COMPETE Coordinator:

Competence Platform on Energy Crop and Agro-forestry Systems for Arid and Semi-arid Ecosystems – Africa

COMPETE India Field Visits & 5th International Biofuel Conference

Organized in the framework of the COMPETE Work Package 4 (WP4) on South-South Cooperation

February 4 – 8, 2008

Pune, Kawardha, New Delhi, India

SUMMARY REPORT

COMPETE is funded by European Commission 6th Framework Programme – Specific Measures in Support of International Cooperation (contract INCO-CT-2006-032448).

COMPETE Field Visit India – Organisation and Objectives

This field visit to India was organized in the framework of the COMPETE Work Package 4 on South-South Cooperation by the COMPETE partner Winrock International India (WII) in cooperation with WIP Renewable Energies, Germany.

During the last years India has launched an ambitious biofuel programme based on ethanol produced from sugar cane (molasses) and biodiesel produced from oil-bearing seeds of jatropha (Jatropha curcas) and pongamia (Pongamia pinnata). The biodiesel programme in India proposes to use jatropha oil produced from a major plantation programme. In the framework of this biofuel programme India has gained worldwide recognized expertise in biofuel production technologies as well as in research and application (e.g. multifunctional platforms for rural electricity generation) of new oil seeds such as jatropha and pongamia for biodiesel production.

The objective of the COMPETE field visit to India was to foster South-South cooperation between partners from Africa, Latin America, and Asia highlighting best practices as well as their replication potential in Africa.

The programme of the COMPETE field visit included visits to major equipment manufacturers for the production of biofuels, as well as to the Ranidhera Rural Electrification Project based on the use of straight Jatropha oil. Furthermore, guided tours to several Jatropha plantations and a small-scale biodiesel production facility were organized for the COMPETE group.

The detailed programme of the field visit is presented in Annex 2 to this summary report.

The COMPETE group included 17 representatives from COMPETE partner organizations as well as 7 representatives from COMPETE Associate Partners. 11 participants came from the African countries Burkina Faso, Ethiopia, Ghana, Kenya, Senegal, South Africa, Tanzania and Zambia, and two participants from Mexico and Brazil.

The COMPETE project acknowledges the sponsorship of 4 African participants through the UN Division for Sustainable Development.

The participants list is presented in Annex 3 to this summary report.

Program Organisation

- Sobhanbabu PRK, WII, India (sobhan@winrockindia.org)
- Sudipto Chatterjee, WII, India (sudipto@winrockindia.org)
- Dr. Rainer Janssen, WIP, Germany (rainer.janssen@wip-munich.de)
- Deepak Sharma, WII, India (Deepak@winrockindia.org)

This summary report was prepared by Dr. Rainer Janssen, WIP, Germany.

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DAY 1 – COMPETE Field Visit – 4 February 2008

On the morning of 4 February the COMPETE group travelled from the hotel in Mumbai to the city of Pune (170 km) to visit the major Indian equipment manufacturers **PRAJ Industries** and **THERMAX Ltd.** active in the fields of biofuel production technologies as well as boiler technologies for biomass based co-generation.

PRAJ Industries

The introduction to PRAJ Industries was given by Mr. Anil Deshpande, President International Marketing.

COMPETE Group at PRAJ Industries

PRAJ Industries was established in 1984 and currently has a staff of more than 800 of which 80% are engineers and technicians. PRAJ has gained over 350 international references in more than 40 countries providing technologies and plants in the following fields of activity:

- Ethanol production technology (Liquifaction, Saccharification, Fermentation, Distillation, Dehydration),
- Biodiesel,
- Beer production,
- Wastewater treatment,
- Bionutrients for ethanol industry,
- Evaporation systems.

Ethanol Plant (Source: PRAJ)

International references for ethanol production plants include:

- British Sugar, Wissington, UK,
- Anklam Bioethanol (Danisco Gr.), Germany,
- Biowanze SA (Südzucker Group), Belgium,
- Gasohol de El Salvador,
- Incauca SA, Cauca, Colombia,
- Khon Kaen, Thailand.

