

Strategies and modalities to scale up implementation of best practices, innovations and technologies that increase resilience and sustainable production in agricultural systems according to national circumstances.

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SECRETARÍA DE AGRICULTURA Y DESARROLLO RURAL



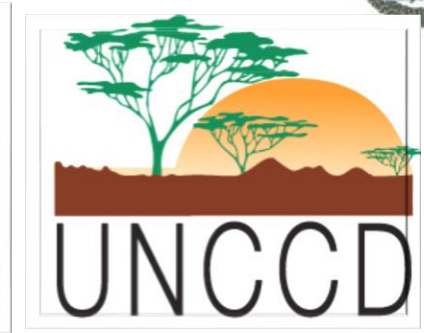
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# Systemic approach



## Sustainable soil and water management



Convention on  
Biological Diversity



GLOBAL SOIL  
PARTNERSHIP

Climate change, land degradation, and biodiversity loss are closely interlinked.

Conservation, restoration of **ecosystem functions**, sustainable use of biodiversity, **sustainable agricultural practices**, contribute significantly to **climate change adaptation and mitigation**, disaster risk reduction and **food security and nutrition** and to **reduce biodiversity loss**.



# Systemic approach



## Sustainable soil and water management



Convention on Biological Diversity



GLOBAL SOIL PARTNERSHIP

Federal government, state and municipal.



Academy R&D  
CSO  
Private sector



Indigenous peoples and local communities, women and youth



# Commitment of Mexico

The government of Mexico is committed to promoting sustainable development

Sustainability as an indispensable factor of:

- ✓ Well-being
- ✓ Social equity
- ✓ Ecosystem integrity

Sustainable development

Natural resources conservation

Climate change mitigation and adaptation

Sectorial Program



Improve sustainable production processes and reduce vulnerability of agricultural, livestock, aquaculture and fishery sectors to climatic risks.





# What are your country's national experience with scaling up the implementation of best practices, innovations and technologies that increase resilience and sustainable production in agricultural systems according to national circumstances?

