1. General Information

1.1. Name of Applicant Organisation

ACCION FRATERNA (AF) [1]

RDT Ecology Centre,
Upparapalli Road,
Bangalore Highway,
Anantapur 515 002,
India.

1.2. Title of the Project

FCN-LCF Coalition Programme – Pilot Phase

1.3. New or Extended Project

New project

1.4. Project Period

1 year Pilot Phase of a 10 year Coalition Programme

1.5. Project Funding Period

June 2010 to May 2011

1.6. Total Project Cost

Rs 11,604,750 / € 193,413

1.7. EED Funding Request

Rs 9,804,750 / € 163,413

1.8. Other Funding Bodies

Environment Defense Fund (EDF), New York
Rs 1,800,000 / € 30,000

[1] Please see the Organisational Profile of Accion Fraterna, the coordinating NGO for this coalition programme, attached as Annexure 1

2. Background of the Project

2.1. FCN Low Carbon Farming Coalition [2]

The FCN-LCF Coalition comprises of 5 Indian NGOs who share the goal of utilising verified emission reduction (VER) revenue to expand sustainable agricultural practices for small, marginal and drought affected farmers. The FCN-LCF Coalition has been formed under the Fair Climate Network, which will support Coalition members to access VER revenues.

Please see the Strategic Plan, attached as Annexure 4, for a further elaboration.

2.2. FCN-LCF Coalition Members

Accion Fraterna

Accion Fraterna is a 27 year old NGO which works in the field of Sustainable Agriculture (SA), rural employment, vocational training with 60,000 families in over 230 villages.

Social Education & Development Society (SEDS)

SEDS is a 30 year old NGO which works under the motto "towards a greener tomorrow" on natural resources development and management, community organisation, health and education in over 130 villages.

Palmyrah Workers Development Society (PWDS)

PWDS is a development organisation founded in 1977, offering support services to sustain community initiatives. Currently, PWDS is implementing 66 field projects, has promoted eleven support organisations with mainstream linkages, and works in 30 districts in Tamil Nadu through network programmes with 44 NGOs as partners.

Social Animation Centre for Rural Education and Development (SACRED)

Established in 1998 and working in villages in the Bangalore district, SACRED has a holistic approach to rural development. SACRED aims to empower women and mould a new generation through gender sensitisation and environmental awareness – aiming for human justice and equality.

Bharath Environment Seva Team (BEST)

BEST has been working in the Pudukotttai district of Tamil Nadu since 1984. BEST has been involved in Sustainable Agriculture for the past 8 years. They work in 54 villages covering 5,000 acres and 2,000 farmers. Women farmers are encouraged to be part of this programme.

2.3. The Fair Climate Network (FCN)

About 60 development workers from grassroots NGOs, scientists, environmentalists and feminists have got together to form the Fair Climate Network. The purpose is to facilitate and capacitate grassroots bodies to develop pro-poor CDM Projects and tap carbon resources for the sustainable development of the poor.

The Fair Climate Network believes that grassroots groups, NGOs, people's organizations, Gram Panchayats, etc. are best situated to identify CDM activities that can be undertaken for the sustainable development of the poor. The FCN also believes, as a basic tenet, that totally open and transparent carbon revenue sharing arrangements should be in place.

[2] The 5 Participant NGOs have got together under an MoU with EDF, New York, attached as Annexure 2

The Fair Climate Network has set up a Tech Team at Bangalore with CDM Specialists to handhold and assist in the preparation of 20 pro-poor CDM Projects to reach out to 600,000 families, and access € 100 million from Carbon Investors in the next 3 years. In a span of just 2½ years, 19 CDM Projects are in the pipeline, some at an advanced stage of development.

DoE and Carbon Investor approved digitized Monitoring Systems that meet EB Standards have been developed for all the above technologies.

2.4. Sustainable Agriculture

A large number of FCN Members promote Sustainable Agriculture practices in their areas of operation. These grassroots NGOs have developed technologies suited to their local environments, resulting in positive shifts in cropping patterns and cultivation practices, and have also demonstrated increased drought resistance.

It is difficult to expand existing sustainable development practices for a number of reasons, including limited NGO capacity and limited finances. The FCN-LCF Coalition aims to build capacity to expand existing SA practices. Carbon revenues will allow them to be taken up on a larger scale than the current existing demonstrations, by providing a financial incentive to small, marginal and drought affected farmers.

Therefore, quantifying the amount of GHG avoided by adopting SA practices, introducing new practices to further reduce emissions, and claiming VERs to earn carbon revenue provides a solution to existing barriers.

SA technologies include reduced or no-tillage farming, altering crop mixes and rotations, multiple cropping, changing the mix of irrigated versus dry land, and changing approaches to managing water and straw in rice production, fertiliser and pesticide management, amongst others.

2.5. FCN Partnership with Environmental Defense Fund (EDF)

FCN has partnered with EDF, New York, to provide the science needed for this Coalition Programme. This FCN-EDF partnership has explored the viability of procuring Verified Emission Reductions (VERs) from the cultivation of small, marginal and drought affected farmers, and found it feasible.

2.6. Socio-economic and Environmental Characteristics of the Project Areas [3]

The geographical and demographic spread of the 5 Participant NGOs share some similar ecological, social and economic characteristics.

