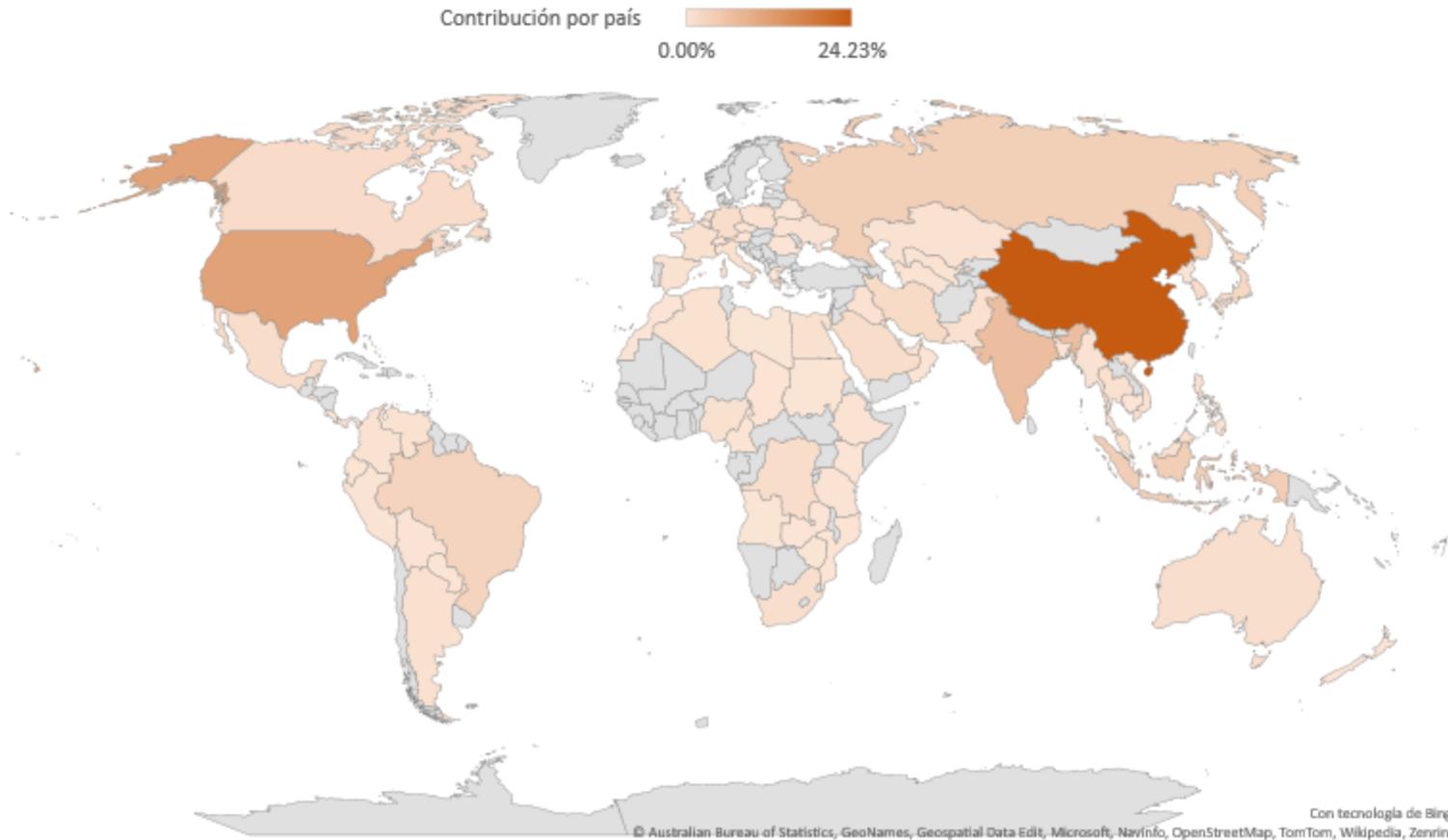


Nature Based Solutions in Mexico: Environmental Justice and Compliance with National and International Mitigation Goals

