

BIOCOM

&

SUSTAINABILITY

GSB & LACAF AUGUST MEETING

August ,2014



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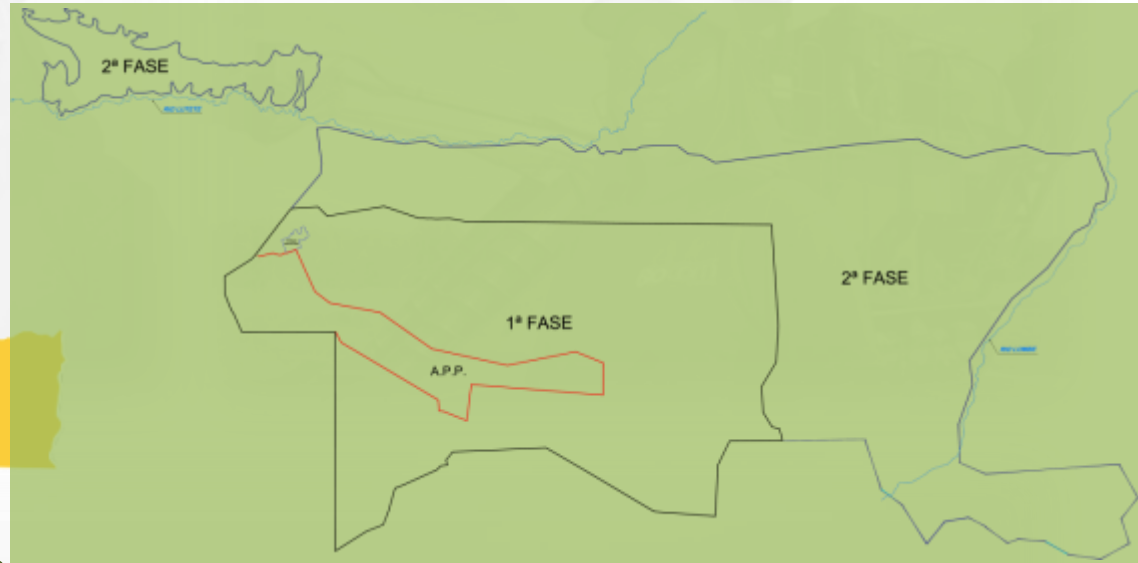
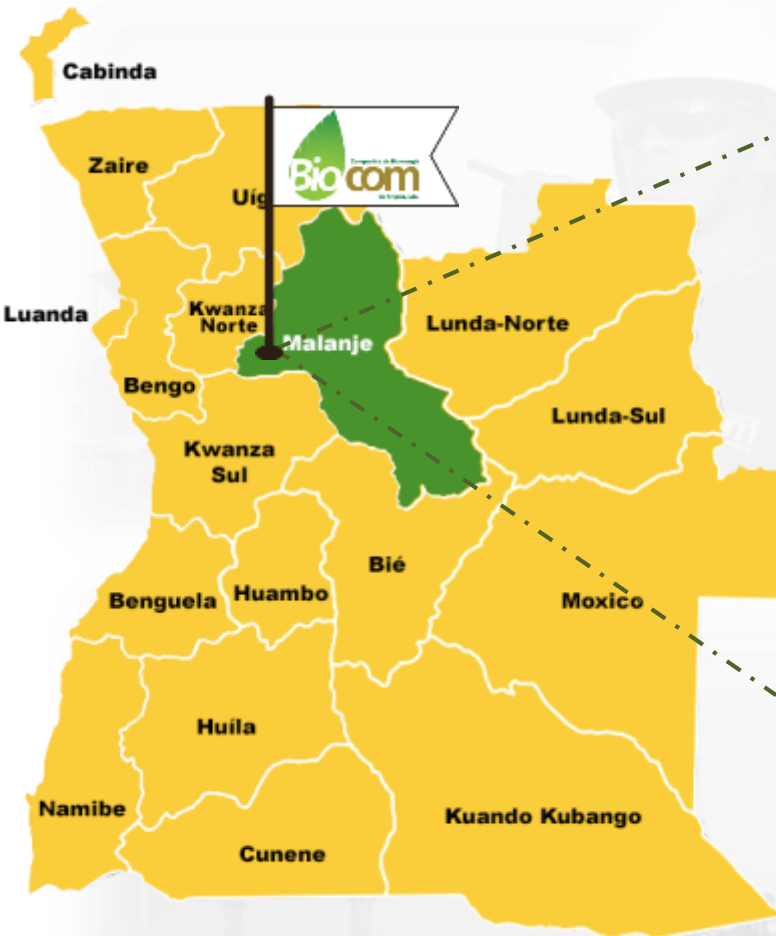


Social Highlights 03



Environmental Highlights 04





Biocom is inserted into the Polo Agroindustrial of Capanda, which aims to develop the agro business and food security in Angola.