Based on its experience in agro-based processes, PRAJ offers technologies, plants, and services for biodiesel production since about 6 months. The following are the charateristics of PRAJ biodiesel technology:

- Wide range of standard capacities: 100 to 500 MT/Day,
- Flexibility to operate with multiple vegetable oil feedstock (Jatropha, pongamia, canola, sunflower, soybean, palm),

- High efficiency cascade transesterification process,
- Reduced waste-water due to in-process water recycling.

PRAJ has offices in Bangkok, Johannesburg, Bogota, Sao Paulo, the US, Europe and the Middle East. Within Africa the company has already implemented 2 plants in Nigeria, and one plant is under development in Algeria. PRAJ is very interested to engage in business in African countries and opportunities for sweet sorghum based ethanol production are explored in Ghana, Zambia and Egypt.

Furthermore, PRAJ operates an Innovation Centre to explore and develop viable bio-engineering technologies for converting renewable agro-molecules into energy and bio-products. Initiatives of the Innovation Centre include the development of alternative energy crops such as tapioca, tropical sugar beet and sweet sorghum.

In the discussion involving representatives from PRAJ and the COMPETE study group the following main issues were addressed:

- PRAJ regards community sized biofuel production systems as economically not viable. Capacities of PRAJ technology range between 20.000 and 1.2 million litres per day.
- It is seen as most important to reduce the effluent from currently 10-12 litres per litre of produced ethanol to about 2 litres through recycling systems.
- PRAJ is engaged in biodiesel production tests from algae since about 6 months. First results are expected in 1.5 years.

A separate presentation on activities of PRAJ in the field of ***sweet sorghum*** was given by Dr. Rajeev Dwiwedi, Research Associate Crop Science.

The following research and technology development activities on sweet sorghum as future promising energy crop for ethanol production are currently performed by PRAJ:

- Compositional studies on sweet sorghum and factors affecting ethanol production,
- Testing of sweet sorghum bagasse for steam and power generation,
- Development of juice extraction treatment and bagasse handling and management,
- Sweet sorghum syrup fermentation process with high yield and recycling potential of up to 75% waste water,
- Energy efficient distillation, dehydration and evaporation systems.

Since 1999 PRAJ is engaged in research on sweet sorghum, including a 400 ha plantation in Australia. From 2005 to 2007 PRAJ has executed pilot trials on the development of high yielding varieties and on ethanol production based on the use of both sugar cane and sweet sorghum as feedstock in the same ethanol plant. A new pilot plant for sweet sorghum based ethanol and electricity production with a capacity of 13.000 litres per day is currently under construction in India (in cooperation with the Tata Group) and will start ethanol production in October/November 2008.

In the discussion on sweet sorghum the following main issues were addressed:

- Sweet sorghum grows well on soils suitable for sugar cane plantations.
- Water and nutrient requirements are lower for sweet sorghum as compared to sugar cane.
- In order to increase the sugar content of sweet sorghum the panicle (grain) has to be removed.
- The production of grain and sugar from sweet sorghum (usually regarded as main advantage of the crop) is not seen as economically viable by PRAJ.

Sweet sorghum industrial processing (S.: PRAJ)

- The use of both sugar cane and s
- Sweet sorghum for ethanol production can significantly increase the time of available feedstock supply.

The PRAJ corporate presentation as well as the presentation of PRAJ Sweet Sorghum ethanol technology are available at the COMPETE website www.compete-bioafrica.net.

THERMAX Babcock & Wilcox (TBW)

The introduction to TBW was given by Mr. Vinay Kabra, Deputy General Manager – Innovation, and Mr. Subhash Gandhe, Senior Manager - Marketing.

Since 1960 TBW offers integrated solutions in energy and environment management based on its engineering expertise in heating, cooling, power, water and waste management and chemicals.

COMPETE Group at THERMAX

The Boiler & Heater Group of TBW provides technologies for biomass combustion systems, waste heat, oil and gas, and turnkey solutions to generate steam and power. The features offered by TBW biomass fired boiler include:

- Capacities in the range of 20 to 300 tons per hour, pressures up to 135 bars, temperatures up to 515°C,
- Travelling grate, dumping grate, pinhole grate or hopper bottom (fluid bed),
- Indoor and outdoor installations,
- Multifuel firing capabilities, including bagasse, husk, straw, coffee grounds, cane tops, coconut shells, wood chips.

