



MATA ATLÂNTICA E SUSTENTABILIDADE

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PROJECT
"EDUCATION & CLIMATE CHANGES"

STI & HIV WORLD CONGRESS, RIO 2017

(Joint meeting of the 22nd ISSTD & 18th IUSTI)



FINAL REPORT



SBDST | Sociedade Brasileira de Doenças Sexualmente Transmissíveis

December 2016

INSTITUCIONAL DATA

Name: Sociedade Brasileira de Doenças Sexualmente Transmissíveis/Setor de DST (MIP/CBM), Universidade Federal Fluminense.

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DIRECTOR

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OBJECTIVE

Neutralize the Effects of Greenhouse Gases – STI & HIV World Congress to be held in Rio de Janeiro, Brazil, from July 9 to 12, 2017.

DESCRIPTION

INSTITUTION

The Brazilian Society of STD, or Brazilian Association for the Control of Sexually Transmitted Diseases (ABCDST), founded in July 7, 1988, is a civil, unprofitable organization, of indefinite term, which aims to bring together doctors and other professionals working in the top-level domain of health activity in the Federative Republic of Brazil; encourage actions for the control of sexually transmitted diseases (STD); promote the integration of occupational categories participating in STD control actions; stimulate and conduct periodical Congresses, Conferences, Symposiums and scientific meetings, as well as scientific publications and/or public elucidation; act together, make partnerships and related agreements with the public sectors, private bodies, and other Civil Society Organizations (CSOs); link up with other similar national and international associations; promote the publication and dissemination of topics

of interest. With these actions, ABCDST intends to improve health care and education, and defend the professional interests. The doctor and professor at the Federal University of Rio de Janeiro Mauro Romero Leal Passos was the first President of the society and, in 1986, opened the first congress of the society, *DST In Rio*, held at Hotel Glória, Rio de Janeiro. In 1998, the professor continued to promote a series of the society's events presiding *DST In Rio 2*. Thereafter, his colleagues took the society's board of directors, and every two years a large and efficient national Congress had been carried out, always reaching more than 1,500 national and foreign participants.

The Sexually Transmitted Diseases Section in the Department of Microbiology and Parasitology of the Biomedical Institute at the Fluminense Federal University was created in October 1988 under the coordination of Prof. Mauro Romero Leal Passos.

The STI Section accomplished several activities, as follows: medical care to patients referred by the public network of the city of Niterói and metropolitan area municipalities, health education activities for the general population, development of clinical research, specialization course in STD. The Section edits the *DST - Brazilian Journal of Sexually Transmitted Diseases* quarterly, an indexed scientific journal, which is a reference approach to STDs. The journal is printed and distributed or can be accessed on the internet in Brazil and abroad.

THE CARBON NEUTRALIZING PROJECT

THE ENVIRONMENTAL EDUCATION PROJECT & CLIMATE CHANGE is the basis for a social and Environmental Program that intends to mobilize the public and organizers of the STI & HIV WORLD CONGRESS 2017 to realize, comprehend and effectively participate in the improvement of life quality by addressing the theme of climate change and global warming.

The project consists in achieving the necessary goals so that the Congress obtains the PRIMA CLIMATE CHANGE SEAL for the compensation of carbon emissions.

OBJECTIVES

- 1.** Collaborate with the reduction of carbon emissions and fight the effects of global warming.
- 2.** Submit a strategic model against climate change that can be replicated in other events across the country and abroad.
- 3.** Awaken the consciousness of the public about climate change and the necessary attention to confronting the consequences of practicing the motto "think globally, act locally".
- 4.** Disclose to society there are institutions that exemplify the best practices in favor of the environment, showing that it is possible to change toward sustainability, and that this change has already begun with the leaders.
- 5.** Stimulate citizen participation in actions of Sustainability with a view to social welfare.