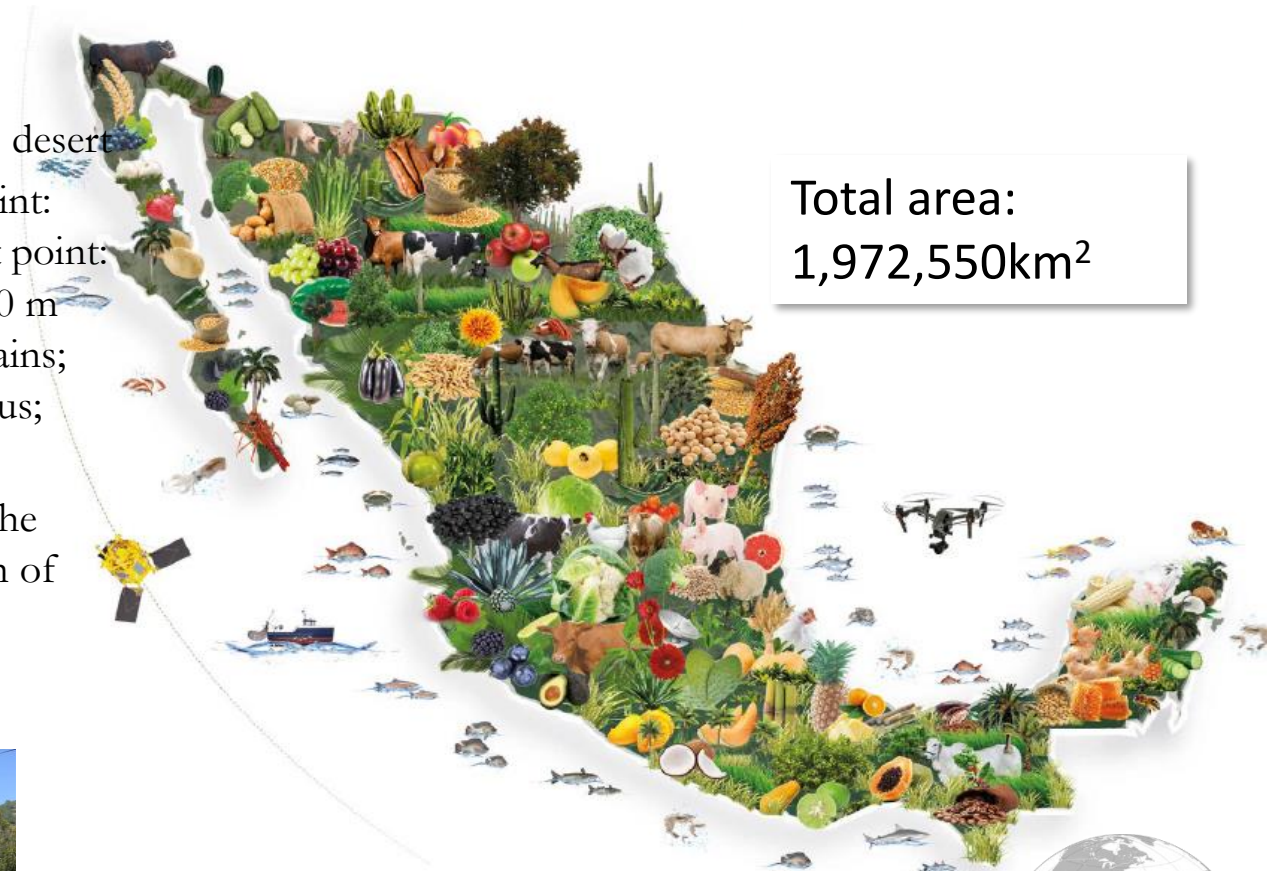


**Climate:** varies from tropical to desert

**Elevation extremes:** lowest point: Laguna Salada -10 m, highest point: Pico de Orizaba volcano 5,700 m

**Terrain:** high, rugged mountains; low coastal plains; high plateaus; desert.

**Megadiverse** country, part of the **Mesoamerican** center of origin of cultivated plants.



Total area:  
1,972,550km<sup>2</sup>



Very diverse bioclimatic conditions  
Great heterogeneity of productive systems  
Private and social land property





# Sectoral Committee on Genetic Resources for Food and Agriculture (CSRGAA)

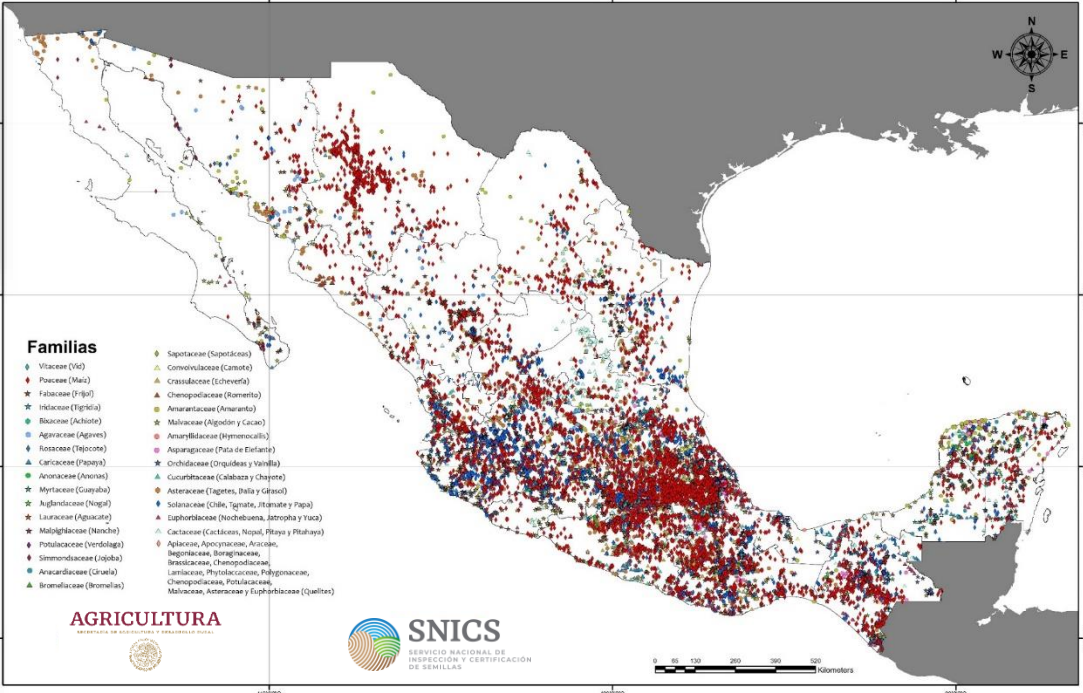


- Recognizing the importance of genetic resources for food and agriculture on adaptation to climate change and food security, the CSRGAA was legally established on July 16, 2020.
- The Multiannual Work Program and the consolidation of 4 Subcommittees are on going.

