



Sustainability and Carbon Emissions requirements within International Markets

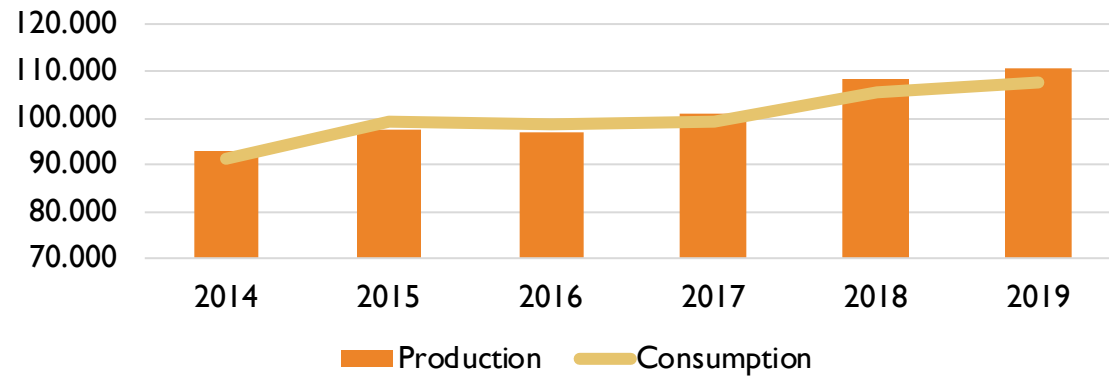
ISCC Regional Stakeholder Dialogue Latin America
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Agenda

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

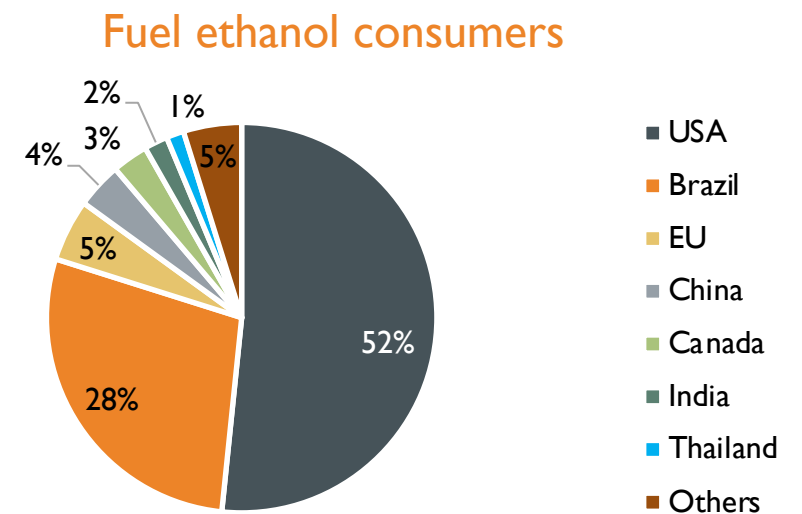
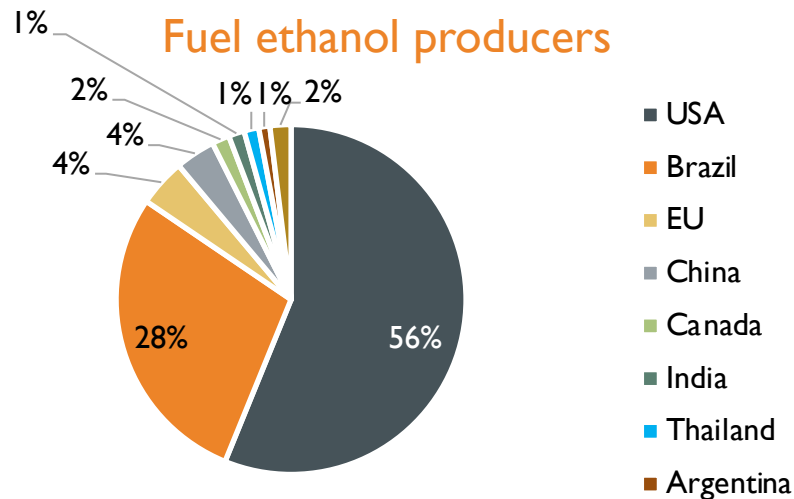
World Fuel Ethanol Market

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?

