



# Sustainability and Carbon Emissions requirements within International Markets

ISCC Regional Stakeholder Dialogue Latin America  
Jennifer Jiménez – Ethanol and Molasses Trader Pantaleon  
[Jennifer.jimenez@pantaleon.com](mailto:Jennifer.jimenez@pantaleon.com)

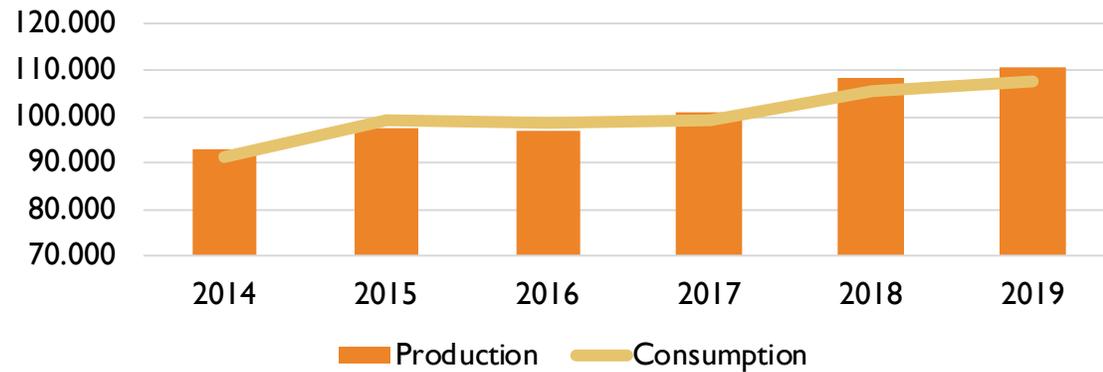
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# Agenda

- World fuel ethanol market
- Sustainability and Carbon Emissions Requirements
  - EU
  - USA
- Pantaleon sugar at a glance

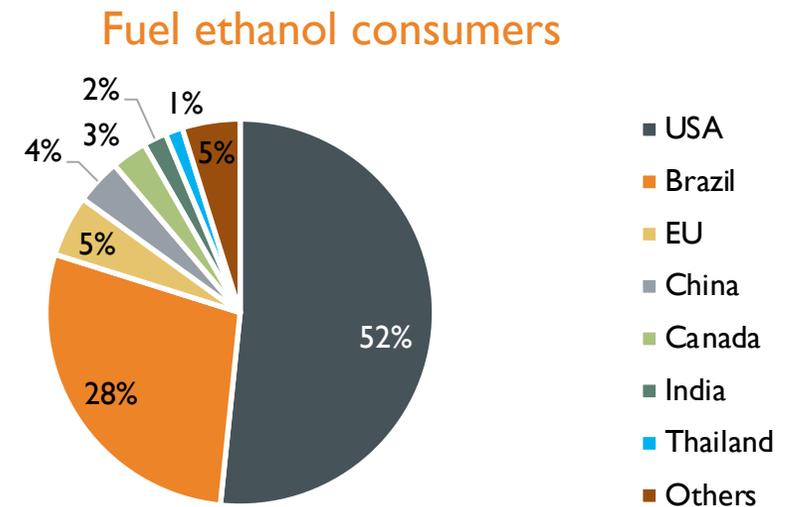
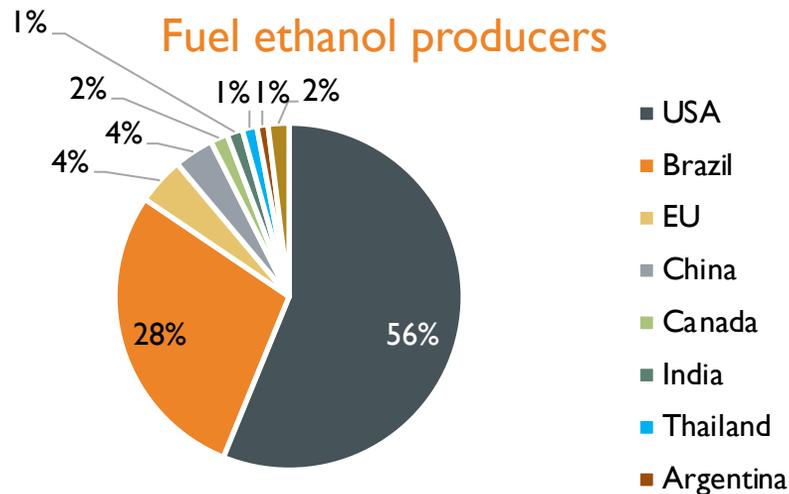
# World Fuel Ethanol Market