National Institute of Ecology and Climate Change

March 2024

GHG global emissions



Ranking	Country	% global contribution
1	China	24.23%
2	United States	11.60%
3	India	6.76%
4	Indonesia	3.94%
5	Russia	3.87%
6	Brazil	2.92%
7	Japan	2.28%
8	Iran	1.80%
9	Canada	1.56%
10	Saudi Arabia	1.45%
11	Germany	1.45%
12	Democratic Republic of the Congo	1.37%
13	Mexico	1.35%
14	South Korea	1.31%
15	Australia	1.22%
16	South Africa	1.13%

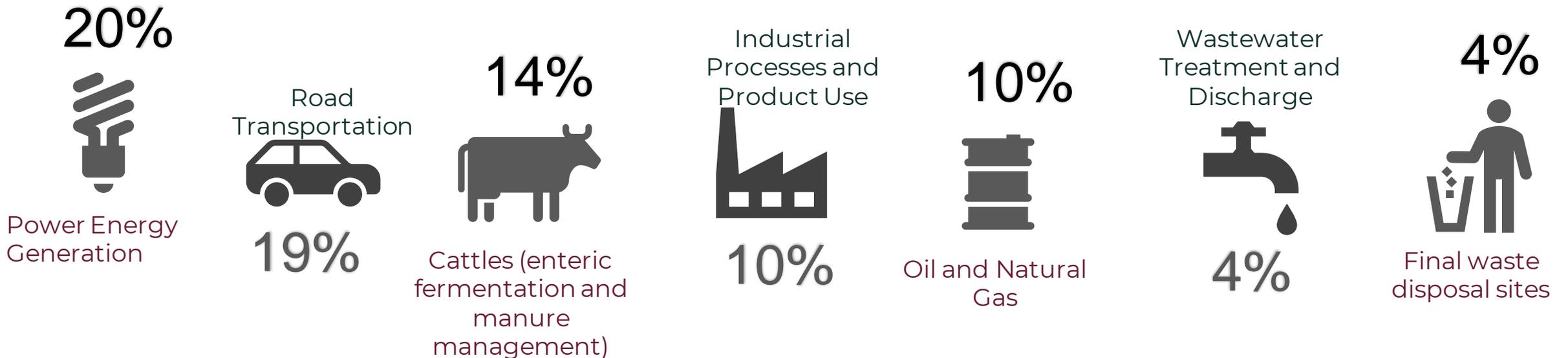
Mexico GHG emissions

In 2021, Mexico emitted **714.05 million tons of** carbon dioxide equivalent (**CO₂e**), this emission represents **1.28 – 1.4%** of global **GHG*** emissions.



