



AFRICA RESOURCES
DEVELOPMENT COMPANY



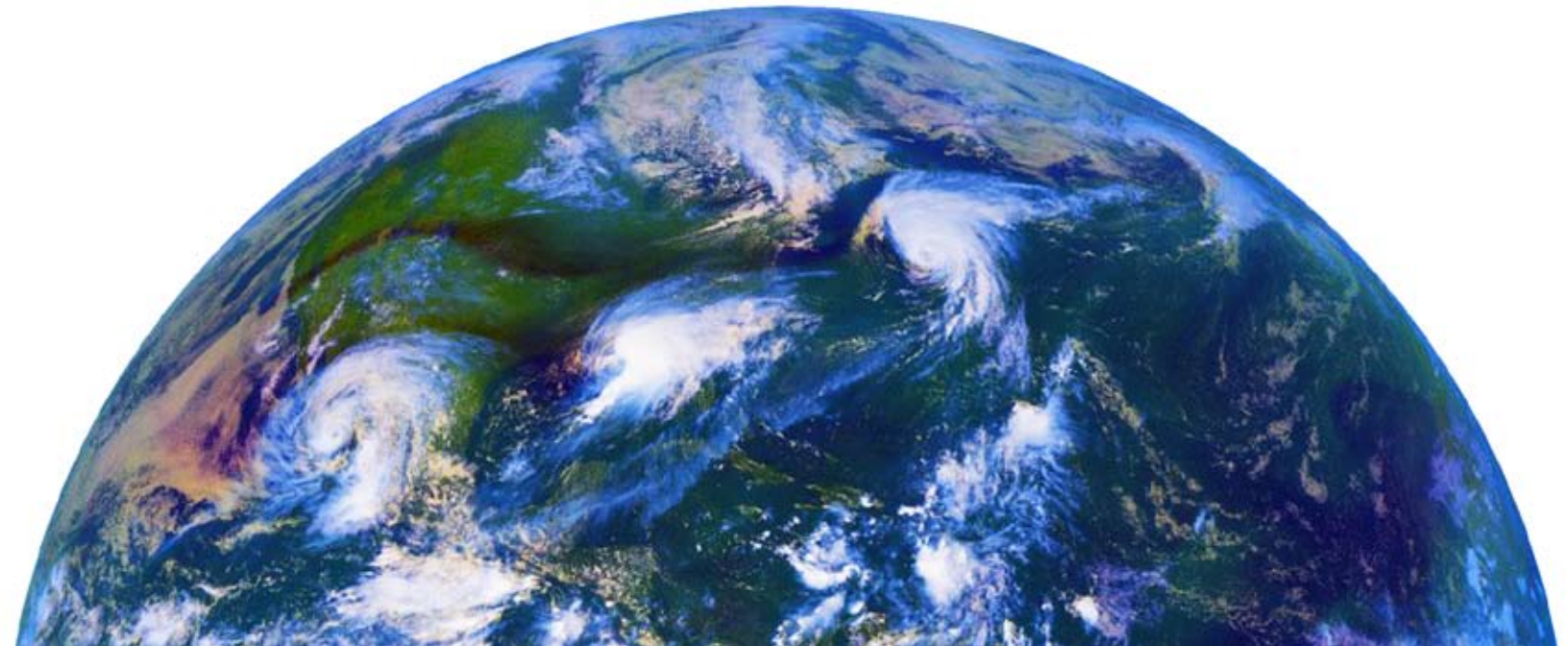
INFINITE

Business Plan

For

Sustainable Income Generation
Through Natural Energy

EXECUTIVE SUMMARY



Energy is and will be the focal point for driving humanity forward. While certain sources of energy are, or appear to be constant (Sun), some others are declining (Oil). It is the responsibility of every human being not only to conserve energy for the future but also strive for renewable sources of energy.