ACTIVITIES CARRIED OUT

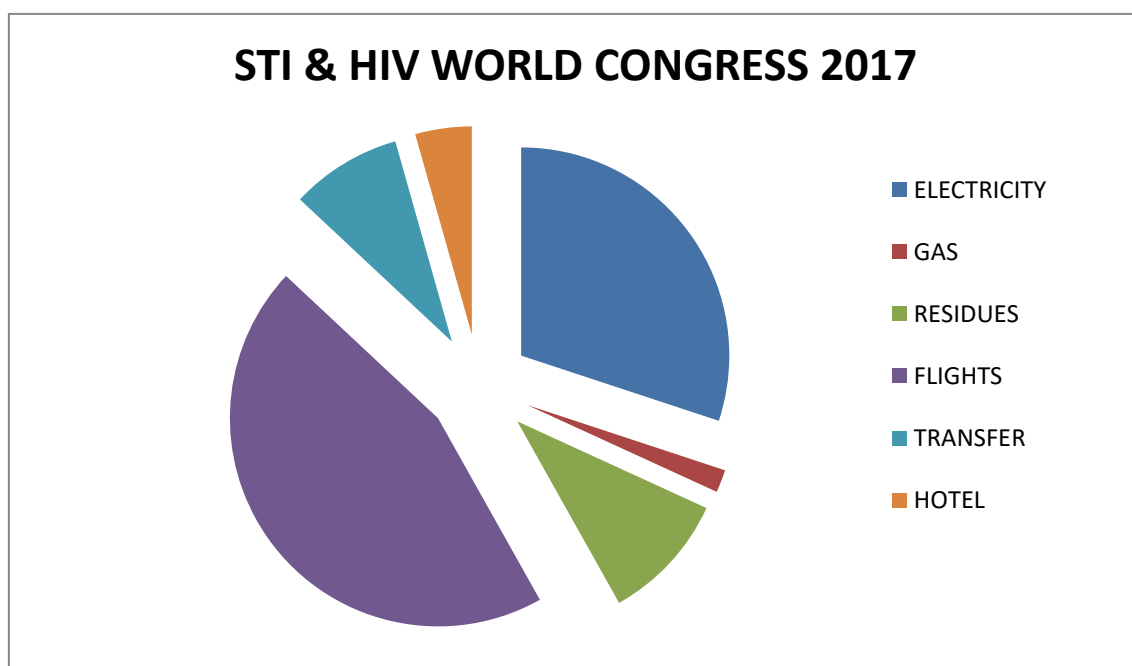
- 1.** Setting GGE Inventory – Greenhouse Gases Effects with the gathering of information related to emitters vehicles from the stages of 2017 Congress.
- 2.** Conversion of the result of the total quantity of emissions in seedlings of Atlantic Forest native trees to be planted in the preservation area for proper environmental compensation.
- 3.** Definition of the area for planting 500 trees.
- 4.** Creation of a "Field Day" to accomplish pedagogical actions of planting, as a joint effort and Environmental Education.
- 5.** Monitoring of the planted seedlings to ensure their survival for at least 21 years, which is the approximate time spent by the Atlantic Forest species to reach the adult stage, incorporating in its biomass the amount of equivalent carbon emitted, on the matter in hand, through the stages of Congress 2017.

6. Registration of images and make them available on Social Networks to collaborate in the construction of collective consciousness, especially among young students.

7. The institution's certification as to compliance with the methodology, granting the title "NEUTRAL CARBON EVENT".

WORKSHEET OF GREENHOUSE GASES EMISSION - CONGRESS 2017

ITEM		QUANTITY		tonCO ₂ e
1	Electricity	500,000	kW/h	24.0 tCO ₂ e
2	Fuel Gas	100	m ³	1.41 tCO ₂ e
3	Organic residue	300	kg	8.0 tCO ₂ e
5	Flights	1,000,000	km (Brasil)	23.50 tCO ₂ e
		1,300,000	km (exterior)	32.50 tCO ₂ e
6	Motor vehicle	2,000	litres/gas	6.90 tCO ₂ e
7	Lodging	vb	daily expenses	3.5 tCO ₂ e
8	Other material	100	kg	1.0 tCO ₂ e
TOTAL				100,81 tCO₂e
GRAND TOTAL OF SEEDLINGS FOR PLANTING				500 trees (Atlantic Forest)