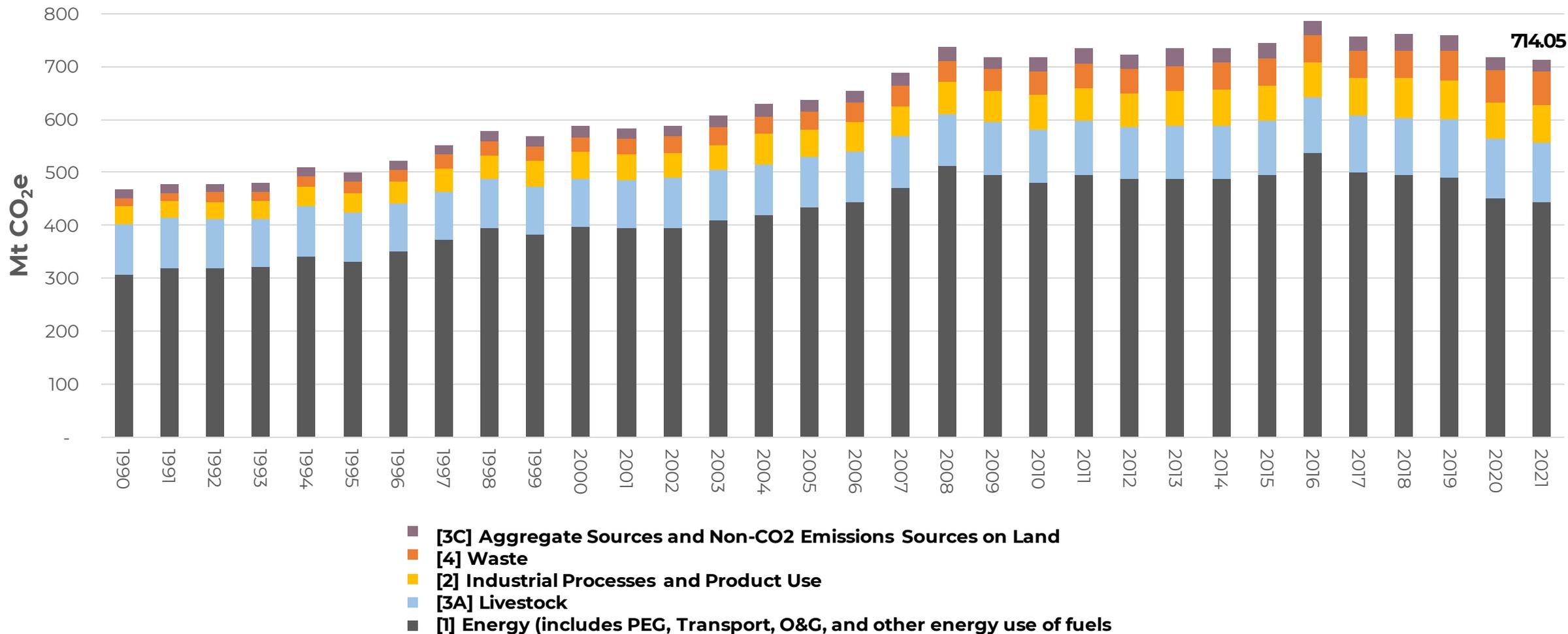
13° worldwide emitter

Main emission sources and their contribution to national emissions:



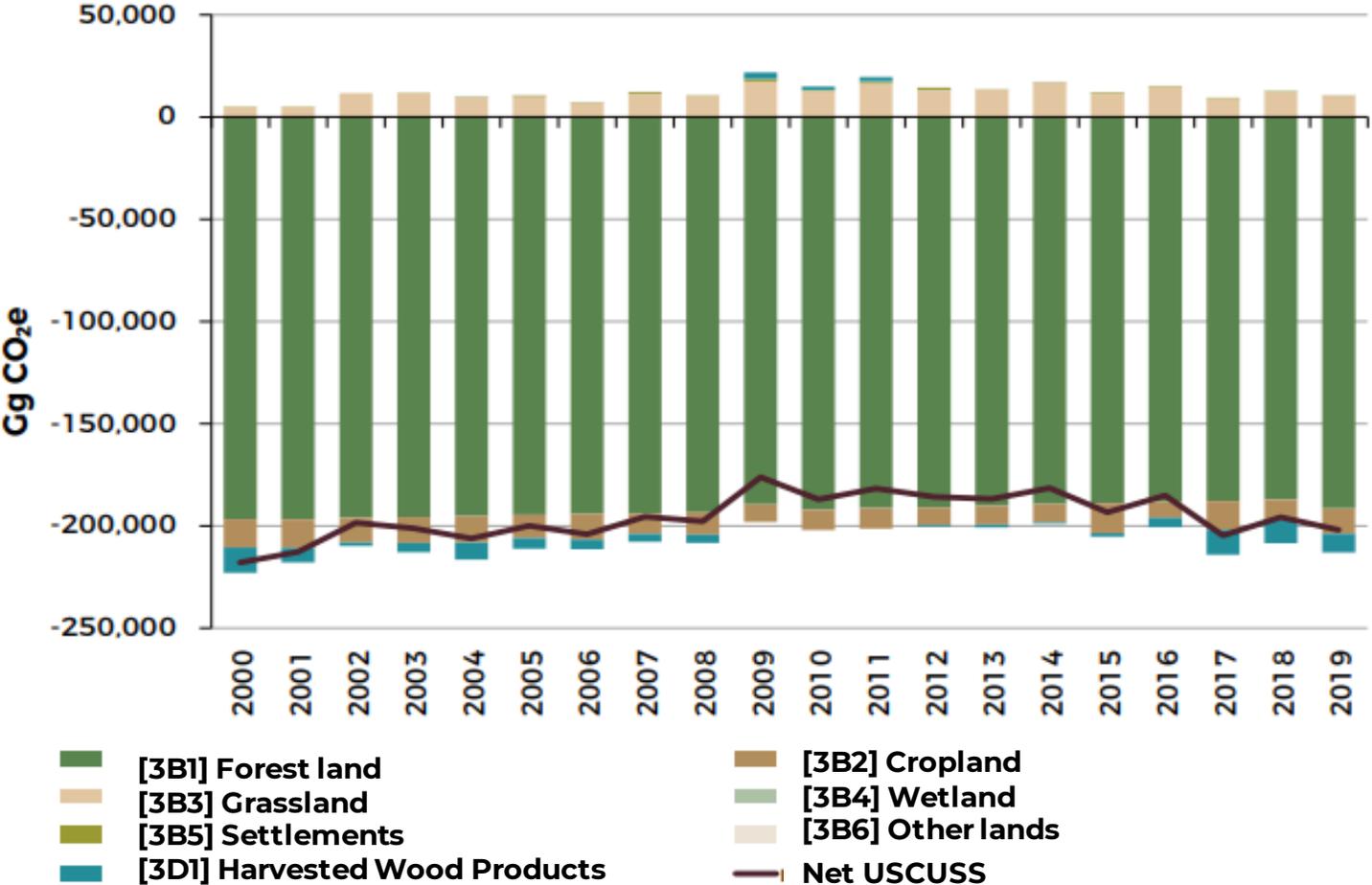
*https://www.climatewatchdata.org/ndcs-explore?indicator=pa_status

