

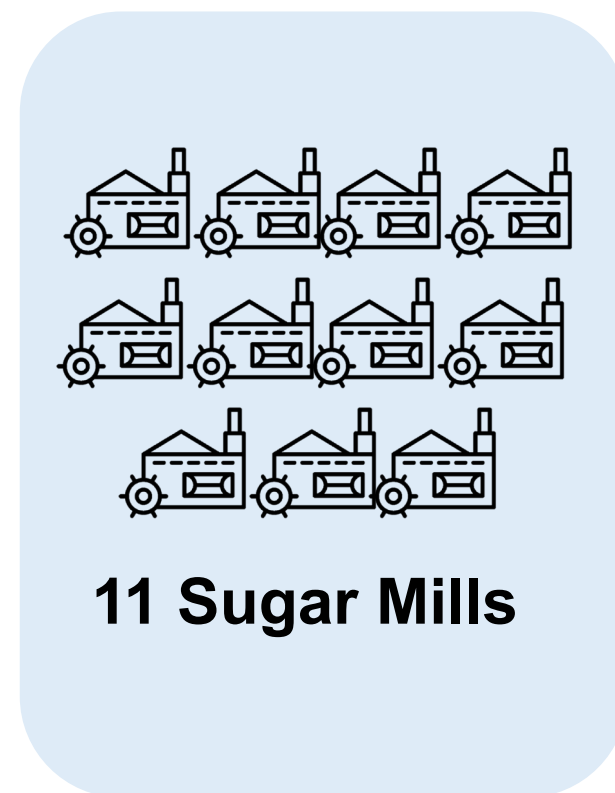
Experience on Integrated Water and Energy Solutions

Luis Miguel Paiz

Guatemalan Sugar Producers Association



About ASAZGUA

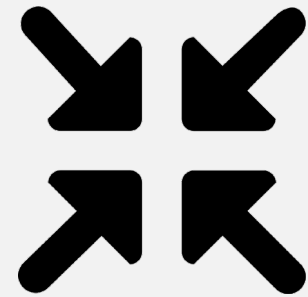


Our alignment with the 2030 Agenda

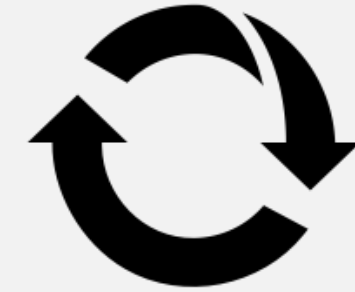


SDG 6: Clean Water and Sanitation

16% reduction of water used on field for irrigation (2015-2020)



100% of the water used in the mill is treated and reused on the field



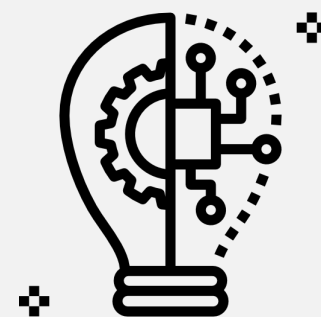
Developed the most efficient sugarcane variety in Guatemala, using **14%** less water per ton of sugar produced



Participated in technical roundtables with other stakeholders to implement correcting measures to ensure **responsible use** of water.



New technologies adapted and adopted to use the exact amount of water needed on field