Up to date TBW has implemented about 125 biomass fired boilers in India. Furthermore, TBW offers 200-300 kW test facilities to analyse combustion properties as well as slagging and fouling behaviour of various biomass feedstock. More than 100 different types of biomass have been tested, and it was found that it is advisable to co-fire clean burning biomass (such as rice husks and bagasse) together with highly slagging fuels (such as mustard husks and cotton shells).

In the discussion involving representatives from TBW and the COMPETE study group the following main issues were addressed:

- Co-firing of biomass and coal requires two different feeding systems due to the different flow characteristics. Coal is fed into the boiled through gravity, whereas biomass is blown into the boiler with air.
- The appropriate technology for biomass boilers is the travelling grid technology.
- TBW biomass use filters to reduce particulate emissions; typical NO_x emissions are 200 ppm.

In 2006 TBW has implemented a travelling grid boiler with a capacity of 133 tons per hour operating on wood chips in Tanzania. The company is highly interested in additional biomass based installations in African countries.

DAY 2 – COMPETE Field Visit – 5 February 2008

On 5 February the COMPETE group travelled from Mumbai to Raipur and further to the city of Kawardha (170 km north from Raipur) to visit the Ranidhera Rural Electrification Project implemented by Winrock International India.

Remote Village Electrification through Straight Jatropha Oil

Winrock International India (WII) has engaged in the electrification of three villages in the State of Chhattisgarh with the objective to demonstrate the technical and financial viability of operating diesel generators with straight vegetable oil.

The project village Ranidhera visited by the COMPETE group is located in Kabirdham district inside a valley surrounded by forested hills. The village is not electrified and the distance to the next grid access point is 15 km. The village comprises 110 households with 600 persons of the two tribes Gonds and Baigas.

Streetlights in Ranidhera village

The following activities have been implemented within the project by using a bottom-up participatory approach with strong emphasis on ownership of the initiative:

- ***Community mobilization and capacity building***

  Extensive community mobilization has been carried out for the management and operation of the facilities including tariff setting and collection of electricity fees. Furthermore, several training programmes for the newly established Village Energy Committee (VEC), consisting of 10 members of the village community, and the operators of the power plant have been carried out.

- ***Plantation of Jatropha saplings***

  More than 25.000 Jatropha saplings were planted on farm boundaries, road sides and waste land; no farm land was used for Jatropha plantations. The costs of the saplings were covered by WII and the villagers undertook the planting through voluntary labour contribution.

- ***Installation and commissioning***

  The power plant consisting of 4 gensets, oil expeller, filter press and boiler was commissioned on 9 April 2007. It has been in continuous operation since then without any technical failures. All equipment is installed in a power plant building with sufficient storage capacity for Jatropha seeds. The electricity is distributed within the village through the set-up of a mini-grid.

  The power plant consists of three 3.5 kW gensets and a back-up generation capacity of 7.5 kW. Electricity is produced from 6 p.m to 9:30 p.m. to supply 30 streetlights, light points at 107 households and sockets (for entertainment) at 65 households.

Start-up of gen-set

Since its start in April 2007 the electrification project has shown excellent performance with respect to technical, financial, social and institutional sustainability.

Since April 2007 no failure of the power plant has been experienced and the three operators are confident of handling the day-to-day operation as well as small repair and maintenance work.

Since May 2007 the villagers are paying for the electricity services (20 Rs per light point per month, 30 Rs per socket per month) into a Village Energy Fund. So far all payments have been done, and the money is used to pay the salary of the operators, cover maintenance expenses and generate surplus for future larger maintenance work.

