



Sustainable Water and Energy Solutions supporting Climate Change Objectives during the Decade of Action and Beyond

ongoing work supported by
the sugar agroindustry of Guatemala and
opportunities for the near future

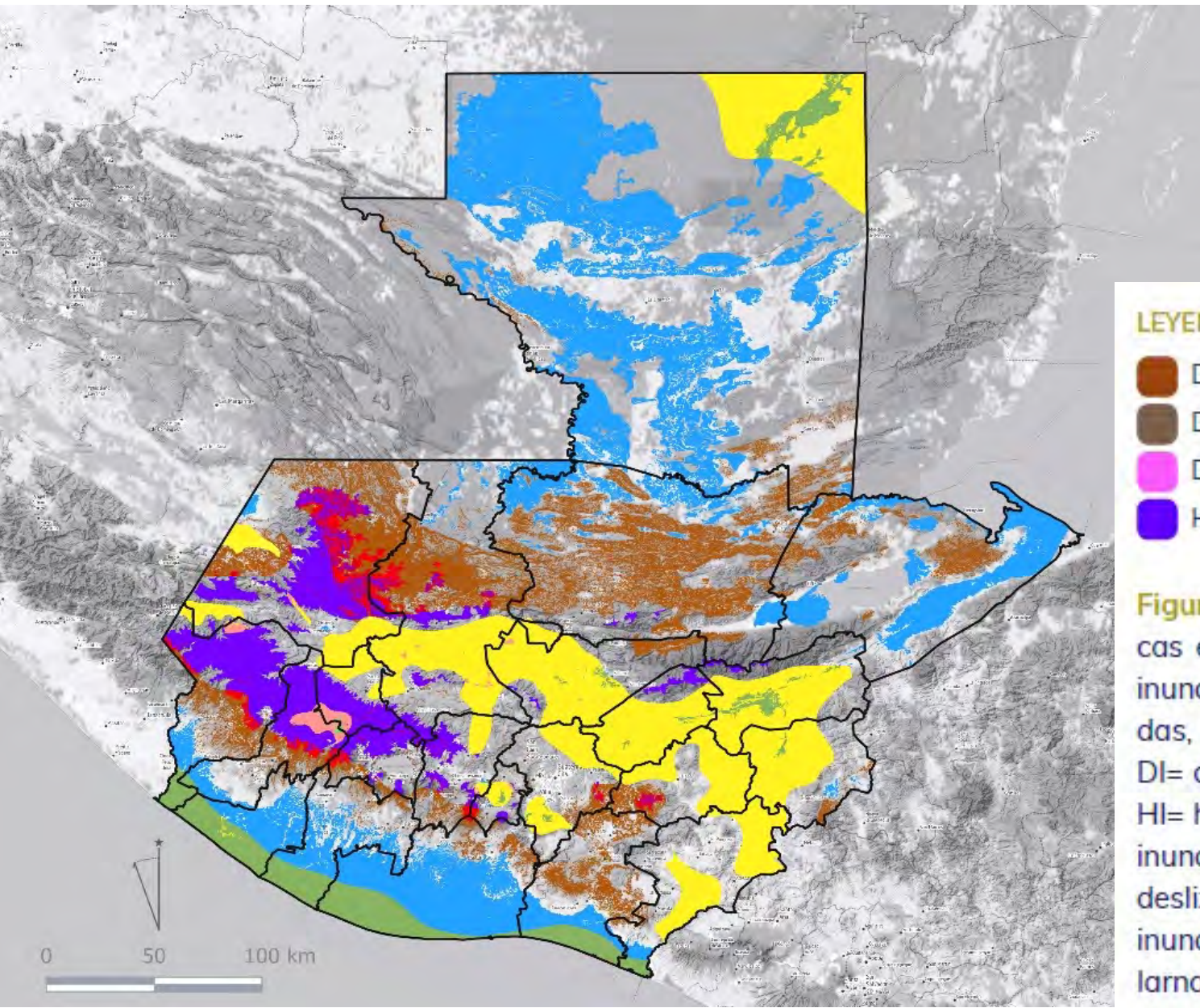
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Climate hazards in Guatemala

(colours indicate exposure to one, two or three hazards)



(IARNA, 2009, en SGCCC 2019)

LEYENDA

D	DS	DSI	DH
DI	DSH	S	SI
DHI	I	HS	División Administrativa Departamental
H	HI	SHI	

Figura 4-2 Mapa de territorios expuestos a amenazas climáticas en Guatemala, siendo las principales amenazas las sequías, inundaciones, heladas y derrumbes. D= deslizamientos, H= heladas, I= inundaciones, S= sequías, DH= deslizamientos y heladas, DI= deslizamientos e inundaciones, DS= deslizamientos y sequías, HI= heladas e inundaciones, SH= sequías y heladas, SI= sequías e inundaciones, DHI= deslizamientos, heladas e inundaciones, DSH= deslizamientos, sequías y heladas, DSI= deslizamientos, sequías e inundaciones, SHI= sequías, heladas e inundaciones. Adaptado de IARNA-URL (2009).

