

# Pan India LCF Coalition

## *Table of Contents*

1. General Information .....	1
1.1. Name of Applicant Organisation .....	1
1.2. Project Title .....	1
1.3. Project Life .....	1
1.4. Project Funding Period .....	1
1.5. Project Cost .....	1
2. Background of the Project .....	1
2.1. The Fair Climate Network (FCN) .....	1
2.1.1. Non Ecclesiastical Body .....	1
2.1.2. Ideology .....	2
2.1.3. Grassroots Bodies .....	2
2.1.4. FCN Tech Team .....	2
2.1.5. Convening the FCN .....	3
2.2. Low Carbon Farming (LCF) .....	5
2.2.1. Background .....	5
2.2.2. 1 <sup>st</sup> FCN-LCF Coalition .....	5
2.2.3. Developing an LCF Methodology .....	6
2.2.4. Extending to 10 more Grassroots NGOs .....	6
2.3. Learning from the three FCN-LCF Pilot Projects .....	6
2.3.1. 1 <sup>st</sup> FCN-LCF Pilot Project .....	6
2.3.2. 2 <sup>nd</sup> & 3 <sup>rd</sup> FCN-LCF Pilot Projects .....	7
2.4. What is LCF? .....	8
2.5. Post-Pilot SA Extension Services .....	9
3. Situation Analysis .....	9
3.1. Farming Systems .....	9
3.1.1. Mainstream Agriculture .....	10
3.1.2. Subsistence Cultivation .....	10
3.1.3. Sustainable Agriculture .....	10
3.2. Participating Farmers .....	11
3.3. Empowered Project Delivery Personnel .....	12
3.4. Intimacy with Communities .....	12
3.5. Commitment to the Long Haul .....	12
3.6. Business Arrangement .....	12
3.7. Proliferating LCF .....	13
3.8. An Implementation Technology .....	13
4. Pan India LCF Coalition .....	14
4.1. Rationale .....	14
4.2. Participant NGOs .....	14

4.3.	Prospects & Potential .....	15
4.3.1.	Smallholder Farming is here to Stay .....	15
4.3.2.	Decentralised Enterprises .....	16
4.3.3.	Timing & Opportunity .....	16
4.3.4.	LCF & Climate Change .....	16
5.	Project Planning Matrix .....	17
5.1.	Goal & Purpose .....	17
5.2.	Project Objectives .....	18
6.	Target Group.....	19
7.	Project Activities .....	19
7.1.	Critical Project Outputs.....	20
7.2.	LCF Teams .....	20
7.3.	Implementing SA Practices .....	20
7.4.	Expanding LCF to more Farmers .....	20
7.5.	GHG Labs.....	21
7.6.	Farmer Producer Companies .....	21
7.7.	Validation & Verification.....	21
7.8.	Aggregating & Marketing Offsets .....	22
7.9.	Extending LCF to more Regions .....	22
7.9.	Administering the Pan India LCF Coalition .....	23
8.	Project Budget .....	25
8.1.	Cost Plan .....	25
8.2.	Finance Plan .....	26
8.3.	Participant NGO-wise Distribution.....	27
9.	Assessment of Risks .....	27
10.	Sustainability of the Project.....	27
10.1.	LCF Offsets .....	27
10.2.	Selling LCF Offsets.....	28
10.3.	The Carbon Market.....	28

## 1. General Information

### 1.1. Name of Applicant Organisation

FAIR CLIMATE NETWORK  
19/1 Alexandria Street  
Richmond Town  
Bengaluru 560 025

### 1.2. Project Title

Pan India LCF Coalition

### 1.3. Project Life

20 years

### 1.4. Project Funding Period

1 July 2012 to 30 June 2015

### 1.5. Project Cost

	July 2012 to June 2013	July 2013 to June 2014	July 2014 to June 2015	3 Year Total	
Sunk Costs	₹ 9,402,987	₹ 5,832,429	₹ 7,210,709	₹ 22,446,124	30%
	€ 144,661	€ 89,730	€ 110,934	€ 345,325	
EDF	₹ 7,144,400	₹ 5,260,400	₹ 5,260,400	₹ 17,665,200	24%
	\$ 142,888	\$ 105,208	\$ 105,208	\$ 353,304	
Icco	₹ 11,875,011	₹ 11,557,222	₹ 11,233,289	₹ 34,665,522	46%
	€ 182,692	€ 177,803	€ 172,820	€ 525,931	
Total	₹ 28,422,398	₹ 22,650,051	₹ 23,704,398	₹ 74,776,847	100%
	€ 437,268	€ 348,462	€ 364,683	€ 1,150,413	

## 2. Background of the Project

### 2.1. The Fair Climate Network (FCN)

#### 2.1.1. Non Ecclesiastical Body

Anchored in the principle that the poor ought to be rewarded for not emitting Greenhouse Gases, the Fair Climate Network was formed in September 2007. Today, it comprises a wide range of committed and competent individuals and organisations, including grassroots NGOs, climate change activists, journalists, environmentalists, scientific bodies, European funding NGOs, youth groups, carbon investors, social entrepreneurs, carbon auditors, suppliers of green technology, IT professionals, finance experts, management consultants, etc. Currently, the FCN has 100 members.

Over the past 5 years, the FCN has evolved as an open and welcoming Network; a *non-ecclesiastical* body, albeit with firm positions on Climate Change, clear and ethical working principles, and an

international credibility. Within this porous circle, it contains fiercely independent Members who choose to remain in order to draw on a collective synergy and pursue their individual interests.

The common and shared purpose is to facilitate and capacitate grassroots bodies develop pro-poor Climate Mitigation Projects and tap carbon resources for the sustainable development of the poor.

### 2.1.2. Ideology

The hundreds of thousands we work with genuinely believe that their grandmothers had it easy – that they didn't have to walk so far to gather firewood, that the thorns in those days were less prickly, and that forest guards were gentlemen who did not sexually harass them. They also believe that their grandfathers had it easy – that rains were predictable and on time, that bumper crops grew on lush fields, and that food was healthier. These perceptions are as strong and as real as any scientifically proven/disproved fact.

The hundreds of thousands we work with search for a cause for the changes they perceive. They stumble upon Climate Change information we provide, interpret/misinterpret, and “name their world”. This view of the changing climate through the prism of their local environment is one among many perfectly valid and legitimate positions. Not just valid, but an extremely powerful engine to sustain a prolonged attention span. It stands tall as an equal with all other frameworks.

There are diametrically different frameworks in varied takes on Climate Change. We live in a real world where there is peril in not recognising every one of these frameworks as perfectly valid and legitimate. Every opinion, feeling and perception plays a role. No hegemony of a single framework will prevail. The co-production model is the only harbinger of acceptable international strategies to tackle a global crisis. Every single opinion has to be carried to arrive at acceptance and compliance.

FCN has a definite take on the environment, natural resources, Climate Change and carbon offsetting. We are not unthinking agents who mechanically opportunist on possibilities offered by Climate Change. We refuse to leave the larger understanding of the global climate system to “enlightened others”. Through our interventions and experiential learning, we develop powerful positions, take a stand, and strategize to make ourselves heard. We have found an identity and space in the comity of players from across the world.

We are sufficiently climate literate to realise that the time left to maintain global climate integrity is running out.

### 2.1.3. Grassroots Bodies

FCN believes that grassroots bodies (NGOs, Community Based Organizations, Gram Panchayats, *et al*) are best suited to identify climate mitigation 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 with End Users have to be in place.

Pro-poor emission reduction projects are a layer on top of decadal community organisation and CBO formation efforts of grassroots NGOs. They are not stand-alone business enterprises undertaken by resourceful individuals capitalising on their presence in the midst of the rural poor. Climate Mitigation Projects that start with a dependency on NGO capabilities, need to quickly develop institutional mechanisms that ensure a transfer of ownership and management to End Users.

### 2.1.4. FCN Tech Team

Preparing Climate Mitigation Projects requires a thorough procedural understanding and highly specialised skillsets. In order to handhold grassroots NGOs through these steps, the FCN has set up a Tech Team with Specialists, Facilitators and support staff.

Grassroots NGOs have to be weaned away from the charity delivery mode to one where Primary Stakeholders are encouraged to become petty entrepreneurs. For this, NGOs have to make a major mind shift and acquire skills to think and act in a New Age Business mode. Only then can these Climate Mitigation Projects be community owned and managed. This is not an altruistic position taken by the

FCN. It is an elementary business requirement for the success of long term operations that have to last for 10, 21 and 60 years, sited at thousands of scattered locations.

The NGO Dynamics team of the FCN assists grassroots NGOs assess strengths, challenges and opportunities, and develop capabilities. They also suggest a legal and accounting framework within which grassroots NGOs/CBOs can implement Climate Mitigation Projects and trade in Carbon Offsets. Please see <http://fairclimate.com/tech/team/>

35 client NGOs of the FCN are currently developing 37 Climate Mitigation Projects. 9 of these are already registered with the UNFCCC & Gold Standard, and currently being implemented. Together, they will permit 307,069 rural families to reduce emissions by 660,072 tCO<sub>2-e</sub> every year.

Projects are developed under the strictest international Standards to measure Carbon reductions and ensure that they are real, additional, measured and verified. Technologies being promoted include domestic Biogas, Photovoltaic Lamps, Fuel Efficient Woodstoves, Drinking Water Purification, Afforestation/Reforestation and Low Carbon Farming. Please see <http://fairclimate.com/reports/>

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

### 2.1.5. Convening the FCN

#### *[ADATS and the Fair Climate Network](#)*

ADATS has been active in Climate Change for the past 17 years, and enjoys an international credibility. It is the first grassroots NGO to demonstrate that it was possible to tap large carbon resources for the sustainable development of the poor.

Barely 10 months after the Kyoto Protocol entered into force, we put a pro-poor stamp on the market mechanisms by registering the world's first pro-poor project in December 2005. We were the 46<sup>th</sup> project to be registered, world wide. Since then, 3 more pro-poor CDM Projects have been registered, carbon resources procured, and are being implemented.

- The Bagepalli CDM Biogas Project was registered in 2005 to build 5,500 domestic Biogas units for as many rural women. It has undergone several verifications and issuance into the Emission Trading System (ETS).  
<http://cdm.unfccc.int/Projects/DB/DNV-CUK1131002343.1/view>
- The Biogas CDM of BCS was registered in 2009 to construct another 18,000 units for as many women.  
<http://cdm.unfccc.int/Projects/DB/DNV-CUK1242729511.7/view>
- The Bagepalli CDM Reforestation Project was registered in 2011 in order to assist 20,000 families grow tree crops on 10,000 hectares of land under rain fed conditions.  
<http://cdm.unfccc.int/Projects/DB/TUEV-SUED1306246960.28/view>
- A new Woodstoves CDM Project is currently being developed in order to assist 4,500 families who do not have space or cows to construct biogas units.

ADATS enabled 36,107 families to contribute an annual reduction/sequestration of 170,272 tCO<sub>2-e</sub> through 4 CDM Projects. These were bottom up decisions taken in hundreds of villages by thousands of small and poor peasant families who contributed and paid for project development. ADATS operationalised opportunities opened up by the Kyoto Protocol and formation of market mechanisms, and set a benchmark for grassroots NGOs. The Fair Climate Network was formed in mid 2007 to share the experiential learning with other grassroots NGOs to enable them to tap carbon resources through facilitation and handholding.