TREES PLANTING

1. Planting 695 seedlings of Atlantic Forest.

Area: IF PINHEIRAL

- District: Centro, CEP: 27197-000.
- Municipality: Pinheiral.
- State: Rio de Janeiro.
- Responsible for the area: Maurílio de Faria Vieira Júnior.
- Period: December 2016.

PLANTED SPECIES

COMMON NAME	SCIENTIFIC NAME	ECOLOGICAL GROUP	QT.
Aroeira pimenteira	<i>Schinus terebinthifolius</i>	pioneer	38
Anda-açu	<i>Joanesia princeps</i>	opportunistic	35
Cacau-selvagem	<i>Bombacopsis glabra</i>	initial secondary	126
Caju	<i>Anacardium occidentale</i>	opportunistic	2
Goiabeira	<i>Psidium guajava</i>	late secondary	39
Guapuruvu	<i>Schizolobium parahyba</i>	pioneer	17
Ingá	<i>Inga vera</i>	opportunistic	126
Jacarandá-mimoso	<i>Jacaranda mimosifoli</i>	pioneer	2
Jenipapo	<i>Genipa americana</i>	late secondary	45
Jussara	<i>Euterpe edulis</i>	late secondary	1
Leiteira	<i>Peschiera fulchsiae folia</i>	pioneer	10
Paineira rosa	<i>Ceiba speciosa</i>	initial secondary	35
Pau-cigarra	<i>Senna multijuga</i>	pioneer	5
Sesbania	<i>Exótica</i>	opportunistic	6
Sibipiruna	<i>Caesalpinea pluviosa</i>	secondary	38
Tamboril	<i>Enterolobium contortsiliquum</i>	pioneer	38
Tucaneiro	<i>Cytharexyl lummyriantum</i>	opportunistic	135

The planting area was divided into two parts. The first one has an extension of approximately 2,000 m² (0.2ha) destined to test the use of fodder leguminous bean, *mucuna*, *guandu* and *crotalária* for the control of spontaneous vegetation (invasive). The following forest species *ingá* (126 seedlings), cocoa (126 seedlings) and *tucaneiro* (126 seedlings) will be used in this area, with 2x2m spacing.

The second area, of approximately 0.2ha, was reserved for mixed planting of seventeen species listed above with their respective number of seedlings with 2.5x2.5m spacing.

All the planting and the experiment accomplishment are designed to restore the Permanent Preservation Area on the banks of Caximbau stream. Each area is 1,600m² long.

Coordinates GOOGLE 23 K zone; 604213.96m E and 7509394.63m S.



CALCULATION METHODOLOGY

1. For CO₂: $E_{CO_2} = (DA * Femiss) / 1000 * GWP$

- E_{CO_2} = Emission of CO₂ (tCO₂e)
- DA = Data of Activity (l/m³)
- Femiss = Factor of emission of CO₂ (kg/l – kg/m³)
- GWP = Global Warming Potential. CO₂ = 1

2. For CH₄: $E_{CH_4} = (DA * Femiss) / 1000 * GWP$

- E_{CH_4} = Emission of CH₄ (tCO₂e)
- DA = Data of Activity (l/m³)
- Femiss = Factor of emission of CH₄ (kg/l – kg/m³)
- GWP = Global Warming Potential. CH₄ = 21

3. Para NO₂: $E_{NO_2} = (DA * Femiss) / 1000 * GWP$

- E_{NO_2} = Emission of NO₂ (tCO₂e)
- DA = Data of Activity (l/m³)
- Femiss = Factor of emission of NO₂ (kg/l – kg/m³)
- GWP = Global Warming Potential. NO₂ = 310

4- Electricity: $E_{CO_2} = (DA * Femiss) / 1000 * GWP$

- E_{CO_2} = Emission of CO₂ (tCO₂e)
- DA = Data of Activity (l/m³)
- Femiss = Factor of emission of CO₂ (kg/l – kg/m³)
- GWP = Global Warming Potential. CO₂ = 1

Note: 2006 IPCC methodology also used by GHG Protocol with the conversion of tCO₂/MWh into tCO₂/kWh, by dividing the values by 1,000.