CASE STUDY:

Activities by the Guatemala Sugar Agroindustry supporting the implementation of the Sustainable Development Goal 13 (SDG 13) of the United Nations 2030 Agenda for Sustainable Development.

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

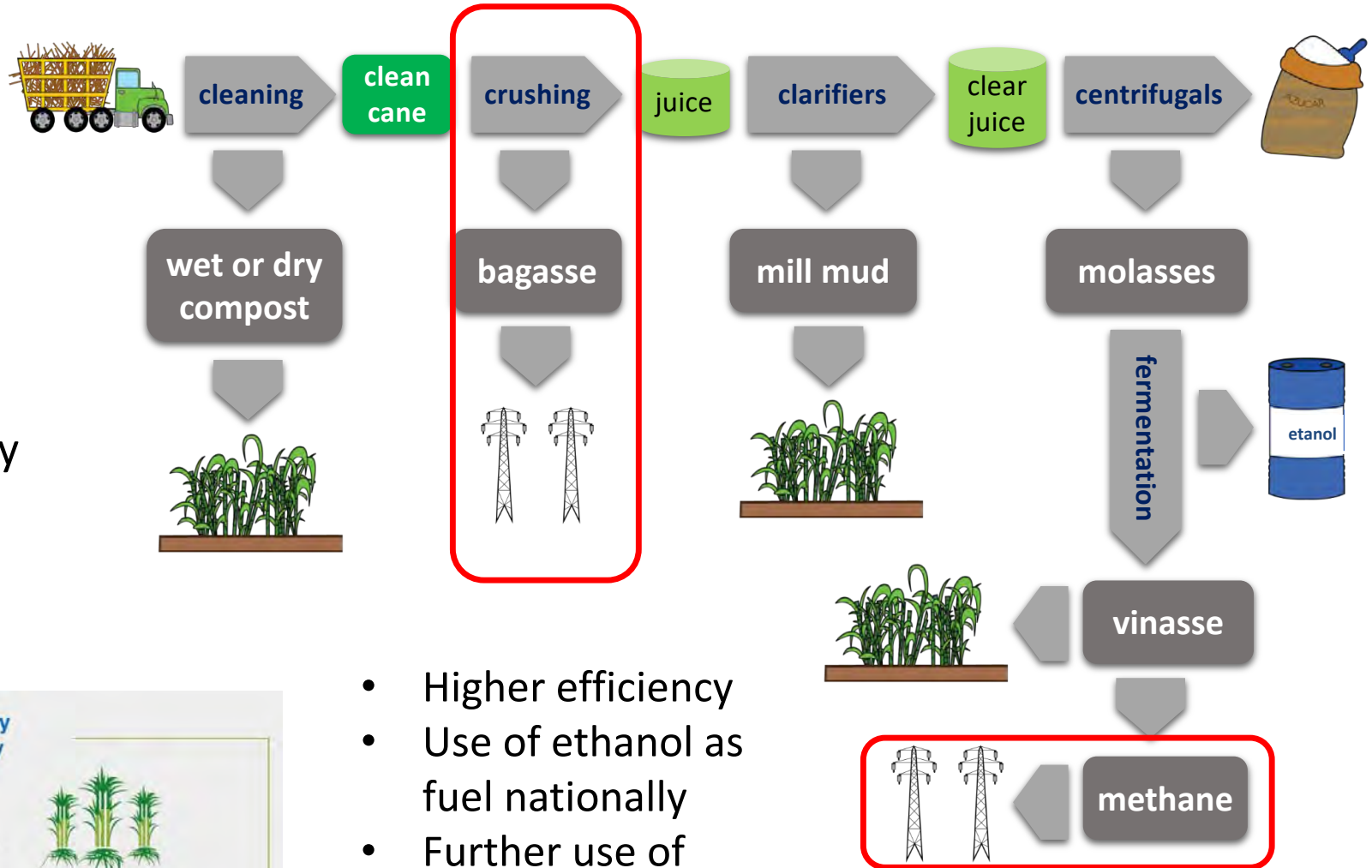
1. Climate change science
2. Climate change adaptation and vulnerability reduction
3. Mitigation
4. Capacity building

<https://www.un.org/en/waterenergynetwork>

<https://www.un.org/en/water-energy-network/page/publications>

Electricity generation and biofuels from sugarcane

4 million tons of CO_{2e} are avoided annually through generating electricity from sugarcane (6.7% of national emissions).

