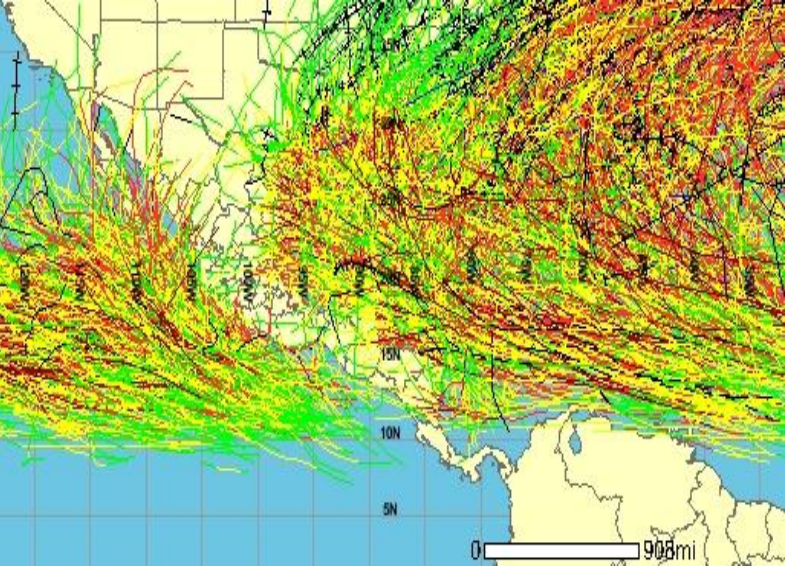
Climate action (ODS13) from the sugar agroindustry of Guatemala

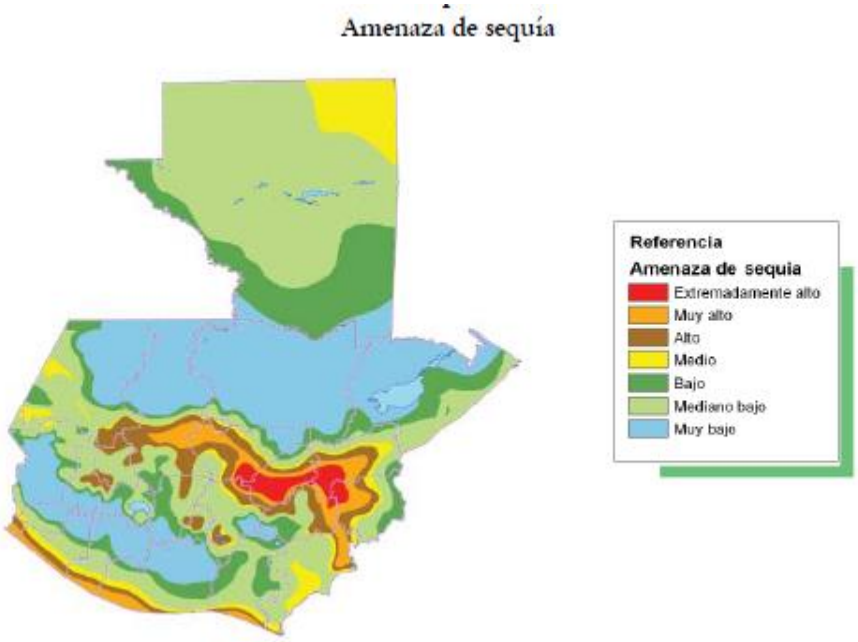
Alex Guerra Noriega, PhD

Climate Change Research Institute (ICC)