Fuel ethanol production and consumption (mln liters)



- Global demand is growing in Brazil, USA, China, Thailand and India.
- Feedstock use for fuel ethanol production comes from sugar cane, beet molasses and from grains (wheat, corn).

Source: ISO Ethanol yearbook. 2019 estimated values





## Sustainability and Carbon Emissions requirements



# What do our customers want?



Compliance  
with Laws and  
International  
treaties



Enviromental  
protection



Good  
agricultural  
practices



Community  
protection  
and  
development



Safe working  
conditions



Good  
manufacturing  
practices



Product  
traceability

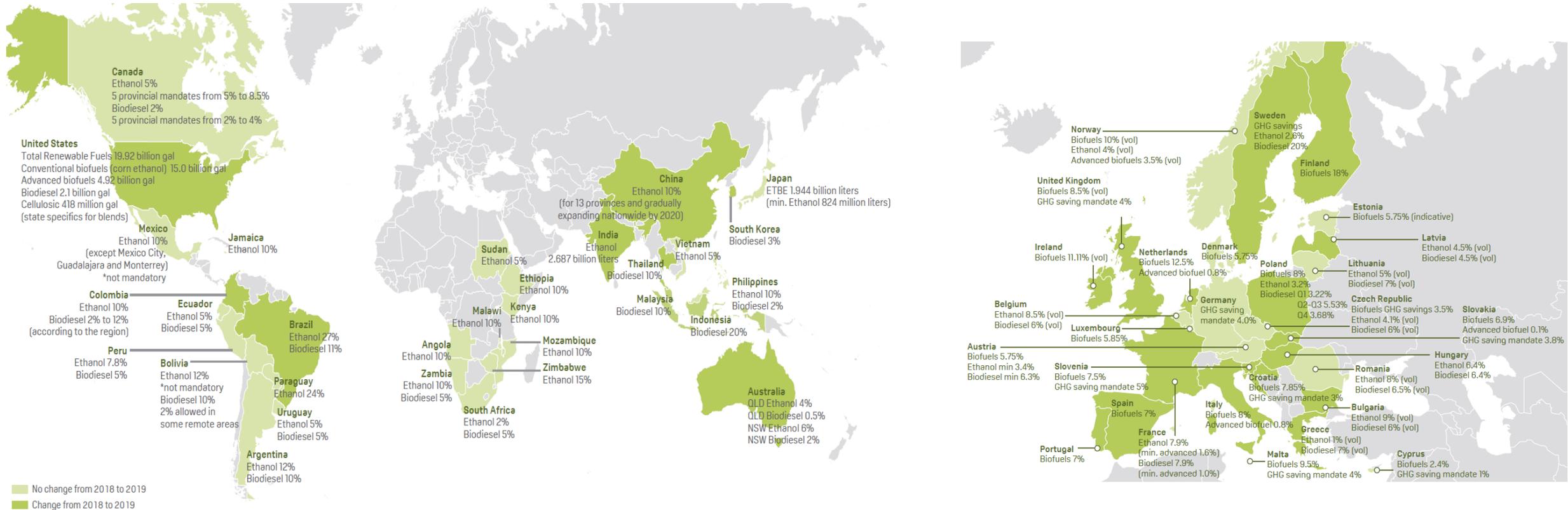


# Why are there so many sustainability requirements?

- Our climate is changing at an alarming rate and we're already feeling the impacts.
- More and more consumers are looking for more transparency about what they use, eat and drink.
- Consumers increasingly distrust.
- Large companies have Responsible Supply Chain Policies and needs to buy from companies that meet their Sustainability goals.