County of Cacuso – Malanje Province
Angola, 370 km of Luanda.

Shareholders

Cochan



40%

ODEBRECHT

40%



20%

Agricultural Area

- 1st phase agricultural area = 36.921,00 ha
- 2nd phase agricultura area = 33.185,00 ha
- Total agricultural area = 70.106,00 ha

Investment

1st Phase

- USD 750 Millions

2nd Phase

- USD 520 Millions

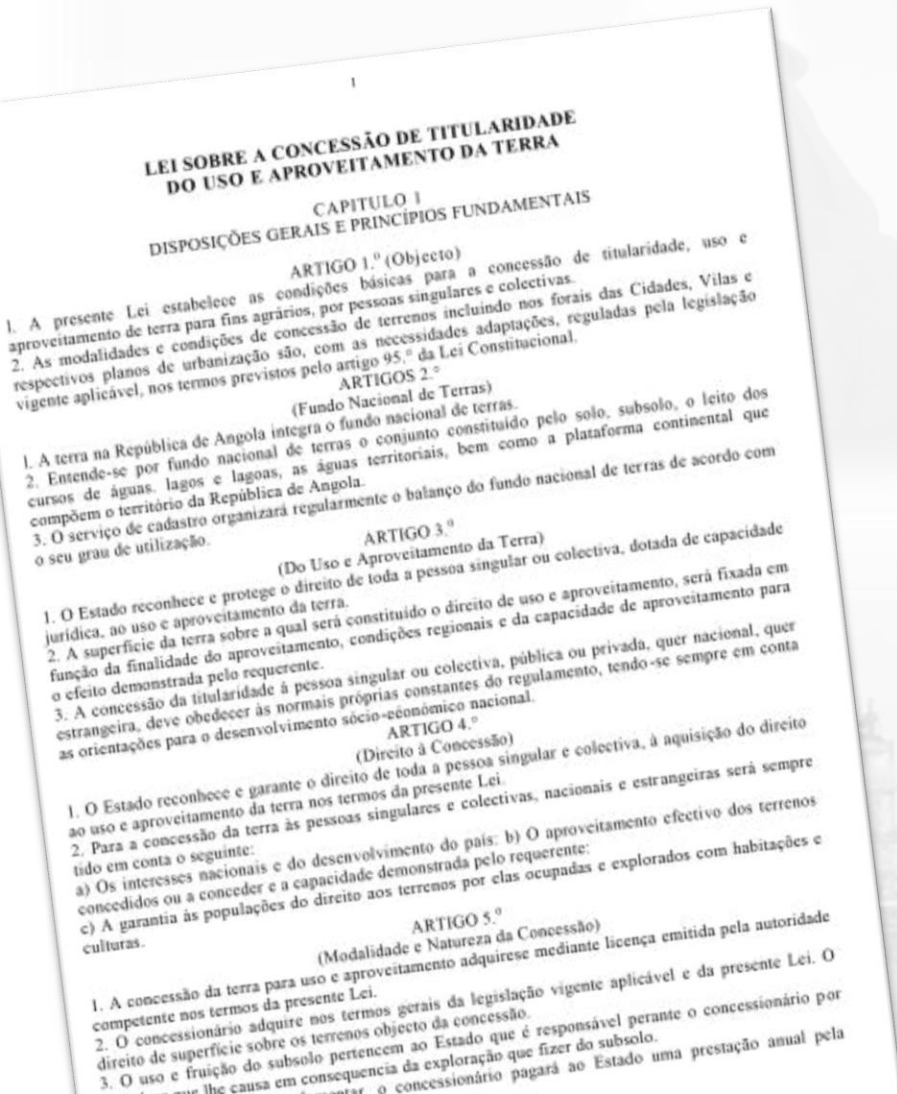
Production Phase I – Crop 18/19

- 2,2 millions of sugar cane;
- 256 millions ton of white cristal sugar;
- 30 millions m³ of anhydrous ethanol;
- 235 GWh of energy export.