National GHG emissions by sector



Emissions increased 52.7% between 1990 y el 2021, however, in the last 10 years emissions decreased 3%, and are similar to those in 2009.

USCUSS emissions and removals

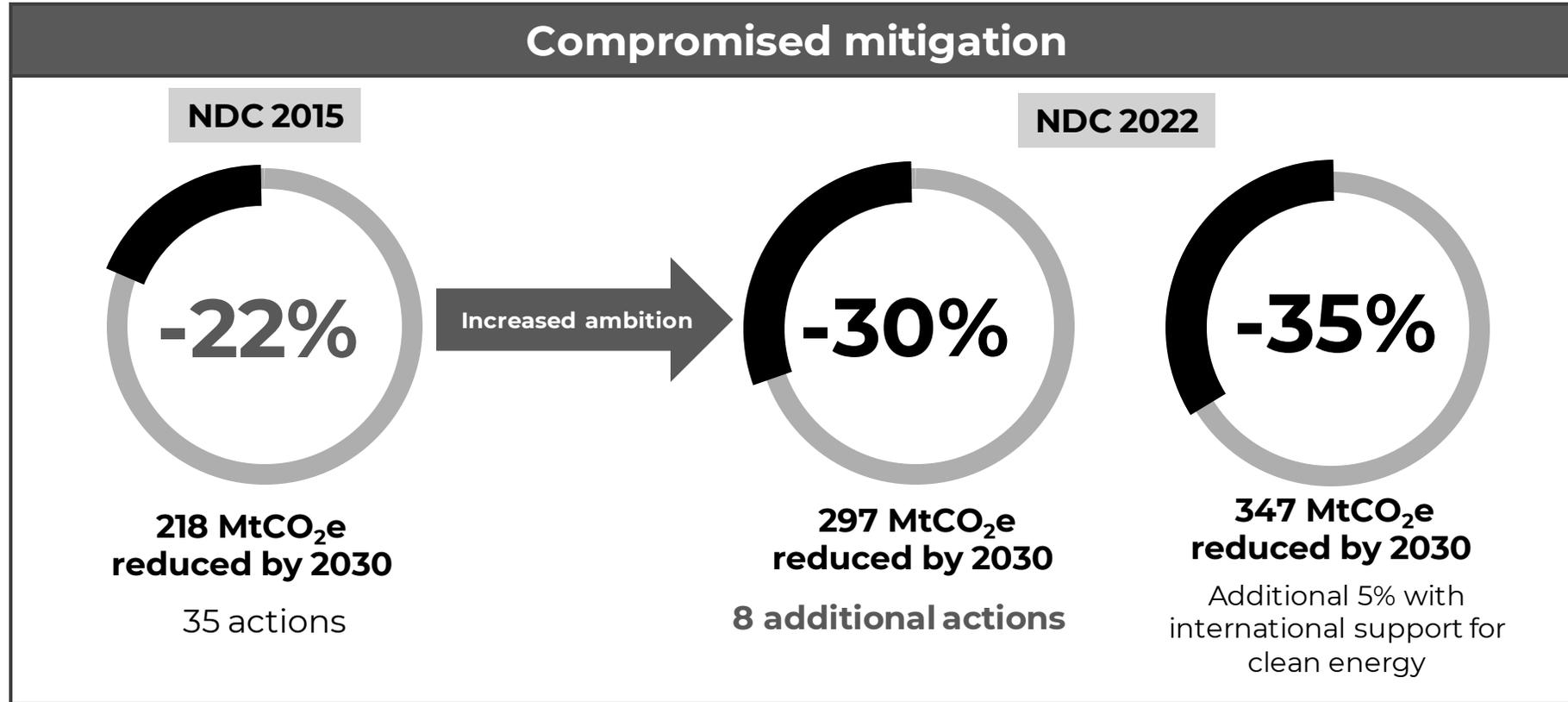


Deforestation from 2000 a 2019, (change from forest land use to other uses) is on average **212,834 ha/year**.