During discussions between the villagers, representatives from WII and the COMPETE study group the following main issues were addressed:

- Jatropha seeds are collected by the villagers (50% women) for 4 Rs per kg.
- Jatropha seeds are harvested in April/May and July/August. In off-season seeds need to be acquired on a market (in 60km distance from the village).
- It is in the responsibility of the VEC to ensure the supply of seeds.
- The fee of 20 Rs per light point compares with expenses of about 40 Rs for lighting with kerosene lamps.
- The total revenue created from electricity sales comprises 3500 Rs per month
- Engines used for electricity generation are Indian Liester engines.
- Adjustment of the engines to operate on straight Jatropha oil includes pre-heating of the oil through a coil around the engine exhaust.
- Maintenance (e.g. filter change, engine cleaning) is performed after 250 hours of operation.
- The 7.5 kW genset is used as mechanical drive for the oil expeller.
- A wood fuelled boiler had to be installed to pre-heat the Jatropha seeds in order to increase the oil expelling efficiency.
- The expeller has a capacity of 30 kg per hour. After 5 hours of operation about 40 l of oil are expelled, sufficient for an operation of the 3 engines for four days.
- Storage of Jatropha oil is possible for up to 15 days.

The villagers of Ranidhera highly appreciate the electricity services provided to their households enabling them to work and study in the evening hours. Furthermore, the street lights facilitate safe walking through the village by night and TV/radio is used for entertainment. The community exhibits pride of one of the first rural electrification projects based on straight vegetable oil.

Electrified household in Ranidhera village

Villagers at the power plant building

DAY 3 – COMPETE Field Visit – 6 February 2008

On 6 February the COMPETE group visited three Jatropha plantations operated by the Chhattisgarh Biofuel Development Authority (CBDA) in the vicinity of Raipur, Chhattisgarh State. The tour was guided by J.L. Gupta, CBDA Technical Officer.

In line with the Indian 'National Mission on Biodiesel', the Chhattisgarh State Government has started a large programme for establishing Jatropha plantations on 1 million ha of fallow and degraded land by 2012. The Chhattisgarh Government has set-up an agency named 'Chhattisgarh Biofuel Development Authority (CBDA)' in 2005 for the promotion of the State biofuel programme. The aims and objectives of CBDA are:

- Promotion of RTD for the development of appropriate technologies,
- Increase of rural income, rural income and women empowerment,
- Establishment of energy crop plantations – Tree-born Oil Seeds (TBO) (e.g. Jatropha),
- Ensuring energy security and reduction of greenhouse gas emissions.

The Chhattisgarh Government is targeting degraded forest land, Government fallow land, as well as unused land belonging to farmers for the plantation of TBO. The following policy initiatives have been undertaken:

- ***Supply of Jatropha samplings to farmers***

  Jatropha saplings are raised in nurseries operated by the Forest Department, Agriculture Department, Forest Development Corporation, Chhattisgarh State Renewable Energy Development Agency (CREDA) and other Government organisations. Up to 500 saplings are distributed for free to farmers. For additional saplings farmers have to pay 0.5 Rs for each sapling and a maximum number of 5000 saplings are available per farmer.

- ***Land allotment policy for investors***

  The Chhattisgarh Government has set-up innovative policies for allotting wasteland to Government organisations for TBO cultivation and establishment of biodiesel production plants.

- ***Support price for purchase of TBO***

  In order to encourage farmers to grow TBO on their fallow land, the Chhattisgarh Government has introduced a support price for seeds and oil from TBO such as Jatropha and Karanj.

The first Jatropha plantation visited by the COMPETE group included about 90.000 plants on 40 ha Government owned wasteland with compacted soil. Spacing between the 2-year old Jatropha plants grown from saplings is 2 m, and pruning of the branches was done to increase the number of branches (and thereby the yield) and to limit the final plant height to about 3-5 m.

Jatropha plantation in Chhattisgarh

Jatropha fruit

The expected yield after seven years is 3.5 to 4 kg per plant. Due to the low fertility of the soil farm manure is used as fertilizer and the Jatropha saplings were planted using auger holes (e.g. planting holes with fertilizer to facilitate good growth in the initial phase). Irrigation is necessary in summer during the first 3 years.

Harvesting periods in the Raipur area are April/May and Sept. to November. During harvest 2-3 persons are employed earning 80 Rs per day.