All 5 project areas are located in South India. These regions are semi arid drought prone belts with a low annual rainfall of 400-700 mm. Most of the land is rain-fed, and some irrigated by tanks and bore wells. Due to environmental degradation, soils are depleted and low on biomass.

Project areas in Andhra Pradesh have a comparatively lower rate of literacy when compared to Karnataka and Tamil Nadu. But across the board, female literacy is low. The PWDS project area has the highest female literacy rate, while BEST has the highest male literacy rate – both in Tamil Nadu.

About 18% of the total population belong to SC/ST. The adult employment rate is between 75-80%, with 12-22% of these marginal workers.

The average household size is 5, and about 15% live in substandard houses.

[3] Please see environmental and socioeconomic conditions specific to each project area, attached as Annexure 3

3. Problem Description

3.1. Focal Problem

The focal problem that FCN-LCF Coalition Programme aims to address is:

> *"NGOs are unable to access carbon revenue, which would allow them to scale up existing Sustainable Agriculture coverage and practices."*

Carbon offsetting, especially in agriculture, is a relatively new concept worldwide. Many grassroots NGOs, including the 5 participants of this Coalition Programme, have already been involved in promoting Sustainable Agriculture (SA) practices for several years.

However, this is limited to a small number of farmers. The NGOs are not able to expand in the face of mainstream cultivation practices, and without additional capital expenditure.

Low Carbon Farming provides an opportunity to access capital by leveraging carbon markets. These activities will also support a long-term strategy to link mitigation and adaptation.

Currently, there are no substantial efforts, backed by reliable science, that support small, marginal and drought affected farmers to re-establish integrated farming systems, sustainable livelihoods and contented lifestyles on a significant scale.

Our position is that Sustainable Agriculture is the starting point for an outright rejection of high external input destructive agriculture (HEIDA). Sustainable systems require the introduction of integrated farming systems with self sufficient farmers and sustainable livelihoods – in effect, this is an integration of trees, crops and animals at the household level.

There are 5 causative factors that result in an inability to put these Sustainable Agricultural systems in place.

3.2. NGOs Lack Technical Expertise

Grassroots NGOs have adopted alternate technologies derived from native wisdom and developed sustainable agricultural practices. However, they have been unable to come to grips with the complex concepts of climate change, adaptation, mitigation, emission reduction, rigorous monitoring and carbon trading.

NGOs also suffer from a lack of capacity due to dealing with charity funds, which create a different economic milieu. As a result, grassroots NGOs do not have the expertise to handle commercial funds on a business model, and ensure timely deliverables.

3.3. Grassroots NGOs Lack Support to Expand Sustainable Agriculture Practices

The Community Based Organisations (CBOs) that NGOs have built possess the organisational structure, but not the institutional arrangement to pool emission reductions they will individually generate at each farm, and aggregate them into a single unit. In order to access carbon resources, the structures and discipline of such an arrangement is vital.

Emission reductions in agriculture are relatively low, at about 5 $tCO_{2\text{-}e}$ per hectare per annum. In addition, a comparatively low price of around € 6 per VER. These figures do not add up to the volume needed for isolated trade in the voluntary carbon market. NGOs need to combine their efforts to play from a position of strength.

3.4. Limited Range of Sustainable Agricultural Practices

Rejuvenating traditional knowledge in farming requires a concerted effort in the face of mainstream cultivation's homogenising ideology. The productivity of the soil under mainstream

cultivation techniques has fallen to critical levels – with an absence of essential humus, manure and moisture. In an integrated farming system, factors causing and sustaining soil productivity go beyond farm boundaries into common lands, pastures, forests, cattle, birds and scores of other living and non-living organisms. There should be an effective interplay between all these elements with the natural principles of recycling, symbiosis, antibiosis and diversity.

The range of Sustainable Agriculture practices, that grassroots NGOs could undertake on small pockets of land, therefore decreased to a small number of practices that could still be advocated in a close to sterile landscape.

3.5. Insufficient Incentives to Commit Fully to Sustainable Agriculture

The government's tendency to aggressively push HEIDA has meant that mainstream prescriptions have come to dominate in every sphere. This refers to access to information, technologies, facilities, markets, as well as a general acceptance of standard practice. Direct and indirect support and subsidies are provided to follow these prescriptions.

When Sustainable Agriculture practices are successfully demonstrated to a handful of farmers on small portions of their holdings, the mainstream paradigm portrays these examples as aberrations to the rule – that HEIDA is the most productive method of farming.

The addition of potential carbon revenue to sustainable agricultural projects will help to overcome mainstream cultivation homogeny, and provide a viable alternative to struggling farmers.

3.6. Absence of a Domestic Offsets Market

The growing middle class in India is coupled with a weak social consciousness. However, there is scope to tap into India's new business-minded 'green' generation – which is increasingly in need of certified sustainable emission reductions.

As India is a non-Annex I country under the Kyoto Protocol, emission reduction targets do not need to be statutorily met. As a result, there are no institutional arrangements organised into a carbon market within India.

Tapping into an international market, and utilising the FCN's knowledge to link up with international buyers provides the stability required to ensure carbon credit projects in India can be both possible, and successful.