Production Phase II – Crop 23/24

- 4,4 millions of sugar cane;
- 512 millions ton of white cristal sugar;
- 60 mil m³ of anhydrous ethanol;
- 342 GWh of energy export.

Land use in Angola



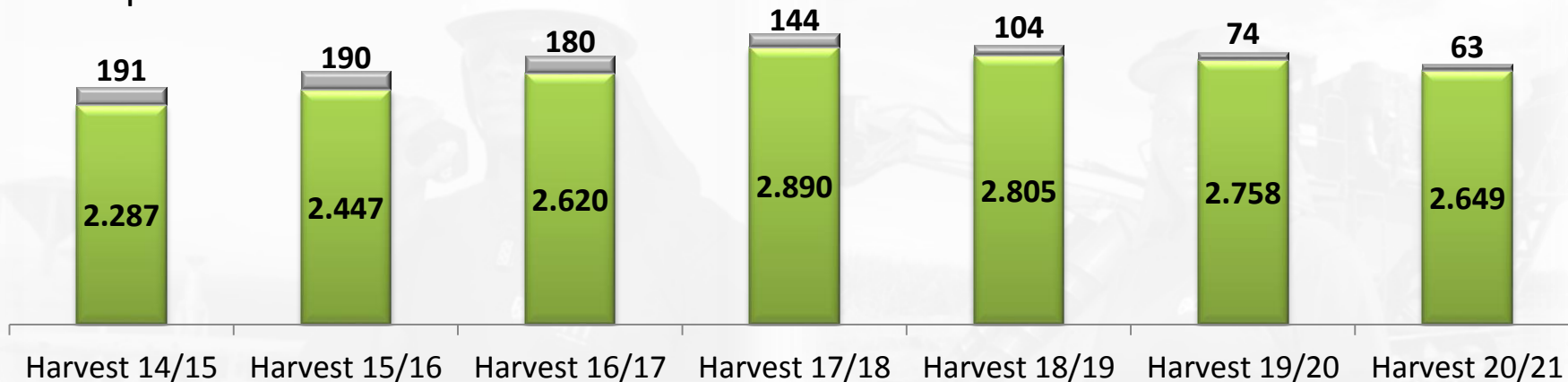
- ✓ The use and land concession in Angola was regulated in 1992;
- ✓ Created the National Land Fund;
- ✓ The concessions are made by the Government considering the national socio-economic interest;
- ✓ Can be made public or private, collective or singular people for a period of up to 45 years.