Apart from the state owned and operated Jatropha plantations visited by the COMPETE group, saplings are distributed to farmers at very low cost to grow plants on their private (non-agricultural) land. After initial hesitation more and more farmers show interest in growing Jatropha. The Ministerial support price for Jatropha seeds is set at 6.5 Rs per kg, whereas the current market price of Jatropha seeds (mainly used for planting saplings) is 18-22 Rs.

The second and third Jatropha plantation visited by the COMPETE group was established on better (i.e. loose and sandy) soils. Although the age of the Jatropha trees of 2 years was the same as in the first plantation, the trees were larger and reported initial yields were higher as well. Furthermore, no irrigation is required due to the high rainfall of 1100 mm, and fertiliser input is reduced (no auger hole planting technique).

COMPETE Group at Jatropha plantation

This underlines the fact that although Jatropha can grow on wasteland under poor soil conditions, the yield of Jatropha plantations (and thus their economic viability) will crucially depend on quality of soil as well as availability of water and fertiliser.

The third day of the COMPETE field trip was concluded by a visit to a biodiesel production demonstration plant with a capacity of 1000 litres per day set-up in Raipur by the Chhattisgarh Biofuel Development Authority (CBDA). This small-scale plant is entirely locally built, and an introduction to the plant was given by Mr. Pramod N. Ghaywat, CBDA Plant Manager.

CBDA Biodiesel demonstration plant

In order to perform biodiesel research this demonstration plant is closely linked with the ASORD Research & Development Centre. ASORD operates several research laboratories and testing facilities for the analysis of biodiesel production from a variety of local feedstock. The research activities of ASORD were presented to the COMPETE group by Dr. Preeti Kaur, ASORD Principal Scientist.

Finally, the biodiesel produced in the demonstration plant is used in the Chhattisgarh Chief Minister's official vehicle as well as in vehicles of the Chhattisgarh Biofuel Development Authority (CBDA).

DAY 4/5 – COMPETE Field Visit – 7/8 February 2008

Conference poster

In New Delhi the COMPETE group attended the 5th International Biofuels Conference organized by Winrock International India on 7-8 February.

The conference was attended by more than 400 delegates from central and state ministries, technology suppliers, petroleum and ethanol industries, NGOs, and research and development institutions.

The COMPETE partnership contributed to the success of the conference with the following presentations:

- Competence Platform on Energy Crop and Agro-forestry Systems for Arid and Semi-arid ecosystems - Africa (COMPETE) - An European Commission Initiative, by Dr. Rainer Janssen, WIP, Germany
- Biofuels Production and Use in Brazil: The Long Experience with Ethanol and The New Biodiesel Program, Prof Arnaldo Walter, State University of Campinas (Unicamp), Brazil
- Biofuels Overview in Africa, by Prof. Francis Yamba, CEEEZ, Zambia

Presentation by Dr. Rocio Diaz, Imperial College

- Sustainability Assessment of Biofuels in Practice, Dr. Rocio Diaz-Chavez, Imperial College, London

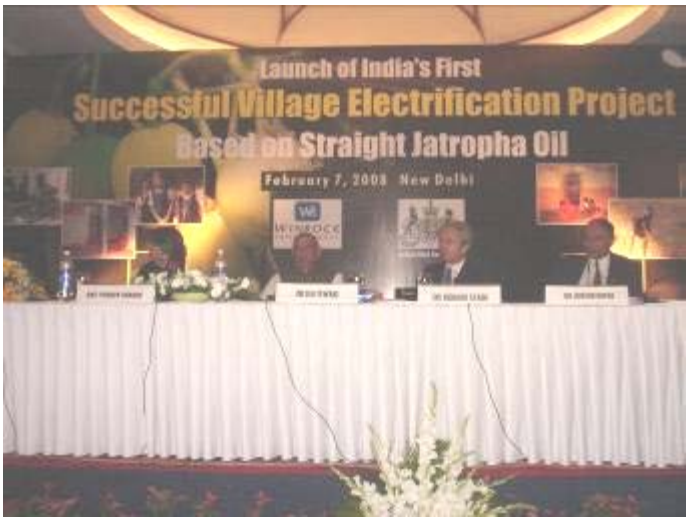
Among other topics, the conference highlighted current policy initiatives for the promotion of biofuels in India.