4. Participating Farmers

4.1. Demographic Projection

		Andhra Pradesh		Karnataka	Tamil Nadu	
	Overall	**AF**	**SEDS**	**SACRED**	**BEST**	**PWDS**
Participating Farmers	**5,996**	2,000	507	1,277	1,162	1,050
> Female headed families	**10%**	12%	20%	2%	9%	7%
> Male headed families	**90%**	88%	80%	98%	91%	93%
Castes & Communities						
> SC/ST	**23%**	21%	16%	27%	14%	37%
> Middles Castes	**62%**	65%	47%	73%	86%	40%
> Upper Castes	**15%**	14%	36%	-	-	23%
Total Land (hectares)	**8,000**	4,000	1,000	1,000	1,000	1,000
> Rain fed	**57%**	80%	80%	58%	37%	30%
> Irrigated	**43%**	20%	20%	42%	63%	70%

4.2. Gender Disaggregation

Participant NGOs take a gender disaggregated view of the farmers they work with and have sound reasons for choosing particular landholding sizes and family demographics to reach out to. They have clear policies and strategies to deal with gender and social inequities. They attempt to reach socially and economically disadvantaged sections in all and every programme. Many alternate/diversified livelihoods interventions, for example, are exclusively for women. Gender training is undertaken at the village level to increase the role and participation of women in decision making at the family level. Low Carbon Farming is no exception.

Women

A significant percentage of families in Andhra Pradesh are women headed, slightly less in Tamil Nadu, and practically non existent in Karnataka. This too will affect the choice of SA practices baskets. Participant NGOs have the sensitivity to know which practices are easier adapted by women farmers.

Caste

The vast majority of Participating Farmers belong to middle castes (in some areas of Tamil Nadu they are referred to as backward classes, minorities, *et al*) since these are the farmers that the NGOs have a greater affinity to. 23% of the families belong to SC/ST. Since 2 participant NGOs do not work with upper caste farmers, their overall presence in the project is just 15%.

Land Size

Accion Fraterna understands “middle caste” as “middle caste-class”. In the harsh agro-climatic conditions of Anantapur district, many middle class families with less than 10 acres of dry land live below subsistence levels, due to 7 years of drought in every decade. All of them are part cultivators and part wage labourers. The NREGA offers them a respectable option of earning wage labour without losing their prestige and standing in village society, since they cannot survive only on cultivation. These harsh economic conditions forces AF to include such drought affected farmers into the category of small and marginal.

4.3. Irrigation

In Andhra Pradesh and Karnataka, the vast majority of Participating Farmers will be dry land cultivators, totally dependent on erratic, spatial and unreliable rainfall. However, there are irrigated tracts in these project areas where small and marginal farmers do own some lands. On the other hand, in Tamil Nadu the majority own irrigated lands. Baskets of SA practices will be adjusted according to local geographic variations based largely on irrigation and other ecological parameters.

4.4. Regional Variations

Participant NGOs have an intimate knowledge of their respective areas of operation. In each region, caste and landholding size fairly accurately reflect socioeconomic status.

While it would usually be assumed that "rain-fed farmers" are at a greater risk than "irrigated farmers", this may not always be the case. In Tirunelveli district, for example, the project area is irrigated by the Tamaraparani river. Water for irrigation comes mainly from a nearby dam. Farmers receive canal water very irregularly, and the dates of release are gradually becoming more and more uncertain. In this PWDS area of operation, although the water table is high, only a small number of farmers have bore wells to tap this ground water when dam water fails to reach their fields.

5. Expected Outcome and Impact [4]

5.1. Development Goal

- Sustainable livelihoods of small, marginal and drought affected farmers, which are under threat due to the mainstream cultivation practices of the emerging market economy and frequent droughts, optimised with stabilised incomes from agricultural production through Low Carbon Farming
- Environmental balance restored in project area through eco-friendly Sustainable Agriculture

5.2. Impact Indicators

- Reduction in distress sales, forced migration and fields left barren
- Increase in crop diversification, availability of biomass, enhanced biodiversity and reduction of agro-chemical usage

Means of Verification

- Annual Effects Monitoring by Village Communities
- Expert Studies

5.3. Project Objective

- Grassroots NGOs access carbon money and scale up Sustainable Agriculture coverage and practices

[4] Please see the LogFrame in our Strategic Plan, attached as Annexure 4

5.4. Outcome Indicators

- 50% of small, marginal and drought effected farmers in each NGO's area of operation adopt Sustainable Agriculture practices by 2020
- Annual increase in percentage of NGO finances mobilised from the Carbon Offsets Market
- Annual increase in the value of farm income from Sustainable Agriculture
- Annual increase in proportionate farm income from Sustainable Agriculture vis-à-vis mainstream cultivation
- Annual increase in proportionate area under Sustainable Agriculture vis-à-vis total landholding

Means of Verification

- Hectares financed under offer sheets
- Participating farmers under offer sheets
- Audited accounts
- Data generated by digitised Monitoring Solution

5.5. Added Value

The 5 Participant NGOs in this FCN-LCF Coalition Programme are all longstanding EED partners. Together they receive a total of € 622,115 every year.