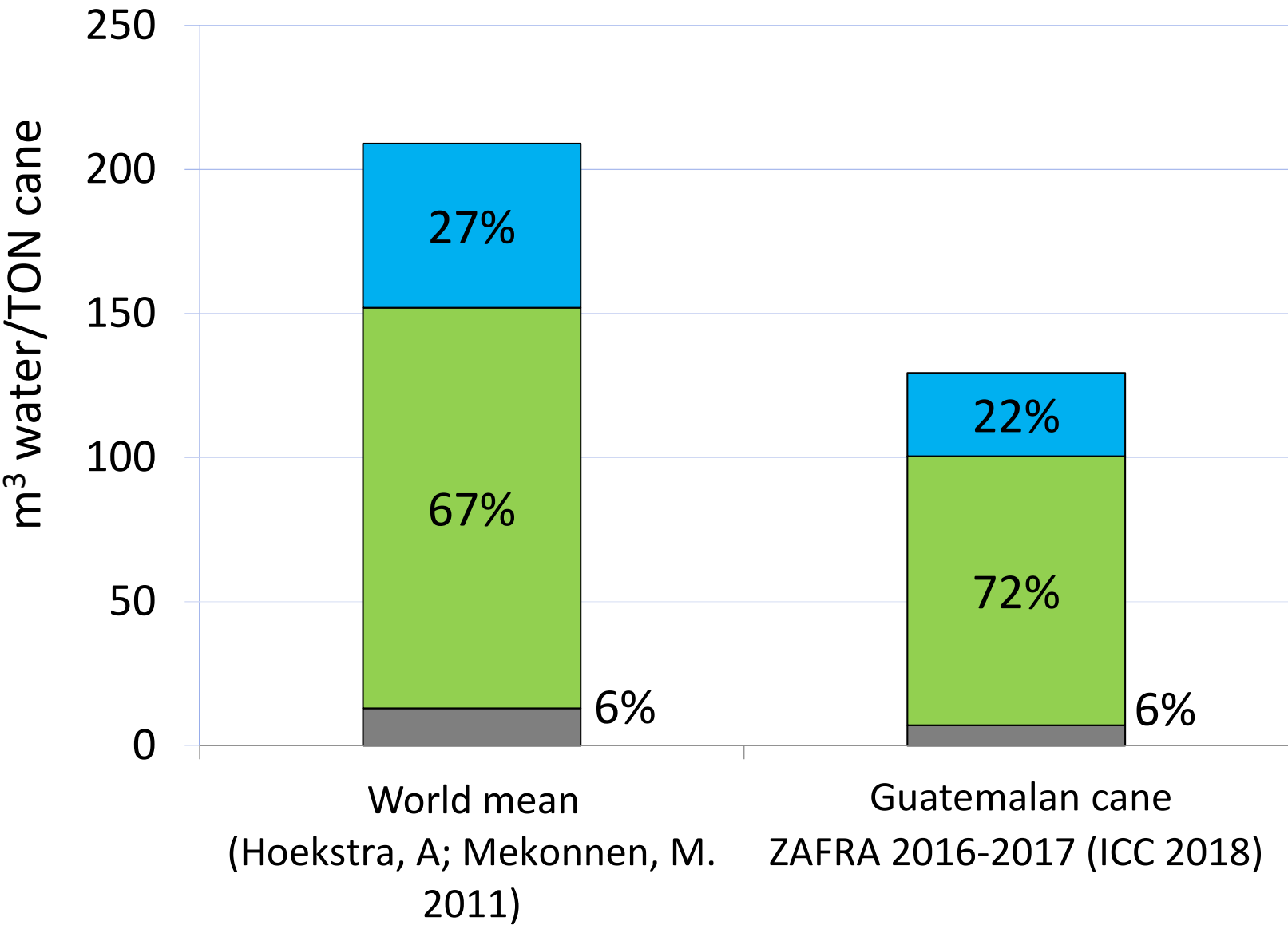
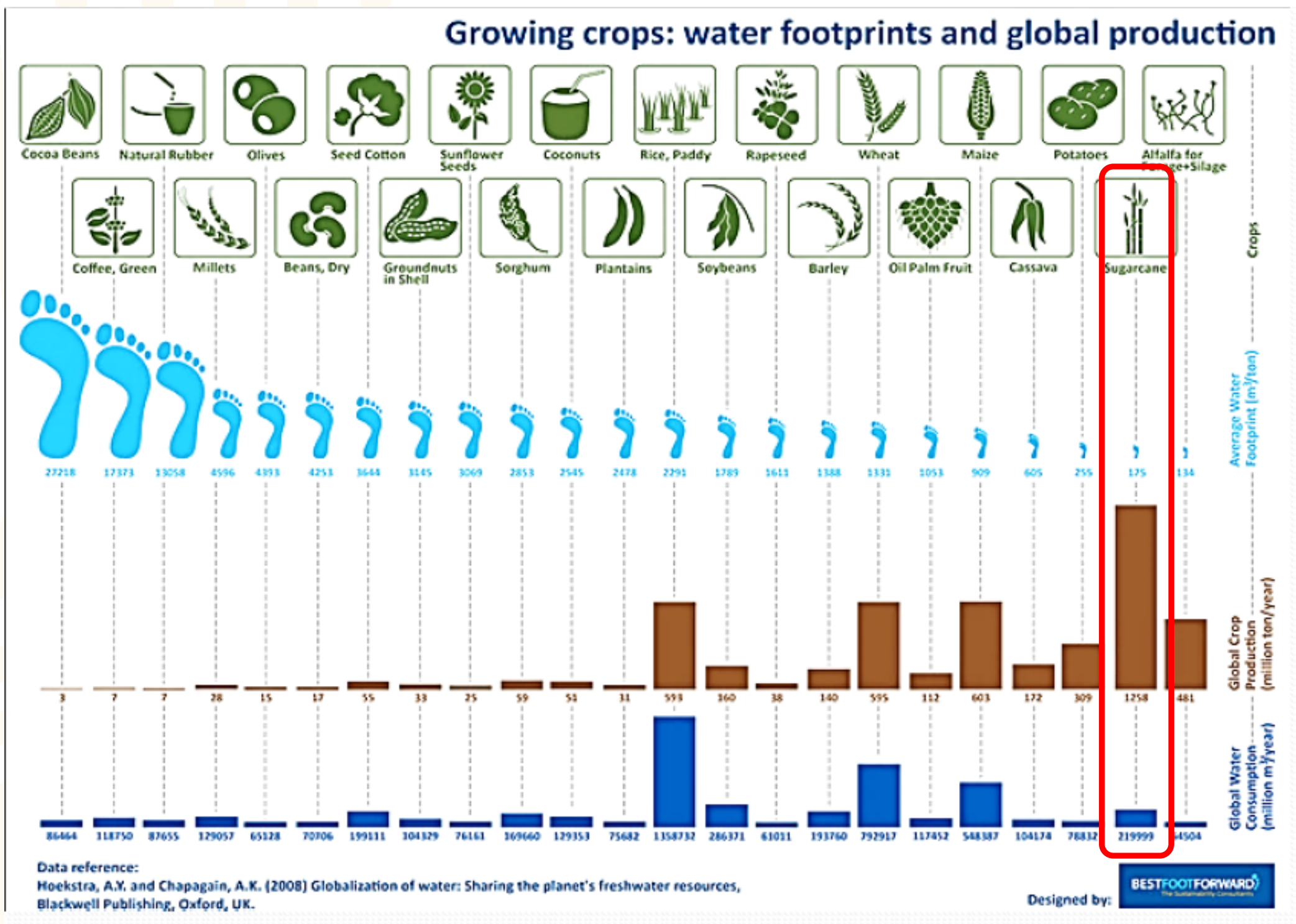