It is also now scientifically established that global warming caused by greenhouse gas (GHG) emissions is a fact. Internal combustion engines are a major contributor to global warming as they account for about 20-30% of global emissions. Emissions of CO₂ and other GHGs from transport are among the fastest **growing contributors to global warming**.

ARDCO'S 'Infinite', obtains its motivation from the need to produce environment friendly, renewable sources of energy that will also give a sustainable source of income for the less privileged.

Jathropha is a plant the seeds of which can give the oil required for biodiesel. Jathropha is a hardy plant species. ARDCO'S Infinite has already planted and learnt how beneficial this can be on its own Pilot farm.

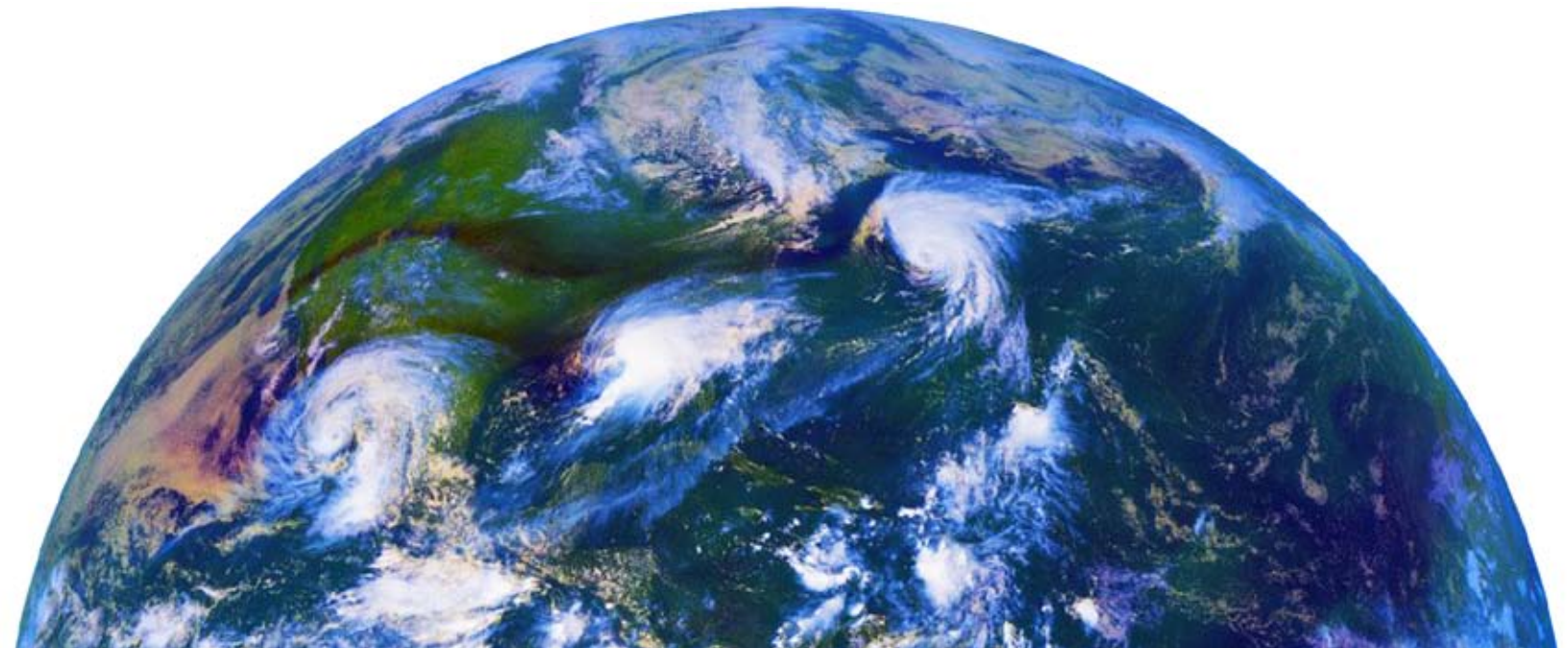
An inadequate source of income is what is making poverty reduction a challenge. Colombia and Nigeria have in common a very high percentage of marginal and small farmers who depend entirely on agriculture for their survival. As days pass by, agriculture is becoming a losing proposition. Self Help Groups (SHG/COOPS) which are constituted by less than twenty women from poor households, are making a silent revolution in Colombia today. They engage themselves in micro credit activities. Planting Jathropha on their land can give them a constant income for several (up to 30-40) years. What they require is advice, assured market and assured income. ARDCO'S Infinite will train, supply seedlings, procure and process the Jathropha seeds for SHGs that in turn, will be part of COOPERATIVES.