Status of Current & Ongoing EED Sanctioned Project

Participant NGO	EED Project No.	Start	End	Sanctioned Budget
Accion Fraterna	20090224 G	Apr-09	Mar-12	800,000
SEDS	20080339	Oct-08	Sep-11	476,000
SACRED	20080336/BfW 232/08	Nov-08	Oct-11	70,273
BEST	20080336/BfW 232/08	Nov-08	Oct-11	70,071
PWDS	20090205 G	Jan-09	Dec-11	450,000
Total				**€ 1,866,344**

This Pilot Phase, with an additional investment of just 9% over and above their sanctioned budgets, will increase the reach and capacity of these EED Partners many times over. It will introduce a significant increase in their capacity to tap commercial carbon revenues and enter into a different, non-charity funding model. They will successfully contend with new demands placed on their organisations in terms of gathering good socioeconomic and technical data, exact monitoring, reporting, compliance to science, and fiscal responsibility.

All 5 Participant NGOs are also grassroots NGOs, situated in the midst of the people they work with. They have developed an intimacy with communities and assisted the poor attain a good degree of organisation. Now, with the taking up of this FCN-LCF Coalition Programme, these bonds with communities will not only get strengthened, but new structures and institutions will be formed for the aggregation of carbon credits and collective dealings with the larger economy.

Communities of the poor will cease to be "beneficiaries" and "target groups" of the NGOs. They will instead become formal, institutionalised and actual partners of the NGOs. This will usher a change in the organisational structure and culture of the NGOs themselves, transcending the mode that had developed a generation ago, and define the parameters of a new-age service delivery civil society.

5.6. National Poverty Reduction Strategy

The LCF Pilot Phase is aligned with India's national poverty reduction strategy in a number of ways.

Improved profitability

The end goal of the LCF Coalition Programme is to alleviate poverty in rural communities. This will be achieved through reducing agricultural input costs by moving to a Sustainable Agriculture model. As farmers' operating expenses reduce for an equivalent yield, profitability improves.

Risk Management

Farmers within the project area are at the mercy of erratic monsoons, as they work on rain fed land, with little or no irrigation. This equates to significant risk exposure to early or delayed rainfall, resulting in low crop yields. The front end risk (sowing, preparation of land, etc) can be managed by reducing operating costs – resulting in a lower financial risk if the monsoon is not timely. In addition, multi-cropping (planting a variety of crops with differing levels of resilience to monsoon on the same plot of land) can reduce the effects of exposure to erratic monsoon conditions.

Carbon Revenue

Another major outcome of the move to Sustainable Agriculture under LCF is carbon emission reductions and sequestration. This Carbon is a valuable asset and, when linked to the carbon market, generates additional revenue for the farmer.

National Climate Change Action Plan (NCCAP)

The LCF Pilot Phase supports the goals of India's National NCCAP through the generation of carbon emission reductions as a result of Sustainable Agriculture. Under this Action Plan, LCF will support the:

- National Mission for Sustainable Agriculture – to devise strategies to make Indian agriculture more resilient to climate change
- National Water Mission – to conserve water and minimise wastage
- National Mission for a Green India – to enhance ecosystems, including carbon sinks

Agriculture Policy : Vision 2020

The LCF Pilot Phase also supports the goals of India's Agriculture Policy: Vision 2020, by promoting sustainability and natural resource management, providing incentives for the uptake of SA, and addressing issues such as integrated soil nutrient management and water management.

National Standards of Organic Farming

The LCF Pilot Phase will contribute towards goals under the National Standards of Organic Farming, such as the promotion of organic farming, which will contribute beneficially to the ecosystem.

National Rural Employment Guarantee Act (NREGA)

There is the potential to utilise NREGA to promote Sustainable Agriculture in India. The Act guarantees the rural poor 100 days of paid employment per year – the community can select which works it would like to undertake for those 100 days.

Participant NGOs of this LCF Coalition Programme are in the process of making a serious recommendation that NREGA should result in asset creation on the lands of small, marginal and drought affected farmers, in addition to guaranteeing employment.

5.7. Baseline Data

A baseline assessment of biomass, biodiversity, crop diversity and agro-chemical usage *et al*. will be completed by the LCF Expert within the FCN Tech Team as part of his job description. Participant NGOs approximate current baseline levels in their respective project areas as under:

Indicator	Overall (average)	AF	SEDS	BEST	SACRED	PWDS
Distress Sale of Land	3.1%	4%	***	0.2%	6%	2%
Forced Migration	2.9%	1%	***	1.3%	8%	1%
Fields left Barren	16.3%	20%	15%	10%	25–30%	9%
Crop Diversification	Will be determined through Expert Study					
Biomass Availability						
Biodiversity						
Use of Agro Chemicals						
Ground Water Table	247.5 ft	200–250 ft	***	240 ft	450–500 ft	40–60 ft
Crops Grown (acreage)		Groundnut 78%	Groundnut 82%	Paddy 60%	Ragi, Grams 60%	Paddy 70%
		Pulses 9%	Pulses 6%	Groundnut 25%	Permanent [5] 30 %	Black gram 30%
		Millets 5%	Paddy 4%	Sugarcane 5%	Vegetables 5%	Millets 10%
		Paddy 4%	Sunflower 3%	Vegetables 4%	Paddy 5%	Trees 10%
		Sunflower 3%	Other [6] 3%	Pulses 3%		
		Vegetables 1%	Maize 2%	Millets 3%		

[5] Permanent crops include such crops as: mango, sericulture and coconut.
[6] Such as Ragi, chillies, fruit, vegetables, mulberry