# Fuel ethanol demand is mandate blend driven



87% of biofuels demands derives from mandates.  
 As the Paris Climate Agreement progress, we can expect to see more countries adding blend mandates.

According to the European Commission (RED II mandate) it is mandatory to use Advanced Ethanol that has sustainability certifications.

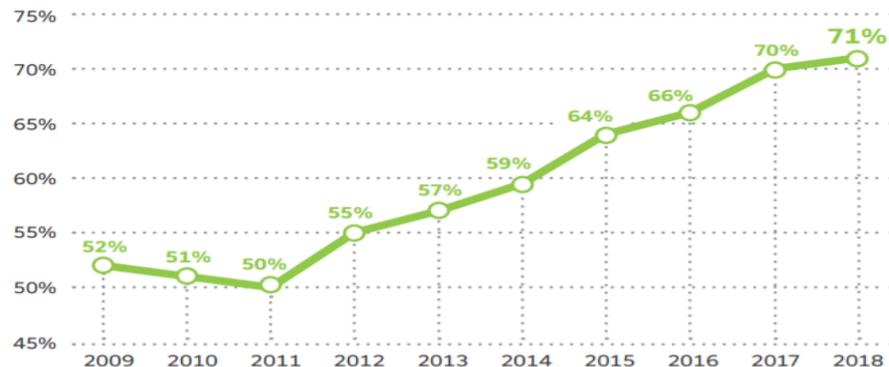
# EU - RED II

- RED II 32% share for renewable energy (review clause in 2023)
  - 14% renewable energy for transport sector (rail & road).
  - Crop-based fuels at maximum 7%.
- GHG reduction target for suppliers by 6%.

- Renewable ethanol is expected to play an important role in the realization of the EU's energy and climate ambitions to 2030.
- In order to demonstrate compliance with the EU's sustainability criteria, biofuels needs to be validated by voluntary schemes approved.

## Average certified emission savings in %

Since 2011 the average certified greenhouse gas emission savings of renewable ethanol against fossil fuel have increased continuously, reaching 71% in 2018.



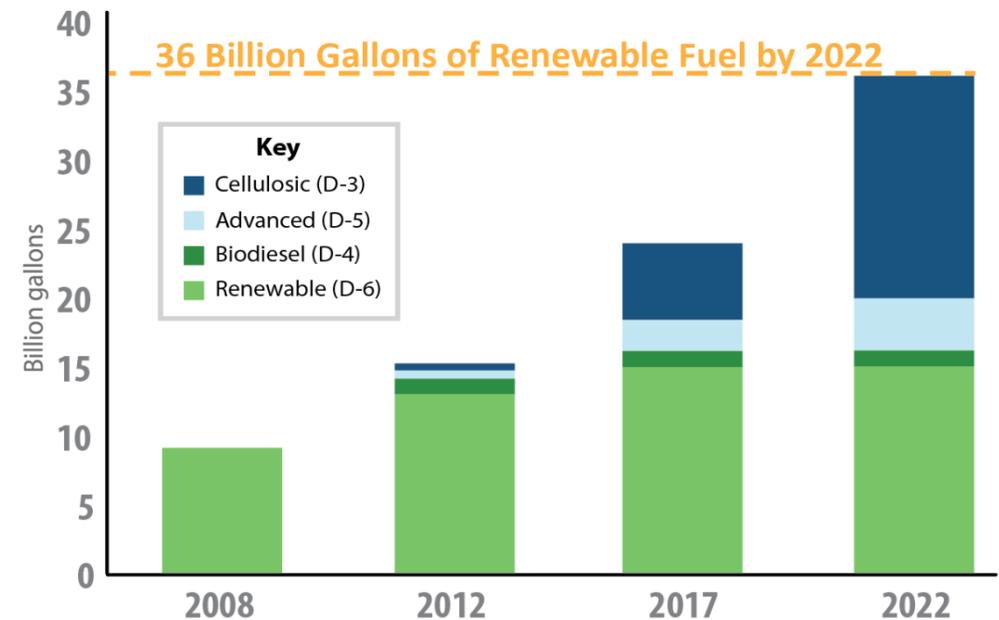
Source: Aggregated and audited data of ePURE members, compared to a fossil fuel comparator of 83.8 gCO<sub>2eq</sub>/MJ



