



UNITED NATIONS DECADE OF  
SUSTAINABLE ENERGY FOR ALL  
2014-2024



## LAUNCH OF THE DECADE OF SUSTAINABLE ENERGY FOR ALL (SE4ALL) LATIN AMERICA AND THE CARIBBEAN

October 15-17, 2014  
Santiago Marriott Hotel, Santiago, Chile

# Financing Biofuels in Latin America and the Caribbean



**Arnaldo Vieira de Carvalho**  
Inter-American Development Bank – IDB  
Energy Division  
Infrastructure and Environment Department  
Washington, DC  
[arnaldov@iadb.org](mailto:arnaldov@iadb.org); +1 202 623 1719

# IDB Scorecard for Sustainable Biofuels

## ENVIRONMENTAL

### General

#### Yield (liters oil/ethanol per ha)

above 6000

above 4500

between 1500 and 4500

below 1500

#### Yield (GJ per hectare per year)

above 100

between 50 and 100

below 50

### Cultivation

#### Former land use

No land area (algae and waste)

Degraded land

Under-utilized land or husbandry

Marginal land

Displaced cultivation or husbandry

Rainforest, primary forest

Peat land

Wetland

Ecological sensitive/protected area  
- Biological corridors

#### Crop Lifecycle

Replant greater than 3 years

Replant every year, no-till

Replant every year, low till

Replant, 1-3 years

Replant every year

#### Crop rotation/Crop mix

Nitrogen fixing crops used in rotation

Inter-cropping

No crop rotation

[www.iadb.org/biofuelsscorecard](http://www.iadb.org/biofuelsscorecard)



**Inter-American Development Bank – IDB**

## Press Release

July 23, 2008

Press Contact  
Patricia Rojas  
[patriciaro@iadb.org](mailto:patriciaro@iadb.org)  
(202) 623-1373



### **IDB lends \$269 million for three Brazilian ethanol plants**

The Inter-American Development Bank will lend \$269 million for three new ethanol plants in south-central Brazil, in the **largest biofuel investment ever made by a development bank**. The Board of the Bank unanimously approved the financing today.

The three plants are being developed by Companhia Nacional de Açúcar e Alcool (CNAA), a joint venture formed by Brazilian sugar producer **Santelisa** Vale, U.S. private equity firms and **Global Foods**, a holding company registered in the Netherlands Antilles...



**Inter-American Development Bank – IDB**

## Press Release

December 15, 2009



### **Peru Biofuel project to receive US\$25 million**

Combined ethanol refinery, sugar plantation and electricity plant will generate 500 permanent jobs for local communities in the Department of Piura, Peru.

An initiative of Maple Energy Plc, an energy company that has focused solely on [Peru](#) since 1994, listed on the London Stock Exchange's Alternative Investment Market and on the Lima Stock Exchange. The project is known as Maple Etanol, requires **a total investment of \$245.5 million** and will receive assistance from Netherlands .....



## Announcements

Jan 28, 2014

# IDB approves green line for key financial institution in Brazil

## Loans of up to \$125 million to expand access to credit for green projects

The IDB approved a Green Line Partnership with Banco Pine S.A. in [Brazil](#) to expand access to financing for environmentally sustainable projects, particularly biofuels and [renewable energy](#) projects.

The IDB will provide an unsecured A/B loan of approximately \$125 million to Banco Pine for working capital and long-term loans in these sectors, and to finance capital expenditures.

The partnership is expected to increase Pine's green portfolio by \$600 million in the next five years, which in turn will contribute toward achieving the government's goal of refocusing Brazil's energy matrix on more environmentally friendly sources by 2021.



[Share](#) [Comment](#)

## More information

Marcelo Paz  
IDB Structured and  
Corporate Finance Senior  
Specialist  
[mipaz@iadb.org](mailto:mipaz@iadb.org)

## About us

[Brazil and the IDB](#)

[Structured and Corporate  
Finance](#)

## Topic

[Energy](#)