PEOPLE



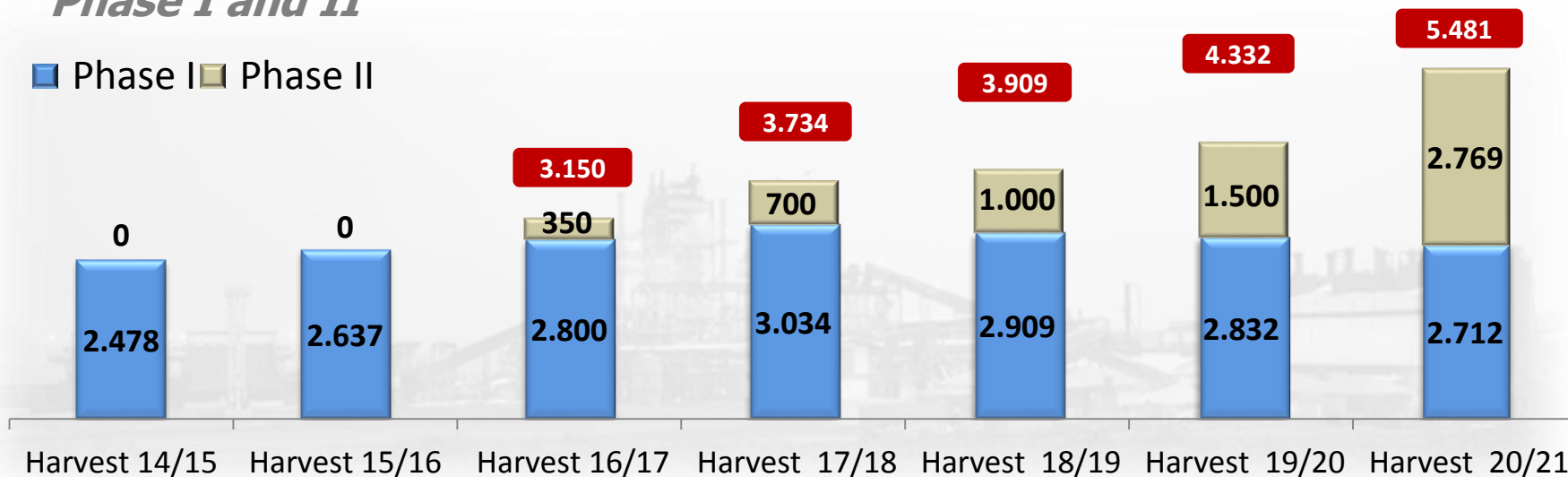
Phase I

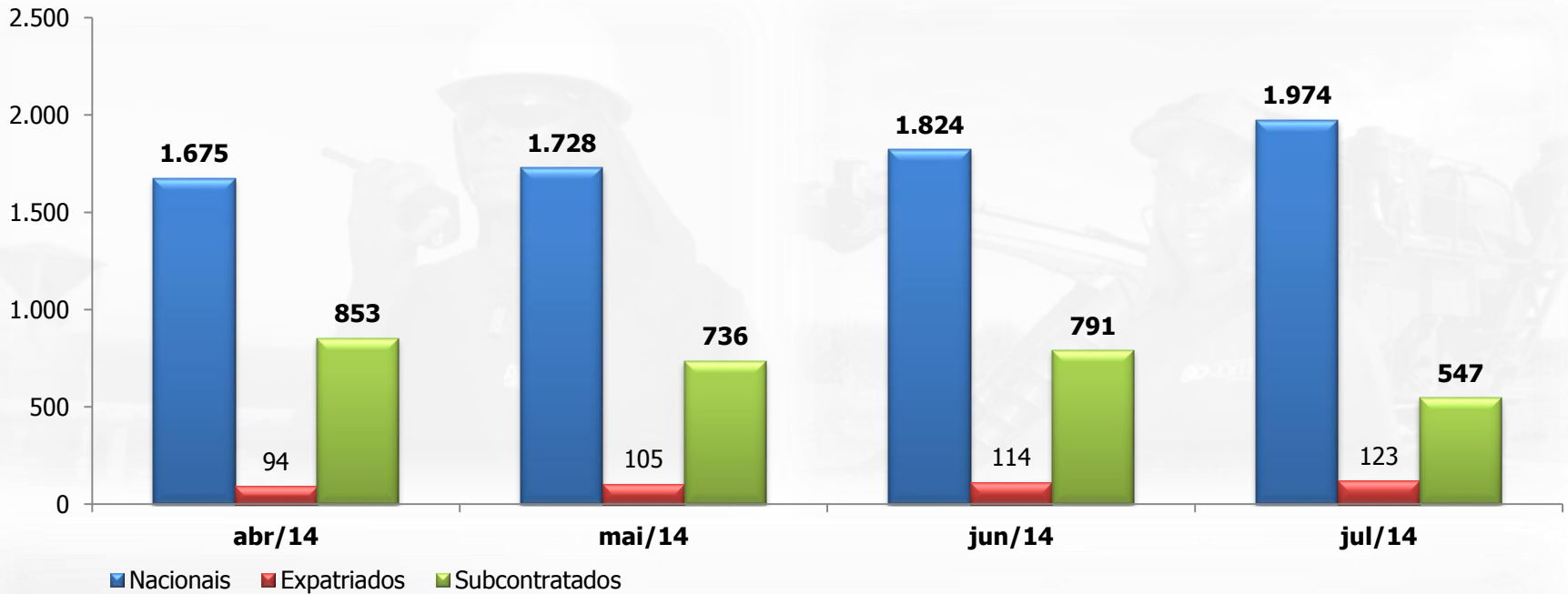
■ Expatriate ■ National



Phase I and II

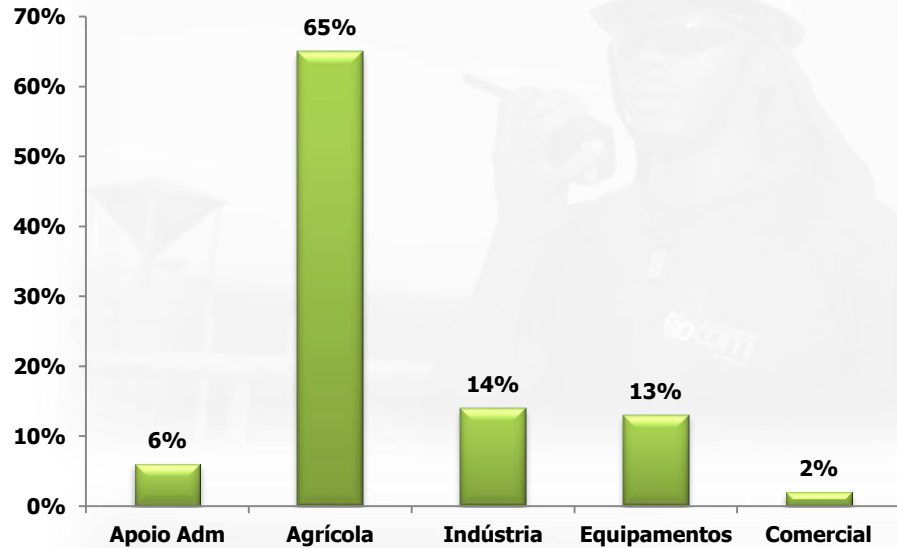
■ Phase I ■ Phase II