US\$11 Million allocated through our programs for water and sanitation projects (2016-2019). Over **82 thousand people** benefited.



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Water footprint of sugarcane



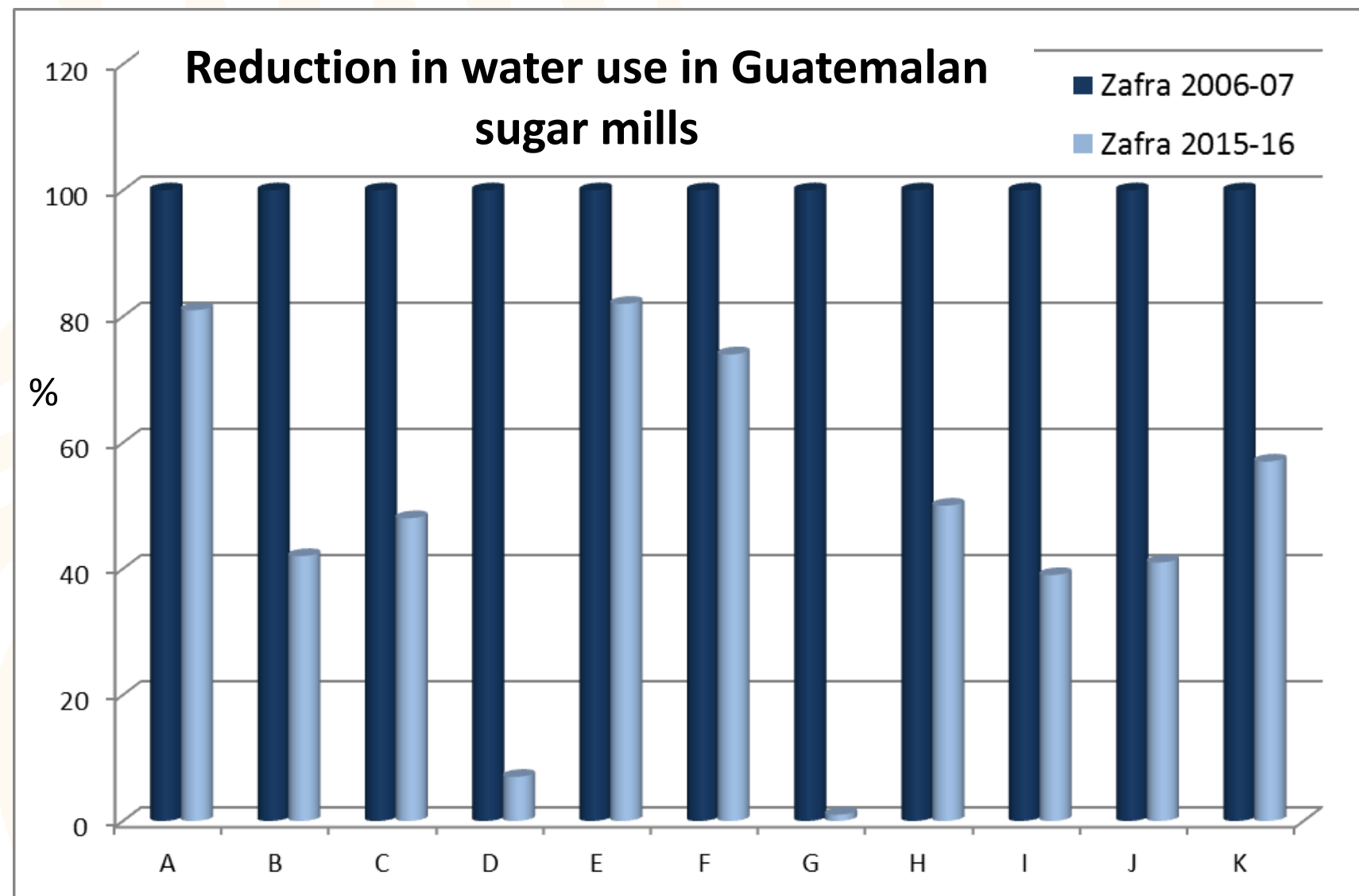
Water footprint of sugarcane: 175 m³/ton