In 2003, the Planning Commission of the Government of India launched the 'National Mission on Biodiesel' identifying Tree-born Oil Seeds (TBO) such as Jatropha as suitable oil seeds for the production of biodiesel in order to replace fossil diesel in the transport sector and for rural electrification. This national mission stated the following objectives:

- Use of barren Government land and fallow land belonging to farmers,
- Generation of additional employment and income for the rural population,
- Environmental improvement through the cultivation of wastelands,
- Enhancing energy security,
- Electrification for remote rural areas based on pure plant oil.

Several Indian States, such as Chhattisgarh, have already implemented programmes for the promotion of TBO and biodiesel production, but the Indian National Policy on Biofuel is currently still under development.

On the evening of 7th February the official Launch of the Country's First Successful Village Electrification Project based on Straight Vegetable Oil took place in the presence of the Indian Minister for Rural Development.



Official launch of the Ranidhera village electrification project

Furthermore, a Documentary Film on the Ranidhera Village Electrification Project was presented to the audience of the 5th International Biofuels Conference.

All presentations held at the 5th International Biofuels Conference in New Delhi are available at the COMPETE project website www.compete-bioafrica.net.

Annex 1: The COMPETE Project

1.0 COMPETE Objectives

The Competence Platform on Energy Crop and Agroforestry Systems for Arid and Semi-arid Ecosystems – Africa (COMPETE) will establish a **platform for policy dialogue and capacity building** and identify **pathways for the sustainable provision of bioenergy**

- to improve the quality of life and create alternative means of income for the rural population in Africa
- to aid preservation of intact ecosystems in arid and semi-arid regions in Africa
- to enhance the equitable exchange of knowledge between EU and developing countries

2.0 COMPETE Activities

COMPETE will deliver a matrix of multi-disciplinary and cross-sectoral work-packages

- to evaluate current and future potential for the sustainable provision of bioenergy in Africa in comparison to existing land use patterns and technologies
- to facilitate South-South technology and information exchange capitalizing the world-lading RD&D in bioenergy in the key countries- Brazil, China, India, Mexico, and Thailand
- to develop innovative tools for the provision of financing for national bioenergy programs and local bioenergy projects including carbon credits, bilateral and multi-lateral funding instruments, and the role of international trade
- to develop practical, targeted, and efficient policy mechanisms for the development of bioenergy systems that enhance local value added, assist local communities, and address gender inequalities
- to establish the Competence Platform to ensure effective dissemination and knowledge exchange inside and outside the network

3.0 COMPETE Partnership

The COMPETE partnership comprises 20 European and 23 non-European partners – 11 partners from 7 African countries, 3 regional African policy and financing bodies (African Development Bank; Food, Agriculture and Natural resources Policy Analysis Network of Southern Africa; UEMOA- Biomass Energy Regional Program), 9 partners from Latin America and Asia, and the Food and Agriculture Organization of the United Nations (FAO).

COMPETE Website: www.compete-bioafrica.net

Annex 2: COMPETE India Field Visits – Agenda

	February 1, 2 & 3, 2008
COMPETE Partners / Associates arriving in Mumbai / India	
Hotel reservation – Residency Hotel, Suren Road, Andheri - Kurla Rd, Opp. Cine Magic, Near W.E. Highway, Andheri (East), Mumbai - 400 093, Telephone :- 91-22-6649 1234 / 1244 **Contact person:** Mr. Joseph Rodrigues, Manager	
	February 4, 2008
07:00	Departure to Pune from hotel by Bus (Distance: 170 km – Time: 3 hrs)
10:00 – 13:00	Visit to **PRAJ Industries** (Biofuel Plant & Machinery Manufacturer) PRAJ House, Bavdhan, Pune 411 021, Tel: +91-20-22951511, Web: www.praj.net
13:00 – 14:00	**Lunch**
14:00 – 15:00	Visit to **PRAJ Industries** *continued….*
15:00 – 17:30	**Visit to Thermax Ltd.** B&H Division, Energy Building, R D Aga Road, MIDC Chinchwad, Pune 411019, Phone: +91 (20) 66051318, Mobile : +919823125358 **Contact Person:** Ms. Pinaki Bhadury, Head - Strategy
17.30	Departure to Mumbai by Bus (Distance 170 km – Time: 3hrs)
20:30	Arrival in Mumbai
Hotel reservation – Residency Hotel, Suren Road, Andheri - Kurla Rd, Opp. Cine Magic, Near W.E.Highway, Andheri (East), Mumbai - 400 093, Telephone :- 91-22-6649 1234 / 1244 **Contact person:** Mr. Joseph Rodrigues, Manager	
	February 5, 2008
06.30	Hotel check out & departure
08.30	Departure to Raipur by Kingfisher Airlines (Flight No.: IT 4705)
11:15	Arrival in Raipur
12:00 – 13:00	**Lunch**
13:00	Departure to Ranidhera Village by Bus (Distance: 150 km – 4 hrs)
16:00 – 19:00	Visit to **Ranidhera Rural Electrification Project**
Hotel reservation – Hotel Supreet, Kawardha (No. of rooms booked : 20) **Contact person:** Mr. Nirmukh, Mob:09425241211, Tel: 07741 – 233592	