INFINITE OILS, SA is a company that will be registered in Colombia and Nigeria as a global producer of biodiesel. INFINITE OILS, SA will register in early 2009 a joint venture in Colombia with Corporacion Colombiana de Desarrollo. Infinite has entered into an agreement with SENA in Colombia for a Technical Cooperation on developing jathropha plantations in Colombia and Nigeria. This includes a buy back arrangement of jathropha seeds/oil.

Infinite through this project proposes to plant Jathropha on 100,000 acres of land belonging to SHG/COOPS members in the Departments Of Magdalena, Cesar, and Guajira as well as in the States of Kano and Kaduna in Nigeria. Within two years Infinte proposes to establish its own Blending Plant unit to produce biodiesel. Infinite will provide seedlings and technical assistance to members of SHGs/COOPS besides a buy back agreement.

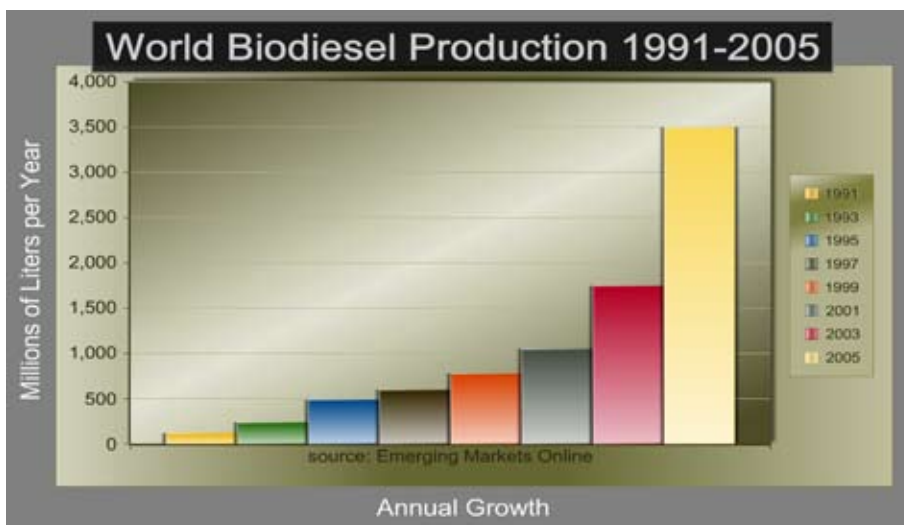


1. THE BUSINESS



1.1 BUSINESS PROPOSITION

The ultimate product is biodiesel. In order to have biodiesel it is essential to plant Jathropha bushes/trees the seeds of which give oil. This project proposes to plant 100,000 acres of land with Jathropha in Colombia and Nigeria. The land is owned by members of SHGs/COOPS. Infinite will provide seedlings and all technical assistance including a buy back agreement. The rainy season in both countries vary and nurseries will be used. In Colombia, the nursery for this has already been raised.



Research study: “Biodiesel 2020.”

For Brazil, China, and India, the study includes long-term forecasts and year 2020 scenarios, each measuring growth in the diesel and biodiesel markets, as well as focusing on the potential for biodiesel growth.

For each of the global markets, this study has developed proprietary forecasts as a baseline to produce 2020 “Scenarios” for the U.S., Europe, China, India and Brazil.