6. Project Activities

6.1. Capacitating the FCN Tech Team

- Appointing an LCF Expert [7]
  - EDF will source a competent Expert in Low Carbon Farming
  - The Fair Climate Network will appoint him to join the Tech Team as the LCF Expert
- Delegating a FCN Facilitator
  - The FCN will delegate a Junior CDM Specialist as FCN Facilitator to the Coalition Programme to assist and learn from the LCF Expert.
  - He will regularly visit all 5 Participant NGOs and handhold them to ease bottlenecks and assist in implementation.
  - He will monitor progress and assist Participant NGOs realise the Pilot Phase Budget in a responsible and diligent manner. In this capacity, she will work in close coordination with the Accion Fraterna Accounts Staff.
  - In the technical execution of her duties, she will report to the LCF Expert, but in the administrative matters she will report to Malla Reddy, AF, and Ram Esteves, FCN.

6.2. NGO Orientation

- Accessing Low Carbon Farming Potential
  - Participant NGOs will assess the Low Carbon Farming potential in their respective project areas by documenting current reach of mainstream practices across villages and families.
- Setting up LCF Teams at each Participant NGO
  - Each Participant NGO will appoint an LCF Coordinator who is adept in field work, understands basic science, and is proficient in using computer application software.
  - Participant NGOs will set up Low Carbon Farming Teams, consisting of the LCF Coordinator, other NGO Staff, and village Volunteers – AF will have 22 volunteers and the others 7 each.
  - LCF Teams will determine skill gaps in their respective NGOs and take measures to fill these.
  - Village Committees will be formed.
- Training and Orienting the LCF Teams
  - LCF Teams will be trained by the LCF Expert and FCN Facilitator on the overall concept of Low Carbon Farming as VER projects.
  - Theoretical orientation will also be given on specific topics like developing a business sense, community awareness, participation and ownership, need to take GPS readings and generate GIS maps, validation, monitoring, etc.
  - LCF Teams, assisted by the FCN Facilitator, will prepare a curriculum for village meetings, along with handouts and pamphlets.

[7] Please see the Roles & Responsibilities of various staff attached as Annexure 5

6.3. Selecting Project Participants

- Creating a general awareness in their respective project areas
  - LCF Teams will select the villages in which they will explain the programme to communities, and arrange logistics for awareness raising.
  - LCF Coordinators will prepare a non-technical and transparent summary on the Pilot Phase, and also on the long haul – i.e. the full 10 year LCF programme, execution of carbon contracts, carbon aggregation, finances/carbon revenue to incentivise, etc.
  - LCF Teams will conduct village meetings across their entire area of operation.
- Choosing villages and Participating Farmers for the Pilot Phase
  - LCF Teams will set up Village Committees to take responsibility of the Programme.
  - Together with Village Committees, they will determine criterion for Participating Farmer selection.
  - LCF Teams will list a total of 6,000 Participating Farmers who fit the agreed criterion and want to participate in the programme.

6.4. Collecting Demographic Data

- Conducting family demographic and landholding surveys
  - LCF Teams will prepare a survey format and field test it with about 100 families.
  - They will finalise the format, and print the required number of sheets.
  - LCF Coordinators will train their LCF Teams to correctly code data gathered in the survey formats.
  - LCF Teams, Volunteers and Village Committees will conduct the data collection across all of 6,000 selected project participants.
  - Data will be cross checked for accuracy and, if necessary, taken back for corrections.
- Procuring digitized monitoring solutions to meet stringent VER requirements
  - Participant NGOs will contract Tristle Technologies Pvt. Ltd. to provide LCF monitoring solutions. [8]
  - LCF Teams and Tristle will together finalise customisation required for their respective monitoring solutions.

6.5. Taking Stock and Project Potential

- Collating lists of possible Sustainable Agriculture practices across the project area
  - LCF Expert will spend quality time at each Participant NGO project area to make an inventory of all Sustainable Agriculture practices currently undertaken, including coverage, extent of adaptation, etc.
  - LCF Expert will suggest new/improved SA practices that could easily fit into these baskets of practices.
- Setting tentative targets based on above data
  - LCF Expert will, along with the LCF Teams and NGO leadership, assess the realistic potential to expand accept SA practices and implement them at each Participant NGO's area of operation.

[8] Please see a write-up on the Tristle LCF Monitoring Solution attached as Annexure 6

- Setting tentative targets for the long haul
  - Tentative targets will also be jointly adopted for the long haul – i.e. the 10 year LCF Programme at each Participant NGO's area of operation.