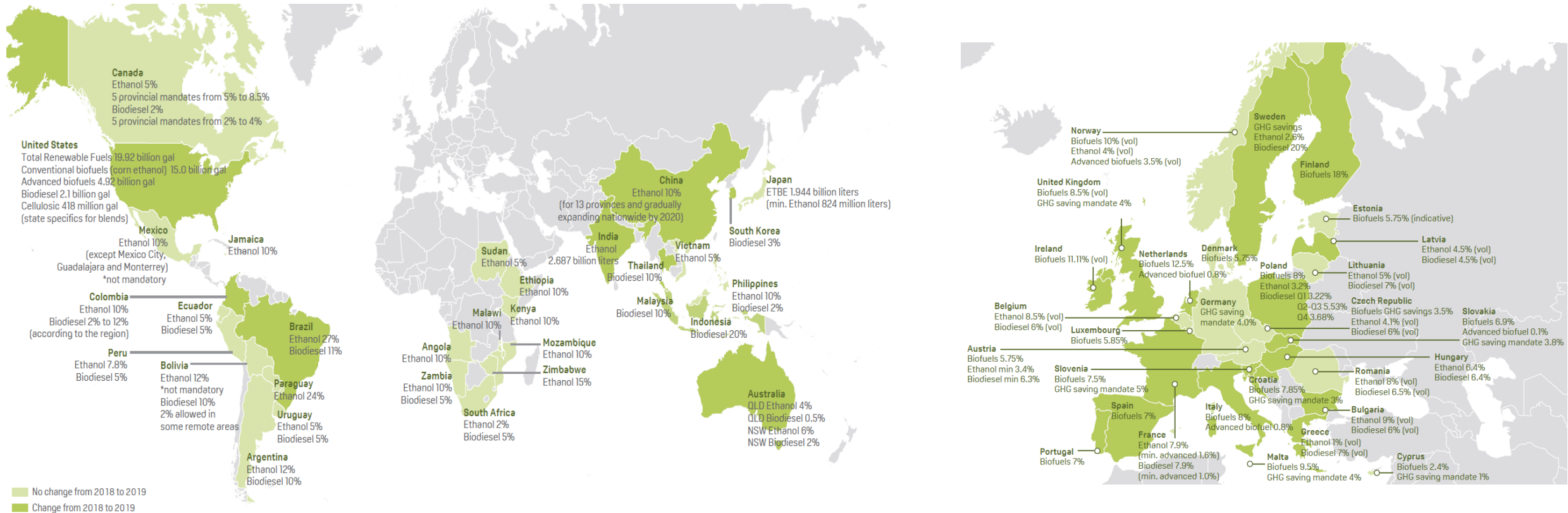
- Our climate is changing at an alarming rate and we're already feeling the impacts.
- More and more consumers are looking for more transparency about what they use, eat and drink.
- Consumers increasingly distrust.
- Large companies have Responsible Supply Chain Policies and needs to buy from companies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



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11



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.

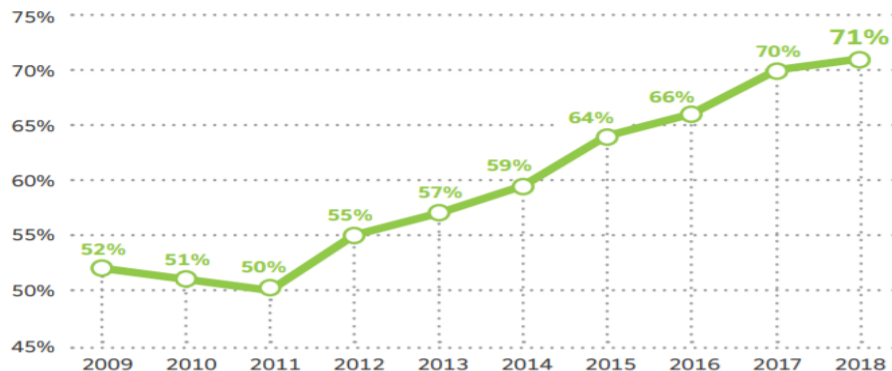
According to the European Commission (RED II mandate) it is mandatory to use Advanced Ethanol that has sustainability certifications.

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%.

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_{2eq}/MJ

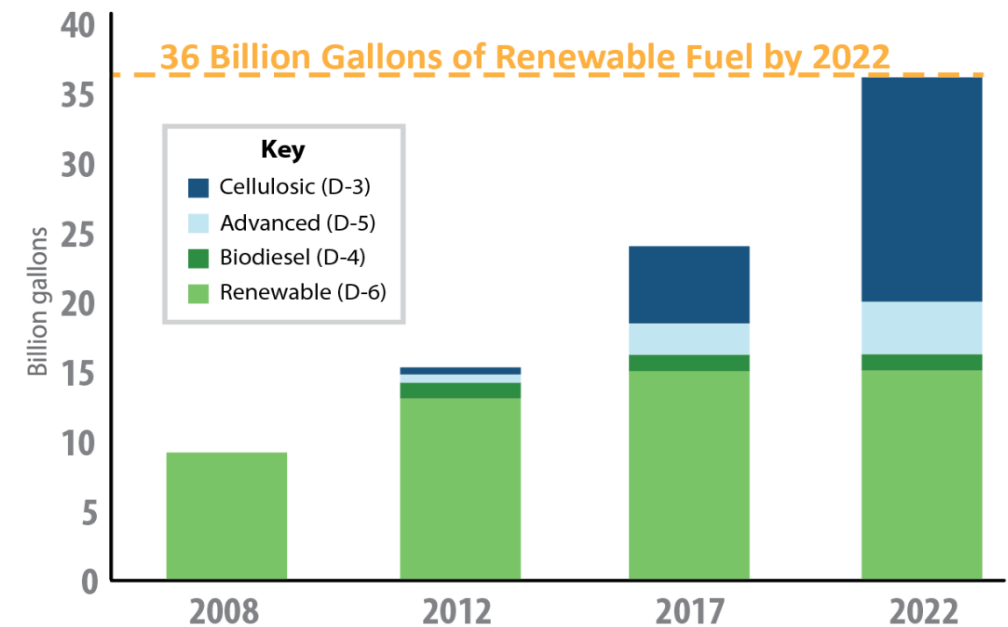
- Renewable ethanol is expected to play an important role in the realization of the EU's energy and climate ambitions to 2030.
- In order to demonstrate compliance with the EU's sustainability criteria, biofuels needs to be validated by voluntary schemes approved.



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

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.