Emissions come mainly from change from forest land to grassland (95%), generally towards induced grassland.

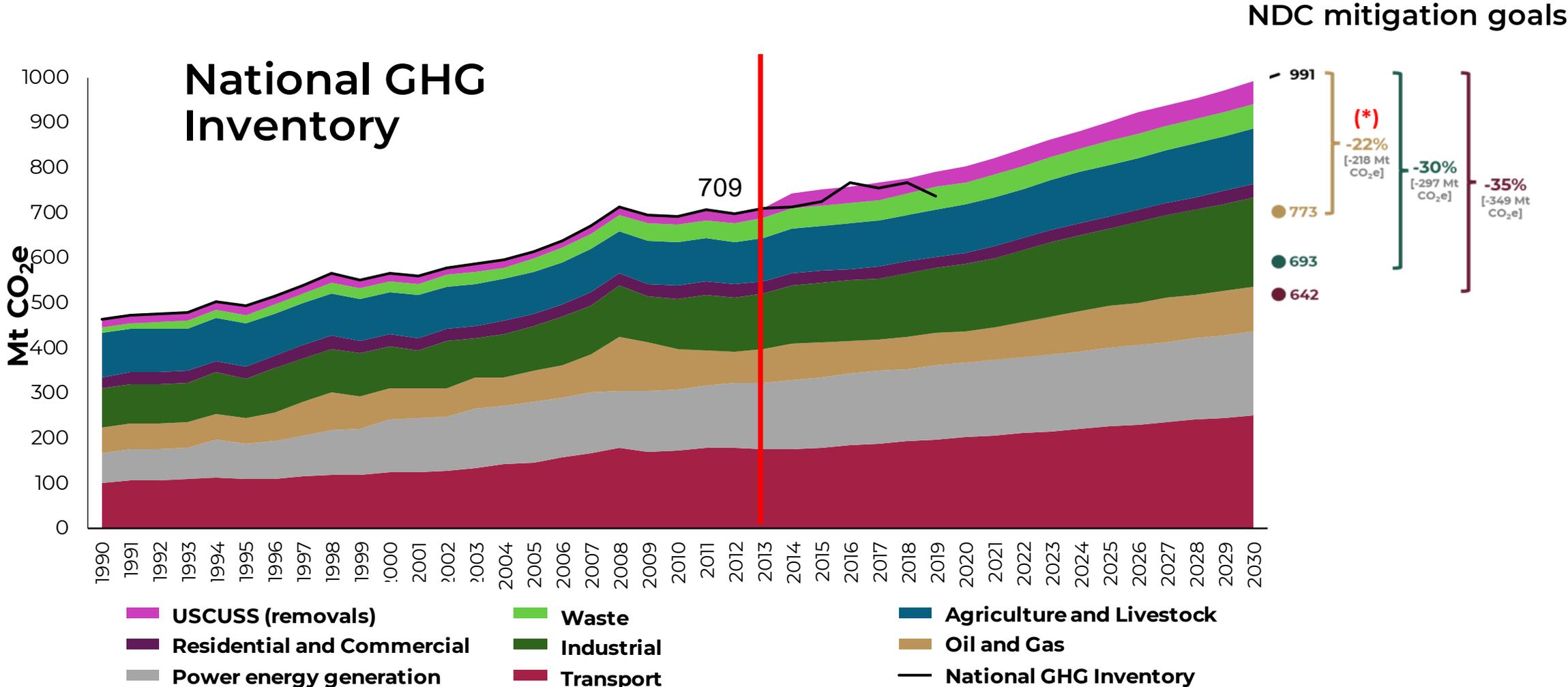
USCUSS emissions in 2019 are in the order of 17.4 MtCO₂ and removals are -210.2 MtCO₂, therefore the net results are -192.7MtCO₂