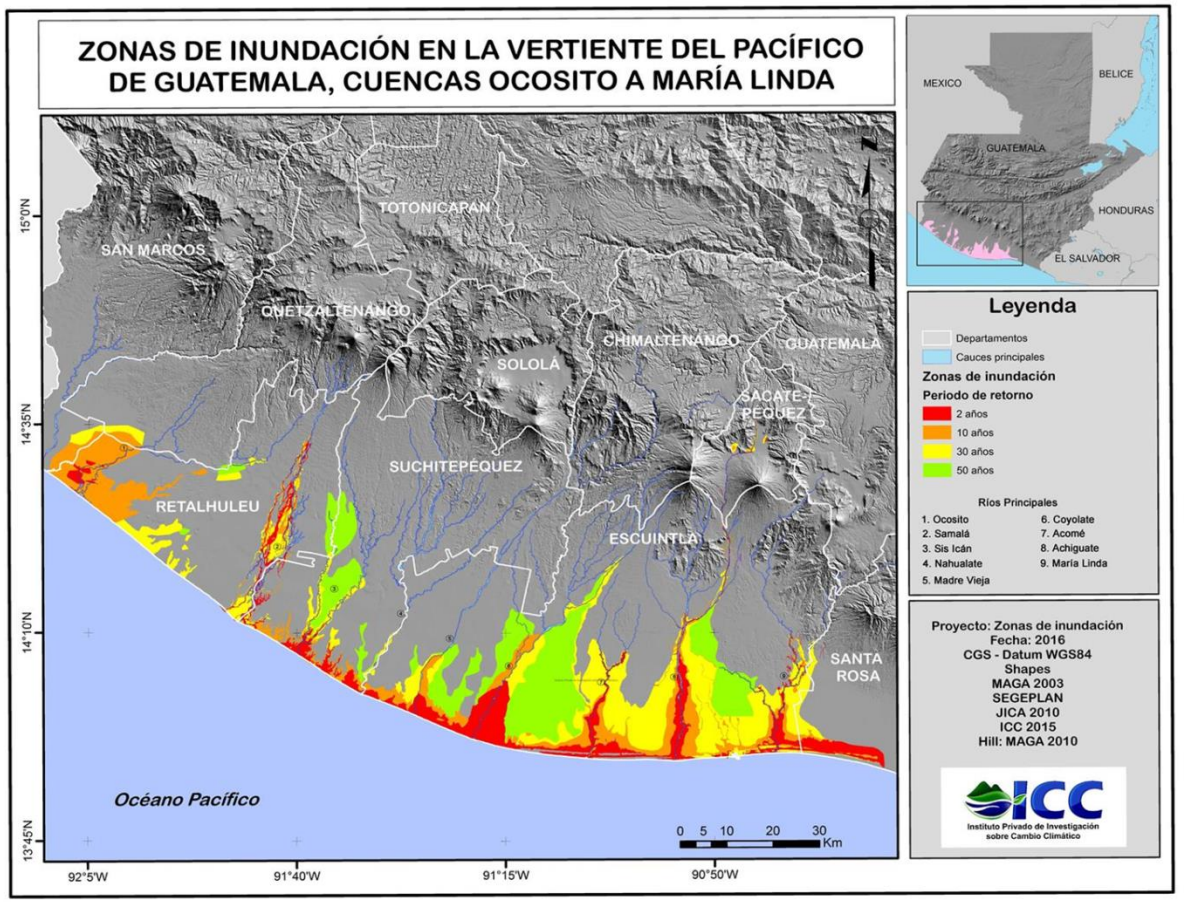
Guatemala, 12th of July 2021.