# USA - EPA

- The RFS sets the annual mandate levels for various classes of renewable fuels.
- Each refinery is required to blend a certain number of gallons based on the percentage of the total US refinery capacity made up by their production.
  - EPA proposed regulatory changes to allow gasoline blended with up to 15 percent ethanol.
  - E15 would be allowed to be sold year-round, rather than just eight months of the year.
  - Substantial growth for biofuels demand is expected.

## Congressional Volume Target for Renewable Fuel



Source: EPA

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## What are other countries working on?

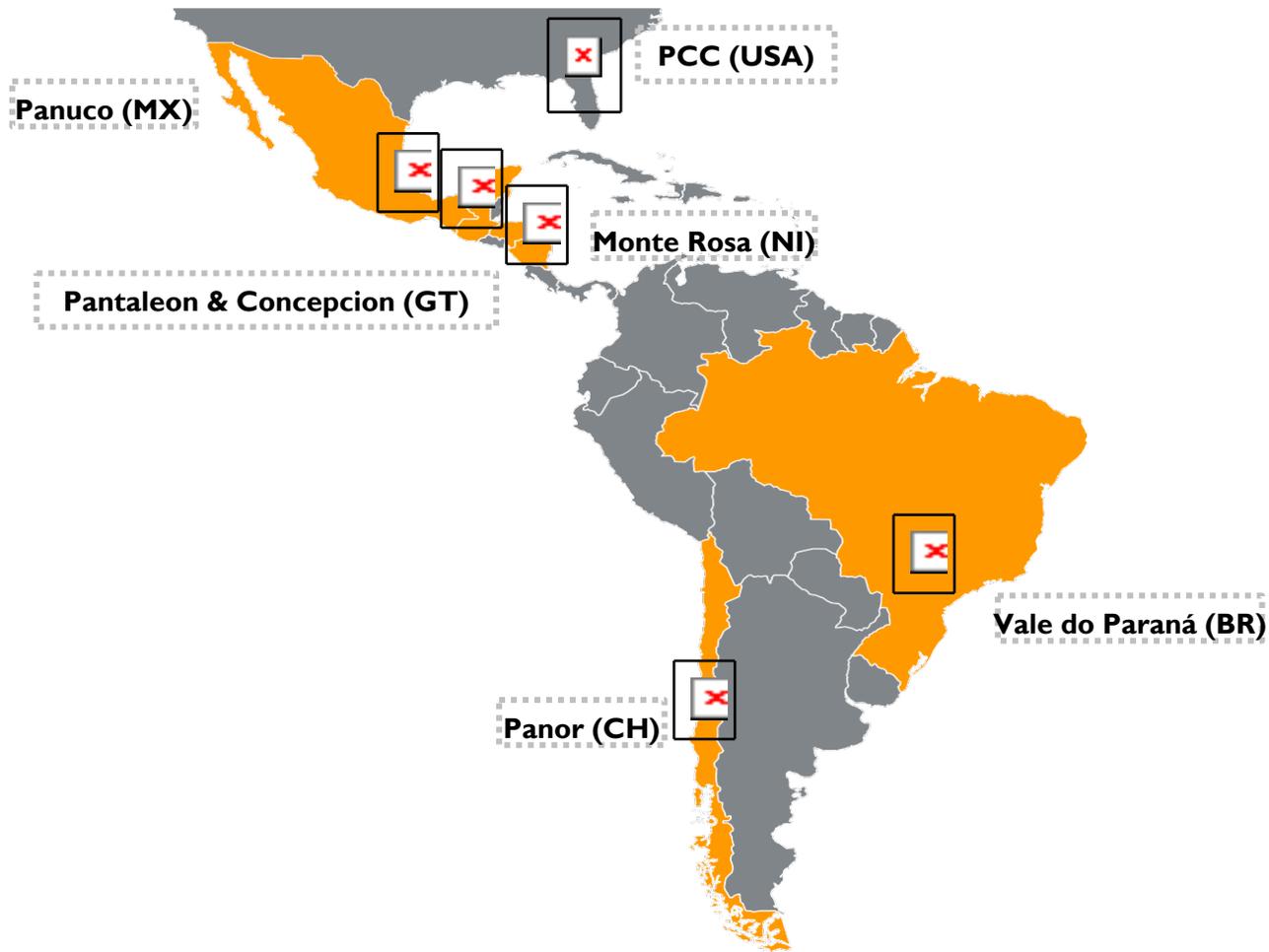
- **Brazil:** has launched Renovabio, a Brazilian policy for the decarbonization of the transport sector, which aims to incentivize the use of renewable energy.
- **Thailand:** Energy Ministry has set a time frame to promote E20 as the primary petrol product by early 2020.
- **India:** ethanol blend rate in gasoline is mandated to reach 10% by 2022.
- **China:** has suspended its plan to implement a nationwide gasoline blend containing 10% ethanol this year, due to sharp decline in the country's corn stocks and limited production capacity of the biofuel.