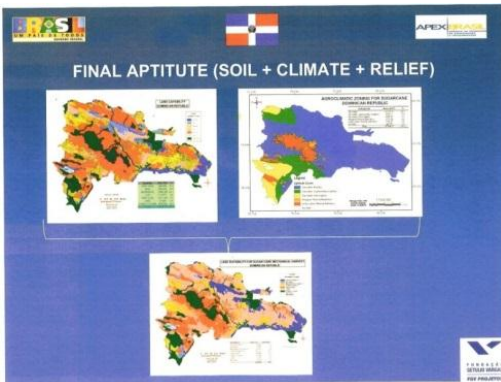
## Press contact

John Ferriter  
[johnfe@iadb.org](mailto:johnfe@iadb.org)  
(202) 623-1394

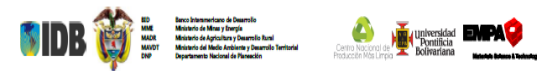




# Examples of grant support to biofuels



- El Salvador (APEX-funded)
- Dominican Republic - DR (APEX-funded)
- Haiti, Guatemala and Honduras (IDB-funded)
- DR Phase II to evaluate specific projects (IDB-funded)
- Support to the Mesoamerican Biofuels Network and most LAC countries on biofuels
- Support to 2<sup>nd</sup> Gen Biofuels in Chile (Consorcio ForEnergy)



Proyecto:

"Estrategias de energía sostenible y biocombustibles para Colombia ATN/JC-10826-CO y ATN/JF-10827-CO"

"Evaluación del ciclo de vida de la cadena de producción de biocombustibles en Colombia".

**unica**  
UNIÃO DA INDÚSTRIA DE CANA-DE-AÇÚCAR  
ETANOL • AÇÚCAR • ENERGIA SÃO PAULO • BRASIL



**renovAção**

## Resumen Ejecutivo

Sostenibilidad de  
**SBC** biocombustibles  
en Colombia

PREPARADO PARA: Banco Interamericano de Desarrollo (BID) –  
Ministerio de Minas y Energía  
ELABORADO POR: Consorcio CUE  
FECHA: Enero 2012  
CIUDAD: Medellín



# IDB Initiative for Sustainable Aviation Biofuels

- ✓ **1<sup>st</sup> activity: Life cycle assessment** of Carbon emissions during the production and utilization of biojet fuel from sugar cane (DSHC): **82%** reduction on carbon emissions; **and Benchmarking of Biofuels Sustainability Standards** co-financed with Embraer and Boeing



# IDB Initiative for Sustainable Aviation Biofuels

- ✓ Support demonstration (experimental) flights with Azul (1<sup>st</sup> ever with DSHC) and GOL (as part of ICAO Flightpath) during Rio+20 using different feed stocks.





# IDB Initiative for Sustainable Aviation Biofuels

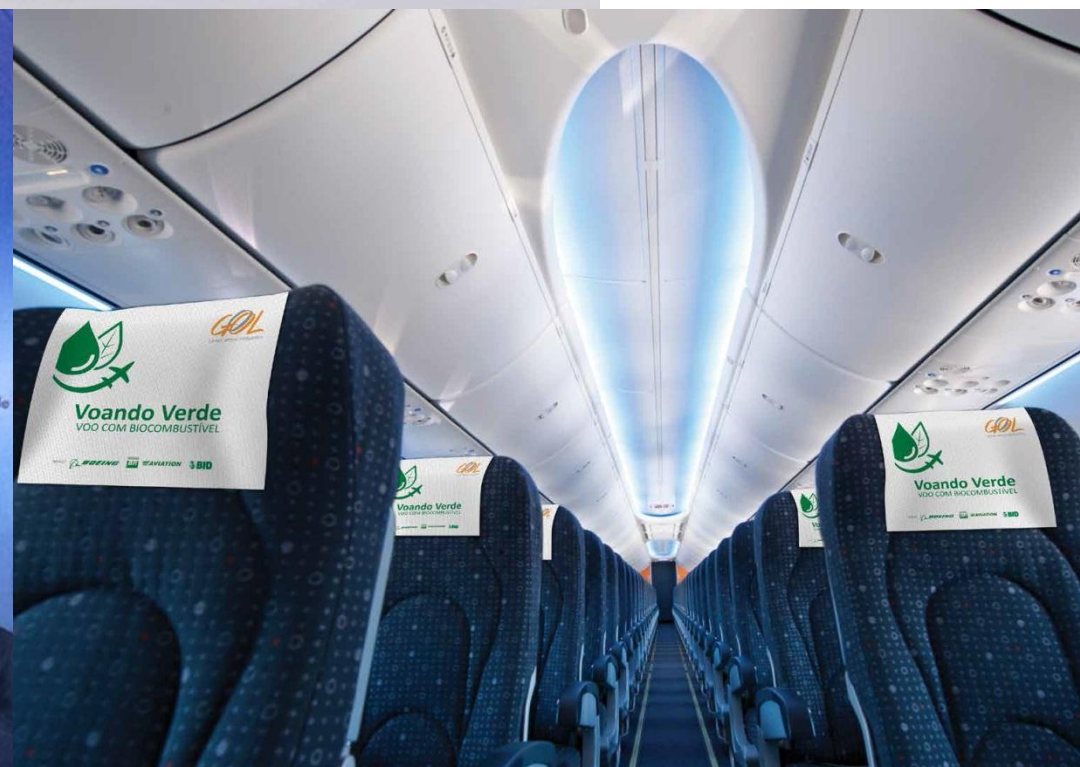
- ✓ Brazil's first commercial biojet fuel flight, CGH-BSB on October 24<sup>th</sup>, 2013, following approval of *Resolução ANP Nº 20*; DOU 25 June 2013 for HEFA