Mexico and its commitment against climate change (NDC)



65%
of the new commitment is
attributed to mitigation
actions in the AFOLU sector

Baseline scenario



Nature-based solutions and compliance with mitigation commitments

Nature-based solutions are at the heart of NDC compliance

Actions proposed in 2015 with a mitigation potential of **72.7 MtCO₂e**

33%
of the 2015 mitigation
commitments



**Zero net
deforestation rate**

- Maintain the change of use from non-forest to forest lands
- Reduce the area of change from forest to non-forest land



**Agrosilvopastoral
systems**

- Promotion of sustainable practice
- Increase of soil carbon reserves



**Community forest
management**

- Implementation of Community Forest Management and Payment for Environmental Services programs



**Conservation
agriculture**

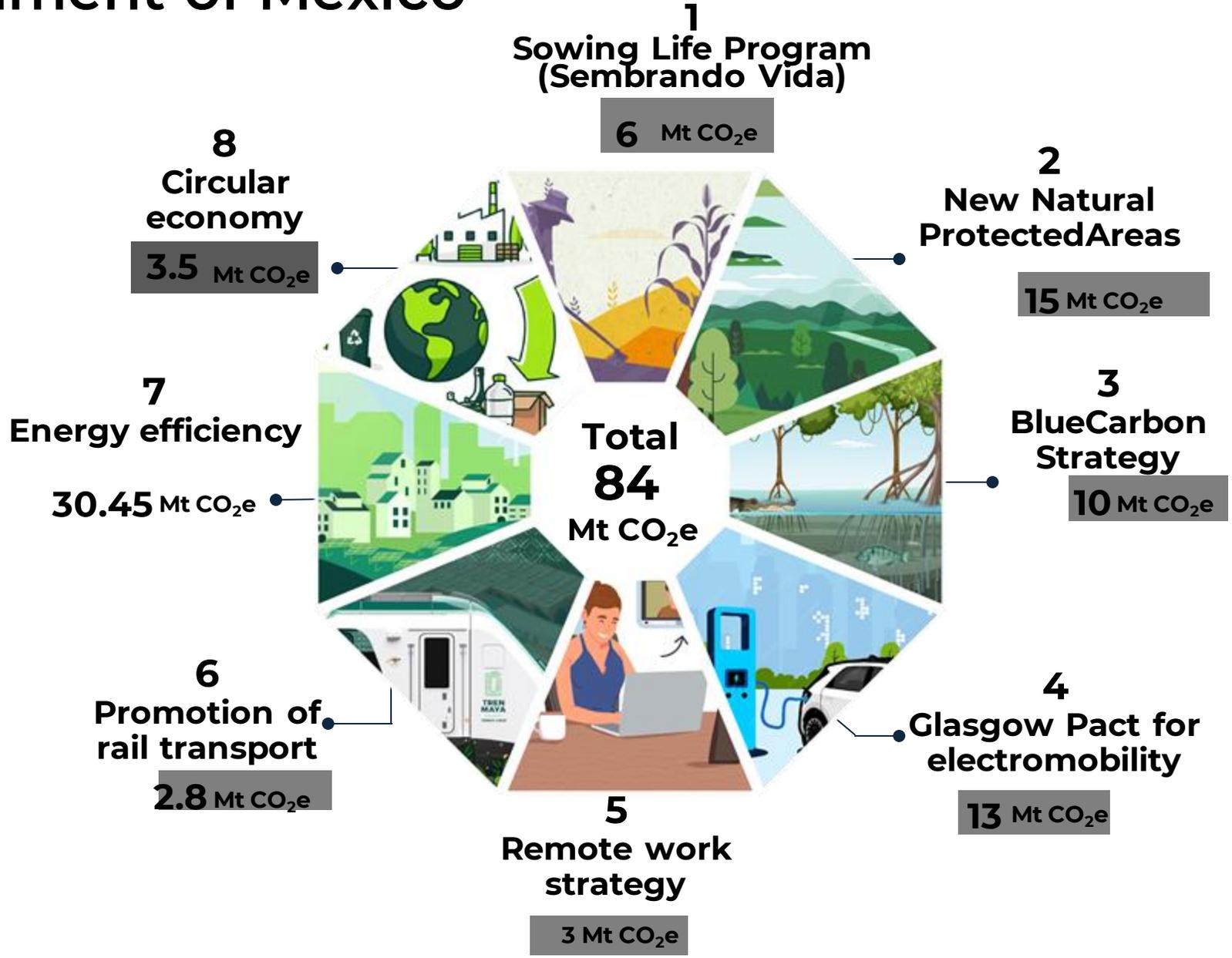
- Promotion of sustainable agronomic
- Increase of soil carbon reserves