## Network of Germplasm Banks



## Seed Conservation for native crops



64,000 accessions from 1,301 species

# NAMA for Sustainable Livestock and Low Emissions



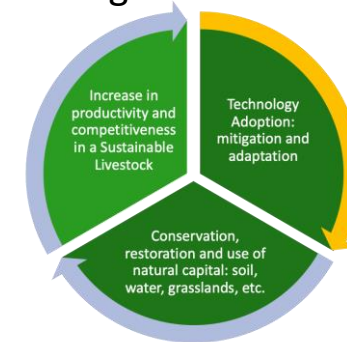
## Mexico is a livestock country



109.8 Million ha of rangelands and meadows, 56% of the total territory  
31% GDP sector

## Threat to Climate Change: GHG Emissions: 15%, 70% livestock sector

- Livestock: enteric fermentation, excreta management
- Agricultural burns: 10% fires
- Changes in land cover
- Changes in Land Use



## Objective

**Vision:** To transform conventional extensive livestock farming towards carbon neutral livestock, in congruence with the 1.5° C objective and the NDC

**Territorial coverage and scope:** 10 States; 8 Climate Regions; 5 Ecological Livestock Regions



## 44 Stakeholders

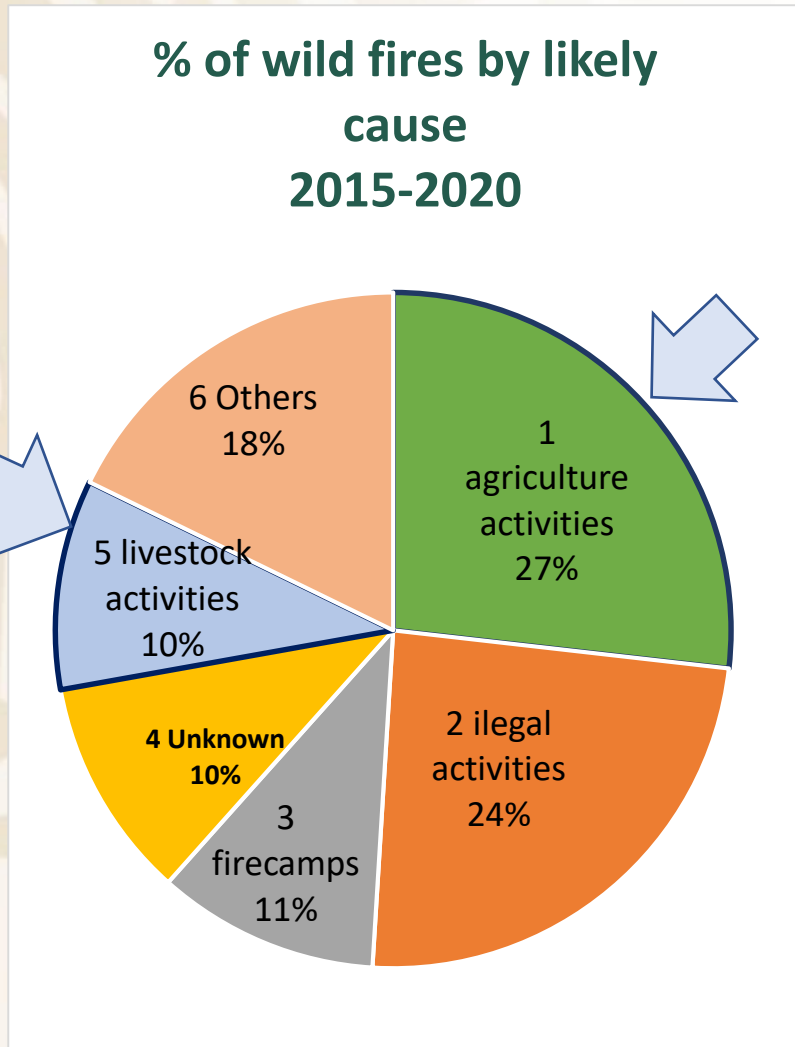