**Pantaleon** Sugar at a glance



# Pantaleon Sugar Holdings at a glance



**78,500 mt / day**  
Crushing installed  
capacity



**1.14 MM ton / year**  
Sugar produced



**242,000 m3 / year**  
Alcohol  
produced



**581 GWh / year**  
Energy sold



**435,000 mt / year**  
Molasses  
produced

# What are we doing in terms of Sustainability?

## People

We adopt practices that contribute to our employees' health, safety and personal development.

- +25,600 employees during harvest season.
- Total Worker Health® approach
- >68,000 free medical visits in our health clinics that offer primary care, ophthalmology and dentistry services.

## Prosperity

We contribute to the well-being of the communities in which we operate.

- 27 education projects
- 10 health projects
- 15 community development projects
- 39,983 people directly benefited by programs
- \$4.55MM community investment

## Planet

We establish environmental efficiency goals, and train our staff continuously.

We comply with the regulatory requirements in environmental matters of the legislation of the countries where we operate and customer requirements.

98% use of renewable energy.

94% of waste is reused or composed.

135.66 hectares reforested in 2018

## Product

We offer clients high quality products that comply international sustainable production practices.

Our tech investments allow for efficient harvesting, processing and logistics.

We work with cane suppliers to ensure a sustainable supply chain.

# Our certifications help us to comply with the requirements of our customers and markets



- **Pantaleon**: ISSC Plus, ISSC EU, Bonsucro, Kosher, HACCP, FSSC 22000, ISO 9001.
- **Concepcion**: ISSC Plus, ISSC EU, Kosher, HACCP, FSSC 22000, ISO 9001.
- **Bioetanol**: ISSC EU, Bonsucro, Kosher, HACCP, FSSC 22000.
- **Monte Rosa**: Bonsucro, Kosher, HACCP, ISO 9001, ISO 22000, GMP+, OHSAS 18001.
- **Panuco**: ISO 9001, FSSC 22000, OHSAS 18001, ISO 14001, Kosher.