6.6. Delineating Discrete Plots

- Training LCF Teams in GIS concepts and GPS skills
  - Participant NGOs will procure 50 E-Trek instruments (handheld GPS recording devices), one for each Village Volunteer.
  - A GPS /GIS Expert will conduct a common training for all 5 LCF Teams
  - Each LCF Team and Village Volunteers will attend field training at ADATS, Bagepalli, for 2-3 weeks.
- Taking GPS readings of landholdings
  - LCF Teams will explain the entire process to their Participating Farmers, familiarise them with the concept of fixing latitudes/longitudes and satellite mapping, and elicit ownership for gathering accurate readings.
  - Participating Farmers will place bond stone markers at each corner of the polygons that comprise their landholdings.
  - LCF Teams and Village Committees will resolve silly/serious boundary disputes between neighbours.
  - Village Volunteers will enlist local youth and arrange logistics so that they can smoothly undertake the GPS readings of all the landholdings found in a contiguous tract of land, in a single go. [9]
  - Youth Teams will take the GPS readings of 8,000 hectares of land.
- Downloading GPS readings into a polygon recorder
  - LCF Coordinators will download GPS data from each village and generate polygon shape maps.
- Checking and correcting shape maps
  - LCF Coordinators will correct each polygon after checking against streamed Google Map images.
  - Individual shape maps of each landholding will be printed, taken to the villages and shown to each Participating Farmer for confirmation.
  - LCF Coordinators will finalise the shape maps, based on feedback corrections, and commit the discrete plots.
- Obtaining title deeds for all of the land plots involved within their project areas
  - LCF Teams will assist Participating Farmers obtain Land Title Deeds from Government offices.
  - Where the Title is not directly in the names of Participating Farmers, Genealogy Trees will be obtained from Village Accountants to link owners to farmers.
  - LCF Coordinators will scan and feed these Titles & G-Trees into the monitoring solution.

[9] This is very important since GPS readings taken at different times, captured by different sets of satellites, will give erroneous readings.

6.7. Making Baseline Calculations

- Make a preliminary assessment of baseline calculation of agricultural emissions
  - The LCF Expert will spend quality time at each project area and use information gleaned in # 6.4. to make a preliminary assessment of baseline calculation of agricultural emissions in each of the 5 project area.
- Sharing assessment with the FCN and EDF
  - The LCF Expert will share this assessment with the FCN and the Senior Economist and Scientists at EDF. They will together calculate baseline emissions through mainstream cultivation.

6.8. Estimating Emission Reductions

- Estimating expected emission reductions
  - The LCF Expert, along with the LCF Teams at each project area, will estimate expected emission reductions as a result of the proposed SA practices.
- Communicating Baseline Emissions and Estimated Reductions with all Participant NGOs
  - A 2 day Workshop will be held to share figures amongst the Participant NGOs
  - A report on the data and methodologies used to estimate targets will be shared with EDF
  - A report on targets will be submitted to the Senior Economist/Scientists at EDF
  - Tentative Offer Sheets will be prepared

6.9. Executing Carbon Contracts

- Generating End User Agreements (Carbon Contracts)
  - Participating Farmers at each project area will choose their respective carbon aggregators – either their respective Participant NGOs, or not-for-profit companies set up to trade in carbon credits and also sell organic/no-pesticide produce.
  - FCN and EDF will together draft legally binding End User Agreements/Carbon Contracts for each project area.
  - LCF Teams will execute these Carbon Contracts with 6,000 Participating Farmers.

6.10. Validation

- Validating the 5 Offer Sheets
  - A DOE will be appointed to validate under the Voluntary Carbon Standards (VCS).
  - Desk reviews and site visits will be conducted. The FCN Facilitator will arrange for the speedy execution of validation tasks. The LCF Expert will respond to CAR's and CL's and accompany Validators to the project areas.
  - FCN and EDF will oversee the validation process.

6.11. Preparing Offer Sheets

- The India Program Manager, EDF, will prepare 5 Offer Sheets to sell the calculated VERs.

6.12. Creating a Domestic Carbon Market

- Right from the inception of this 1 year Pilot Phase, EDF, FCN and Participant NGOs will "sell" the FCN-LCF Coalition Programme to potential carbon buyers and create a domestic offsets market.

7. Project Budget

7.1. Budget of Expenditure [10]

1.	**PROGRAMME COST**			
1.1.	**TRAINING**			
1.1.1.	Cost of preparing LCF awareness building material and modules; translating into colloquial languages	300,000		
1.1.2.	Cost of procuring videos and translating/dubbing into local languages	100,000		
1.1.3.	Food costs & logistics to conduct cluster level meetings to explain Pilot Phase details to 6,000 Participating Farmers @ Rs 30	179,880		
1.1.4.	Stipend for 50 village Youth to conduct demographic surveys and take GPS readings @ Rs 1,500 p.m. x 4 months	75,000		
1.1.5.	Travel & incidental cost for 50 Youth to attend GPS training at Bagepalli @ Rs 1,500	300,000	954,880	*8%*
1.2.	**SURVEYS & DELINEATING DISCRETE PLOTS**			
1.2.1.	Cost of printing formats and stationery @ Rs 2.50 per format	14,990		
1.2.2.	Cost of planting an average of 7 bond stones on the corners of each land holding @ Rs 20 per stone	1,120,000		
1.2.3.	Legal costs to execute individual Carbon Contracts with 6,000 Farmers @ Rs 30	179,880	1,314,870	*11%*
1.3.	**VALIDATION**			
1.3.1.	DOE Validation Fee to certify 5 Offer Sheets under the Voluntary Carbon Standard (VCS)	600,000	600,000	*5%*
1.4.	**PROGRAMME STAFF**			
1.4.1.	Salary of 5 full time LCF Coordinators with field and technical/computer skills to implement the Pilot Phase at each Participant NGO @ Rs 15,000 p.m. x 12 months	900,000	900,000	*8%*
2.	**COORDINATION & ADMINISTRATION**			
2.1.	**CENTRAL STAFF**			
2.1.1.	Salary of 1 LCF Expert to coordinate the 5 LCF Pilot Phases @ Rs 130,000 (EDF contribution)	1,560,000		
2.1.2.	Salary of 1 FCN Facilitator @ Rs 30,000	360,000	1,920,000	*17%*
2.2.	**ADMINISTRATION COSTS**			
2.2.1.	Travel, telephone and other overheads for Central Staff @ Rs 20,000 p.m. (EDF contribution)	240,000	240,000	*2%*
2.3.	**CAPITAL COSTS**			
2.3.1.	License fee for 5 LCF Monitoring solutions, with 5 modules, customised by Tristle Technologies Pvt. Ltd. @ Rs 850,000 [11]	4,250,000		
2.3.2.	Cost of 50 handheld E-Trek Instruments to take GPS readings @ Rs 8,500	425,000		
2.3.3.	Cost of 5 Computer Servers to load the intranet monitoring solutions @ Rs 200,000	1,000,000	5,675,000	*49%*
TOTAL			**11,604,750**	*100%*