	February 6, 2008
08:00	Departure to Raipur by bus (Distance 150 km – Time: 3 hrs)
13:00	Arrival in Raipur
13:00 – 14:00	**Lunch**
14:00 – 17:00	Visit to Jatropha Plantations in Raipur & Dhampari district, Chattisgarh Mr. J.L. Gupta, Technical Officer CREDA, Mobile +91 94 2525 9083
17:00 – 18:00	Visit to Chattisgarh Biofuel Development Authority's (CREDA) Biodiesel Production Plant, Energy Education Plant, VIP Road, Raipur (Biodiesel Manufacturing Plant of the State Government)
18:30	Departure to Delhi by Jet Airways (Flight No: 9W 367)
21:30	Arrival in Delhi
Hotel reservation – 1. New Woodland Hotel (No. of rooms: 17), B-7/113 A, Safdarjung Enclave Extension, New Delhi-110029, Phone: 011-46014444, Website: www.newwoodland.comb **Contact person:** Mr. Abraham Mathew, General Manager (Mob: 9810352445) 2. India Habitat Centre (No. of rooms booked: 7), Lodhi Road New Delhi - 110003 Phone: 24682001-24682009, Website: www.indiahabitat.org	
	February 7, 2008
08:30	Departure to Hotel Le Meridian, New Delhi
09.30 – 17.30	5th International Biofuel Conference Hotel Le Meridien, Janpath, New Delhi
	February 8, 2008
08:30	Departure to Hotel Le Meridian, New Delhi
09.30 – 17.30	5th International Biofuel Conference Hotel Le Meridien, Janpath, New Delhi
Hotel reservation – 1. New Woodland Hotel (No. of rooms: 17), B-7/113 A, Safdarjung Enclave Extension, New Delhi-110029, Phone: 011-46014444, Website: www.newwoodland.comb **Contact person:** Mr. Abraham Mathew, General Manager (Mob: 9810352445) 2. India Habitat Centre (No. of rooms booked: 7), Lodhi Road New Delhi - 110003 Phone: 24682001-24682009, Website: www.indiahabitat.org	
	February 9 & 10, 2008
Departure of COMPETE partners	