Efficiency in water use in the sugar industry in Guatemala

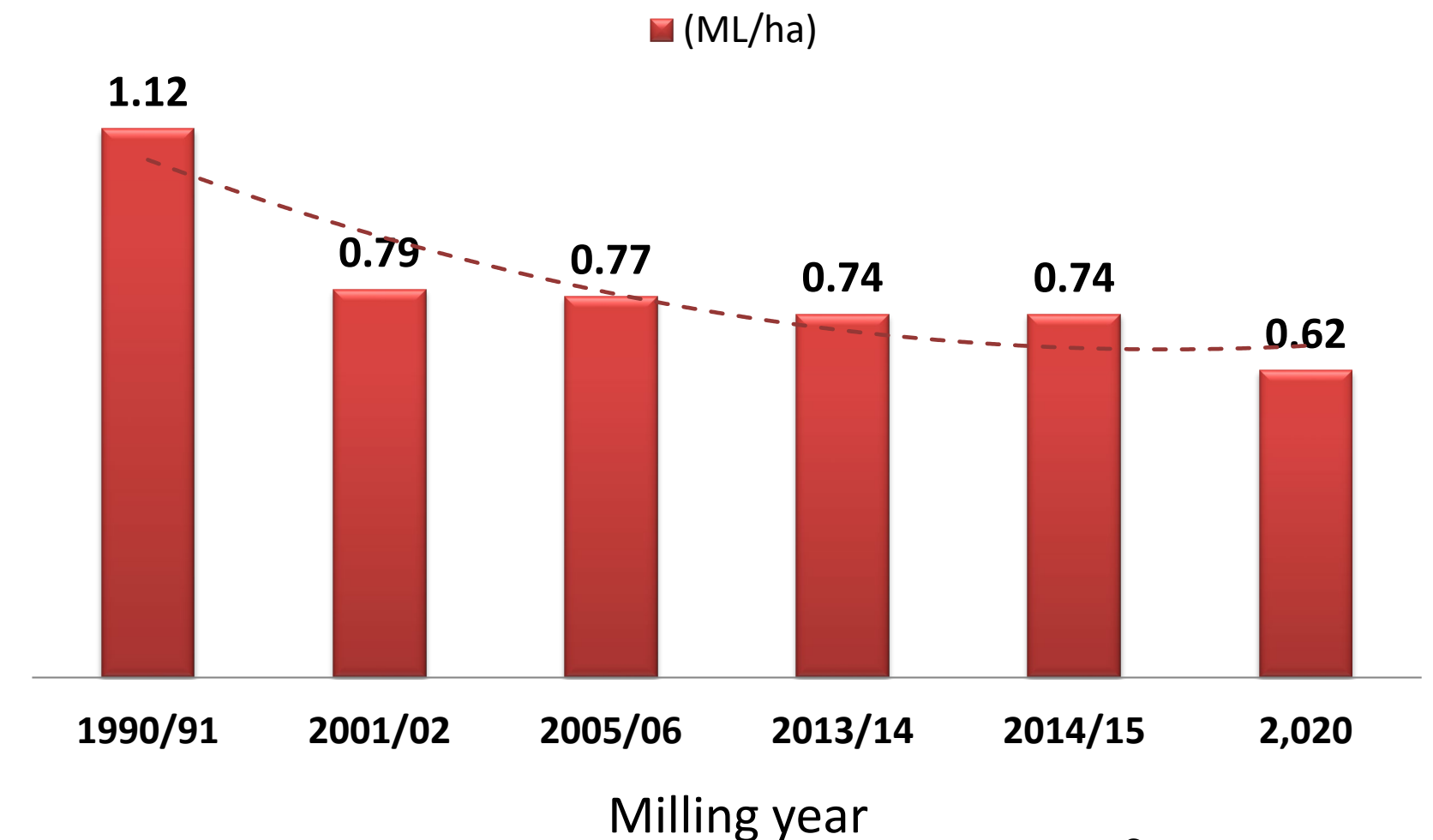


Actions that contributed to reduce water use

- Shift to more efficient irrigation technology
- Use of soil and weather data in irrigation