Jatropha (Jatropha Curcas)

Ironically, the first diesel engine ever made, in 1893, was powered by peanut oil- a biofuel. By the 1920’s the petroleum industry had all but eliminated the biofuel infrastructure and usurped the market with petrodiesel because it was cheaper to produce. Even then, the engine’s inventor, Rudolf Diesel, maintained that “the use of vegetable oils for engine fuels may seem insignificant today, but such oils may become, in the course of time, as important as petroleum and the coal-tar products of the present time.”

In Colombia the Government already has a biodiesel policy in place. The Government of Colombia has also put in place a subsidy system to encourage the Private Sector farmers to go for Jathropha cultivation. The State Government of Magdalena has further announced 50% subsidies for the Jathropha seedlings.

1.2 PRODUCTION PROCESS & DEVELOPMENT

The resources required for the production of biodiesel are: land, package of practices, seed/seedlings, agricultural equipment, pest control measures, procurement of harvested seeds, processing of seeds into oil and marketing. Land from SHG/COOPS members have already been identified and they have given their consent letters. Complete package of practices such as seed treatment, nursery raising, land development, planting, pest control, pruning, irrigation, etc. are already being taken care of by SENA on their Pilot Farms.

Tractors are required for land development and this will have to be procured. A four wheeler will be required in the third year to transport seeds from farmers to dispeller units. A nursery is already raised on Infinite's land. Land needs to be purchased for establishing dispeller units.

SENA has already established a research and development unit in Magdalena, as well as a Pilot Plant in Salvador and are offering their expertise. The Government of Colombia through its policy statement has laid down quality standards and this will be followed.

1.2.1 suppliers

There is an agreement with SENA for all purposes. Seeds were purchased through them. They are already providing all necessary technical inputs.

1.3 MARKET STRUCTURE AND ANALYSIS

1.3.1 target market and customer base

SKL has agreed to buy back oil either in raw form or in processed oil form. Infinite plans to establish and sell refined oil and excess seeds to Colombia and Nigeria. (The National and all oil companies will buy any quantity of biodiesel produced.)

1.3.2 competitor analysis

There are other players in the market. They are successful too. However this will not affect plans as market is just too large to comfortably accommodate all players.

1.3.3 market size and potential

As the production of diesel is peaking and the number of users of diesel increases daily, the market size will only increase.

1.3.4 competitive advantage





When the oil production starts, “Infinite biodiesel’ will have its own legal entity and brand.

1.4 MARKETING & SALES

1.4.1 sales

Not applicable. All production presold to SKL.

1.4.2 marketing & communication

Existing tie up with SKL already exists.

1.4.3 distribution

We do not intend to have our own distribution system. We plan to sell biodiesel/ seeds to SKL, ECOPETROL

07 1.5 COMPANY STRUCTURE

1.5.1 management

Infinite will be managed by its Managing Director, who is the proposer of this project.

SENA will assist- is already assisting- in all technical aspects including identification of SHG members. Infinite will employ two supervisors-one for each district, two tractor drivers, an accountant and a watchman. When the production of oil starts, more people will be employed as required.

1.5.2 legal status

Infinite is already a legal entity as a proprietorship firm registered in November 2008. The dispeller unit will be registered as a small

scale industrial unit when they start functioning. It is easy to get permission for this.

1.5.3 partners and sponsors

As mentioned earlier SKL, SENA, ECOPETROL will be, if necessary, the partners. We have already started working together.

1.6 RISKS

Risk	Measure to counteract the risk
Pest attack on plants	Pest control measures will be taken up during the visits by supervisors
Lack of irrigation facilities	Selection of land will be based on this essential factor.