**200+ biojet fuel flights  
during World Cup  
between host cities and  
support to MG/  
Brazilian/Panamerican  
Biojet fuel Platforms**



See video: <http://www.iadb.org/en/topics/energy/se4allamericas/renewables,17688.html>



**Voando Verde**  
VOO COM BIOCOMBUSTÍVEL



SPONSORS: AMYRIS TOTAL BOEING SBID

1<sup>st</sup> commercial flight using  
sugarcane-derived biojet fuel:  
July 30, 2014



**Voando Verde**  
VOO COM BIOCOMBUSTÍVEL



PATROCINADORES:



Plataforma Brasileira de Bioquerosene, biocombustível para o Brasil





# IDB Initiative for Sustainable Aviation Biofuels

- Feasibility study of the first HEFA commercial plant for production of biojet for ASA of **Mexico**. Two alternatives were contemplated: processing 2,000 and 6,500 barrels per stream day (bpsd) of refined vegetable oil.



Aeropuertos y  
Servicios  
Auxiliares



Uop  
A Honeywell Company





# IDB Initiative for Sustainable Aviation Biofuels

- ✓ Study on Camelina in **Argentina**: feasibility of cultivation in marginal areas in south of the country, includes analysis of economic, social and environmental issues.



## CAAFI General Meeting 2011

November 30 – December 1, 2011

Georgetown University Hotel and Conference Center, Washington, DC  
[www.caafimeeting.com](http://www.caafimeeting.com)



## CBPPM

### II Congresso Brasileiro de Pesquisa em Pinhão-mansô

"Pinhão-mansô: focando em soluções sustentáveis para produção de biocombustíveis"

29 a 30 de novembro

1- Centro de Eventos e Treinamentos da CNTC, Brasília-DF



Patrocinador Prata

Transportadora Oficial

Apoio



Ministério da Educação

Promoção e realização



Ministério da Agricultura, Pecuária e Abastecimento



UNITED NATIONS DECADE OF SUSTAINABLE ENERGY FOR ALL 2014-2024



# IDB

## 1<sup>ST</sup> IDB/BNDES WORKSHOP ON FINANCING BIOFUELS INVESTMENTS IN LATIN AMERICA AND CARIBBEAN

IDB Headquarters  
 Washington, D.C.  
 July 28th, 2014



RSVP BY REPLYING TO THIS EMAIL INVITATION, OR TO  
[GEOE@novozymes.com](mailto:GEOE@novozymes.com)

MONDAY, SEPTEMBER 22 2014  
 3:00 PM – 4:30 PM  
 SCANDINAVIA HOUSE  
 58 PARK AVENUE @ 38th STREET  
 NEW YORK CITY

JOIN US!

## AVIATION CLIMATE ACTION TAKES OFF CELEBRATING THE DEVELOPMENT OF SUSTAINABLE ALTERNATIVE FUELS IN FLIGHT



We are pleased to invite you to celebrate and recognize actions by the aviation industry to mitigate climate change.

Specifically, we will celebrate the use of biofuels to transport delegations to the UN Climate Summit and recognize the role that advanced biofuels can play across the transportation sector to reduce net emissions of carbon dioxide and to mitigate climate change.

Join us for a reception in New York the day before the UN Climate Summit.



# THANK YOU



# IDB

Inter-American Development Bank / [www.iadb.org](http://www.iadb.org)