-Ivory Coast border, about 350 kilometers from the project area. recently. Well-informed experts however think that these disease occurrences could be due to wild fires, drought, and soil nutrient deficiencies in the study area.

General Tolerance: *Ofram* plantations are known to be drought hardy, moderately frost resistant, and tolerant to brief seasonal water-logging. The tree is however light demanding. Early pruning is advisable for *Ofram*. Recommendation for final harvesting will vary from 15 to 25 years. *Ofram* produces medium-density wood with high market value in Ghana and overseas. They are used as:

- Construction material;
- poles and posts;
- veneer and plywood inputs;
- carvings and turnery; and
- versatile packaging material.

Teak: (Cultivation Experiences in Ghana)

Ghana's natural forests will soon no longer be able to supply 2006/2007 levels of tropical hardwood demand. Steps are therefore being taken to find alternative sources of hardwood supply. The Government of Ghana recognizes the severity of the problem, and is creating the required enabling environment to encourage private sector investment in Teak plantations, especially.

Teak (*Tectona grandis*) is a very popular tropical hardwood among both people who process it as well as among users of the end product. In teak growing, **BEST PRACTICE** is the application of superior technical, managerial, and financial know-how to satisfy the goals of the grower, without causing damage to the environment or to society. The Forest Research Institute of Ghana (FORIG) located at Fumesua-Kumasi, has developed superior *plus* teak trees and seedlings. The seedlings are available to the public at reasonable prices.

Planting And Spacing: **Plant 1,110 teak trees per ha** (3m x 3m). Plant sufficiently early in the year to allow full growing potential in the first year. Do not plant after the month of June as a general rule.

Survival Count: Carry out a survival count one month after planting. Replant where mortality surpasses 10 per cent and is randomly distributed. Replanting (or beating up) should be done as early as possible in the growing season..

Weeding should be carried out every two or three months depending on vegetation growth and growth of unwanted weeds. Weeding (where grass is scraped away from the young teak plant) can make dramatic favorable results. Grass causes problems for the young teak plant in terms of survival and fast growth.

Diseases: Teak is relatively disease-free. However, stem rot can occur, through poor soil selection or from bush fire.

Early pruning of teak is advisable to improve wood quality and increase the merchantable height on the best teak trees. **Thinning** is one other activity that should be carried out on time and adequately! Carry out thinning by all means before the 7th or 8th year. Carry out first thinning when the stand is about 12 m. Remove 50 per cent of the trees and leave about 500 trees only per hectare.

The Rotation: Recommendations for final harvesting will vary from 20 to 30 years depending on the fertility of the soil.

Teak has a reputation for excellent wood quality. Teak wood properties include: **(a)** strength and lightness, **(b)** dimensional stability, **(c)** non-corroding properties, **(d)** ease of working and seasoning, **(e)** termite, fungus, and weather resistant, and **(f)** relatively straightforward machining properties.

- To promote agro – forestry and related rural micro credit schemes

Article 3 Nature of the MOU for implementation, terms and conditions.

3.1 This MOU creates a general framework for the collaboration between the Biakoye District Assembly and Picodev, Ghana.

3.2 In pursuance of the collaboration established by this MOU, Biakoye District Assembly and Picodev, Ghana hereby agree to collaborate in the mobilization of the six selected communities namely, Ahenkro, tayi, Ntumda, Tepo, Bumbula, and Akposo Kabbo to ;

- Release the required land (at least 100acres for the demonstration plots of planted trees) and 2 acres each per head for the individual cassava farms and
- Provide suitable space / facilities at the Assembly’s premises when possible or make alternative arrangements for the use of such for the project’s meetings, workshops monitoring and review missions when required and
- Any other requests within the Assembly’s capability as may become necessary from time to time.

3.3 Alternatively and essentially, Picodev, Ghana would be responsible for a transparent execution of the project in order to provide the required project outputs for the benefit of all stake holders and send all required reports promptly as outlined in the project document.

3.4 This MOU may not be amended, supplemented, or modified in any respect except by written agreement signed by authorized representatives of each party.

3.5 Notwithstanding the use of the expression “collaborating party” herein, it is expressly agreed that nothing in this MOU shall be construed to create a relationship to render either party liable for any debts or obligations incurred by the other.

3.5 Neither party is authorized to enter into agreement for or on behalf of the other to collect any obligation due or owed to the other, accept service of process for the other, or to bind the other in any manner whatsoever, nor shall either party be liable for the actions of the other during the performance of activities included in this MOU.

3.6 Notwithstanding this MOU either party reserves the right to enter into similar agreements or MOU with any other entity it so chooses.

3.7 In the event of disagreement between the parties concerning the meaning of any part of the MOU, the BDA and the NGO(PG) executive body shall arbitrate.

3.8 BDA and the NGO(PG) agree that the MOU will continue until it is terminated either by joint decision of both parties or at the expiration of the task period.
BDA and the NGO (PG) acknowledge that the foregoing properly sets forth their mutual understandings and intentions IN WITNESS WHEREOF, the duly authorized representatives of the parties have executed this agreement the day and year first above written.

BIAKOYE DISTRICT ASSEMBLY

PICODEV, GHANA



Title: District Chief Executive



Title: Director, NGO.

**DIST. CHIEF EXECUTIVE
BIAKOYE DIST. ASSEMBLY
NKONYA – AHENKRO**

Article 3 Nature of the MOU for implementation, terms and conditions.

3.1 This MOU creates a general framework for the collaboration between the MOFA District Office at Nkonya- Ahenkro and Picodev, Ghana.

3.2 In pursuance of the collaboration established by this MOU, MOFA District Office at Nkonya- Ahenkro and Picodev, Ghana hereby agree to collaborate in the mobilization of the six selected communities namely, Ahenkro, tayi, Ntumda, Tepo, Bumbula, and Akposo Kabbo to ;

- Release the required land (at least 100acres for the demonstration plots of planted trees) and 2 acres each per head for the individual cassava farms as well as provide Extension Services relevant to the project and
- Provide suitable space / facilities at the Assembly's premises when possible or make alternative arrangements for the use of such for the project's meetings, workshops monitoring and review missions when required and
- Any other requests within the District's capability as may become necessary from time to time.

3.3 Alternatively and essentially, Picodev, Ghana would be responsible for a transparent execution of the project in order to provide the required project outputs for the benefit of all stake holders and send all required reports promptly as outlined in the project document.

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3.5 Neither party is authorised to enter into agreement for or on behalf of the other to collect any obligation due or owed to the other, accept service of process for the other, or to bind the other in any manner whatsoever, nor shall either party be liable for the actions of the other during the performance of activities included in this MOU.

3.6 Notwithstanding this MOU either party reserves the right to enter into similar agreements or MOU with any other entity it so chooses.

3.7 In the event of disagreement between the parties concerning the meaning of any part of the MOU, the BDA and the NGO(PG) executive body shall arbitrate.

3.8 MOFA D O at Nkonya-Ahenkro and the NGO(PG) agree that the MOU will continue until it is terminated either by joint decision of both parties or at the expiration of the task period.

MOFA D O at Nkonya - Ahenkro and the NGO (PG) acknowledge that the foregoing properly sets forth their mutual understandings and intentions IN WITNESS WHEREOF, the duly authorized representatives of the parties have executed this agreement the day and year first above written.

MOFA District Office
Nkonya - Ahenkro

PICODEV GHANA

Title; MOFA District Director

Title: Director, NGO.