Climate vulnerability in Guatemala



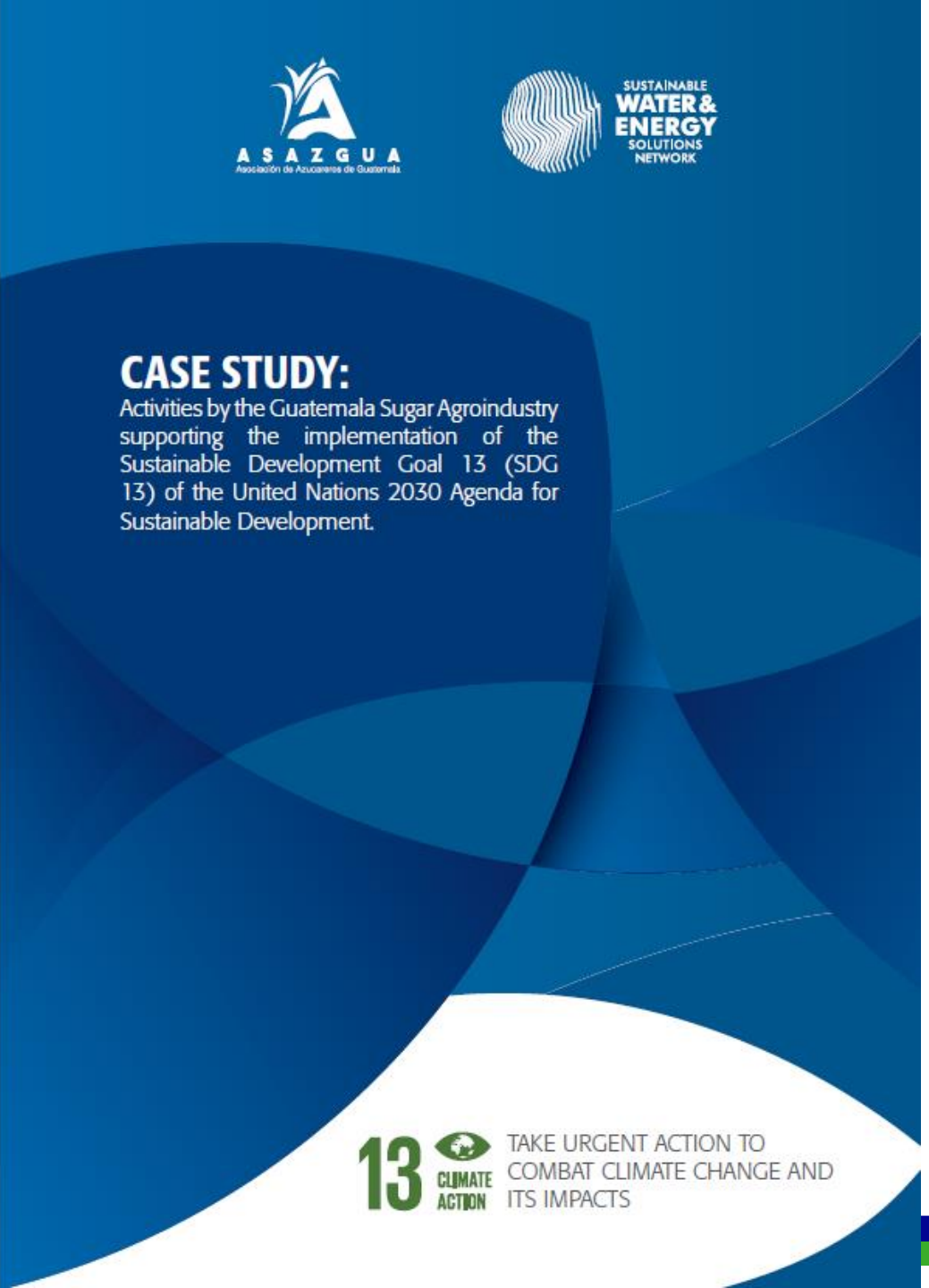


Fuente: MAGA (2006) en Castellanos y Guerra (2009)



Fuente: ICC, 2016.

Central America is one of the world's most vulnerable regions. There are impacts on an annual basis.



Contributions from the Sugar Agroindustry of Guatemala to the four main aspects of climate change policy

1. Climate change science
2. Climate change adaptation and vulnerability reduction
3. Mitigation
4. Capacity building

There is a Climate Change Policy and its structure follows these areas.

Creation of the Climate Change Research Institute: innovation in climate change governance