**Installation and operation
of biodigesters**

- Capture of methane emissions
- Renewable energy production and biofertilizer

New Mitigation Actions of the Government of Mexico



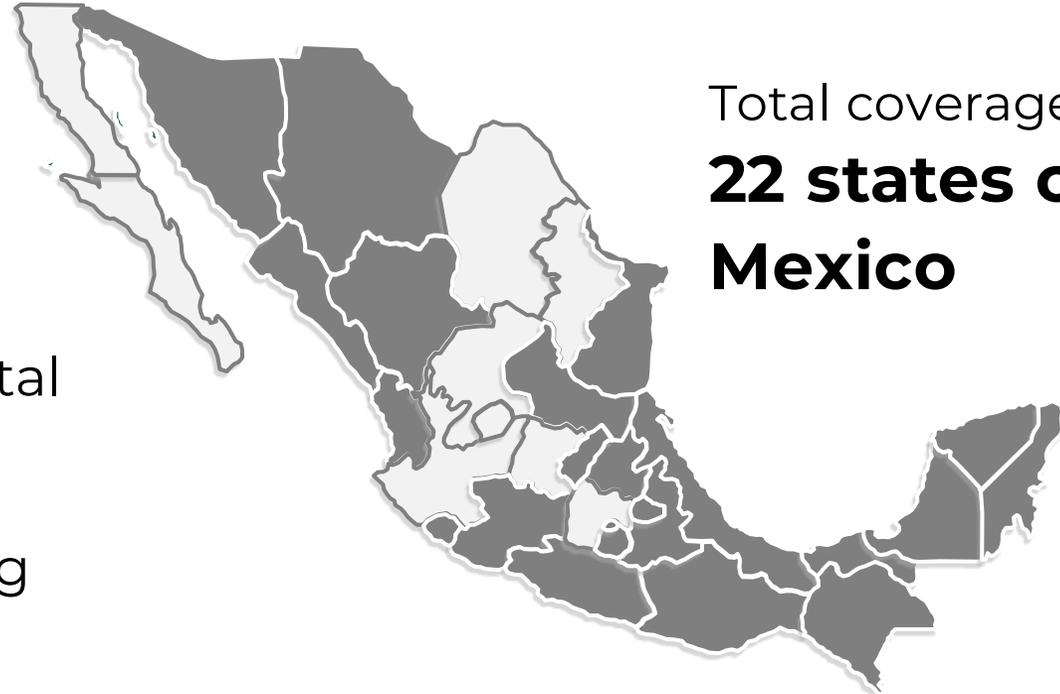
Of the 8 new actions that Mexico added in the NDC 2022, **3** are **nature-based**, and contribute **36%** of these new committed actions.