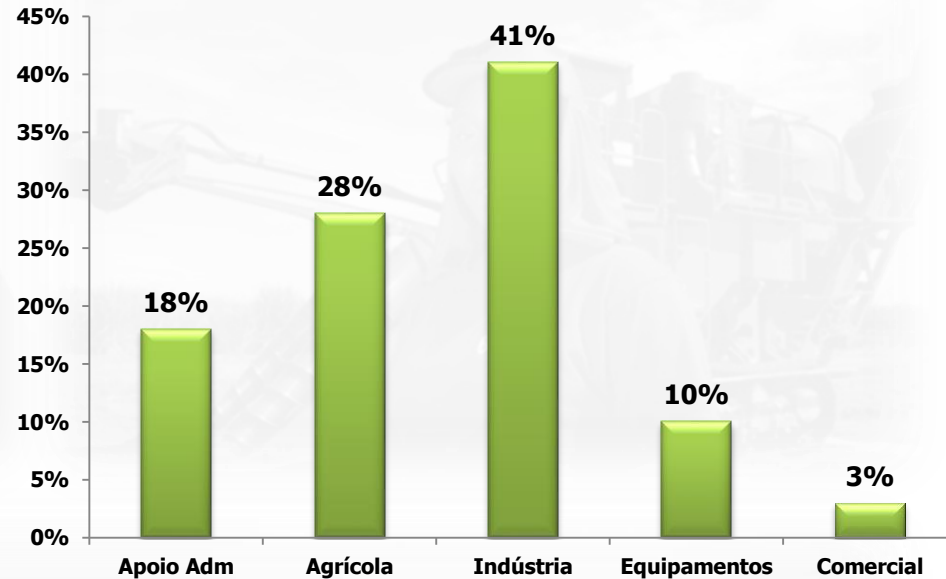


Effective	Apr-14	May-14	Jun-14	Jul-14
National	1.675	1.728	1.824	1.974
Expatriate	94	105	114	123
Subcontractors	853	736	791	547
Total	2.622	2.569	2.729	2.644