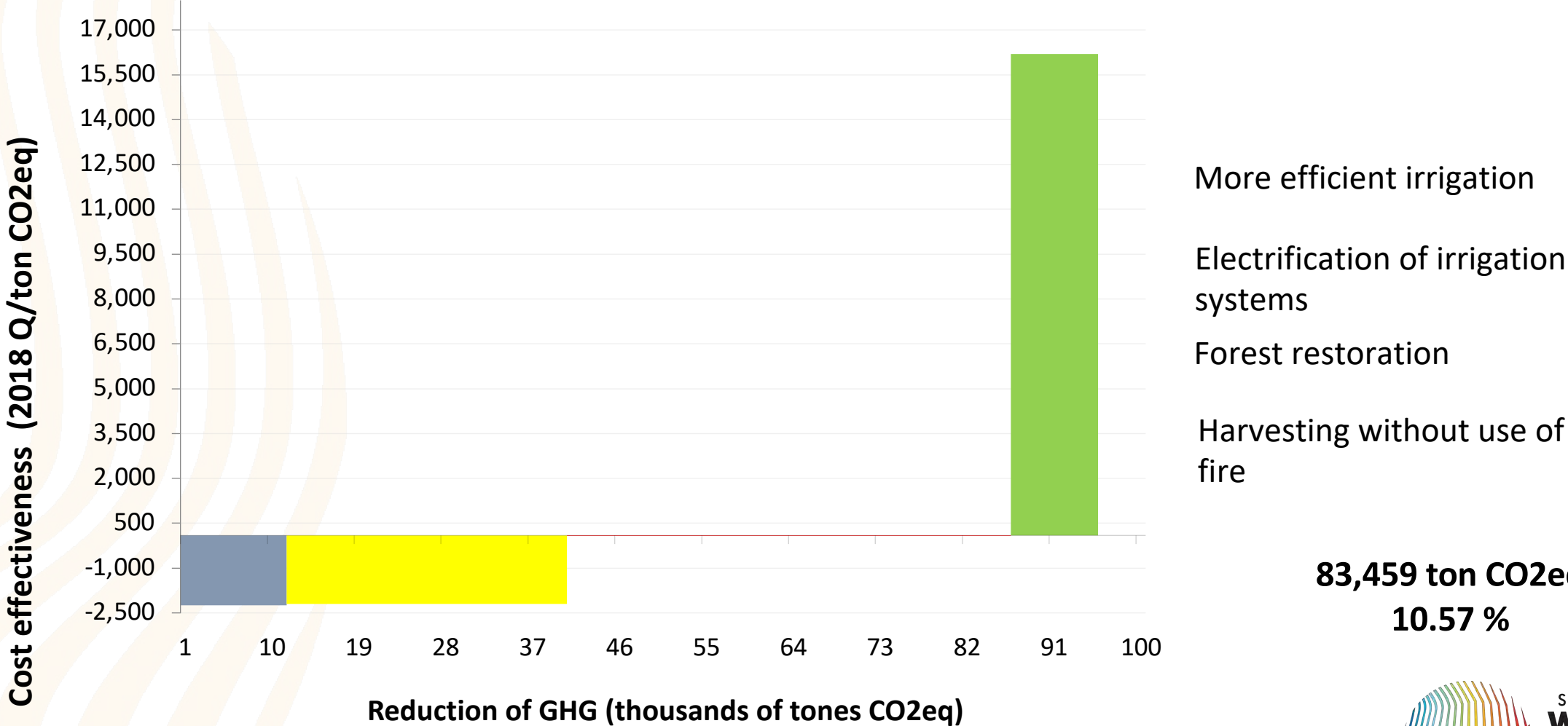


- Higher efficiency
- Use of ethanol as fuel nationally
- Further use of methane for electricity