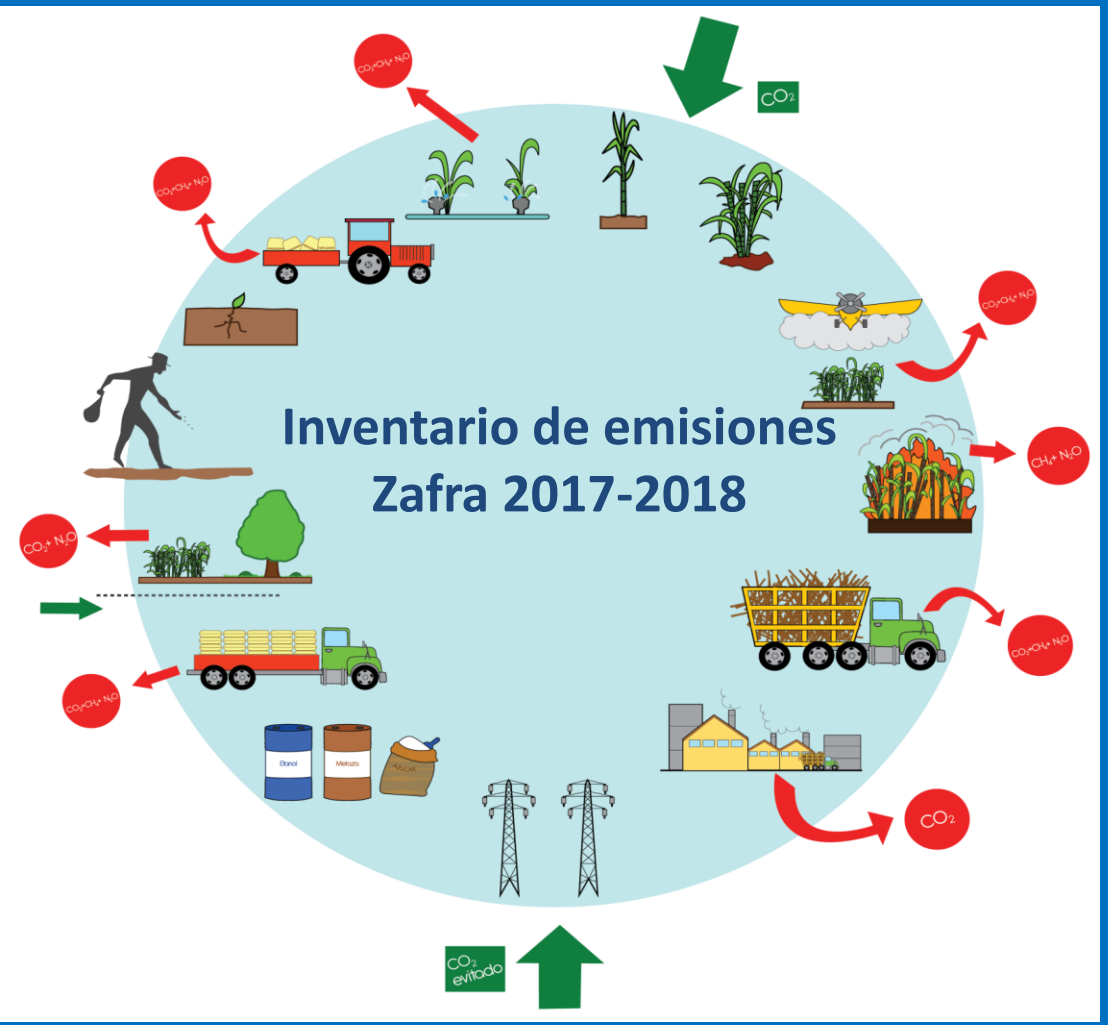
- Carries out research to aid the industry and other stakeholders (municipalities and communities) in the area of influence.
- Funded (now) by the private sector of Guatemala and El Salvador, as well by aid agencies (60-40%)