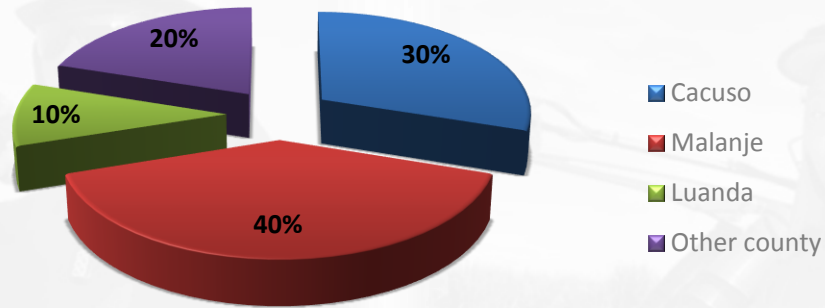
Área distribution - Nationals



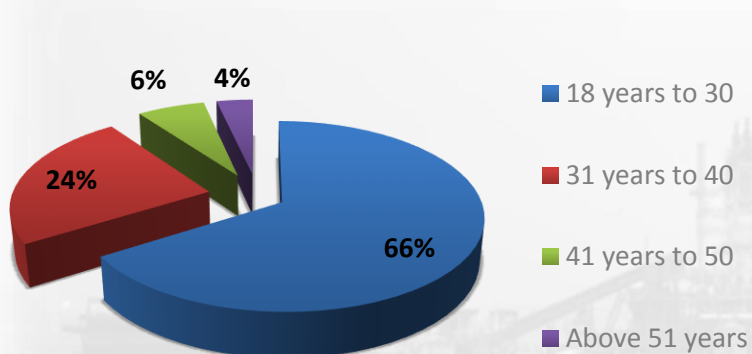
Área distribution – Expatriates



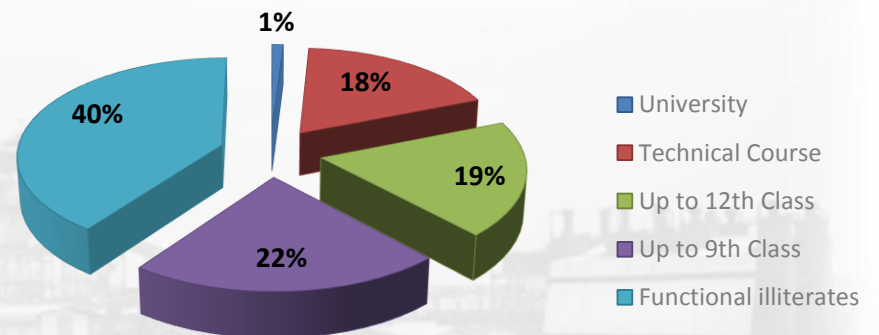
Origin of National Contracts Effective



Age Group



School Level



General Working Conditions

4.800 meals are served daily under the supervision of a dietitian.



A fleet of 45 buses carrying 2.000 members daily.



200 national and expatriate members are housed in a structure that offers:

- ✓ Feeding;
- ✓ Internet;
- ✓ Rooms with air conditioning, Tv and minibar;
- ✓ Laundry Services;
- ✓ Structure of drinking water;



- ✓ Weekly fellowship;
- ✓ Festivities in festive dates;
- ✓ Football Tournaments;
- ✓ Tours sights on Sundays;



Gym



Playroom



Living area





Team of nine technicians of Occupational Safety led by an Engineer of Work Safety.

- ✓ Investment of \$ 3 million in equipment and training in SHE
- ✓ Deployment of the Emergency Response Plan;
- ✓ Emergency Brigade;



Occupational Hygiene:

- ✓ Environmental Risk Assessment – physical, chemical and biological;
- ✓ Plan for chemical, toxic and flammable hazards.

Security Management System with risk analysis based on OSHAS 18.001:

- ✓ Security Analysis Task;
- ✓ Preliminary Hazard Analysis;
- ✓ Work Instruction;
- ✓ Work Permit Critical Risk;