## Early Actions

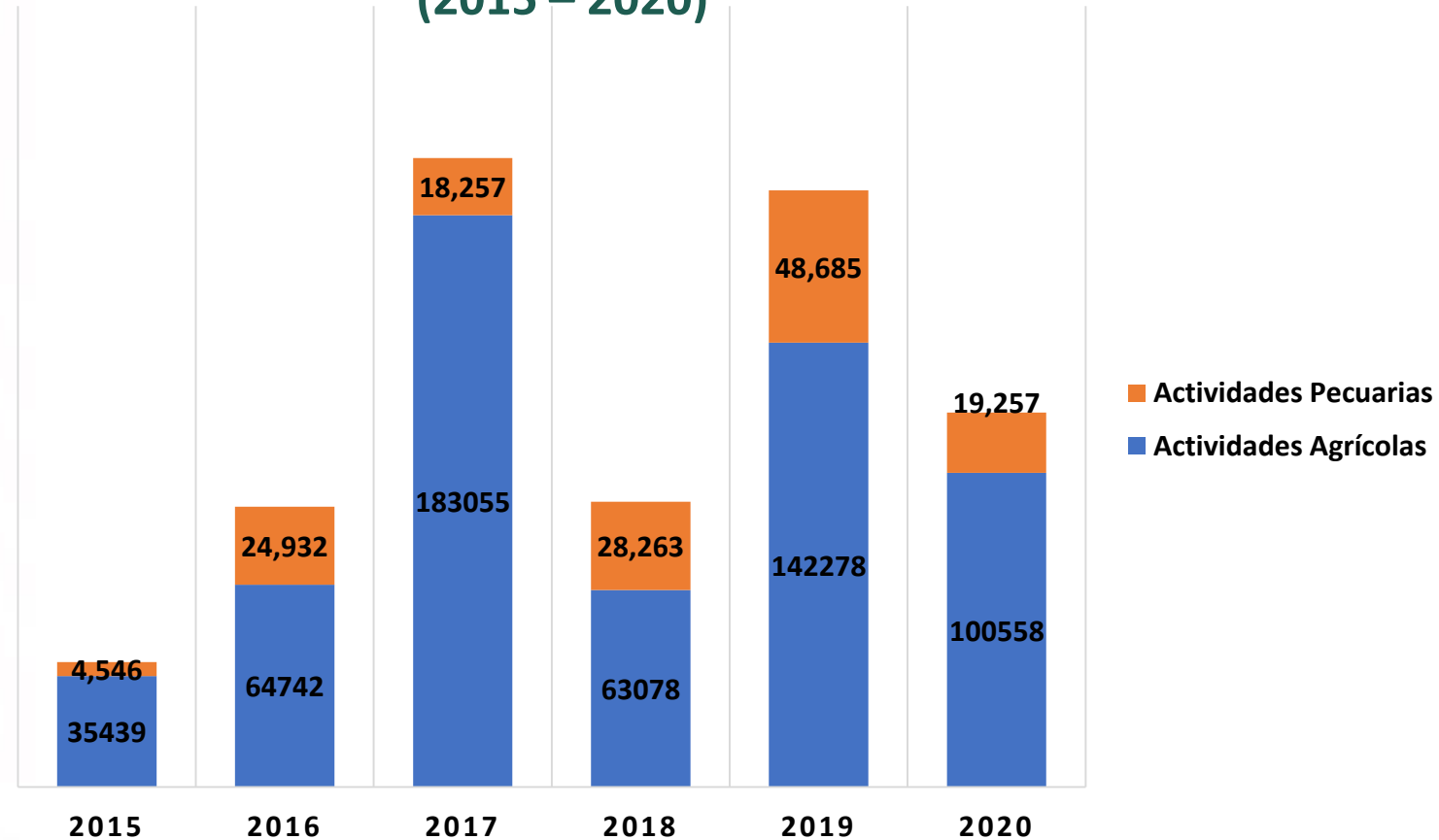
- Participatory workshops in 6 regions to quantify emissions and mitigation potential
- Design of the Sustainable Livestock Strategy in Tabasco (EEREDD+)
- Sustainable Livestock Project for Grazing Bovines in Tabasco
- Baseline: Quantification of emissions and mitigation potential of the NAMA
- Scientific publications (in process): arid and tropical zones
- Study: Carbon Capture Potential in Livestock Soils

## Challenge: Financing

# Reducing the use of fire in agriculture



**Forest ha affected by wildfire caused by agriculture and livestock activities (2015 – 2020)**





# Inter-secretarial coordinating actions



## Sustainable Forestry Development Law

Last modification April 26, 2021

Art 24. Sec. VII. Design and apply a strategy for fire management and promote agricultural production alternatives that exclude the use of fire.