ICC's areas of work

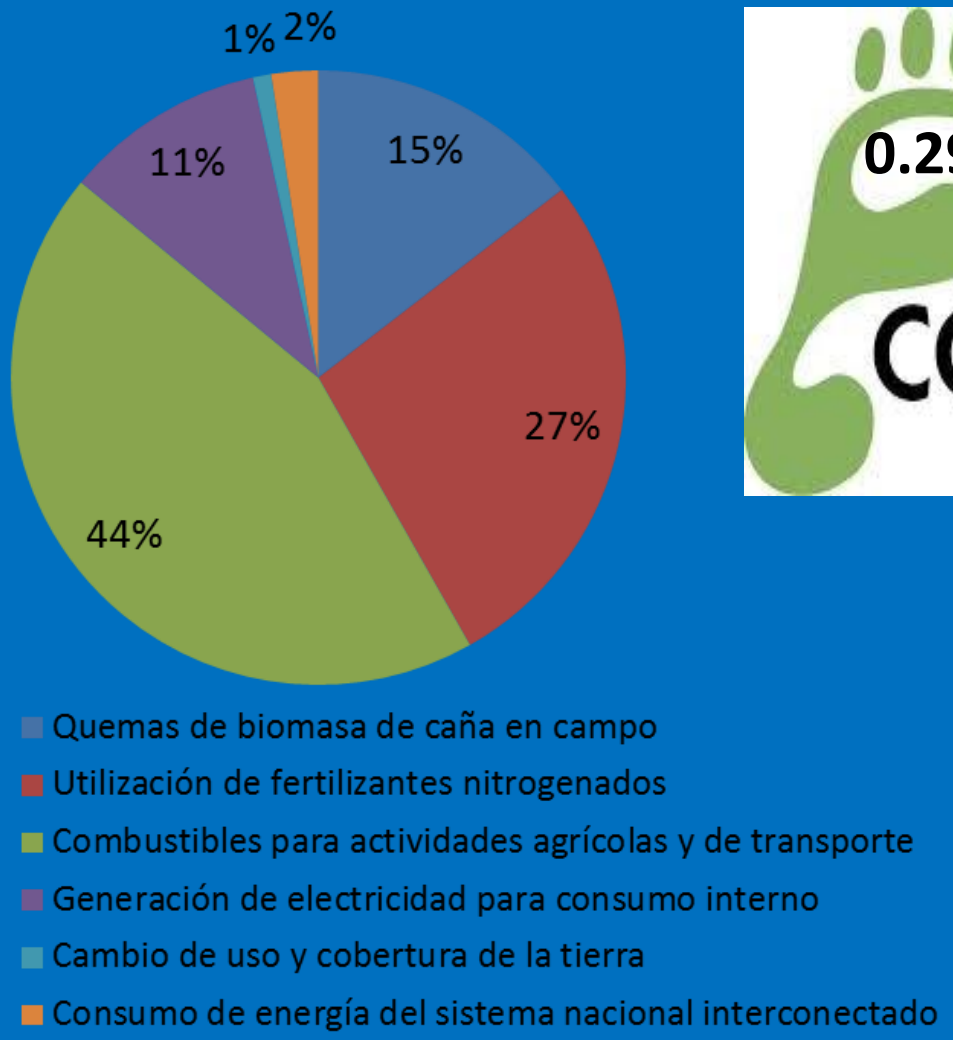
- Hydrometeorological Information
- Flood Research and Management
- Greenhouse Gases
- Environmental Management
- Protection and Restoration of Forests and Soil
- Integrated Water Management
- Adaptation Practices
- Capacity Building

Carbon footprint of Guatemalan Sugar

Based on IPCC methods



789,611 Ton CO_2eq
(<3% of national emissions)