1.7 SWOT ANALYSIS

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none">Assured marketJathropha non browsableSpread out land baseTechnical support assured	<ul style="list-style-type: none">Although hardy species, jathropha requires irrigation for economic yieldNew to the area, require a lot of communication and training to farmers
OPPORTUNITIES	THREATS
<ul style="list-style-type: none">Replicate this model in other districts and statesProvide environment friendly fuel in the market	<ul style="list-style-type: none">Pests can be a big problemDiminishing land availabilityProtests from people who may be afraid that food producing land may be replaced by jathropha plantations

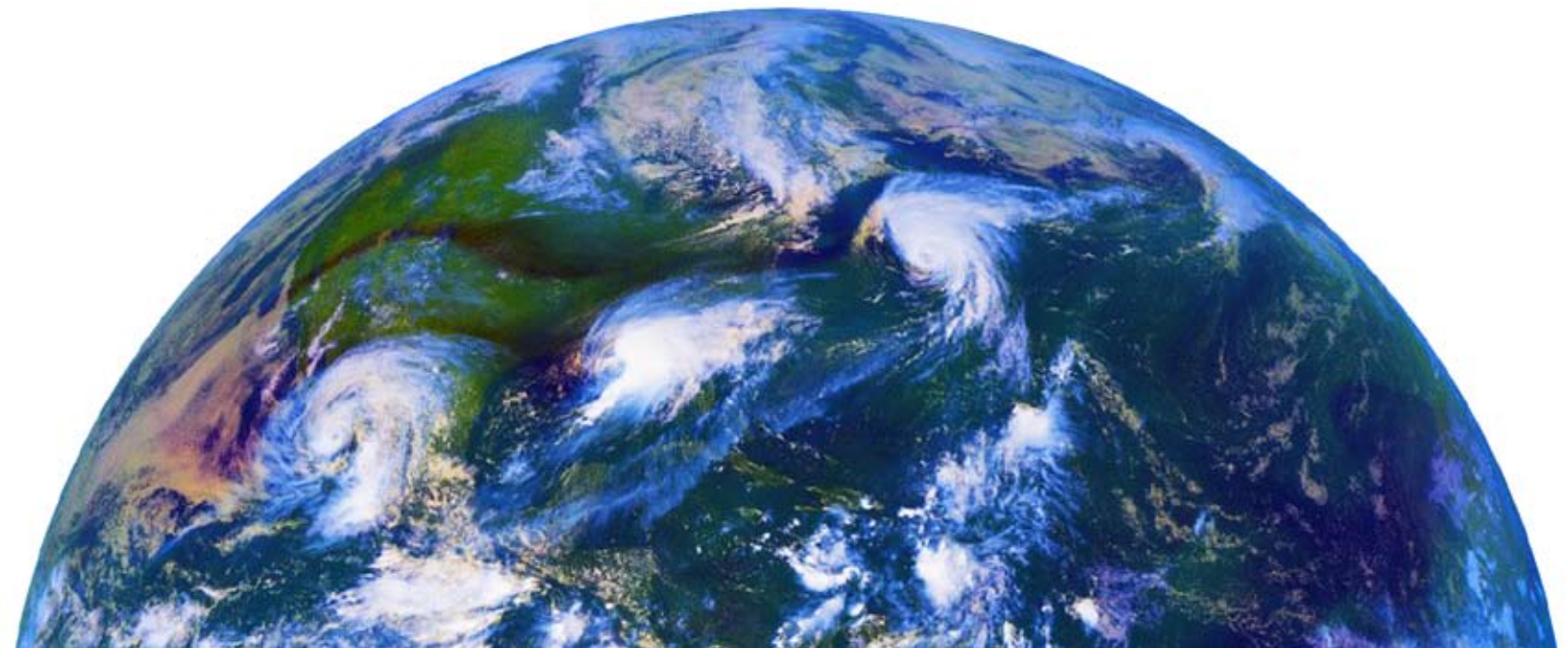


1.8 POTENTIAL PRIZE MONEY

The prize money will be utilised for purchase of tractors and transport vehicle for seed collection, land for dispeller unit and salaries.