Technologies of choice for FCN Members are Domestic Biogas, Woodstoves, and a toned down version of A/R, Low Carbon Farming. ADATS has not just registered and implemented these CDM Projects, but also gone through 4 successful verifications and issuance. ADATS and the Coolie Sangha provide a live

demonstration of community ownership and management of Climate Mitigation Projects. FCN Members gain hands on exposure, learn and train their field staff at Bagepalli.

Every single Member Coolie family pitches in to facilitate, teach and train grassroots NGOs, with pride and self assertion. Their sole interest is to proliferate pro-poor Climate Mitigation Projects throughout the country, proclaim their position on Climate Change, and retain leadership as first among equals.

#### Unique Character

The unique characteristic of the Fair Climate Network is that it is a platform of different bodies and persons, each with their own viewpoint and purpose. Each one's motives are valid, legitimate and absolutely essential. Without the synergy of diverse ambitions, concerns and capabilities, no one will be able to pull off what each one wants to individually achieve. Every person and organisation has something to offer, that we as a whole need.

The FCN does not hammer out a common Purpose or draw a blueprint for an overarching programme. Instead, it is a getting together as a multilateral gathering to foster bilateral relations. Several Programme Coalitions, like this Pan India LCF Coalition, have grown out of the FCN, without the Network itself getting institutionalised.

These bilateral relations are in the private domain of parties who get together to mutually benefit and take their respective agendas forward. This could be consultancy for PDD writing, validation and registration, provision of digitized monitoring solutions, strengthening CBOs, publicising powerful stories behind the generation of valuable Carbon Offsets, marketing, negotiating an ERPA, offering post-registration services, inputting cutting edge science for LCF, selling a product, supplying a component, offering management consultancy, advising on the legal and accounting framework, or whatever.

This will not happen *without* the FCN. When developed independently, outside the milieu of the Network, they become mere over-the-counter arrangements that are privately struck. Whereas when entered into from this reference point, they transcend from an inane to a certain level of the sublime. Individual strategic partnerships that emerge from this gathering will somehow remain within the larger domain of all, forcing a moral answerability amongst stakeholders. This is vital for the development of long term and New Age business relationships.

#### Core Group & FCN Convenor

Keeping this open and non-ecclesiastical character in mind, a Core Group comprising 6 persons protects the values of the FCN, deals with Network functioning issues in a non institutional framework, and contributes to the expansion of scope and horizon. Ram Esteves is the Convenor, and the FCN Tech Team reports to and works under his direction.

The secretariat is at ADATS Campus, Bagepalli. All FCN Meetings, FCN-LCF Coalition meetings, and training are held at Bagepalli.

#### Legal Holder

Icco provided a generous start-up grant to set up the FCN Tech Team and cover its running costs for the first 3 years. Instead of institutionalising the FCN, these moneys were administered by ADATS. This supported phase has just got over. The Tech Team now operates as a financially viable social business enterprise, on an "at cost" basis, under the aegis of the Fair Climate Services Pvt. Ltd., which is the legal holder of the FCN Tech Team. Please visit <http://fairclimate.com/tech/team/services.aspx>

On the advice of a working group and legal opinion, FCS Pvt. Ltd. was registered with 6 persons of impeccable integrity as Directors. All of them had made an intrepid contribution to take the Fair Climate Network to its current position. The Objects of the FCS Pvt. Ltd. are:

- i. to render services, training, consultancies, domain expertise on climate change, environmental and sustainable development sectors and capacitate NGOs, CBOs and other grassroots bodies, undertake climate change and environment related projects.
- ii. to promote, campaign, lobby, advocate and build public opinion on Climate Change issues.
- iii. to invest and finance greenhouse gas mitigation projects through spot and forward purchase/sale of emission reductions globally, undertake audits, validations and verification,

open and operate accounts and registries in Emission Trading Systems, market and trade in carbon offsets.

- iv. to itself develop and implement pro-poor emission reduction and environmental projects.

The Tech Team obtains its relevance, as well as client-base, exclusively from the FCN. Unlike other FCN Members, the Tech Team is not an independent entity. It continues to be answerable to the Fair Climate Network, drawing on the collective synergy, operating under the direction of the FCN Convenor, and answerable to the Core Group.

## 2.2. Low Carbon Farming (LCF)

### 2.2.1. Background

The farm sector offers significant opportunities for carbon sequestration and emission reductions. Emissions from farming contribute 14% of global Greenhouse Gases. In India, farming contributes to 28% of the national GHG emissions. Low Carbon Farming practices offer farmers the opportunity to capitalize on the carbon market, as they shift to agricultural methods that are more sustainable, involve lower input costs and result in emission reduction and sequestration by sinks.

Several FCN Members are grassroots NGOs involved in Sustainable Agriculture (SA). They have developed technologies that go by various terms like organic or natural farming, chemical free cultivation, low external input sustainable agriculture (LEISA), permaculture, etc. These have resulted in shifts in cropping patterns and cultivation practices, and demonstrated drought resistance. They have shown these techniques as workable on demonstrations that range from small pockets in scattered villages to hundreds of hectares in contiguous tracts. Scaling up these SA practices was the challenge.

Quantifying N<sub>2</sub>O, CH<sub>4</sub> and CO<sub>2</sub> avoidance in practices currently being propagated under SA, introducing new practices to further bring down the carbon footprint, and claiming Emission Reductions to earn Carbon Revenue was the solution. Small and marginal farmers could be incentivised to abandon mainstream practices and adopt SA.

In December 2008, the FCN began to explore ways and means by which small and marginal farmers could be rewarded for their low emissions. CDM methodologies in agriculture sector were dominated by CH<sub>4</sub> avoidance projects on large farms, and none for smallholder farming. Our first glimpse of hope emerged in July 2009 when we explored the VER route, voluntary and US markets. We set up a long-term collaboration between Environment Defense Fund (EDF), New York, and the Fair Climate Network.

### 2.2.2. 1<sup>st</sup> FCN-LCF Coalition

In March 2010, 5 grassroots NGOs got together to form the 1<sup>st</sup> FCN-LCF Coalition where they would provide leadership and blaze a trail by leveraging non-traditional carbon markets and show the way for small and marginal Farmers to reverse and restore the damage done to their lives, livelihoods and the environment in the pursuit of High External Input Destructive Agriculture (HEIDA). EDF would provide the cutting edge Science.

EED, Germany, funded a one year Pilot Project where we would:

1. Obtain conceptual and practical skills and capabilities to measure and verify the extent and quality of SA adoption.
2. Irrefutably identify Discrete Plots where SA Practices would be undertaken.
3. Develop proven and implementable SA Package of Practices (PoP's) and establish processes to implement/monitor and quantify them through Plot Diaries.
4. Develop a Methodology to prove Emission Reductions when switching from HEIDA to SA.
5. Explore a market for these Emission Reductions and use Carbon Revenues to incentivise small and marginal farmers.
6. Initiate changes in the organisational culture of Participant NGOs to facilitate their acceptance of a business mode of working, recognising participation, transparency, lack of hierarchy and getting rid of bureaucracy as essential prerequisites to succeed in New Age Business.

One year proved to be too short. This Pilot Project was extended by yet another, with financial assistance hobbled from EDF and own efforts of the 5 Participant NGOs.

The biggest achievement of this 1<sup>st</sup> FCN-LCF Pilot Project was that they were able to initiate the development of an LCF Methodology, bring smallholder farming to centre stage in Climate Change discussions, and extend LCF to 10 more grassroots NGOs.

### 2.2.3. Developing an LCF Methodology

3 months into the implementation of this 1<sup>st</sup> FCN-LCF Pilot Project, a Specialist was appointed to explore the development of an LCF Methodology. It became clear from a review of existing tools and methodologies that there were none directly applicable to Low Carbon Farming.

We decided to measure emissions and establish baselines. At each sub Agro Ecological Zone (AEZ), Main Crop(s) grown by small and marginal farmers were identified. Mainstream (HEIDA) and SA Reference Plots were established for each Main Crop(s), and GHG Labs set up. CH<sub>4</sub> and N<sub>2</sub>O emissions for each Main Crop(s) in each AEZ started being measured at weekly intervals. There were glitches in the sampling procedure and GHG Lab protocols, and we lost the 2011 crop season. Gas Analysers had to be tweaked and calibrated. EDF scientists worked hard to set matters right and got everything shipshape by June 2012.

Besides providing cutting edge Science to develop the LCF Methodology, EDF has also involved a panel of reputed scientists and scientific bodies as external stakeholders to oversee and provide international credibility to the exercise.

After recording emissions for each Main Crop(s) for 3 cropping seasons, an exercise that will take 5-6 years, there will be concrete data to calculate Emission Reductions for various Main Crop(s) grown by small and marginal farmers in 12-14 AEZ's spread across India.

### 2.2.4. Extending to 10 more Grassroots NGOs

When designing the 1<sup>st</sup> FCN-LCF Coalition, we declared that we were in for the long haul. We anticipated that this would proceed in 4 sequentially phased stages with some degree of overlap:

1. Pilot Project where capabilities would be enhanced and skills imparted for batches of NGOs formed into specific purpose Coalitions.
2. Implementation Phase lasting 3-4 years where basic SA Extension Services would be externally funded in these NGOs.
3. Expansion Phase where all the landholdings of all farmer families would be fully covered in these NGOs, with SA Extension Services funded with Carbon Revenues earned.
4. Extension Phase where more and more grassroots NGOs/CBOs would venture into Low Carbon Farming.

In July 2011, the 2<sup>nd</sup> FCN-LCF Coalition was formed by 4 grassroots NGOs. This was quickly followed by 6 more grassroots NGOs who formed the 3<sup>rd</sup> FCN-LCF Coalition in September 2011. A 4<sup>th</sup> FCN-LCF Coalition is currently underway.

## 2.3. Learning from the three FCN-LCF Pilot Projects

### 2.3.1. 1<sup>st</sup> FCN-LCF Pilot Project

4 months after their Pilot Project got completed, NGO leaders and LCF Coordinators from the 1<sup>st</sup> FCN-LCF Coalition met in November 2011 to take a self-critical look at achievements and failures:

- The larger objectives of the Pilot Project, in terms of building wherewithal, instilling skills and building NGO capability had, by and large, been met.
- Coverage, in terms of number of Participating Farmers, Discrete Plots and Acres fell short from a target of 18,750 acres to just 12,000 acres (64%). Only 1 of the 5 Participant NGOs had doubled their targeted coverage.



- Not a single Discrete Plot had been committed and frozen – a prerequisite for 3rd Party verification.
- Main Crop(s) had not been chosen and SA PoP's not yet developed by most NGOs.
- As a result, Plot Diaries had not been designed and printed.
- A change in mind-set, from operating in the conventional Project mode to a New Age Business approach, had not been fully internalised by all Participant NGOs.
- In spite of having discussed the need to involve Participating Farmers (primary stakeholders) at every stage of planning and implementing LCF, this had not been done. Most Participant NGOs did not have the level of intimacy with communities that they had earlier proclaimed.
- This caused serious problems when GHG Lab measurements didn't proceed like clockwork. GHG Lab Readings went awry and Emission Reduction estimates were drastically lowered. Panic ensued when NGOs could not guarantee the volumes of Carbon Revenues they had promised their farmers. In fact, this was the sole aspect of LCF that they had communicated with Participating Farmers.

This has not been altogether bad since, perhaps for the very first time, these NGOs were forced to deal with their primary stakeholders as Customers, rather than recipients of their goodness. Promising and then failing to deliver is a nightmare faced by all businesses.