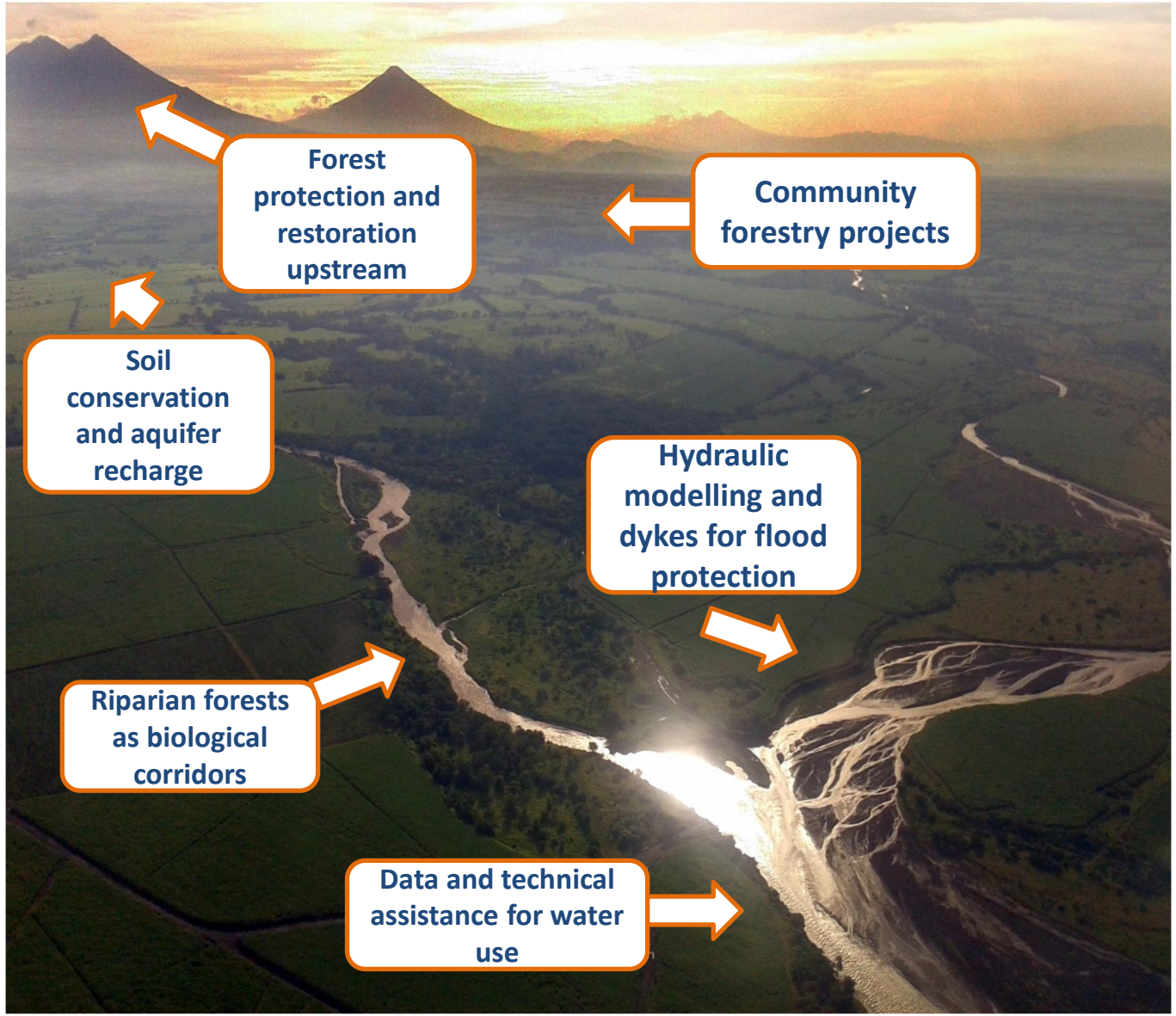


(ICC, 2019)