[10] Please see a Participant NGO-wise expansion of this budget attached as Annexure 7

[11] Price does not include 10.3% Service Tax since EED can make a direct payment to Tristle Technologies, and Accion Fraterna can book a Debit Note. Else, we have to add another Rs 437,750 to software cost

7.2. Budget of Income

Requested from EED	Rs 9,804,750	€ 163,413	84%
EDF Contribution	Rs 1,800,000	€ 30,000	16%
TOTAL	**Rs 11,604,750**	**€ 193,413**	**100%**

7.3. Participant NGO-wise Allocation

NGO	Amount	
Common Expenses	3,160,000	27.2%
AF	2,267,000	19.5%
SEDS	1,513,688	13.1%
SACRED	1,554,625	13.4%
BEST	1,561,813	13.5%
PWDS	1,547,625	13.3%
TOTAL	**11,604,750**	**100%**

8. Assessment of Risks

8.1. Identifying Risks

There are no risks in this 1 year Pilot Phase. It comprises of merely a set of systematic activities to educate the farmers, build up a good database on their landholdings, assess baseline emissions, estimate emission reductions and prepare Offer Sheet for the advance sale of VERs. All 5 Participant NGOs have a proven track record in implementation efficiency.

Neither will there be any risks in the 3 year Implementation Phase from 2011 to 2013. These too, after all, are just a scaling up of practices that Participant NGOs have been implementing in their project areas for several years with demonstrated success.

Real risk creeps into the timely delivery of volumes. Will Participating Farmers adopt the several SA practices they say they will, without reverting back to "easy" mainstream cultivation? Will Participant NGOs be able to deliver the committed number of VERs per hectare, year after year, to the advance buyer? Will VER generation be on track in volume and quality?

8.2. Delivery Risks during Implementation Phase

Farmers can adopt SA practices only if their fields contain some amount of soil and moisture. Often times, in these dust blown arid tracts, there just aren't the ingredients needed to undertake any kind of farming whatsoever, let alone sustainable agriculture. Degraded environments can be rectified through SA, but how does one start?

The only possible solution is to *gradually* build up soil from an inert to a healthy state wherein it comprises of minerals, humus, biomass and everything needed to sustain healthy plant growth, through *non-ambitious interventions*. Hauling silt, crop rotation, mulching, etc. will be the preferred SA interventions as opposed to more advanced interventions like farm ponds, blue green algae and rearing ducks. The latter is not possible in semi arid drought prone regions that receive less than 560 mm.

Degraded lands are not just caused by mainstream cultivation alone. They are also the result of an onslaught of bad weather, year after year. The problem is merely accentuated by a senseless adoption of over exploitative HEIDA practices that pillages land that has an already low carrying capacity.

This FCN-LCF Coalition Programme runs the risk of preparing over ambitious Offer Sheets that cannot deliver on targets.

8.3. SWOT – Strategic Priorities

		Internal Environment	
		STRENGTHS	**WEAKNESSES**
External Environment	**OPPORTUNITIES**	**INVEST** 1. Highlight failures of High External Input Destructive Agriculture (HEIDA) and offer Sustainable Agriculture (SA) as a proven alternative 2. Assemble Strategic Plan of experienced Coalition with Cutting Edge Science and scale potential to offer High Quality Emission Reductions to Discerning Carbon Buyers 3. Enhance NGO Capacity to register VER Projects and prepare Offer Sheets 4. Scale up SA Practices and Stabilise Farm Income in the face of Failing Mainstream Cultivation 5. Create a Domestic Carbon Offset Market	**DECIDE** 1. Upgrade Staff Capacities to meet New Age Business requirements of CDM Management 2. Increase Intimacy with Communities using SA Projects as a Tool of Organisation Culture 3. Fast Track Participation of New Entrants (Farmers/Villages) to Deliver Synergistic Results and Scale Up 4. Set Standards and Benchmark Best Practices for VER Generation in SA Projects 5. Initiate and Support FCN Members to undertake Large SA Projects
	THREATS	**DEFEND** 1. Increasingly access Carbon Resources to Finance Mitigation/Adaptation Activities 2. Use LCF as a Cushion to Cope with Adverse Agro Climatic Events and Conditions	**DAMAGE CONTROL/DIVEST** 1. Develop Strategies to deal with the "Chicken and Egg" problem of Degraded Environment acting as impediment to Sustainable Agriculture and SA Practices being the only remedy to Restore the Degraded Environment