2. THE ENTREPRENEUR



Infinite Energy And Natural Resources (Infinite) company was initiated to promote generation and use of renewable sources of energy and run a profitable business. It is also the objective of the company to be equitable and participatory. I own a farm land in which Jathropha is planted. Visited several Jathropha plantations and discussed with farmers the difficulties they have faced and seen the various technical aspects of cultivation such as pitting, spacing, pruning, marketing, etc.

I have been an Advisor to IFC/WB in Nigeria in a watershed project in the Southern State of Bayelsa, Rivers and Akwa Ibom for 2 years. I am highly familiar with the Government systems, and have worked closely with the Agriculture, Horticulture, Forest and Agricultural Engineering departments of the Government. I have also worked closely with the Self Help Groups. I am presently a consultant to several NGOs promoting SHGs.

I hope to take up Jathropha planting on at least 20,000 acres of

land in the two Countries of Colombia and Nigeria, on the land of SHG members. It is also expected that two expeller units will extract oil from Jathropha seeds when established.

Three years from now, two dis-peller units will be producing biodiesel and Infinite, and SHG members will start getting the returns. However, 5 years from now, Infinite hopes to add more districts under similar terms, and ten years from now Infinite would be working several states in Nigeria.





2.2 EXPERIENCE

I was Advisor to Nigerian State Government and to the Columbian Government for a watershed project which was also promoting SHGs. This watershed project had agriculture as a major component and in the process came across Jathropha as a high return giving, hardy and non-browsable species. I have visited several Jathropha plantations and studied its pros and cons.