Sowing Life Program (Sembrando Vida)

This program addresses two major problems, rural poverty and environmental degradation

Restoring rural territory allows addressing GHG reduction through greater CO₂ capture.

**Mitigation potential of 6 MtCO₂
in 2030.**



Total coverage in
**22 states of
Mexico**

Mitigation considerations:

- **More than 596 million plants**
- **More than 401 thousand hectares in Agroforestry System and 578 thousand hectares in Milpa Interspersed with Fruit Trees.**
- **Average survival rates by year: 2019: 86%; 2020: 82% and 2021: 86%.**
- **Reduced tillage and zero tillage, compost with excreta is incorporated**



Natural Protected Areas

Mitigation considerations:

Data from National Commission of Natural Protected Areas Mexico



4 millions de hectares of new Natural Protected Areas



Voluntary Conservation Areas



Restoration Programs (PROCOCODES 16,217.88 hectáreas, PROREST, 19,567.22 hectares, 5,000 additional hectares by 2024)

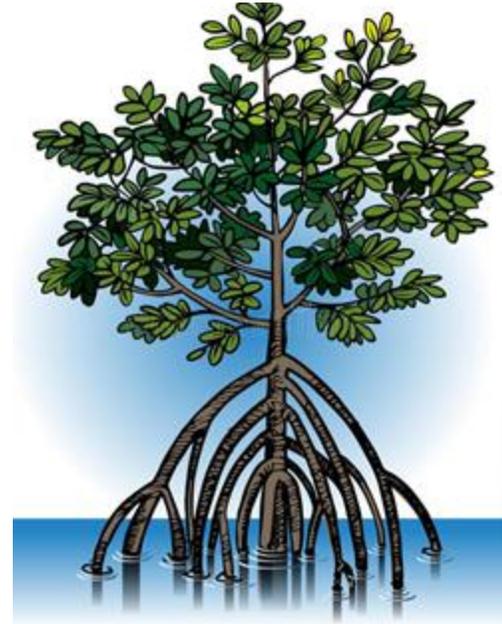
**New NPA mitigation
15 Mt CO₂ en 2030.**



BlueCarbon Strategy

Mitigation considerations:

- According to a study **the mangroves of Mexico capture 1,936 MgCO₂/hectares** (INECC-PNUD, 2017).
- **This measure aims to stop the 0.43% anual deforestation of the mangroves (WRI, 2023)** and be able to maintain the capture of this important ecosystem.



Mexico is the **12th country with the greatest marine-coastal resources and ecosystems.** It has:

- **905,086 hectares of mangroves (CONABIO, 2023)**
- **400,000 hectares of seagrasses and**
- **133,000 hectares of marshes.**

A mitigation of 10 Mt CO₂ is estimated in 2030.



2018-2020 Mitigation

According to the 3rd Biennial Update Report of México, the AFOLU sector achieve the mitigation of 48 MtCO₂e with nature-based actions for a total of 150MtCO₂e of mitigated emissions.

- Implementation of community forest management and payment for environmental services programs (26.5%)
- Permanences in Natural Protected Areas (3%)
- Sowing Life Program (2.6%)
- Creation of new Natural Protected Areas and certification of Voluntary Conservation Areas (0.07%)
- Conservation agriculture (0.17%)



Conclusions

- **Nature-based Solutions** play an important role in mitigating climate change through actions that **improve the carbon capture and storage capacity** of ecosystems, as well as **reversing degradation** by **increasing carbon stocks** and **reducing GHG emissions**.
- Considering nature-based actions in climate change policies is essential to ensure the adoption of measures that are consistent with **social and environmental justice**.
- The nature-based approach facilitates the compliance of international commitments by **linking climate policy with the territorial and daily lives of people, putting communities at the center of solutions to climate change**.

iThank you!