9. Sustainability of the Project

9.1. Self-propelling Design of this Pilot Phase

This 1 year Pilot Phase consists of making solid preparations to implement Sustainable Agriculture practices, as a permanent alternative to mainstream cultivation, on the lands and lives of half the farmers the 5 Participant NGOs work with. It is an effort with 2 clear and tangible Outputs:

a) Build up the capacity of 5 Participant NGOs.

b) Prepare 5 Offer Sheets to obtain carbon revenues through the advance sale of 40,000 Agricultural VERs that will be generated on 8,000 hectares of land owned by small, marginal and drought affected farmers.

The 2nd Output can roughly be compared to "CDM Preparation" and costs incurred likened to "Transaction Costs". However, there is a difference. 100% of transaction costs incurred in CDM Preparation are for just that one single energy project like biogas or woodstoves or photovoltaic lamps that the project proponent wishes to develop. The so-called "transaction costs" in this LCF Pilot Phase go much farther:

- 57% of the expenditure is on permanent investments that will enrich Participant NGOs and remain with them. These include 8% on training and capacity building, and 49% on capital costs.
- 43% are overheads that need to be repeatedly met, for the next 2-3 years, till all the farmers are brought into the regime. These recurring costs are 11% on surveys and delineating discrete plots, 5% on validation, 8% on programme staff, 17% on central (support) staff and 2% on administration.

9.2. Implementation Phase (2011 to 2013)

The question is whether carbon income through the advance sale of VERs to be generated through LCF will be sufficient to incentivise farmers to adopt Sustainable Agriculture practices. An asking price of € 6 per Agricultural VER translates to just Rs 1,800 per hectare or Rs 720 per acre.

Every extra € that can be obtained through selling these VERs in a more informed and committed voluntary market will make a huge difference. That is why the simultaneous creation of a sympathetic domestic and international market, as envisaged in our Strategic Plan, is a vital objective built into the design of the FCN-LCF Coalition Programme.

9.3. Expansion Phase (2011 to 2013)

As just mentioned, more than half the financial investment made in the Pilot Phase will permit Participant NGOs to bring more and more farmers and their lands into the Sustainable Agriculture regime.

Unlike in CDM Preparation, the € 193,413 to be spent in this Pilot Phase will not get sunk as investments on just 8,000 hectares of land. 57% of the expenditure need not be repeated.

Only 43% of the 1st year budget will be needed if a decision is taken to expand the project to cover a target of 50% of farmers and their lands over the next 3 years, whilst implementing LCF and generating carbon credits on the initial 8,000 hectares.

9.4. Extending to other grassroots NGOs (2012 to 2020)

Learning from this Pilot Phase will be used to extend Low Carbon Farming to more and more FCN Members who will be facilitated to join the FCN-LCF Coalition Programme. The reach of such a Sustainable Agriculture programme that earns carbon revenues from the sale of VERs is immense. It can grow to a scale that is limited only by the scope and coverage of grassroots NGOs.

Small, marginal and drought affected farmers will learn from demonstrated experience that Sustainable Agriculture, tailored to local conditions, can successfully mitigate negative environmental impacts and act as adaptation to climate change.

Low Carbon Farming will ensure that thousands of families have the choice and possibility to opt for an integrated farming system – an integration of trees, crops and livestock at the household level. This will protect them from abandoning altogether agriculture.

Climate Change activists, the world over, have struggled for very many years with the question of land use and agriculture. Though they conceived of and struggled for the creation of CDM as a sequestration instrument, their hopes were quickly dashed after the signing of the Marrakesh Accord. It became a mechanism by which established utilities cleverly bypassed the “business as usual” check and managed to interpret their operations as emission reduction. A normal business progression in energy efficiency, which should be seen as a mere reduction in carbon *intensity*, was passed off as emission *reduction*. Outside the Fair Climate Network, not a single

pro-poor sustainable development project that was in the true spirit of CDM has been registered and successfully implemented.

Afforestation/Reforestation Projects are costly and cumbersome to get registered. Except for a handful of commercial ones, none have succeeded.

In the field of agriculture, EDF has initiated perhaps the world's only attempts at interpreting Sustainable Agriculture practices as low carbon farming that will generate emission reductions. In the United States they work with very large farmers, their work in China is State sponsored, and in Vietnam it is propelled by the interest of rice traders to market a "greener" product. This is perhaps the first and only attempt to use the carbon market to re-establish an integrated farming system that will allow farmers to lead contented living and ward away the acute distress that stares them in their face.

In this situation, hundreds and thousands of activists, scientists, environmentalists and others will not just watch over our unique experiment at Low Carbon Farming, but also contribute their might to making it succeed and replicate in as many parts of the globe as possible.

List of Annexures

1. Accion Fraterna Organisation Profile
2. MoU between EDF and Participant NGOs
3. Environmental & Socioeconomic Conditions
4. Strategic Plan with LogFrame
5. Roles & Responsibilities
6. Write-up on the Tristle LCF Monitoring Solution
7. Detailed Budget – Participant NGO-wise