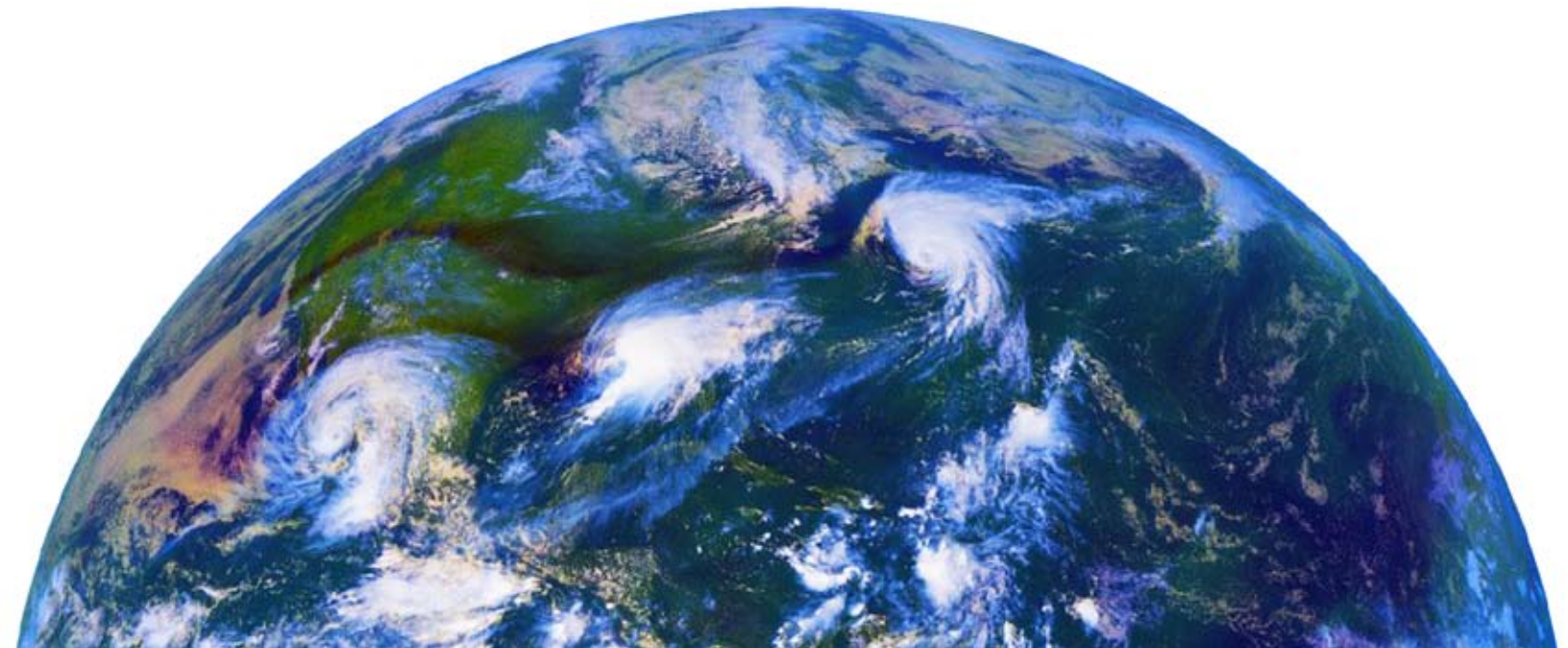
2.3 PERSONAL ROLE

I will be fully involved and continue to cooperate with SENA, SKL, and Local Governments.

2.4 REFERENCES

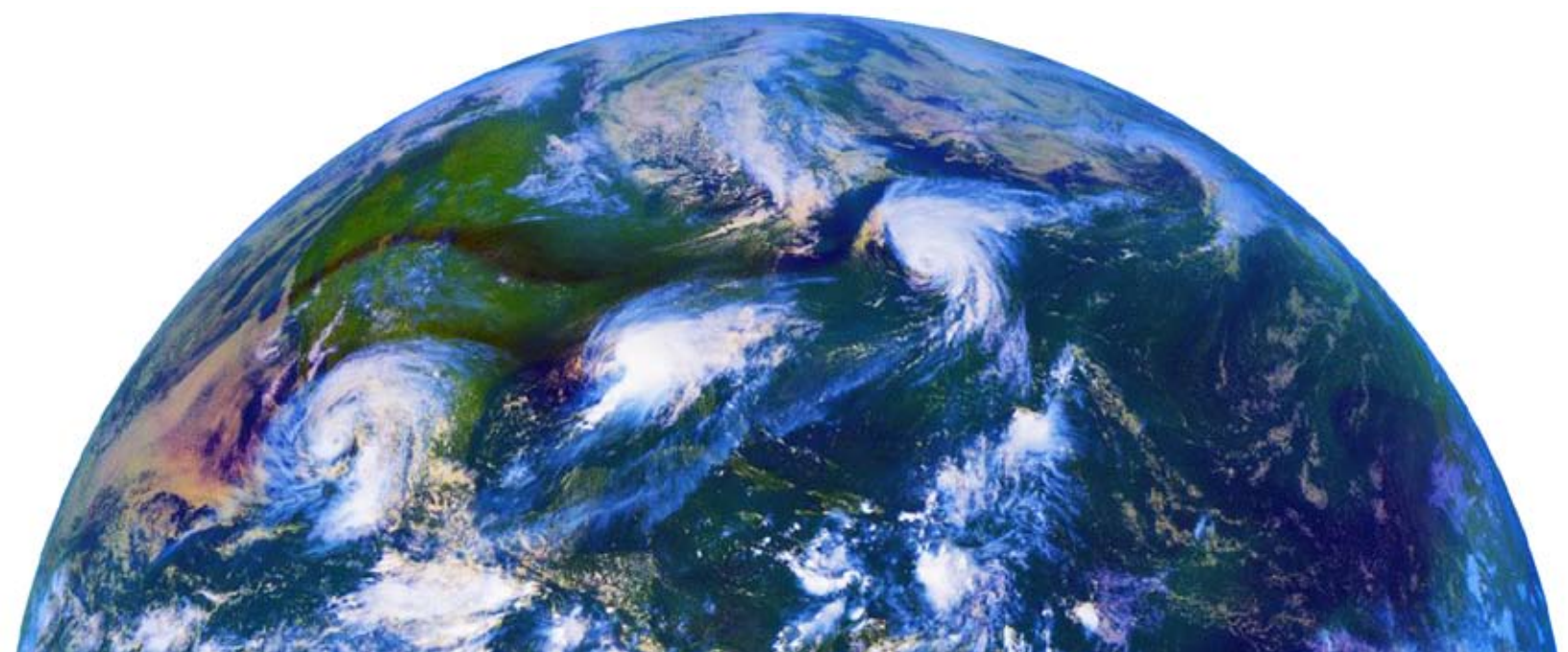
Cesare Calari, IFC/WB Washington. Paul Caldwell (Former CEO MOBIL Nigeria)