We made resource arrangements to continue the Pilot Phase for some more time, and the next 6 months were in a fire-fighting mode. Many of the above shortcomings got addressed:

- GPS coordinates of 5,961 Discrete Plots totalling 12,245 acres were recorded
- But only 8,735 plots totalling 7,377 acres (39% of target) were Committed – i.e. plot information frozen to take up LCF
- All the Main Crop(s) actually being grown by small and marginal farmers have been identified
- SA PoP's have been finalised and Plot Diaries are being printed
- Participating Farmers have been informed on the pilot experimental nature of LCF and asked to share in the highs and lows of taking a leap in the dark
- Glitches in GHG Lab and sampling protocols are fixed

1<sup>st</sup> FCN-LCF Coalition – Baseline as on July 2012

	Demographic Data			GPS Coordinates			Can take up LCF		Pilot Project Targets	
	Total Families	Total Plots	Total Acres	Part. Farmers	Discrete Plots	Discrete Acres	Committed Plots	Committed Acres	Farmers	Acres
AF-A	9,101	3,901	16,624	1,547	1,635	3,404	1,231	2,406	1,100	10,000
AF-K	12,264	3,682	16,912		1,280	425	1,116	390		
SEDS	4,002	10,101	24,603	801	1,778	3,159	514	1,045	1,100	3,750
SACRED	6,571	7,503	14,821	842	1,447	1,450	1,411	1,407	700	1,250
BEST	6,572	10,130	11,429	1,455	5,973	2,851	5,095	2,395	700	1,250
PWDS	1,997	6,482	3,355	1,316	4,658	1,381	484	124	1,900	2,500
<b>Total</b>	<b>40,507</b>	<b>41,799</b>	<b>87,744</b>	<b>5,961</b>	<b>16,771</b>	<b>12,670</b>	<b>9,851</b>	<b>7,767</b>	<b>5,500</b>	<b>18,750</b>

Please see <http://fairclimate.com/reports/progress.aspx> for latest figures

### 2.3.2. 2<sup>nd</sup> & 3<sup>rd</sup> FCN-LCF Pilot Projects

#### 2<sup>nd</sup> FCN-LCF Pilot Project

The rather more nascent 2<sup>nd</sup> FCN-LCF Coalition claims to have learnt from larger LCF issues that cropped up in the 1<sup>st</sup> FCN-LCF Coalition. But they have made mistakes of their own.

All 4 Participant NGOs of the 2<sup>nd</sup> FCN-LCF Coalition work with the rural poor; peasants who own little or no irrigated land. Paddy is not the crop of choice for these farmers.

Early misconceptions of LCF resulted in their selecting wrong Farmers and wrong Main Crop(s). 3 of them in the Telengana region simply presumed that Paddy was the only crop where there would be

Emission Reductions since controlling irrigation would reduce CH<sub>4</sub>. Therefore they selected Farmers from outside their core constituency, bypassing CBO Members. This led to a less than desirable cooperation, and considerably slowed down operations. One of them has corrected this problem while the other 2 continue for reasons best known to them.

Some other issues that came from the Telengana region was the invasion of corporate farming by leasing in large tracts of lands from small and big farmers alike, contract farming where big companies enter into arrangements with individual farmers, and the introduction of GMOs.

In the case of Bt. Cotton, FCN went to the extent of saying that if Participating Farmers could be motivated to abandon GMO crops and switch to sensible food crops, then the baseline emissions of those Discrete Plots would be very high and, consequently, Emission Reductions would also be substantial. In spite of this, they refused to budge from a narrow and blinkered interpretation of LCF as a Carbon Revenue earning mechanism.

2<sup>nd</sup> FCN-LCF Coalition - Baseline as on July 2012

	Demographic Data			GPS Coordinates			Can take up LCF		Pilot Project Targets	
	Total Families	Total Plots	Total Acres	Part. Farmers	Discrete Plots	Discrete Acres	Committed Plots	Committed Acres	Farmers	Acres
TC	1,050	1,897	5,197	1,028	1,820	4,982	-	-	1,200	4,000
WASSAN	650	1,242	1,605	-	360	373	-	-	650	13,400
GRAM	***								2,000	4,000
IIMF	***								2,000	4,000
<b>Total</b>	<b>1,700</b>	<b>3,139</b>	<b>6,802</b>	<b>1,028</b>	<b>2,180</b>	<b>5,355</b>	<b>-</b>	<b>-</b>	<b>5,850</b>	<b>25,400</b>

Please see <http://fairclimate.com/reports/progress.aspx> for latest figures

### 3<sup>rd</sup> FCN-LCF Pilot Project

The 3<sup>rd</sup> Coalition has just started and their term will continue till December 2012, extendable till June 2013. Start-up issues are nit-picky ones since many Participant NGOs were a part of conventional Network programmes. They found it difficult to accept that the FCN-LCF Coalition was merely an organisational arrangement made for FCN Tech Team's convenience, in order to serve them effectively.

3<sup>rd</sup> FCN-LCF Coalition - Baseline as on July 2012

	Demographic Data			GPS Coordinates			Can take up LCF		Pilot Project Targets	
	Total Families	Total Plots	Total Acres	Part. Farmers	Discrete Plots	Discrete Acres	Committed Plots	Committed Acres	Farmers	Acres
LAYA-A	2,824	3,587	14,248	362	507	567	-	-	800	1,100
LAYA-P	1,612	4,264	5,272	78	177	73	-	-		
CeFHA	915	3,432	1,681	118	266	105	-	-	500	800
IRDWSI	2,378	11,729	5,898	173	611	223	-	-	2,400	2,200
ACTION	846	901	2,108	18	24	37			700	1,050
CPSW-D	-	-	-	-	-	-	-	-	2,500	3,500
CPSW-N	-	-	-	-	-	-	-	-		
<b>Total</b>	<b>8,575</b>	<b>23,913</b>	<b>29,207</b>	<b>749</b>	<b>1,585</b>	<b>1,005</b>	<b>-</b>	<b>-</b>	<b>6,900</b>	<b>8,650</b>

Please see <http://fairclimate.com/reports/progress.aspx> for latest figures

## 2.4. What is LCF?

Initially, we formulated a rather banal and prosaic definition of Low Carbon Farming as "SA + Carbon Revenue". We saw LCF only as a strategy to incentivise small and marginal farmers with Carbon Revenue to abandon HEIDA and adopt SA.

3 years down the line, we realised that this was too restrictive a definition. The 3 other Economic Drivers that root for SA are:

- i. Increased Yield
- ii. Decreased Input Costs
- iii. Improved Price for SA Produce

On further reflection, we now understand Low Carbon Farming as synonymous to a low carbon growth trajectory in all fields of farm economics, fulfilling farm and family energy needs. In this manner, LCF contributes to the traditional understanding of Sustainable Agriculture as a healthy balance between crops, trees, animals and people.

## 2.5. Post-Pilot SA Extension Services

Participant NGOs took a leap of faith when they decided to develop LCF. It was a dogged determination that has got the concept where it is today. There is no denying that the pilot nature of the effort, not having answers, groping and experimenting has taken a heavy toll. Nothing has worked like clockwork. Doubts and uncertainties, real and imagined, have contributed to a slackening of performance. Large and established NGOs reacted in one manner and smaller ones in another. Reactions ranged from the irritating to outright boring. Churlish overreactions had to be contented. Tempers have flown but, fortunately, accusations and acrimony were avoided.

At the end of the day, it is an undeniable fact that LCF has established itself as a global strategy to address the problems of small and poor peasants on the one hand, and as a serious solution to maintaining climate integrity on the other. In this light, collateral damage has been surprisingly low and contained. Ground breaking efforts like these will appear to have many beginnings. It will sometimes appear that one is restarting all over again. Some of what is contained in this document may appear like a starting from the scratch. It isn't. It builds on an honest and self-critical appraisal of where we are.

We have no option but to take LCF forward. This is incumbent on us, due to the historic situation we are placed in. We embarked, and so we need to proceed. Folding up at this stage is not an option. Stopping will make heavy exercises like the recording of GPS coordinates of tens of thousands of Discrete Plots, GHG measurement and the running of GHG Labs an utter waste.

Very soon, all 3 FCN-LCF Coalition will have to use their newly acquired skills and capabilities to actually implement SA Practices on thousands of Discrete Plots/acres that have been delineated. This is no easy task. The common issue faced by all 15 Participant NGOs in the 3 FCN-LCF Coalitions are three-fold:

- i. Resource gap to implement SA Extension services till they are self-financed with Carbon Revenue earnings
- ii. Commitment to a rigour and discipline to continually provide measureable Results, time after time
- iii. Need for a good Implementation Technology

The 1<sup>st</sup> FCN-LCF Coalition is well into this phase; the 2<sup>nd</sup> FCN-LCF Coalition has just entered, and the 3<sup>rd</sup> FCN-LCF Coalition will reach there by 2013.

## 3. Situation Analysis

### 3.1. Farming Systems

Middle and rich peasants make a gallant attempt at Mainstream Agriculture. Small and poor peasants who work on their fields practice a non-viable Subsistence Agriculture. This is the milieu in which we need to introduce Sustainable Agriculture and LCF.

Most small and marginal farmers that grassroots NGOs work with are caught in the throes of moving up from Subsistence to Mainstream Agriculture. LCF is an attempt to offer an alternate route in Sustainable Agriculture.

The common feature of all three farming systems is that it is not an industry. Farming does not follow the logic of capital investments and returns since it does not monetise all costs and benefits. Without an in-depth appreciation of these unaccounted costs and benefits, its continuance is a mystery. Its arithmetic cannot be deciphered through linear deduction.

Farms are not utopian units of self-containment. In the peasant political economy, farming is a way of life. It is an all-pervasive family occupation, with every single aspect of day-to-day life adapted to it. Property relations are established through agriculture. Farming systems determine division of labour within families. It sets boundaries that cannot be crossed. It demands unending hard work in the raw elements, in the face of limited and uncertain returns.

Another common feature is the daunting ecological stage in which farming is set for the rural poor. Most regions where grassroots NGOs work are arid landscapes with little or no biomass, severely depleted of natural resources, and drastically reduced cattle population.

### 3.1.1. Mainstream Agriculture

Mainstream Agriculture is the farming system of choice, aggressively promoted by the government and industry. A direct and indirect State subsidy keeps it afloat. This is not just in the form of subsidized seeds, fertilizer and crop insurance. It is also through the creation and maintenance of an infrastructure that provides transport, communication, electricity, timely supply of farm inputs, information, technical, financial and marketing support. Over and above, paddy and wheat have support prices that the State pays to procure.

Alongside, agri-businesses charm subsistence farmers into taking “package deals” for cash crops like cotton, tapioca, and tobacco. These are hard to resist since they address the dire cash needs of farmers. Mainstream Agriculture is less taxing than Sustainable Agriculture, provided farmers access resources to employ farm machinery and apply recommended inputs. Some succeed while others fail. Physical exertion in Mainstream Agriculture is time bound and machine aided. Monoculture demands timely, but not continuous, effort.

### 3.1.2. Subsistence Cultivation

Small and poor peasants subsist by working as agricultural labourers on middle peasant lands for less than minimum wages, and by migrating during summer months. They come back with the onset of monsoons to scratch a subsistence cultivation from small patches of scattered holdings, far away from the villages and hugging the hillsides, averaging less than optimal holding sizes. On average, they visit their fields 5-6 times throughout the 5-6 month crop season. It is colloquially referred to as “lazy farming”.