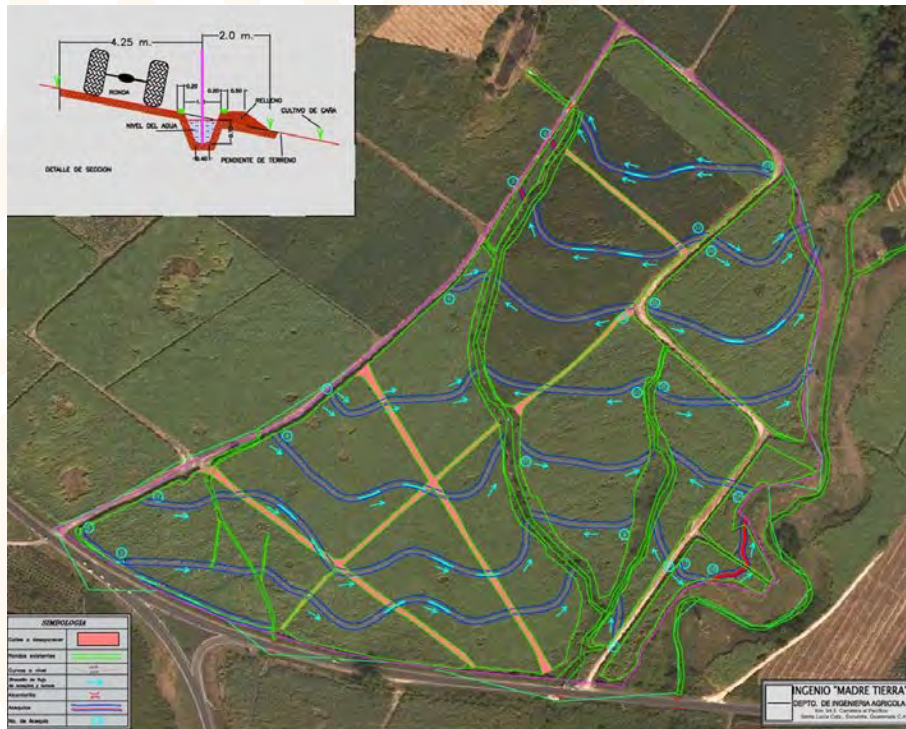
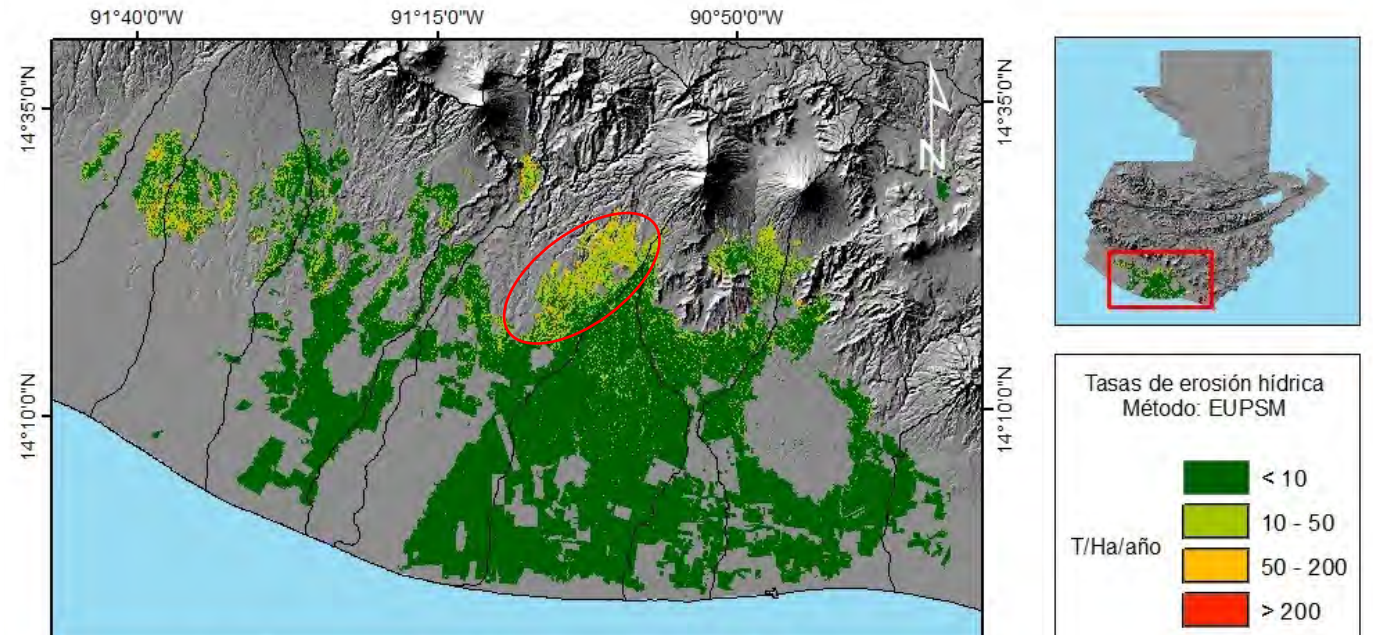
Contributions of the Guatemalan Sugar Industry to diminish the carbon footprint in the country