THE FINANCIAL PLAN



PLANNING						
Number of man-days per activity	2008					
	2007	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	2009
Summary -->	350	370	380	380	380	7,800
Pre-start-up activities						
Business Planning	50	-	-	-	-	-
Feasibility studies	100	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
sub-total (man-days)	150	-	-	-	-	-
Financing & Marketing						
Market exploration	50	50	60	60	60	-
	-	-	-	-	-	-
	-	-	-	-	-	-
sub-total (man-days)	50	50	60	60	60	-
Recruitment & Buying & Investing						
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
sub-total (man-days)	-	-	-	-	-	-
Building						
Watch & ward		95	95	95	95	2,000
	-	-	-	-	-	-
	-	-	-	-	-	-
sub-total (man-days)	-	95	95	95	95	2,000
Launch						
work in progress	-	100	100	100	100	500
	-	-	-	-	-	-
	-	-	-	-	-	-
sub-total (man-days)	-	100	100	100	100	500
Operations						
Manufacturing		-	-	-	-	4,200
	-	-	-	-	-	600
	-	-	-	-	-	-
sub-total (man-days)	-	-	-	-	-	4,800
Other activities						
Interacting with farmers	100	125	125	125	125	500
Location of lands	50	-	-	-	-	-
	-	-	-	-	-	-
sub-total (man-days)	150	125	125	125	125	500
Total man-days	350	370	380	380	380	7,800

THE DEVELOPMENT IMPACT



4.1 THE DEVELOPMENT IMPACT OF YOUR BUSINESS

4.2 LOCAL EMPLOYMENT AND/OR INCOME

- Number of direct jobs created or income increased: 15,000 persons
- Number of indirect jobs created or income increased (e.g. employment spin offs of your business for suppliers and buyers, distributors): 15,000-20,000 families who own land on which Jathropha will be planted. (some families may plant more than one acre).

4.3 IMPROVING THE QUALITY OF LIVING STANDARDS

Agriculture today in Colombia and Nigeria, In general, is not a profitable business for reasons such as tiny land holdings, browsing by animals (livestock is a major source of income in rural areas), marketing and several other reasons such as pest and increasing cost of labour. Other than regular fertilizing and irrigation, Jathropha does not require heavy, risky inputs.

Jathropha will provide assured income, can rear livestock and consequently the income will go up. Jathropha plantation would provide steady, assured income to members of poor families for decades. This will result in the overall socio-economic situation resulting in better education for children, an improved medical and health situation, and overall quality of life.

4.4 KNOWLEDGE AND SKILLS TRANSFER

SENA, ARDCO, PACIFICO, SKL have extensive research and development experience at the international level and this will be utilised at the project. Infinite will transfer this to the farmers through capacity building programmes.





4.5 THE ENVIRONMENTAL IMPACTS AND IMPROVEMENTS IF APPLICABLE

It is also now scientifically established that global warming caused by greenhouse gas (GHG) emissions is a fact. Internal combustion engines are a major contributor to global warming as they account for about 20-30% of global emissions. Emissions of CO₂ and other GHGs from transport are among the fastest growing contributors to global warming.

Jatropha plantation and the subsequent use of biodiesel from it will reduce greenhouse gas emissions in the following ways:

- Greenhouse gas components
- Carbon monoxide
- Ozone-forming hydrocarbons
- Particulate matter
- Sulfur dioxide emissions
- Life cycle carbon-dioxide

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