A gradual pauperisation sets in with insufficient inputs, inadequate attention, uncertain monsoons and continuous drought. Schooled youth from their families, disenchanted with low returns, refuse to participate. Women have no say in crop choice, the extent to which the family borrows, or even whether a crop should be raised at all in lieu of uncertain monsoon predictions. Menfolk are guided by the peasant axiom that if they want an identity as farmers, they cannot leave their lands barren. They attempt to imitate middle and rich peasants, who have a much higher risk bearing and technology adoption capacity, and land in a soup.

### 3.1.3. Sustainable Agriculture

SA is extremely labour intensive and a breathless way of life when compared to Mainstream Agriculture. Even more so when matched to “lazy farming”. Nurseries need to be raised and transplanted. Crops need to be watered, pest and disease attacks identified, insects trapped. Harvests need to be chaffed, threshed and stored. Cattle need to be grazed, stalled, washed, milked and tended. Dung needs to be collected and digested. Farm and home wastes need to be composted. Trees need to be lopped, fuel wood stored, leaves applied as green manure. Fruit and nuts need to be gathered, processed and preserved.

These are monotonous and repetitious tasks, continuity carried out day in and day out, without any let or lenience. A lifestyle suited either to those with no other alternatives, or to those who make a conscious choice to live in harmony with nature.

The burgeoning market economy, on the other hand, offers the rural population an "easier" option. To acquire a modicum of elementary education, migrate to a rapidly increasing number of urban centres, and enter the semi skilled workforce. More often than not, a month's earning in a city job is equal to a year's income through cropping.

### 3.2. Participating Farmers

It is in this context that Participating Farmers need to be chosen for LCF. The term "small and marginal farmers", suggesting an idyllically homogenous group, is rather enigmatic.

Different expectations will entice different classes of the peasantry to Sustainable Agriculture. What attracts small and poor peasants will not be the same for middle and rich peasants. A move from Subsistence Cultivation to Sustainable Agriculture is not quite the same as from the Mainstream. As just stated, SA is a lifestyle suited either to those with no other alternatives, or to those who make a conscious choice to live in harmony with nature. Either could apply to both caste-classes.

Let us use our imagination to describe the type of farmers who will not just participate, but flourish in LCF.

- a) They would be slightly larger families who have a strong woman in them. They would be from slightly remote villages, relatively unaffected by mainstream propaganda. They may have a small source of irrigation. They would either have cattle or at least know about cattle and small ruminants. They would belong to caste-class groupings who own more or less contiguous holdings, and have common lands close by.  
LCF would come as a *Manna* to them, reinforcing their core ideology and worldview. They would be the ones who take LCF forward into unexplored territories.
- b) Then there would be first or second-generation farmers who have recently obtained government distributed or redistributed lands. They would be Subsistence Farmers with little or no knowledge of farming or land husbanding.  
They would lap up SA Extension Services advice that LCF provides, and participate with an excitement and innocent expectation born from enthusiasm.
- c) The third would be entire generations of farmers who have no idea or personal experience with growing mixed crops. They would have been in mono cropping for the past 3 decades. These would be families who have somehow escaped pauperisation, though they would have many a harrowing tale of narrow shaves.  
LCF will be grudgingly accepted as an escape from a dreaded predicament. A dull sense of disappointment for not having obtained what Mainstream promised will persist, and this negative and non-contributing mood will persist with constant challenges and irritants.

We have argued in a later section of this document that the NGO's intimacy with communities plays a major role in convincing farmers to adopt SA. This persuasion power will not be the same over different sections of the peasantry. Once persuaded, Participating Farmers from all three streams need to take ownership, even if poorer peasants from the first and second groups grab leadership.

New Age Business requires the active and informed participation of Primary Stakeholders. A genuine transfer of ownership and management is an elementary business requirement for the success of any long-term commercial operation. If performance and delivery schedules have to be maintained in tens of thousands of sites, spread across different locations, each handled in an unsupervised manner, one is left with no model other than the participatory one.

This is true for any enlightened business. Customers have come to be recognized as Clients. Marketing is now understood as building partnerships.

### 3.3. Empowered Project Delivery Personnel

LCF demands a serious slog by secondary stakeholders, the LCF Teams.

Community organisation invests to reach out to people and relate to their problems in an intimate manner. This is a labour of love, the fruit of which is great relationships that Field Workers enjoy with the poor. Therefore, the burden is not felt.

Something as technical as LCF, on the other hand, demands timely and efficient execution of jobs and tasks. Unless the Purpose behind all these mechanical performances is deeply internalised, an *alienation* sets in and performance levels dawdle. Quality suffers. Data and information cannot be relied upon. When Outputs are in question, Outcome doesn't exist. Delivery schedules fail. The business plunges into irrecoverable loss.

The only way to counter this *sense of alienation* in secondary stakeholders is through a genuine empowerment of Staff. For that to happen, the NGO has to rationalise itself and restructure into a flat organisation. Hierarchy and bureaucracy have to be replaced with unambiguous Action Plans. The actual implementation of jobs and tasks should be left in the private domain of each secondary stakeholder, who will be compensated at mutually agreed rates set for performance indicators.

### 3.4. Intimacy with Communities

Since farming is an all embracing lifestyle, rather than an ancillary activity undertaken to earn a living, farmers want to be thoroughly convinced before they agree to change. Mainstream recommendations, backed by an all-powerful State, offer that guarantee in spite of repeated failures appearing more the rule than the exception.

Alternates suggested by NGOs will be viewed with polite suspicion. Promising Carbon Revenue as an incentive to switch to SA is definitely an economic driver, along with a promise of increased yield, decreased input costs and improved price for SA Produce. But all this will not cut ice if we approach farmers *only in order to propagate LCF*.

This is why LCF and Sustainable Agriculture cannot be used as an "entry point" to build CBOs. An intimate relationship between development workers and communities has to pre-exist. It is an absolute prerequisite, long before the NGO ventures into LCF. Our experience with the 3 Pilot Projects shows that intimacy with communities is even more important than expertise in SA practices.

Along with environmental services that will be monetised in the form of proven Emission Reductions and Carbon Revenue, the economic and ecological benefits should also be stressed. This cannot be done only through well-designed communication literature, meetings and campaigns. Changing deeply held opinions and attitudes that influence everyday economic behaviour is not easy. High quality and trustworthy information has to be shared in an understandable and believable manner. That can happen only when the organisational milieu in which secondary stakeholders operate radically changes.

### 3.5. Commitment to the Long Haul

Participants in the Pan India LCF Coalition need to take a mature and responsible decision to continue with LCF in the long haul for the next 10-20 years. They have to accept that LCF is not pouring old wine into new bottles. Quick bucks in the form of Carbon Revenue will not be earned with just rhetoric. Rhetoric has to be accompanied by Results that are measured and verified.

LCF is a holistic understanding of farming systems within the global climate system, from which are derived various strategic options. Short-term projects are contained within this larger strategy.

### 3.6. Business Arrangement

At the very outset, the Pan India LCF Coalition has to be clearly recognised as a New Age Business arrangement. Such a Coalition will invite an array of external stakeholders who we have never dealt with before. LCF is not a run of the mill activity. It is not just another project dealing with known problems having known causes, implemented with known and proven strategies. Its very innovative and unique nature will invite scrutiny by protagonists as well as antagonists. Answerability in such a Coalition is to a

wider audience comprising primarily the Participating Farmers, and simultaneously the Climate Change world at large.

The Coalition cannot have a controlled membership. While it certainly isn't a loose grouping of all and sundry, it cannot at the same time be a closed knit assembly with strict membership criteria. When actualising on the business opportunity thrown up by Climate Change, various actors of different shades and varieties are bound to get involved.

Icco and EDF should not see themselves as just providers of finance and science, respectively. They are equal and participating members, contributing their share to the Pan India LCF Coalition. This Coalition is far more than a funding arrangement or a science project. At the same time there can be no compromise on financial obligations, nor any dilution of the scientific rigour.

Activities need to be carried out and achievements made in very short windows of annual cropping seasons. Results have to be substantiated. The NGO practice of verbose narrative reports has to be replaced with critical analysis of verified data. Concise case studies can be used only to illustrate, and not showcased to confuse quantitative data with qualitative diversions. The Tristle® LCF Monitoring Solution contributes to this new age reporting practice with analytical Online Reports generated at the click of a button.

Without losing sight of the local context and autonomous functioning of grassroots NGOs/CBOs, the Pan India LCF Coalition has to be a single concerted effort. An overt defence of independence will be as defeatist as obedient conformity to a standard uniformity.

When meeting such requirements of a New Age Business arrangement, we have to depart from the conventional practice of democratic decision-making and placing an overt emphasis on participatory processes. But even this divesting of powers needs to be done in an acceptable manner!

### 3.7. Proliferating LCF

Low Carbon Farming cannot be perceived in the conventional NGO project mode of small-scale pilot demonstrations. It has to be a concerted effort that positively impacts the agrarian economy at scale, and also in a sustainable and climate friendly manner. It is an attempt to formulate policy and introduce practices into the mainstream economic paradigm.

Achieving macro economic impact needs a scale that cannot be predetermined. It has to follow the "tipping point" logic of *extending till unalterable results are obtained*. Though we can start with half a dozen or even all 15 Participant NGOs of the 3 FCN-LCF Coalitions, we have to be prepared to grow to at least 50 NGOs and more than 250,000 acres, reducing a minimum of 500,000 tCO<sub>2-e</sub> per crop. Only then will the international community and Climate Change world take us seriously. This is the compelling logic to set up far more FCN-LCF Coalitions, although in a slightly more cost effective and Results assured manner. And we need to do all this very fast.

LCF cannot be undertaken by a loose grouping of NGOs, all claiming to work for Sustainable Agriculture. However laudable and effective their work may be, LCF demands a commitment to the rigour and discipline of measurement and verification. All Climate Mitigation Projects have to be real, measurable, verifiable and additional, but this applies doubly so to pro-poor projects. Even more so to something as trailblazing as Low Carbon Farming. It needs to answer the 5 vital questions of *Where?*, *Who?*, *Where (again)?*, *What?* and *How Much?* to the full and complete satisfaction of 3rd Party scrutiny.

### 3.8. An Implementation Technology

An Implementation Technology for Low Carbon Farming has to be a mature synergising of all the foregoing. It should provide the *raison d'être* for promoting LCF by spelling out policies and principles at individual Participant NGO level.

It would be presumptuous to spell it out in this document as a binding commitment. It has to be articulated by each Participant NGO, as the very first step in the formation of this Pan India LCF Coalition. Action Plans have to then be drawn up to meet self-set targets.

Individual articulations can, after a few years, be consolidated into a common and unified statement. If we are serious about rising above the Project mode and attempting a macro economic impact, articulating such an Implementation Technology is as important as implementing Sustainable Agriculture.

Each Participant NGO has to seriously address the below listed issues:

- i. Study their respective farming systems and articulate the political economy of their regions
- ii. Choose the types of farmers they wish to attract, and adopt different strategies to do so
- iii. Restructure and rationalise their NGO organisational setups to empower Staff
- iv. Develop/re-establish an intimacy with the communities they work with
- v. Commit to the long haul
- vi. Commit to be a part of a highly focused and disciplined coalition

## 4. Pan India LCF Coalition

### 4.1. Rationale

The need of the hour is for a Pan India LCF Coalition, which is neither a network nor a funding arrangement. It need be composed of multiple stakeholders with a shared vision and mission. It should be a New Age Business arrangement that capitalises on the unique opportunity presented to small and marginal farmers to be a part of the solution in maintaining Climate Integrity.