PERMISSÃO PARA TRABALHO

PI. STMA 005

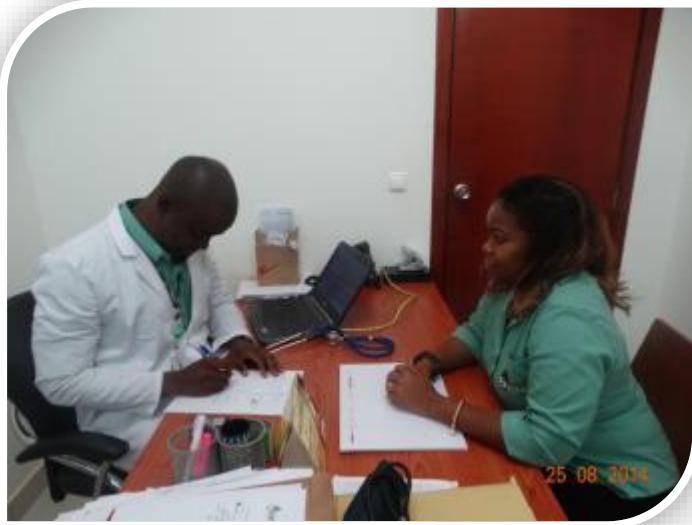
ANEXO 3 SERVIÇO A QUENTE

1. PLANTA / ÁREA		2. DATA E HORA DA EMISSÃO / / às : :		3. OS Nº.	4. TURNO	5. Nº DE INTEGRANTES	
6. EMPRESA (PARCEIRA)/ÁREA GESTORA				7. SUPERVISOR DA ÁREA			
8. DESCRIÇÃO DETALHADA DO SERVIÇO / LOCAL DO SERVIÇO / FERRAMENTAS QUE SERÃO UTILIZADAS:							
ITEM 5 PI. SSMA 005							
MATRIZ DE ACEITABILIDADE:		FREQUENCIA		SEVERIDADE DO RISCO			
9. NOME(S) E MATRICULA DOS EXECUTANTES ENVOLVIDOS NO SERVIÇO (VERSO):							
	NOME	MAT.	ASSINATURA		NOME	MAT.	ASSINATURA
1				4			
2				5			
3				6			
10. AVALIAÇÃO FÍSICA DO EQUIPAMENTO OU LINHA:					11. AVALIAÇÃO ELÉTRICA:		
	SIM	NAO	N/A		SIM	NAO	N/A
DRENADO/INSENTO DE LÍQUIDO?				ISOLADO DO PROCESSO?			DESENERGIZADO?
LAVADO / LIMPO?				COM DRENOS ABERTOS?			ETIQUETADO?
VAPORIZADO/STEAM OUT?				VÁLVULAS BLOQUEADAS?			COM CADEADO?
DESCONTAMINADO?				RAQUETEADO?			OUTROS?
FORA DE OPERAÇÃO?				PURGADO COM Nº?			DESENERGIZADO
DESPRESURIZADO?				ETIQUETADO?			ENERGIZADO
OUTROS?				OUTROS?			DONO DA ÁREA
							DONO DA ÁREA
					NOME	ASS	NOME
							ASS



All members receive uniform and individual safety equipment.

Medical Corporate Structure



- ✓ Medical Clinic that serves 24hours;
- ✓ Medical team with 2 doctors and 12 nursing technicians with 2 ambulances;
- ✓ International Health Plan ALLIANZ;
- ✓ Aerial medical evacuation in case of emergency;
- ✓ Laboratory of Clinical Analysis;
- ✓ Agreements with Hospitals of Luanda and Malanje.



Expatriate members receive Malaria Test Kit and medicine.

Investing in People



Partnership with the College of Agricultural Sciences in Huambo



Structuring the CEFOPROF of Cacuso



Partnership with INEFOP for training of **345 professionals** for industrial operation through **SENAI**;



Partnership with the **College of Agricultural Sciences** in Huambo;



Support **CEFOPROF of Cacuso** on structuring laboratories;



Partnerships with **Medium Agrarian Institutes** of Malanje, N´Dalatando and Wako-Kungo;



Partnership with the School Eiffel of Malanje;



Partnership with Don Bosco school in Adult Literacy;



Training held until April/14

36 Sugarcane Harvesting Machine Operators
353 Tractor Operators;
91 Drivers;
48 Yellow Machine Operators;
40 Automotive Mechanics and Electricians;
90 Farm Leaders;

- **Incomes:** from US\$ 230 (MWage : US\$ 150)



Simulators of Case and John Deere, to train harvesting operations



Practical & Theoretical Training



Technical Seminar for Agricultural Leaders

Professional formation and training to attend the operation of industrial plant



All members trained by the Rules of Safety Work.



140 Industrial Operators
30 Laboratory Analysts

30 Industrial Mechanics
30 Industrial Electricians
15 Instrumentalists
15 Boilermakers
15 Welders
15 Mechanic Turners

Transfer knowledge through practical training.



SENAI



SOCIAL HIGHLIGHTS



Social Development Program

Education

Promote actions to support basic education to eliminate illiteracy and professional qualification.



Incoming Generation

Promote actions that aim empowering of the population in activities that can generate income.



Health

Promote actions of education and awareness of good health practices.



Sport, Culture and Leisure

Promote actions to encourage sports, cultural and leisure activities.



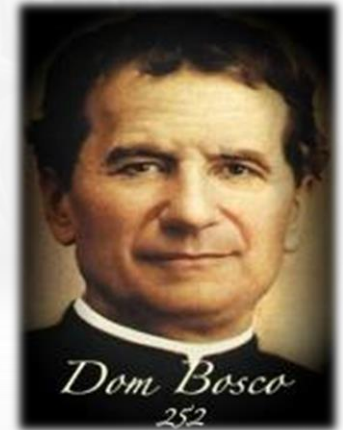
Education



- ✓ 180 people are part of the Literacy Program for Adults;
- ✓ Lectures on Environmental Education in the neighborhoods;
- ✓ Courses of Excel and Word;



Excel & Word courses



Adult Literacy in partnership with Don Bosco School

Incoming Generation



- ✓ Partnership with the Program for Family Agriculture Kukula Ku Moxi benefiting over 700 families;
- ✓ 29 districts benefited;
- ✓ 275 tons of vegetables produced in 2013;
- ✓ US\$ 2.5 million invested in 2013



João Agostinho da Costa works as a tractor operator in Biocom and his wife is part of the cooperative.