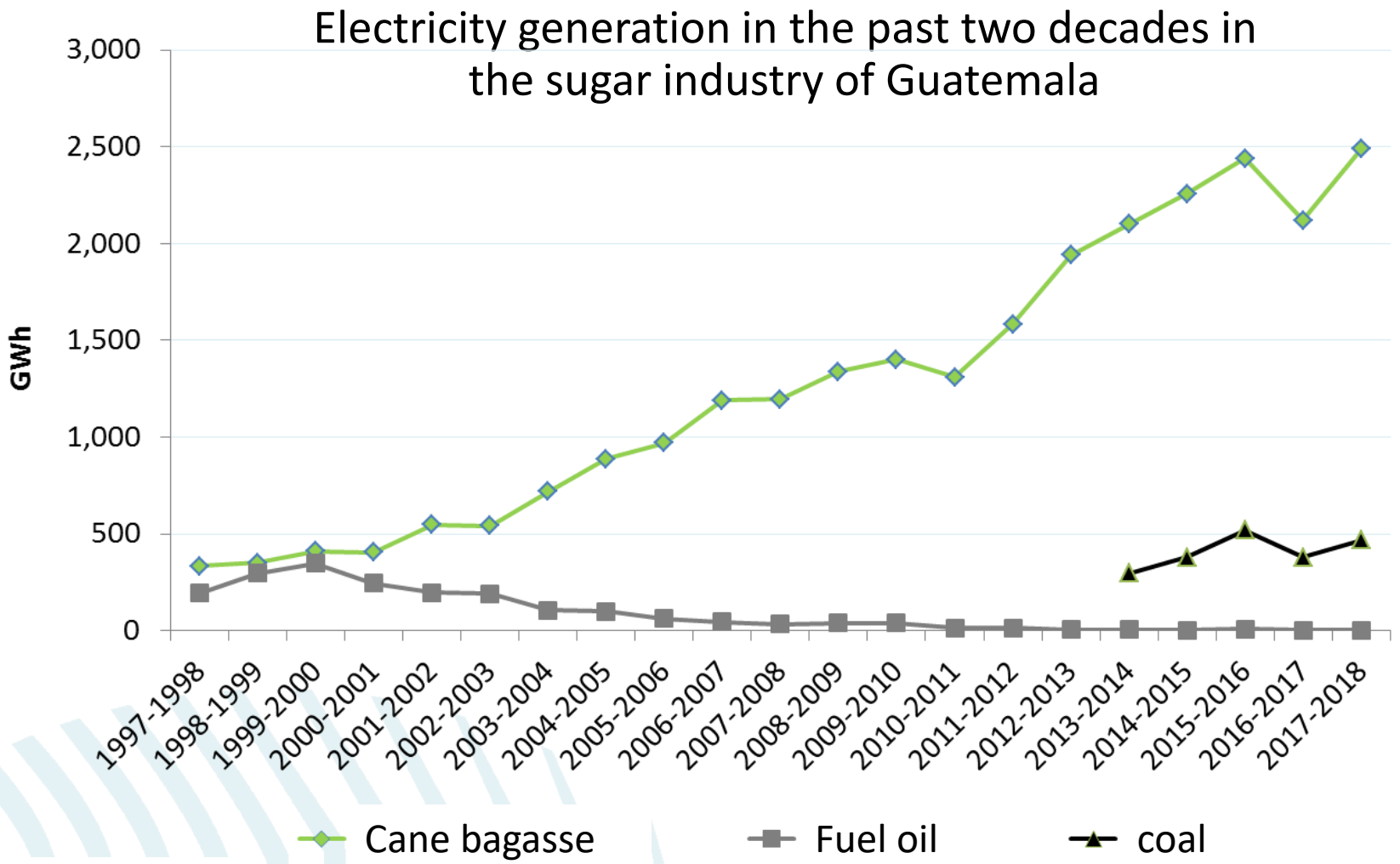
Climate change adaptation and vulnerability reduction

- Research on vulnerabilities related to flooding and droughts
- Disaster Risk Management programme: assessments, risk reduction, preparedness, emergency response and recovery.
- Community projects to build resilience
- Ecosystem based Adaptation

Adaptation actions at the local and the landscape level in the Pacific Basin of Guatemala



Electricity generated from sugarcane biomass is one of the main sources for Guatemala (15% annually)