There is a market failure caused by the exclusion of social and environmental costs and benefits from transactions. These costs and benefits are known to all stakeholders, but traditionally there has been no mechanism to bring them into market considerations. The New Age Business opportunity is when the Carbon Market attempts to correct elements of this market distortion by paying for social and environmental benefits produced by farmers and reckoned in terms of Emission Reductions.

### 4.2. Participant NGOs

For the moment, we will start with 7 NGOs who have gone through the rigour of a Pilot Phase through the 1<sup>st</sup> and 2<sup>nd</sup> FCN-LCF Coalitions, along with ADATS, Bagepalli, which initiated and gives leadership to the FCN and Low Carbon Farming.

Participant NGO	Villages	Farmers	Discrete Plots	Acres
1. ADATS, Bagepalli	200	2,000	2,000	5,000
2. AF, Anantapur	230	3,630	7,260	7,260
3. PWDS, Tirunelveli	43	1,440	5,040	1,728
4. SEDS, Penukonda	35	1,275	3,600	5,400
5. SACRED, Ramnagara	37	1,080	1,440	1,440
6. BEST, Pudukkottai	50	2,088	7,200	3,456
7. TC, Chennakothapalli	50	1,440	1,728	5,040
8. WASSAN, Rangareddy	23	936	1,152	1,584
	669	13,889	29,420	30,908



Together they will bring 29,420 Discrete Plots, totalling 30,908 acres, under Low Carbon Farming in 669 villages.

July 2012 to June 2013		July 2013 to June 2014		July 2014 to June 2015	
502	Villages	580	Villages	669	Villages
9,100	Participating Farmers	11,470	Participating Farmers	13,889	Participating Farmers
19,000	Discrete Plots	23,600	Discrete Plots	29,420	Discrete Plots
18,700	Acres	24,390	Acres	30,908	Acres

At an overtly conservative guestimate of 1.3 tonnes per acre, these 8 Participant NGOs will effect a total Emission Reduction of at least 96,197 tCO<sub>2-e</sub> in the 3 year project period.

	Acres under LCF	LCF Offsets (tCO <sub>2-e</sub> )
2012 Crop Season	18,700	24,310
2013 Crop Season	24,390	31,707
2014 Crop Season	30,908	40,180
Total		96,197

6 more NGOs of the 3<sup>rd</sup> FCN-LCF Coalition will join in July 2013, considerably increasing targets.

### 4.3. Prospects & Potential

Properly conceived and operated, the Pan India LCF Coalition has an exponential growth potential. Earlier we had stated that we *need* to grow till unalterable results are obtained. Here we state the reasons why this will definitely happen.

#### 4.3.1. Smallholder Farming is here to Stay

Unlike Sustainable Agriculture, which we understand as a holistic farming system, Mainstream Agriculture is only a technology; one that disregards soil fertility and attempts to increase soil productivity in order to get quick returns. It also disregards social and environmental costs. HEIDA requires a concentration of land in the hands of a few, heavy investments, and centralised management that imitates dated practices in business and industry. These are absolute prerequisites; the only milieu in which this technology can be applied.

In spite of all its claims, the State cannot absorb every single farmer into Mainstream Agriculture. The very design of capitalisation of agriculture does not allow for that. Small and marginal farmers will, *ipso facto*, be barred from entrance to the high external input pathway.

We see signs of corporate farming and contract farming, and sometimes make too much of the pauperisation-polarisation process. For that to happen at a macro scale, technology and capital are not the only requirements. The vast majority who get displaced and dispossessed have to be provided with alternatives. A modicum of elementary education and imparting a few job skills will not do. The urban infrastructure has to be expanded to cater to more than just 15-20% of those who live in cities. There aren't sufficient resources with either the State or votaries of so called "reforms" for that to happen.

The politics of our vibrant democracy will not allow small and poor peasants to be permanently ignored. Once again, we should be cautious when applying economic paradigm explanations to every single case of neglect.

For a very long time to come, smallholder farming is going to be a fact rather than exception in the Indian political economy. The State cannot afford to ignore Sustainable Agriculture. LCF provides the technology to address this sector in a cost effective and climate positive manner. Environmental concerns and Climate Change questions cannot be glossed over by any serious player in the global setup.

### 4.3.2. Decentralised Enterprises

LCF and a low carbon growth trajectory are an expanding technology. It will open up business opportunities that are yet unthought-of.

Climate friendly and genuinely sustainable systems need to be decentralised. Individual households and smallholdings are the vehicles of choice. A special rigour is required to develop projects that have to deal with diverse and complex requirements at each locale. A system is needed to monitor the performance of these decentralised units spread over thousands of sites covering hundreds of square kilometres.

Through Energy CDM Projects that the FCN has developed, as well as an honest look at results obtained in the 3 FCN-LCF Pilot Projects, grassroots NGOs have demonstrated that this is indeed possible. The digitized monitoring systems we have developed and proficiency of Field Workers who use it with ease reveals the manner in which we have gone about. In fact, grassroots NGOs are better suited for these decentralised solutions, than fly by night business operators.

### 4.3.3. Timing & Opportunity

Seizing an opportunity is always about striking at the right time. All those who have partnered in the FCN-LCF Pilot Projects so far – Participant NGOs, Participating Farmers, Fair Climate Network, EDF, scientific bodies, funding partners, friends, supporters, the whole lot – have the choice to either follow up on efforts carried forward thus far in an intelligent manner, or fold up. Continuing the effort in a half hearted and scaled down manner, lingering till an LCF Methodology is fully developed, waiting to see how the market will respond, *et al*, is as good as shutting down operations. Such an attitude does not auger well even for the NGO Project mode of working.

The question is not *whether* a grouping like the Pan India LCF Coalition will be created. It is *When* and *Who* will take the lead.

Seizing an opportunity is always about striking when the iron is hot. For the past 3 years, two parallel processes have run side by side. Firstly, we nerved ourselves to venture into unknown territory and take a leap of faith. Simultaneously, we researched and assembled a huge body of knowledge. From then on, an entire section of the Fair Climate Network was engaged 24 x 7 in Low Carbon Farming. Though the 3 FCN-LCF Pilot Projects are implemented by 15 NGOs, there is a huge army of people behind the effort. It would not be very clever to lose momentum.

### 4.3.4. LCF & Climate Change

Spread across the length and breadth of India, we can show the developing world how to approach the issue of Climate Change domestically. The truism behind “common but differentiated” has lost much purchase. Historic antecedent cannot be the *only* response we have to Climate Change. Alongside, we need to demonstrate what can be done in today’s reality to maintain climate integrity.

LCF is perhaps the only technology with the potential to embrace half the Indian population living on three-quarter its landmass. Adopting SA and entering a low carbon growth trajectory cannot be done in a mechanistic manner. It requires the informed consent of millions of small and marginal farmers. This enormous base of public debate and discussion will perhaps be the hugest contributor to developing an intelligent position on Climate Change in the country.

## 5. Project Planning Matrix

### 5.1. Goal & Purpose

INTERVENTION LOGIC	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<b>PROJECT GOAL</b>			
<ul style="list-style-type: none"> <li>□ Pan India LCF Coalition set up to give a unified thrust and direction to Low Carbon Farming <i>(reach a tipping point by covering a MINIMUM of 50 NGOs, 250,000 acres and 500,000 tCO<sub>2-e</sub> per crop season)</i></li> </ul>	<ul style="list-style-type: none"> <li>• Annual Increase in number of grassroots NGOs who join the Coalition</li> </ul>	⇒ Membership records	<ul style="list-style-type: none"> <li>• Expertise in SA is not sole consideration for membership</li> </ul>
	<ul style="list-style-type: none"> <li>• Proportion of small &amp; marginal farmers who adopt Sustainable Agriculture Practices at each Participant NGO</li> </ul>	⇒ Online Reports generated by digitized monitoring solution	
	<ul style="list-style-type: none"> <li>• Annual Increase in proportionate farm income from SA (experimental) <i>vis-à-vis</i> Mainstream Agriculture (control) at each Participant NGO</li> </ul>	⇒ Monitoring against baselines by village communities ⇒ Expert assessment	<ul style="list-style-type: none"> <li>• Confidential business information will not be revealed</li> </ul>
	<ul style="list-style-type: none"> <li>• Annual increase in volume of verified LCF Offsets aggregated by the Coalition</li> <li>• Average price obtained for LCF Offsets</li> </ul>	⇒ 3rd Party Verification Report ⇒ Marketing records and financial statements	
<b>PROJECT PURPOSE</b>			
<ul style="list-style-type: none"> <li>○ NGO capabilities enhanced and LCF model established for viable smallholder farming</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Increase in Number of Participating Farmers in each NGO Area of Coverage</li> </ul>	⇒ Online Reports generated by digitized monitoring solution	<ul style="list-style-type: none"> <li>• Participating Farmers do not succumb to State supported corporate invasion by adopting Mainstream Practices or selling off their lands</li> </ul>
	<ul style="list-style-type: none"> <li>• Annual Increase in proportionate area brought under SA <i>vis-à-vis</i> total landholding at each Participant NGO</li> </ul>		
	<ul style="list-style-type: none"> <li>• Annual Increase in volume of verified LCF Offsets generated at each Participant NGO</li> </ul>	⇒ 3 <sup>rd</sup> Party Verification Reports	

## 5.2. Project Objectives

<b>INTERVENTION LOGIC</b>	<b>OBJECTIVELY VERIFIABLE INDICATORS</b>	<b>MEANS OF VERIFICATION</b>	<b>ASSUMPTIONS</b>
<b>PROJECT OUTPUTS</b>			
A. SELF-FINANCED SA EXTENSION SERVICES INSTITUTIONALISED AT 8 PARTICIPANT NGO	A.1. Annual Improvement in Quality of SA PoP's developed for each Main Crop(s) at each Participant NGO	⇒ Annual Appraisal Report by FCN Tech Team & EDF Scientists	• Participant NGOs and farmers accept them as apt and implementable
	A.2. Volume and Quality of SA PoP's practiced on Discrete Plots in each cropping season	⇒ 3rd Party Verification Reports	
	A.3. Annual Increase in value of farm income from SA at each Participant NGO	⇒ Online Reports generated by digitized monitoring solution	
	A.4. %age of total SA Extension Services Budget borne with Carbon Revenue at each Participant NGO	⇒ Audited accounts statements	
B. LCF PRACTICED BY 13,889 FARMERS ON 30,908 ACRES BY MARCH 2015	B.1. Listed SA Practices successfully implemented on 18,700 acres in the 1 <sup>st</sup> Year	⇒ Online Reports generated by digitized monitoring solution	
	B.2. Coverage expanded to 24,390 acres in the 2 <sup>nd</sup> Year, and 30,908 acres in the 3 <sup>rd</sup> Year	⇒ No. and extent of Discrete Plots delineated & committed ⇒ No. of verified Title Deeds recorded	
	B.3. Volume of LCF Offsets certified after each cropping season	⇒ 3rd Party Verification Reports by DOE	
C. GHG LABS SET UP AND FUNCTIONING IN 12 AEZ's	C.1. Educated Estimates on Main Crop(s) wise Emission Reductions in each AEZ by the end of the 2012 crop season	⇒ Communication from EDF scientists ⇒ Acceptance by Buyers	
	C.2. LCF Methodology developed and accepted by international community by 2015	⇒ DNDC Model calibrated for all Main Crop(s) grown by small & marginal farmers in each AEZ	
D. DOMESTIC MARKET CREATED FOR LCF OFFSETS	D.1. Proportion of hits against Corporate bodies approached	⇒ Information shared at Coalition Meetings	• Confidential business information will not be revealed
	D.2. Proportion of LCF Offsets sold in the domestic market		
E. INSTITUTIONAL ARRANGEMENTS MADE FOR SELLING LCF OFFSETS	E.1. Legal Entity, permitted to trade in Carbon Offsets, registered at each Participant NGO	⇒ Registration documents ⇒ Appraisal Report by NGO Dynamics Team of FCN	• Holding pattern and functional structure ensures community ownership and management

<b>CRITICAL PROJECT OUTPUT</b>			
F. NGO STRUCTURES RATIONALISED AND SHIFT MADE TO CULTURE OF NEW AGE BUSINESS	F.1. Empowered Staff implement credible LCF with measured and verified Results	⇒ Action Plan performance against self-set Targets ⇒ Compared %age of LCF Offsets – Claimed & Verified	
	F.2. Comprehensive Database on ALL FARMER FAMILIES and ALL THEIR LANDHOLDINGS established	⇒ Data Audit Check on Tristle® LCF Monitoring Solution	
	F.3. Participatory business setup owned and managed by communities	⇒ Assessment by FCN ⇒ Community Ownership criterion of Buyers satisfactorily met	

## 6. Target Group

The target group of this 3 year project are 13,899 Participating Farmer families from 669 villages in 8 project locations spread across Andhra Pradesh, Karnataka and Tamil Nadu states of South India.