5- Flights: $E_{CO_2} = DA * Femiss * FA * GWP / 1000$

- E_{CO_2} = Emission of CO₂ (tCO₂e)
- DA = Data of Activity (km)
- Femiss = Factor of emission of CO₂ (kgCO₂/passageiro.km)
- GWP = Global Warming Potential. CO₂ = 1

Note: 2006 IPCC methodology also used by GHG Protocol by calculating the total distance travelled by flight by applying 9% of correction factor concerning delays, scales, taxi, etc.

Note₂: Flight Category Table with Emission Factors:

FLIGHT CATEGORY	EMISSION FACTORS		
	CO ₂ (kgCO ₂ /pas.km)	CH ₄ (kg CH ₄ /pas.km)	N ₂ O (kg N ₂ O/pas.km)
Long distance	0,10789*	0,0000005*	0,000003*

($d \geq 3,700\text{km}$)			
Middle distance ($500\text{km} \leq d < 3,700\text{km}$)	0,09429*	0,0000005*	0,000003*
Short distance ($d < 500\text{km}$)	0,16513*	0,000005*	0,000005*
*2012 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting			

6- Organic residues: $L_{O(x)} = MCF_{(x)} \cdot DOC_{(x)} \cdot DOC_f \cdot F \cdot 16/12$

- $L_{O(x)}$ = Methane generation potential (GgCh/GgMSW)
- $MCF_{(x)}$ = CH_4 correction factor management/dimensionless
- $DOC_{(x)}$ = Degradable organic carbon (GgC/GgSW)
- DOC_f = Fraction of DOC that decomposes (dimensionless)
- F = Fraction of methane in biogas (dimensionless)
- 16/12 = Conversion ratio from C to CH_4 (dimensionless)

PRIMA CERTIFICATION

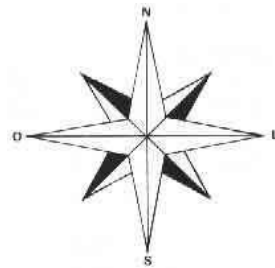
The carbon neutralization PRIMA certificate is obtained based on the recognized GHG Protocol and other related platforms also accepted by the International Scientific Community. The award results of a survey of all GHG – Greenhouse Gases – emissions of an institution, company or event that allow the necessary study and secure calculation to ensure the environmental compensation of emitted carbon.

Associate institutions collaborate with the PRIMA SEAL CLIMATE CHANGES by signing the methodology and confirming its validation. In Brazil: **REBIA** – BRAZILIAN NETWORK OF ENVIRONMENTAL INFORMATION and **GBV** – BRAZIL GREEN GROUP. Abroad: **OCRE** – ASSOCIATION FOR RECOVERY OF THE ENVIRONMENT, CULTURE, PROPERTY, AND RECREATION (Portugal) and **SIMAAS** – MUNICIPAL INTEGRATION SYSTEM AMERICA SOUTH AREA (Southern Cone of South America). Therefore, it is consequently monitored by a network of communicators, columnists, debaters and socioenvironmental professionals who aim to build a Low-Carbon Society.

The "STI & HIV WORLD CONGRESS 2017" Neutral Carbon PRIMA certificate is attached to this Report and can be used by the contracting institution in different vehicles, such as advertising campaigns, environmental and social

responsibility reports, private programs (ISO) certification, technical presentations, etc.

ASSOCIATE INSTITUTIONS



SIMAAS

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