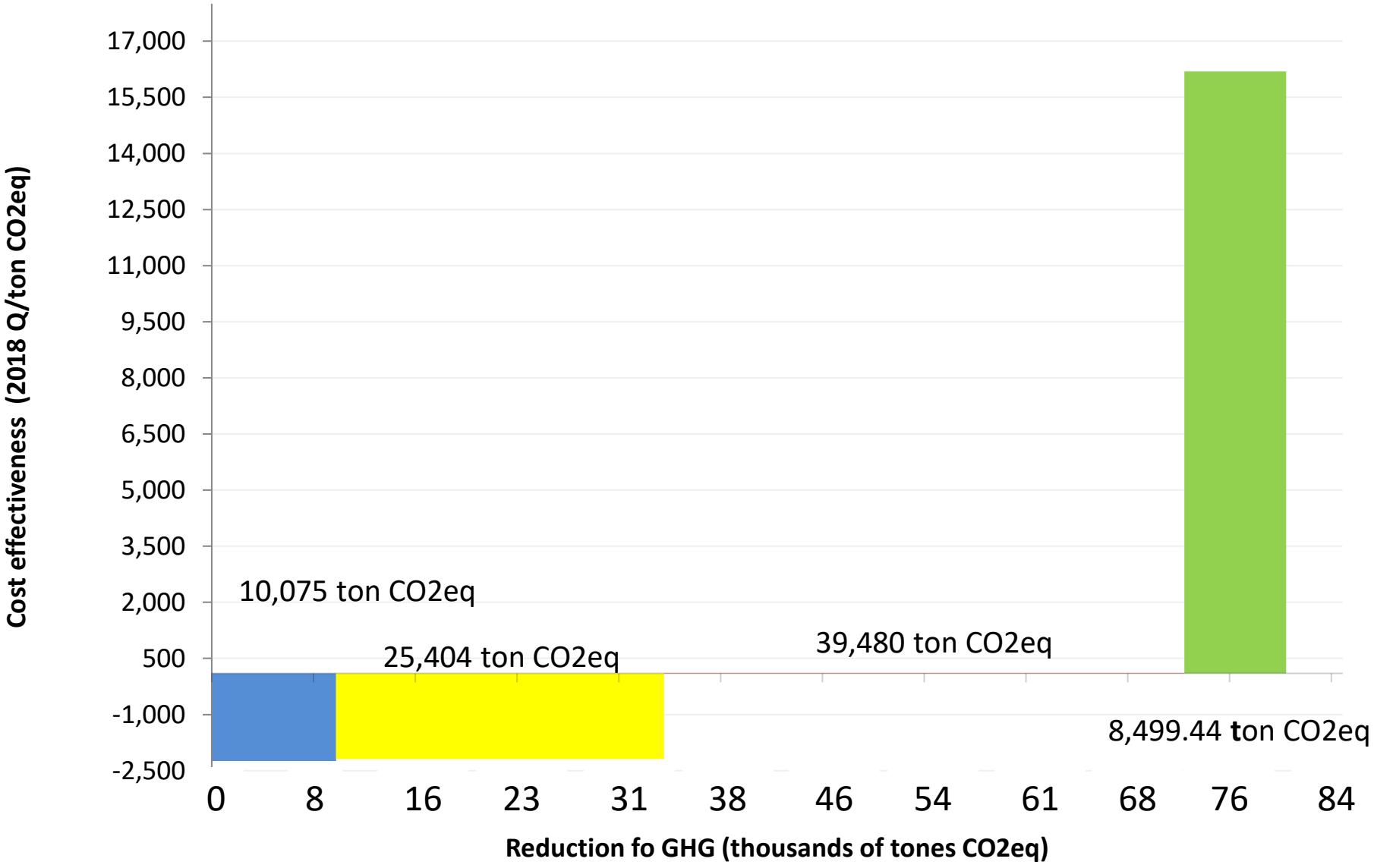


Growth has resulted from growth of cane crushed but also from **doubling efficiency**

Around 10% of the country's total emissions are **avoided**

4 million tons of CO2eq are prevented by generating renewable energy from sugarcane bagasse

Low Emission Development Strategy for Guatemalan sugar producers



More efficient irrigation systems

Electrification of irrigation systems

Forest restoration

Harvesting without use of fire

83,459 ton CO2eq
10.57 %

Instituto Privado de Investigación sobre Cambio Climático
2010-2020

10 AÑOS
Contribuyendo a la mitigación y adaptación al cambio climático

Capacity building: companies, teachers, community leaders

Activities
Training on watersheds and climate change
Talks on reforestation
Climate change course
Support to the National Forestry Congresses and the Climate Change ones
International key note speaker for the ATAGUA and the Forestry Congress
Talks on climate change
Workshops and curses on watershed management, tree nurseries, disaster risk management

In the period 2011-2020

- **> 900 events**
- **> 50,000 participants**


México
Diferendo Territorial, Insular y marítimo pendiente de resolver
Belice
OCEANO ATLÁNTICO
Guatemala
Honduras
OCEANO PACÍFICO
El Salvador
Nicaragua
Pantaleon
MADRE TIERRA
INGENIO PALO GORDO
SanDiego
LA UNIÓN
APIB
CASSA
Guatemala | El Salvador
Centroamérica
www.icc.org.gt - www.icc.org.sv


10 AÑOS
Contribuyendo
a la **mitigación**
y **adaptación** al
cambio **climático**
ISSN 2520-999X