Participant NGO	Villages	Farmers	Discrete Plots	Acres
1. ADATS, Bagepalli	200	2,000	2,000	5,000
2. AF, Anantapur	230	3,630	7,260	7,260
3. PWDS, Tirunelveli	43	1,440	5,040	1,728
4. SEDS, Penukonda	35	1,275	3,600	5,400
5. SACRED, Ramnagara	37	1,080	1,440	1,440
6. BEST, Pudukkottai	50	2,088	7,200	3,456
7. TC, Chennakothapalli	50	1,440	1,728	5,040
8. WASSAN, Rangareddy	23	936	1,152	1,584
	669	13,889	29,420	30,908

\*\*\* Consolidated Gender Lens Reports of all 8 NGOs \*\*\*

## 7. Project Activities

As already mentioned, it may appear that the below listed Activities are a repeat of what was begun in the Pilot Phase. There are two reasons for this:

- i. In the Pilot Phase, the emphasis was on NGOs learning the concept, acquiring wherewithal, learning skills and building capabilities. Coverage targets were designed to accomplish these objectives.
- ii. In this project, the objective is to set up permanent SA Extension Services in 8 Participant NGOs. Working on agriculture demands repetitious efforts, crop season after crop season, in order to firmly establish new systems and practices.

The only Output of any value in this Pan India LCF Coalition are proved Emission Reductions which need to be generated through the rigour of implementing SA PoP's on Committed Plots, maintaining Plot Diaries, and proving it all through 3<sup>rd</sup> Party Verification.

### 7.1. Critical Project Outputs

The NGO Dynamics team of the Tech Team will assist each Participant NGO to develop an appropriate Implementation Technology. This will be done following steps detailed in paragraph 3.8. of this Project Application, and result in moving towards a flat and rationalised NGO structure which introduces the culture of New Age Business and is indicated by:

- Empowered Staff who implement a credible LCF with measured and verified Results
- Establishment of a comprehensive database on ALL FARMER FAMILIES and ALL THEIR LANDHOLDINGS
- Formation of a participatory business setup owned and managed by communities

### 7.2. LCF Teams

SA Extension Services require a human infrastructure of an LCF Coordinator at each Participant NGO, a Field Worker for every 10 villages, and a cadre of village level Monitors, one for every 30 Discrete Plots. NGOs who have core funding to meet these personnel costs can proceed with LCF. Others find it difficult.

These core personnel cannot be part time or temporary. They need to be wholly and permanently engaged in LCF for the next 10-20 years. Commitment, dedication and tenure should score over qualification when selecting LCF Teams. LCF Coordinators and Field Workers should be encouraged to learn on the job and develop themselves within their respective NGOs. Individual youth who comprise the village cadre may change, but as a collective they need to remain intact for very many years.

Participating Farmers will appreciate the contribution of this human infrastructure, and themselves finance it with Carbon Revenues from the 3<sup>rd</sup> or 4<sup>th</sup> year.

### 7.3. Implementing SA Practices

Farmer Field Schools will be organised to impart a general orientation on climate change, carbon offsetting and SA Practices to all Participating Farmers. This will be complemented with thousands of one-to-one contacts till the vocabulary enters the popular vernacular of farmer families.

Each village will need sprayers, drums, mixing equipment, and other paraphernalia to locally prepare bio-fertilizers and pest control liquids. Project funding will only kick-start this process of procuring the necessary gear. Diligent maintenance will become the norm. Further augmentation will take place with local resources, including what can be obtained through government schemes and collections made by communities.

Based on Main Crop(s) specific SA Package of Practices (PoP's), Plot Diaries will be designed for each Participant NGO by the FCN Tech Team. EDF scientists will give their input after examining each PoP from an emission reduction lens. For the first 3 years, project funding will cover the cost of printing Plot Diaries to record SA practices undertaken on each Discrete Plot. After that, like all other costs, this too will be met by Participant Farmers, with Carbon Revenue.

Since most Participating Farmers are either illiterate or neo-literate, they will entrust one village Monitor per 30 Discrete Plots to diligently record SA Practices undertaken. At the end of every cropping season, Field Workers will collect all the Plot Diaries and feed data into the Tristle® LCF Monitoring Solution.

### 7.4. Expanding LCF to more Farmers

In the 1<sup>st</sup> and 2<sup>nd</sup> years, more small and marginal farmers will be brought under LCF. The idea is to cover *all the families* that Participant NGOs work with, recording *all their landholdings*, irrespective of whether or not all of them immediately accept LCF or practice SA on all their scattered holdings.

The cost of printing Common Survey Formats and charges for Village Volunteers to record family demographic data, plant permanent markers on the corners of each landholding, take GPS readings,

feed this data into the Tristle® LCF Monitoring Solution, record GPS coordinates, generate and correct shape maps will be met by the Project.

The cumulative target is to reach 18,700 acres in the 1st year, 24,390 acres in the 2<sup>nd</sup> year, and 30,908 acres belonging to 13,889 Participating Farmer families in 669 villages by March 2015.

## 7.5. GHG Labs

4 GHG Labs have already been set up under the 1<sup>st</sup> FCN-LCF Coalition. 2 more will be set up in the second half of 2012, and 5 more in early 2013. In order to service and supervise such a large number of GHG Labs, EDF will increase capacity. The actual cost of Gas Analysers and other equipment have been met under the 3 FCN-LCF Pilot Projects. EDF has now generously agreed to meet the running costs that include the salaries of GHG Lab workers, sampling staff and monthly recurring costs. This works out to 24% of the total budget. Besides bearing direct GHG Lab costs, EDF will also cover the cost of Scientists who visit from the US to guide and oversee the process, and a panel of Indian scientific bodies who act as advisers.

There were initial glitches in the sampling procedure and GHG Lab protocols. Gas Analysers had to be tweaked and calibrated. EDF scientists worked hard to set matters right, and everything is now shipshape.

The two Outputs that EDF will provide, first tentatively and then definitely, are:

- i. Main Crop(s)-wise Emission Reduction numbers for each AEZ.
- ii. Emission Reduction value in each individual practice within each SA PoP, so that the Tristle® LCF Monitoring Solution can accurately calculate Emission Reductions for each Discrete Plot, based on data from Plot Diaries fed in by the LCF Teams at the end of each crop season.

For the moment, these values will be educated estimates or approximations, backed by literature and generic values. After 5-6 years of GHG measurement the numbers will be accurate and defensible, backed by an internationally accepted rigour.

## 7.6. Farmer Producer Companies

The NGO Dynamics Team of the FCN will assist each Participant NGO to examine State policies, obtain legal and financial advice, and decide upon an appropriate legal framework within which Participant Farmers can trade in LCF Offsets. This will be done with the full and informed consensus of Participant Farmers, who will be owners and managers of the legal entity.

The final result, with registration documents as irrefutable MoV, will be communicated before the last quarterly Coalition meeting of 2012.

## 7.7. Validation & Verification

### 7.7.1. Terminology

In the CDM terminology of the UNFCCC, Validation refers to certifying the business plan spelt out in the Project Design Document (PDD). It is an exercise undertaken to check if the proposed Climate Mitigation Project complies with the chosen Standard, Methodology and various protocols contained thereunder. Verification, on the other hand, is a post-registration exercise that takes place many times during implementation. It certifies compliance to the PDD and calculates the quantity of Emission Reductions that have taken place. Verification is followed by Issuance into the Registry and Carbon Market.

When we embarked on LCF in 2010, in spite of the novel concept and technology not being covered under any existing Standard or Methodology, we decided to use the highest existing rigour and discipline to irrefutably identify Participating Farmers and delineate Discrete Plots. We followed procedures and protocols laid down under Afforestation/Reforestation (A/R). Insofar as making Carbon calculations for emission reduction, we decided to develop our own Methodology with cutting edge Science provided by EDF, New York.

The 12 year long experience of ADATS in developing one of the few registered A/R CDM projects in the world, has been used to develop the Tristle® LCF Monitoring Solution. Through this software solution, every

single bit of our nuanced learning was unreservedly passed on to 15 Participant NGOs of the 3 FCN-LCF Pilot Projects. Wherewithal, skills and capabilities embedded in these 15 NGOs is of the highest international quality.

#### 7.7.2. 3rd Party Verification

When applied to Low Carbon Farming, the terms Validation and Verification merge into a single exercise, conducted during/after every cropping season. This is called 3rd Party Verification.

- Participating Farmer awareness, involvement, and accuracy with which Discrete Plots were delineated and committed, will be Validated. Once validated, the Land ID, Survey Number, Extent, Description, Title and GPS coordinates of these committed Discrete Plots will be “frozen” – i.e. this data will be stored with the DOE and cannot later be altered or manipulated.
- The extent of adoption of SA PoP on each Discrete Plot will be Verified through site visits and an examination of Plot Diaries. Only SA Practices undertaken on these “frozen” plots will be counted for LCF adoption and Emission Reduction calculations.

Licensed Designated Operating Entities (DOEs) who enjoy registration with the UNFCCC will conduct this annual exercise. The FCN Tech Team is currently drawing up a ToR and Validation Protocol for 3<sup>rd</sup> Party Verification with a leading DOE.

Unlike in conventional CDM Projects where a PDD is registered for a crediting period of 10 or 20 years, LCF is an annual or even biannual intervention that occurs during/after each cropping season. Therefore 3rd Party Verification exercises have to be carried out at least once every year.

#### 7.7.3. Carbon Calculations

But this Validation-Verification exercise will not go into Carbon calculation. That will be done by EDF for each Main Crop(s) in each AEZ. Under the Methodology we are developing, we need emission measurements of a minimum of 3 cropping seasons and this will take 5-6 years.

In the meanwhile, due to the credibility and recognition that EDF enjoys, national and international Buyers are willing to accept approximate values for Emission Reductions. Details are being worked out.

#### 7.8. Aggregating & Marketing Offsets

The FCN is also developing a domestic market in India. Potential Buyers are willing to accept LCF Offsets, even before the Methodology is fully developed to irrefutably make Carbon calculation, provided the Fair Climate Network certifies them as real, additional, measured and verified.