Annex 3: Participants

No.	First Name	Last Name	Organization	Country	Email
1	Rainer	Janssen	WIP	Germany	rainer.janssen@wip-munich.de
2	Fiona	Zuzarte	SEI	Sweden	fiona.zuzarte@sei.se
3	Mamadou	Dianka	UEMOA	Burkina Faso	mdianka@uemoa.int
4	Michael	Madjera	EKMD	Germany	michael.madjera@ekmd.de
5	Estomih	Sawe	TaTEDO	Tanzania	energy@tatedo.org
6	Rocio A.	Diaz-Chavez	Imperial College, London	UK	r.diaz-chavez@imperial.ac.uk]
7	Helen	K Watson	University of KwaZulu-Natal	South Africa	Watsonh@ukzn.ac.za
8	Raffaella	Bellanca	Eco Harmony	UK	raffaella@ecoharmony.com
9	Giuseppe G.	Ristori	ISE	Italy	ristori@ise.cnr.it
10	Paul	van Aalst	E+Co Europe	NL	paul.van-aalst@eandco.net
11	Francis	Yamba	CEEEZ	Zambia	fdyamba@yahoo.co.uk
12	Arnaldo	Walter	UNICAMP	Brazil	awalter@fem.unicamp.br
13	Veronika	Dornburg	Utrecht University	NL	V.Dornburg@uu.nl
14	Emilio	de los Ríos	UNAM	Mexico	edelosrios@prodigy.net.mx
15	Kingiri	Senelwa	Moi University	Kenya	ksenelwas@yahoo.co.uk
16	Sobhanbabu	Patragadda	WII	India	sobhan@winrockindia.org
17	Deepak	Kumar	WII	India	deepak@winrockindia.org
COMPETE Associate Members					
18	Jiregna	Gindaba	Sun Biofuels Ltd.	Ethiopia	jgindabadoti@sunbiofuels.com
19	Massaer	Nguer	ISRA	Senegal	massnguer@yahoo.fr
20	Dame	Niang	Ministère de la Recherche Scientifique	Senegal	niangd@ucad.sn
21	Festus	Addo-Yobo	CSIR-Institute of Industrial Research	Ghana	waddoyob@hotmail.com
22	Ohene	Akoto	Jatropha Africa Ltd.	Ghana	oakoto@jatrophaafrica.com
23	Ivan	Vera	UN DSD	USA	vera@un.org
24	Gavin	Schafer	Sun Biofuels Ltd.	Ethiopia	terramap@lantic.net

COMPETE Project Coordination
WP7 Coordination - Dissemination

WIP Renewable Energies
Sylvensteinstr. 2
81369 Munich
Germany
Contact: **Dr. Rainer Janssen**
Dominik Rutz
Phone: +49 89 720 12743
Fax: +49 89 720 12791
E-mail: rainer.janssen@wip-munich.de
dominik.rutz@wip-munich.de
Web: www.wip-munich.de

WP1 Coordination – Current Land Use

University of KwaZulu-Natal
School of Environmental Sciences
South Africa
Contact: **Dr. Helen Watson**
E-mail: watsonh@ukzn.ac.za
Web: www.ukzn.ac.za

WP2 Coordination – Improved Land Use

Utrecht University
Dept. Science, Technology and Society
The Netherlands
Contact: **Dr. Andre Faaij**
Dr. Veronika Dornburg
E-mail: A.P.C.Faaij@uu.nl
V.Dornburg@uu.nl
Web: www.chem.uu.nl/nws

WP5 Coordination – Financing

Energy for Sustainable Development
United Kingdom
Contact: **Jessica Abbott**
Stephen Mutimba
E-mail: jessica.abbott@esd.co.uk
smutimba@esda.co.ke
Web: www.esd.co.uk

COMPETE Project Coordination
WP3 Coordination - Sustainability

Imperial College London
Centre for Energy Policy and Technology
South Kensington Campus, London, SW7 2AZ
United Kingdom
Contact: **Dr. Jeremy Woods**
Dr. Rocio Diaz-Chavez
Phone: +44 20 7594 7315
Fax: +44 20 7594 9334
E-mail: jeremy.woods@imperial.ac.uk
r.diaz-chavez@imperial.ac.uk
Web: www.imperial.ac.uk

WP4 Coordination – International Cooperation

Winrock International India
Contact: **Sobhanbabu Patragadda**
E-mail: sobhan@winrockindia.org
Web: www.winrockindia.org

Stockholm Environment Institute
Contact: **Francis Johnson**
E-mail: francis.johnson@sei.se
Web: www.sei.se

European Biomass Industry Association
Contact: **Stephane Senechal**
E-mail: eubia@eubia.org
Web: www.eubia.org

WP6 Coordination – Policies

Food, Agriculture and Natural Resources Policy Analysis Network of Southern Africa
South Africa
Contact: **Douglas Merrey**
Dr. Charles Jumbe
E-mail: d.merrey@cgiar.org
charlesjumbe@bunda.unima.mw
Web: www.fanrpan.org

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