Live in the Luxilo neighborhood.



Family Farming

Health

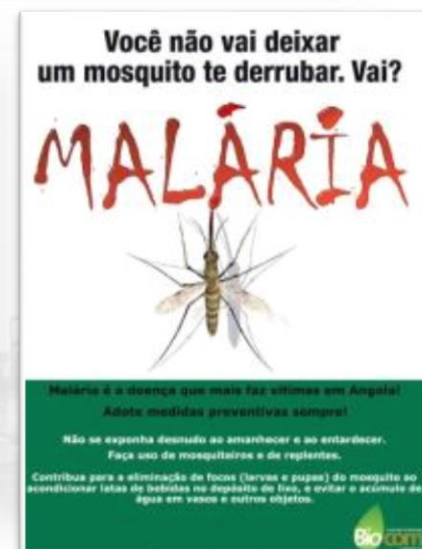


Projects in Health

- ✓ Campaigns Blood Donation, prevention of Malaria, Vaccination;
- ✓ Safe Child Births for midwives of Kukula Ku Moxi.



Lectures on malaria and HIV AIDS. prevention



Sport and Leisure



Projects in Sport

- ✓ 80 young people, from the community, have Judo and Jiu-Jitsu classes in Palanca Negra School;

Projects in Cultural Area

- ✓ 800 children in movie sessions;



Jiu-Jitsu and Judo class



Movie sessions for the children

Relationship with the Community

- ✓ Meetings with Sobas and support to local traditions;
- ✓ Regularization of identification documents;



Meeting with Sobas



Traditional Ceremony
with Soba



Community visit



Support on issuance
of the birth
certificate and
identification

ENVIRONMENTAL HIGHLIGHTS



- ✓ Investment of \$ 2.5 million in environmental monitoring programs;
- ✓ Investment of \$ 150 million in environmental technologies.

- ✓ Brazillian Industrial technology with diffuser system;
- ✓ Generation of electricity from Biomass – bagasse or wood resulting from vegetation removal;
- ✓ Production of Anhydrous Ethanol MEG – Methyl Etinelo Glycol – in addition to gasoline;
- ✓ Production of white crystal sugar (color 150) – Compact Industrial Plant.



- ✓ Control of **air emissions** from boilers – Boiler soot is used to fertilize the cane;
- ✓ **Effluent Treatment Station** – Stillage and bleach are used in fertigation of sugarcane;
- ✓ **Water Treatment Station** - reuse of wastewater after treatment in closed circuit;
- ✓ **Wastewater Treatment Plant for the Equipment Maintenance Unit**– reuse of wastewater after treatment in closed circuit.





Don't have a clear definition in the act as areas of permanent reserve and riparian vegetation.

Collecting seeds in the region



Seeds selection



Sowing seeds



Seeding of various species



Seedlings ready



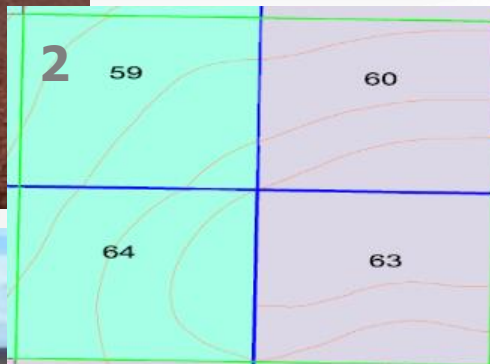
Reforestation



Soil Systematization

Terracing: The construction of terraces or large embedded base is one of the most efficient practices to control erosion on cultivated land.

1



1. Markings of carriers in the field with the use of surveying equipment.
2. Altimetry survey of the land to verify the need for terracing.
3. Marking Terraces.
4. Construction of terraces to conserve soil without risk of sheet erosion.

3 e 4



Planting and Irrigation System

Planting and harvesting **100% mechanized**;
Planted area until August/14: 7.400 ha;
Irrigated crop in the harvest 14/15: 4.767 ha;
Irrigation: Grant of 0.389 m³/s



More than bioenergy
production, we are changing
the expectation of many
lives!





Thank you!

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