Technical and organisational requirements of the above operations demands that LCF Credits generated by Participant NGOs be aggregated and marketed collectively. Actual details will be worked out during the operation of the Pan India LCF Coalition.

#### 7.9. Extending LCF to more Regions

Though we will start with just 8 Participant NGOs, with 6 more joining in mid 2013, we need to grow to at least 50 NGOs and 250,000 acres in a very short time. We have not budgeted for these extensions in this Project Application. But the FCN Tech Team will make concrete efforts to affect such an extension by identifying prospective grassroots NGOs, reaching out, orienting, handholding, forming new FCN-LCF Coalitions, finding resources for Pilot Projects, etc. These efforts will be reported and discussed in the quarterly meetings of the Pan India LCF Coalition

With experience gleaned from the 3 Pilot Projects, the procedure to support grassroots NGOs has changed:

1. The NGO Dynamics team of the FCN will make several visits to the field and do due diligence.
2. Prospective Participant NGOs will enter into 1st Phase Service Contract with Tech Team. Please visit <http://fairclimate.com/tech/team/services.aspx> for details on costs and services.
3. Participant NGOs will come to Bagepalli for 5-6 days to receive an orientation on Climate Change, carbon offsetting, carbon revenue, Climate Mitigation Projects, community ownership and management.



4. They will, at their own cost and effort, conduct a survey of ALL the families they work with in ALL the villages they cover, using the Common Data Collection Format. They will record ALL the landholdings of these families, but not GPS readings.
5. They will, at their own cost, contract with Tristle Technologies to obtain the Tristle® Data Analysis Solution, load it onto existing PCs or Laptops, and enter all this data into the software solution.
6. The Tech Team will, together with Participant NGOs, study analytical reports generated by the Tristle® Data Analysis Solution, and “let the data speak”. In this way, they will decide on a realistic coverage, and apt and implementable technologies for each Participant NGO.
7. If LCF is found to be appropriate, then a Strategic Planning workshop will be conducted. LCF, in this context, is defined as the conscious choice of a holistic low carbon growth trajectory. Along with Sustainable Agriculture, this also includes Energy Projects.  
The FCN will assist them to obtain funding to implement a 1-2 year Pilot Phase in order to develop NGO capabilities, learn skills, etc.
8. If LCF is not chosen, Participant NGOs will enter into a 2nd Phase Service Contract with the FCN Tech Team and develop appropriate Climate Mitigation Projects like Biogas, Woodstoves, Photovoltaic Lamps, etc.  
Please visit <http://fairclimate.com/tech/team/services.aspx> for details on costs and services/

We realise that things will not be as easy as it was for the 15 incumbent Participant NGOs. We also know that the above procedure is skewed in favour of those who take up Low Carbon Farming. However, this is the new reality within which the FCN has to operate. We hope it will also guarantee a better success rate by not repeating the same mistakes we earlier made.

6 grassroots NGOs from Uttarakhand have gone through the first 5 steps listed above. We are waiting for them to complete entering all their formats into the solution to sit together and take the process forward.

#### 7.9. Administering the Pan India LCF Coalition

At the inception meeting of the Pan India LCF Coalition on 3<sup>rd</sup> and 4<sup>th</sup> June, attended by NGO leaders and LCF Coordinators, it was suggested that funds for this Project be administered as under:

##### 7.9.1. Financial Management

- A legal entity, which already enjoys FCRA registration, will administer grants from Icco to the Pan India LCF coalition. It was suggested that the Dairy Development Society could be the Legal Holder.
- The FCN Convenor will be the Project Holder with overall responsibility, authorised to take final decisions.
- Annexed to this Application is a simple Action Plan format which defines quarterly targets for all Project Outputs & Expenditures, irrespective of whether these be financed by Icco or met as Sunk Costs.
- However, GHG Lab finances and activities shall not be covered in these quarterly Action Plans. EDF will monitor progress separately, through GHG Lab Staff. They will transfer their contributions to the GHG Labs directly to the Participant NGOs.
- Each Participant NGO will, along with the FCN Tech Team, fill this format and commit to targets. (*Baselines contained in paragraphs 2.3.1. and 2.3.2. of this Project Application.*)
- Readjustments will normally be made only once every Quarter, and only *ex-ante* changes will be accepted.
- Quarterly tranches of Icco grants will be transferred to the FCRA Accounts of Participant NGOs, based on reaching self-set targets certified by the FCN, strictly on a reimbursement basis.
- DOE & Professional Fees and Project Coordination expenses will be directly met by the Legal Holder.
- For statutory purposes, Action Plans & Budgets will be the basis for each Participant NGO to collaborate with the Legal Holder.

- Participant NGOs will take statutory responsibility for FC utilisation and FCRA reporting as second recipients.
- The Legal Holder will be responsible for meeting its own statutory requirements, and contractual obligations with Icco.

### 7.9.2. Project Coordination

- A Project Manager will be appointed to work in the FCN Tech Team:
  - She will travel extensively to visit Participant NGOs at regular intervals and ensure that self-set targets are met; trouble shoot and fix problems that impede progress.
  - She will act as liaison between Participant NGOs and various other stakeholders, including Tristle, EDF, agriculture experts, etc.
- Reporting:
  - Participant NGOs will submit Quarterly Reports, against their respective Action Plans.
  - To the extent possible, Tristle® LCF Monitoring Solution will provide the numbers for these Reports, avoiding the need for verbose narratives.
  - In order to make on-time Reports totally transparent and available to the world at large, Tristle will link its solution to the <http://fairclimate.com/reports/progress.aspx> page of the FCN website and auto-update as many fields as possible. The beta version of this feature is already operational.
  - FCN Tech Team will assess overall progress, identify bottlenecks, and prepare a summation.
- Coalition Meetings:
  - NGO Leaders and LCF Coordinators from each Participant NGO will meet every quarter for a Coalition Meeting.
  - Summations made by the FCN Tech Team will be presented and discussed.
  - Ex-ante readjustments of Action Plans, if any, will be approved.
  - Authorisation for release of tranches will be obtained.
- A Coalition Accountant will be stationed at Bagepalli and work under the FCN Convenor:
  - She will study the Action Plans & Budgets and make a cash flow forecast, based on which she will ensure that Icco remittances are received on time.
  - She will receive and scrutinise each quarterly report and feed into the Tech Team's quarterly summation.
  - She will make the quarterly transfers to Participant NGOs on the authorisation of the FCN Convenor.
  - She will ensure that all statutory and contractual obligations with the FCRA and Icco, respectively, are strictly complied with.

### 7.9.3. Aggregation & Sale of LCF Offsets

#### Certification

- After the end of each cropping season, LCF Teams will feed data from the Plot Diaries into the Tristle® LCF Monitoring Solution.
- EDF will provide Carbon calculations for each Main Crop(s) and SA PoP at each AEZ. LCF Teams will feed these values into the Tristle® LCF Monitoring Solution.
- 3<sup>rd</sup> Party Verification:
  - Towards the end of each cropping season, and on the request of the Participant NGO, the FCN Convenor will contract a DOE to undertake 3rd Party Verification.
  - DOE Auditors will follow the Validation-Verification Protocol developed by the FCN Tech Team and conduct the 3rd Party Verification through site inspections, desk reviews, etc.
  - Respective LCF Teams will accompany DOE Auditors and FCN Tech Team members on site visits, provide documentation, answer queries and arrange for local transport and hospitality.
  - FCN Tech Team will follow up and finalise the final report.

### Aggregation & Sale

- Final figures for 3<sup>rd</sup> Party verified LCF Offsets will be aggregated by FCS Pvt. Ltd. and registry entries made.
- FCS Pvt. Ltd. will offer these LCF Offsets to domestic and international Buyers, realise an assured price, and pass on the same to Farmer Producer Companies created at each Participant NGO, to trade in Carbon Offsets.
- Tristle® LCF Monitoring Solution will generate distribution lists, appropriating LCF Offsets generated at each project site and the corresponding Carbon Revenue to individual Participating Farmers.
- The Farmer Producer Companies will pay out these Carbon Revenues to Participating Farmers as per Carbon Contracts.

## 8. Project Budget

### 8.1. Cost Plan

	1st Year	2nd Year	3rd Year
<b>1. LCF Staff</b>			
1.1. Salary of 8 LCF Coordinators @ ₹ 10,000 pm	960,000	960,000	960,000
1.2. Salary of Field Workers 50 in the 1 <sup>st</sup> year, 53 in the 2 <sup>nd</sup> year, and 57 in the 3 <sup>rd</sup> year @ ₹ 6,000 pm	3,595,200	3,795,840	4,072,608
1.3. Cost of conducting 8 Monthly Meetings/Training for Field Workers & Village Monitors to assess progress and learn new SA skills at each Participant NGO	1,248,480	1,028,896	1,949,795
1.4. Travel costs for Field Workers 50 in the 1 <sup>st</sup> year, 53 in the 2 <sup>nd</sup> year, and 57 in the 3 <sup>rd</sup> year @ ₹ 1,500 pm	540,000	594,000	774,000
1.5. Mobile & Internet charges 56 Staff in the 1 <sup>st</sup> year, 59 in the 2 <sup>nd</sup> year, and 68 in the 3 <sup>rd</sup> year @ ₹ 500 pm	192,000	210,000	264,000
<b>2. Implementing SA Practices</b>			
2.1. Cost of conducting Farmer Field Schools to impart a general orientation on climate change, carbon offsetting and season pertinent SA practices to all Participating Farmers 502 villages in the 1 <sup>st</sup> year, 78 in the 2 <sup>nd</sup> year, and 89 in the 3 <sup>rd</sup> year @ ₹ 10,000 per village	502,000	78,400	89,080
2.2. Cost of sprayers, drums, mixing equipment, etc. in order to locally prepare bio-fertilizers and pest control liquids 502 villages in the 1 <sup>st</sup> year, 78 in the 2 <sup>nd</sup> year, and 89 in the 3 <sup>rd</sup> year @ ₹ 10,000 per village	5,020,000	784,000	890,800
2.3. Cost of printing Plot Diaries to record SA practices undertaken on each Discrete Plot 19,000 in the 1 <sup>st</sup> year, 23,600 in the 2 <sup>nd</sup> year, and 29,420 in the 3 <sup>rd</sup> year @ ₹ 10	190,000	236,000	294,200
2.4. Stipend for one Village Monitor per 30 Discrete Plots to maintain the Plot Diaries 470 in the 1 <sup>st</sup> year, 591 in the 2 <sup>nd</sup> year, and 745 in the 3 <sup>rd</sup> year @ ₹ 1,000 pm x 5 months p.a.	2,350,000	2,953,333	3,727,333