- Use of waste water from mills for irrigation
- Water re-use in mills
- Waterless technology to clean cane before crushing



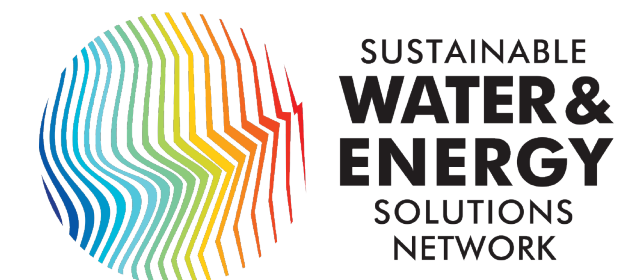
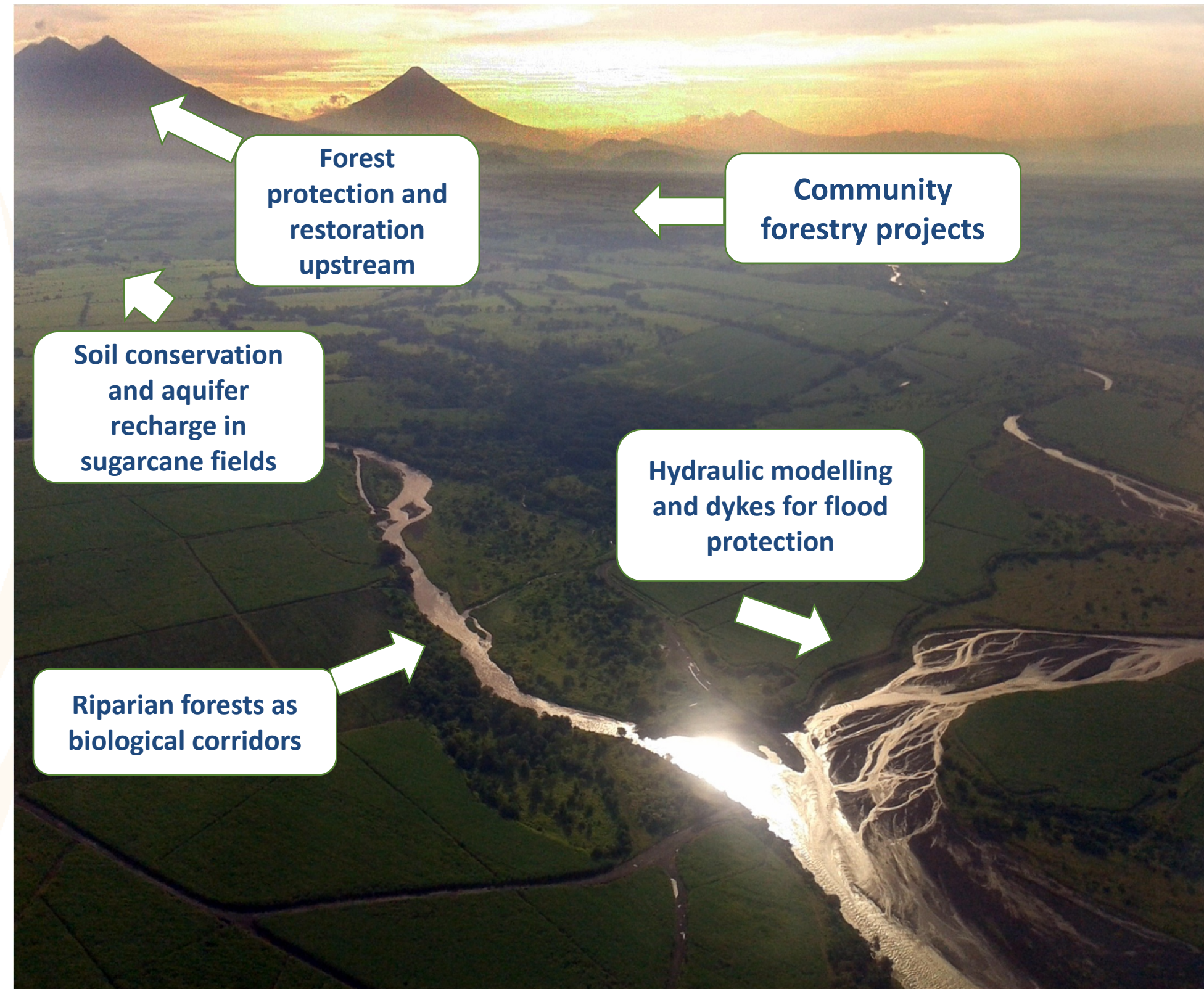
Irrigation water use per hectare in sugarcane, Guatemala