Marginal abatement cost curves for the sugar industry (analysis in 2017 – needs updating)



Assess carbon storage and fixation in agricultural soil and conservation measures for aquifer recharge



Contributions to climate science through the Climate Change Research Institute

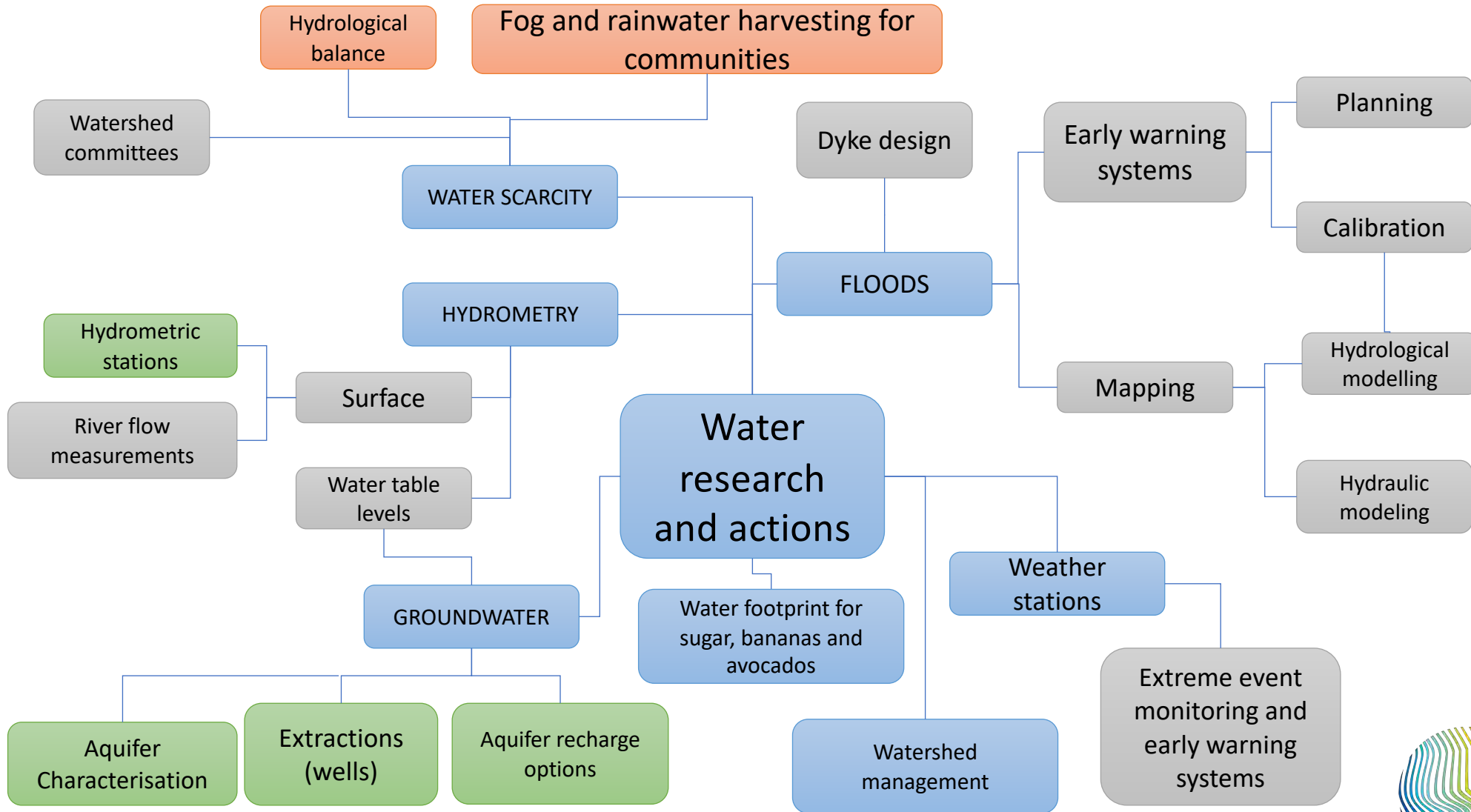
- Carries out research to aid the industry and other stakeholders (municipalities and communities) in the area of influence.
- Funded (now) by the private sector of Guatemala and El Salvador, as well by aid agencies (60-40%)

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



Water research and integrated management for adaptation



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





Guatemala | El Salvador
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SUSTAINABLE
**WATER &
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SOLUTIONS
NETWORK