<b>3. Extending LCF to All Farmers in each Participant NGO</b>				
3.1.	Cost of printing Common Survey Formats in order to bring more farmers under LCF 11,300 in the 1 <sup>st</sup> year, and 16,720 in the 2 <sup>nd</sup> year @ ₹ 25	282,500	418,000	-
3.2.	Cost of an average of 7 Bond Stones to be planted on the corners of each landholding 23,800 in the 1 <sup>st</sup> year, and 31,360 in the 2 <sup>nd</sup> year @ ₹ 25	595,000	845,250	-
3.3.	Charges for Village Volunteers to record demographic data and GPS Coordinates 4,100 discrete plots in the 1 <sup>st</sup> year, and 5,320 in the 2 <sup>nd</sup> year @ ₹ 15	61,500	79,800	-
3.4.	IT charges to feed in demographic data, download, generate and correct shape maps 4,100 discrete plots in the 1 <sup>st</sup> year, and 5,320 in the 2 <sup>nd</sup> year @ ₹ 15	61,500	79,800	-
<b>4. Verification &amp; Validation</b>				
4.1.	DOE Fees to Validate the Discrete Plots & Verify SA Practices undertaken in previous crop season 8 NGOs x 3 years @ ₹ 250,000	2,000,000	2,000,000	2,000,000
4.2.	Professional Fee paid to FCN	1,759,818	1,406,332	1,502,182
<b>5. GHG Lab</b>				
5.1.	One time capital cost	1,884,000	-	-
5.2.	Recurring expenditure - GHG Lab Operation	1,939,000	1,939,000	1,939,000
5.3.	Recurring expenditure - Reference Plot Maintenance	413,900	413,900	413,900
5.4.	Sampling Expenditure	910,000	910,000	910,000
5.5.	Maintenance Dilution of Standards	197,500	197,500	197,500
5.6.	Salaries of GHG Lab Staff	1,440,000	1,440,000	1,440,000
5.7.	Generator Operation Cost	360,000	360,000	360,000
<b>6. Project Coordination</b>				
6.1.	Salary of 1 Project Manager @ ₹ 40,000	960,000	960,000	960,000
6.2.	Salary of 1 Coalition Accountant @ ₹ 20,000	240,000	240,000	240,000
6.3.	Travel, internet, mobile costs @ ₹ 30,000 pm	360,000	360,000	360,000
6.4.	Admin and overhead costs @ ₹ 30,000 pm	360,000	360,000	360,000
<b>TOTAL</b>		<b>₹ 28,422,398</b>	<b>₹ 22,650,051</b>	<b>₹ 23,704,398</b>
		<b>€ 437,263</b>	<b>€ 348,462</b>	<b>€ 364,683</b>

## 8.2. Finance Plan

	July 2012 to June 2013	July 2013 to June 2014	July 2014 to June 2015	3 Year Total	
<b>Sunk Costs</b>	<b>₹ 9,402,987</b>	<b>₹ 5,832,429</b>	<b>₹ 7,210,709</b>	<b>₹ 22,446,124</b>	<b>30%</b>
	<b>€ 144,661</b>	<b>€ 89,730</b>	<b>€ 110,934</b>	<b>€ 345,325</b>	
<b>EDF</b>	<b>₹ 7,144,400</b>	<b>₹ 5,260,400</b>	<b>₹ 5,260,400</b>	<b>₹ 17,665,200</b>	<b>24%</b>
	<b>\$ 142,888</b>	<b>\$ 105,208</b>	<b>\$ 105,208</b>	<b>\$ 353,304</b>	
<b>Icco</b>	<b>₹ 11,875,011</b>	<b>₹ 11,557,222</b>	<b>₹ 11,233,289</b>	<b>₹ 34,665,522</b>	<b>46%</b>
	<b>€ 182,692</b>	<b>€ 177,803</b>	<b>€ 172,820</b>	<b>€ 525,931</b>	
<b>Total</b>	<b>₹ 28,422,398</b>	<b>₹ 22,650,051</b>	<b>₹ 23,704,398</b>	<b>₹ 74,776,847</b>	<b>100%</b>
	<b>€ 437,268</b>	<b>€ 348,462</b>	<b>€ 364,683</b>	<b>€ 1,150,413</b>	

### 8.3. Participant NGO-wise Distribution

Participant NGO	<i>Sunk Costs</i>	<i>Icco</i>	<i>EDF</i>	Total Cost	Acres	Cost/Acre
1. ADATS, Bagepalli	398,000	7,879,500	-	8,277,500	5,000	1,656
2. AF, Anantapur	12,412,550	2,583,530	3,645,200	18,641,280	7,260	2,568
3. PWDS, Tirunelveli	3,195,188	1,276,519	2,647,200	7,118,907	1,728	4,120
4. SEDS, Penukonda	2,263,675	3,357,013	-	5,620,688	5,400	1,041
5. SACRED, Ramnagara	100,140	3,771,231	2,799,200	6,670,571	1,440	4,632
6. BEST, Pudukkottai	377,900	5,985,750	3,279,200	9,642,850	3,456	2,790
7. TC, Chennakothapalli	3,095,576	1,613,322	2,647,200	7,356,098	5,040	1,460
8. WASSAN, Rangareddy	603,095	2,438,659	2,647,200	5,688,954	1,584	3,592
Project Coordination		5,280,000		5,280,000		
	₹ 22,446,124	₹ 34,185,523	₹ 17,665,200	₹ 74,296,847	30,908	₹ 2,404
	€ 345,325	€ 525,931	\$ 353,304	€ 1,143,028		€ 37

## 9. Assessment of Risks

Social business plans tend to list assumptions like “timely deliveries”, “favourable markets”, “congenial price”, etc. under a chapter on Risks. But these are Assumptions that have to be tackled and removed from any intelligent strategic plan. Appropriate objectives and activity processes have to be incorporated to effectively address these issues. If they are left hanging as Risks, intelligent Investors will shy away from a plan that is forborne with excuses for failure.

The greatest danger to this critically thought through and holistic plan is that participants may take it piecemeal, accepting the activities and not comprehending the underlying rationale and philosophy. Meticulous compliance to finance policies and a diligent expenditure of budget lines is not going to achieve much. Unfortunately, that is what most “projects” have come to mean; a bland managerial execution of Plans & Budgets. At the other extreme, “commitment to vision, mission, goal and purpose” has come to be a trite cliché.

The Risk is when Participant NGOs do not carefully study this document, imbibe its spirit, and articulate their own Implementation Technology, as the very first step in the formation of this Pan India LCF Coalition. Action Plans have to then be drawn up to meet self-set targets. Participant NGOs have to make an honest admission of a struggle with reality that offers hope if they are willing to make the shift to the culture of New Age Business.

## 10. Sustainability of the Project

### 10.1. LCF Offsets

The first 8 Participant NGOs of the Pan India LCF Coalition will together bring 30,908 acres under SA in 669 villages in 3 years.

- In these 3 cropping seasons, at a very conservative estimate of 1.3 tCO<sub>2-e</sub> per acre per crop, a total Emission Reduction of 96,197 tCO<sub>2-e</sub> will be generated, validated and verified into the Carbon Market between 2013 to 2015.
- At an assured price of € 12 (₹ 780) per tonne, this will generate a Carbon Revenue of ₹ 75 million, which is the total cost of this 3 year Project.

Post 2015, after SA Extension Services are set in place, overhead costs will drop, SA Practices will improve to generate more than 1.3 tCO<sub>2</sub>-e and the price per tonne will increase. Participating Farmers will be glad to contribute a portion of their income to finance future SA Extension Service operations. Every bit of reduction over and above 1.3 tCO<sub>2</sub>-e and every extra Rupee over and above ₹ 780, will be Carbon Revenue that augments their income.

	Acres under LCF	LCF Offsets (tCO <sub>2</sub> -e)	Price	Carbon Revenue	
2012 Crop Season	18,700	24,310	₹ 780	₹ 18,961,800	€ 291,720
2013 Crop Season	24,390	31,707	₹ 780	₹ 24,731,460	€ 380,484
2014 Crop Season	30,908	40,180	₹ 780	₹ 31,340,712	€ 482,165
		96,197		₹ 75,033,972	€ 1,154,369

## 10.2. Selling LCF Offsets

We will not be able to sell the Offsets in the compliance market in Europe. Firstly, the EU-ETS will not trade in CERs generated from projects registered after 31<sup>st</sup> December 2012 from India and China. Secondly, these tonnes do not conform to any compliance Standard and Methodology.

However, we are not targeting the European Compliance Market with the Offsets that LCF will generate. Insofar as the voluntary market in Europe is concerned, it is still expanding. Alongside, there are other emerging ETS's coming up, of which Australia is the most promising with a floor price of AUD 14 (€ 11) per tonne. Our latest information is that trial runs of the Australian ETS will begin from 2013.

The FCN is also developing the domestic (non compliance) market in India. Right now there is an indicated demand for FCN certified Offsets that is surprisingly high.

It is true that the world, as a unified body, hasn't been able to get its act together. This is indicated from Copenhagen to Cancun to Durban. There is little reason to believe that Doha is going to be any different. But this is not at all indicative of what is happening at the individual nation State level. Individual countries are ploughing ahead. They take the maintenance of climate integrity quite serious. None of them have come up with a strategy that focuses exclusively on Effort Sharing Decisions (ESD's) alone without any Cap & Trade. While no one can say with certainty what forms the trading in Carbon Offsets will take in different countries, there is little doubt that international trading in emission reductions will continue at a nation to nation plane.

Within this developing scenario, we will operate with high quality Offsets. We advocate a scaling up of operations exponentially since projected Supply is frighteningly less than anticipated Demand.

## 10.3. The Carbon Market

Inevitability of a carbon constrained Global Economy

- Global warming is a well understood phenomenon. We cannot wish this problem away.
- The fact that we are not doing enough today to address climate change does not mean we will not do so in the near future.
- The inevitability of climate change will drive action.

Every day we delay strong action inevitably means the stronger the action we will have to take in the future (a not too distant future). This is because we continue to develop under old systems and continue to emit GHG's.

Both markets and policies will be used in almost equal, measure to address climate change mitigation. Effectively, to address climate change, sovereign states and large businesses will try to minimize GHG reduction costs, transaction costs and would like to spur innovation. Through the implementation of the EU-ETS and other GHG market tools like the emissions trading scheme for NoX and SOx in US, it is well understood that well designed markets have the ability to spur efficiency and innovation. Often, in the current economic downturn, the stronger ETS is also viewed by some as a catalyst for growth and job generation.

While the UNFCCC process has been slow to act, we can see the world moving on.

- EU-ETS is now considering a stronger target for 2020
- New Zealand already operates under an ETS. In fact, NZ even manages its fisheries in a similar fashion and has managed to improve its stock of fisheries over time.
- Mexico just passed a legislation to implement a ETS
- California – the worlds 7<sup>th</sup> largest economy has instituted an ETS. Other states in Western US are likely to join the effort.
- Australia has given a clear signal that it will implement an ETS by 2015. It is currently taxing carbon at \$ 14.
- South Korea has already passed a framework act on climate change; instituted a target management system for large emitters; and is on track to pass legislation for an ETS scheme by 2015. In Feb 2012 it passed a Climate Sinks Act to address forest emissions.
- China has given signals that it will be instituting a carbon market soon
- India is leveraging power of the markets (not under an ETs) to address its energy efficiency targets. Talk about the PAT scheme and the associates trades on ECERTS and REcerts
- Japan has been shopping hard for international offsets to meet its obligation under Kyoto.

Our best estimate is that we will continue to see the GHG markets spring up over the next few years and along with it a robust offsets program that links these markets over time and makes the ERU's fungible across markets. While that may take time, it should not deter us in any way. The markets continue to evolve and improve over time. EU-ETS is in its third iteration and improving – others will follow.

While the current EU-ETS market price is down, it's a response to the erratic signal that resulted from the talks in Durban and indecisiveness within the EU on how strong a measure to take for 2020. That said, trades continue and people are banking their tons. Quality tons that are pro-poor continue to demand a premium well above market price.

FCN is quite a few years away from delivering large scale tons to market. Under current projects the tons will really come through in 2014/15. This is in line with new markets coming online. We should move with confidence and be sure that we can find a home for the ERU we generate either in the compliance or voluntary markets.