Source:
CENGICAÑA (2016)



Green infrastructure and Integrated Watershed Management actions in the Pacific Basin of Guatemala

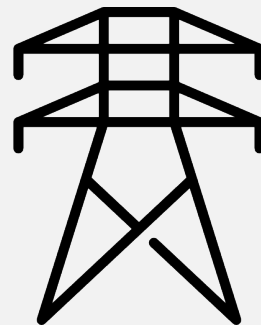


SDG 7: Renewable Energy

Used **100%** of the biomass obtained after crushing to produce energy.



Covered up to **32%** of the national energy demand during Harvest Season.



Produced **65 million gallons** of ethanol (2019)
908 MW of energy (installed capacity).



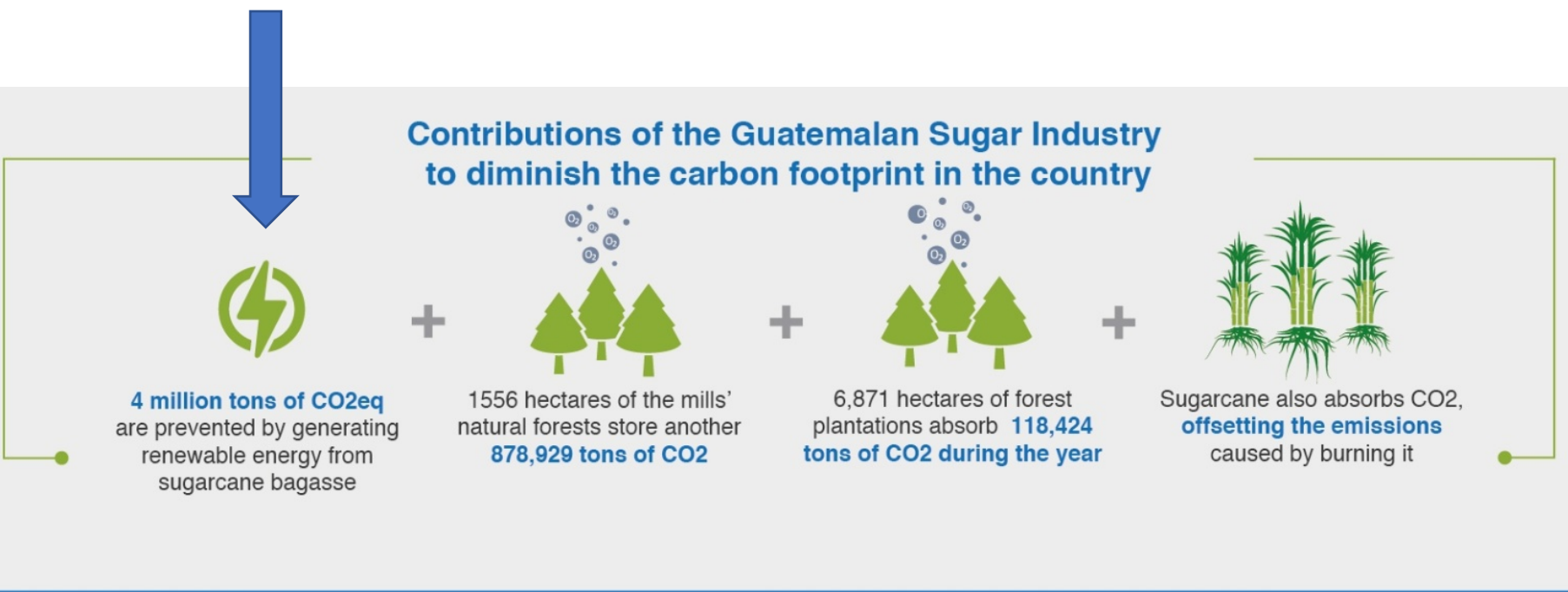
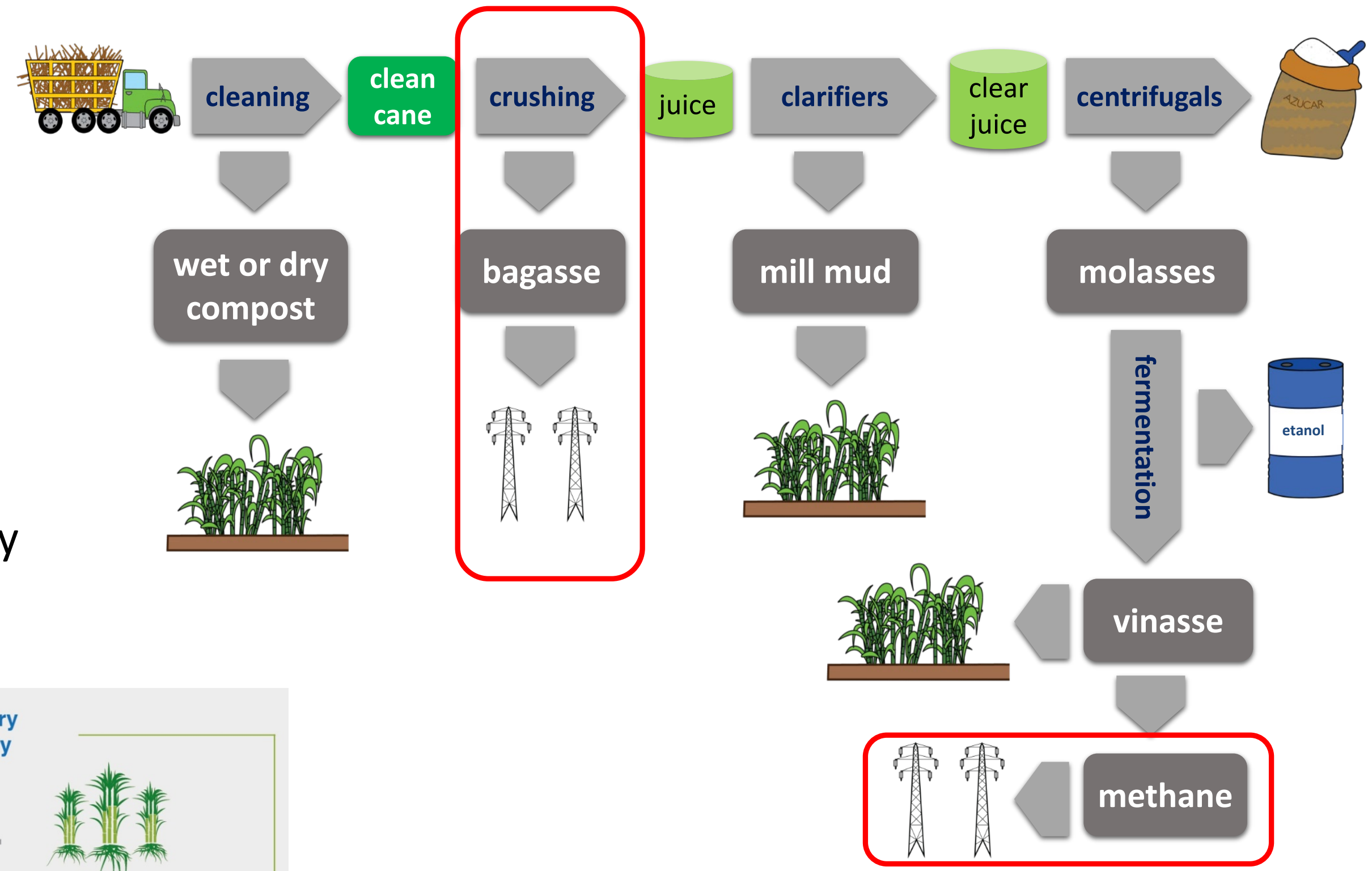
The Guatemalan Sugar Industry, after decades of electrical power inestability during dry season (when hydropower was low), invested in energy plants to produce **renewable energy with biomass** (from sugarcane bagasse). It also produces ethanol to be used as fuel.



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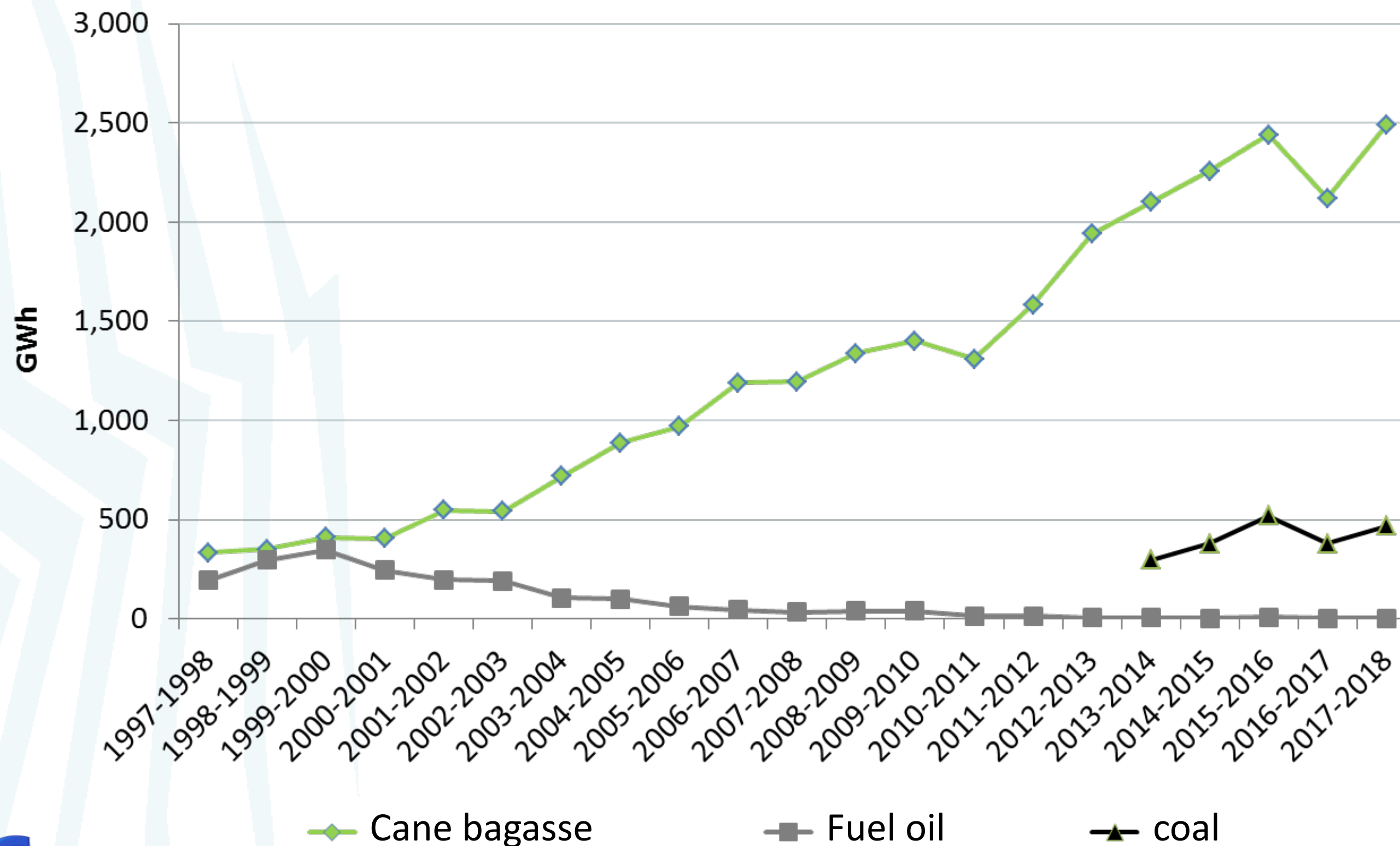
Electricity generation from sugarcane

4 million tons of CO_{2e} are avoided annually through generating electricity from sugarcane



Source: Inventory Report of Greenhouse Gases and Carbon Footprint of the Guatemalan Sugar Industry. Harvest Season 2016/17", conducted by the Institute for Research on Climate Change – ICC –

Electricity generation in the past two decades in the sugar industry of Guatemala



Growth has resulted from growth of cane crushed but also from doubling efficiency

Thank you!
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