## Official Mexican Regulation

NOM-015-SEMARNAT/SAGARPA-2007

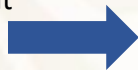
Updating process

This NOM establish the technical specifications and methods for the use of forest fires and agricultural burns.

## Agricultural Subsidy Exclusion

Subsidy exclusion to projects developed on deforested areas outside the agricultural frontier.

Agriculture Development Program (2017-2019)



Agriculture, Livestock, Fishing and Aquaculture Development Program (2020-2021)

## Government Actions



#MiParcelaNoSeQuema



Capacity building to promote alternative practices (conservation agriculture) to benefit soil and water quality by MasAgro Program in collaboration with CIMMYT

Promote **online videos** for different states (Chiapas, Guerrero, Hidalgo, México, and others) presenting alternative practices and explaining NOM-015

Campaign to create awareness among farmers, through radio and social networks

*Incendios y Quemadas Mx App*. Application to notify controlled agricultural burns and forest fires

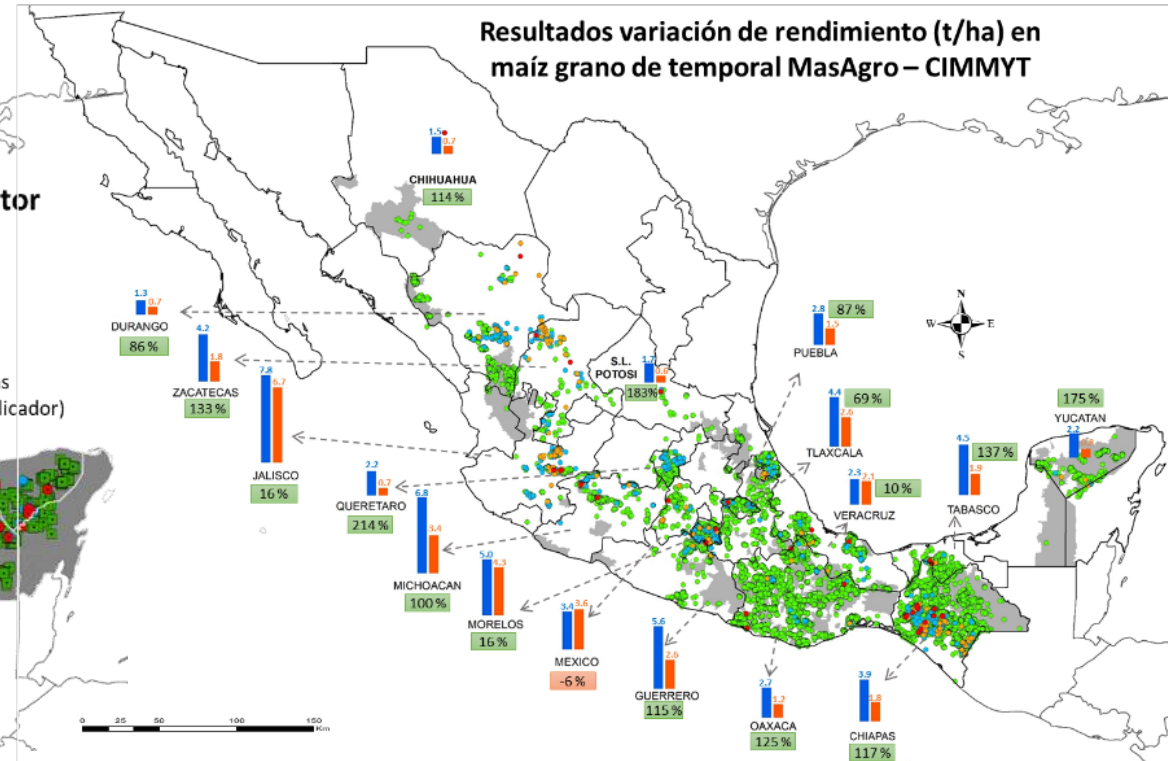
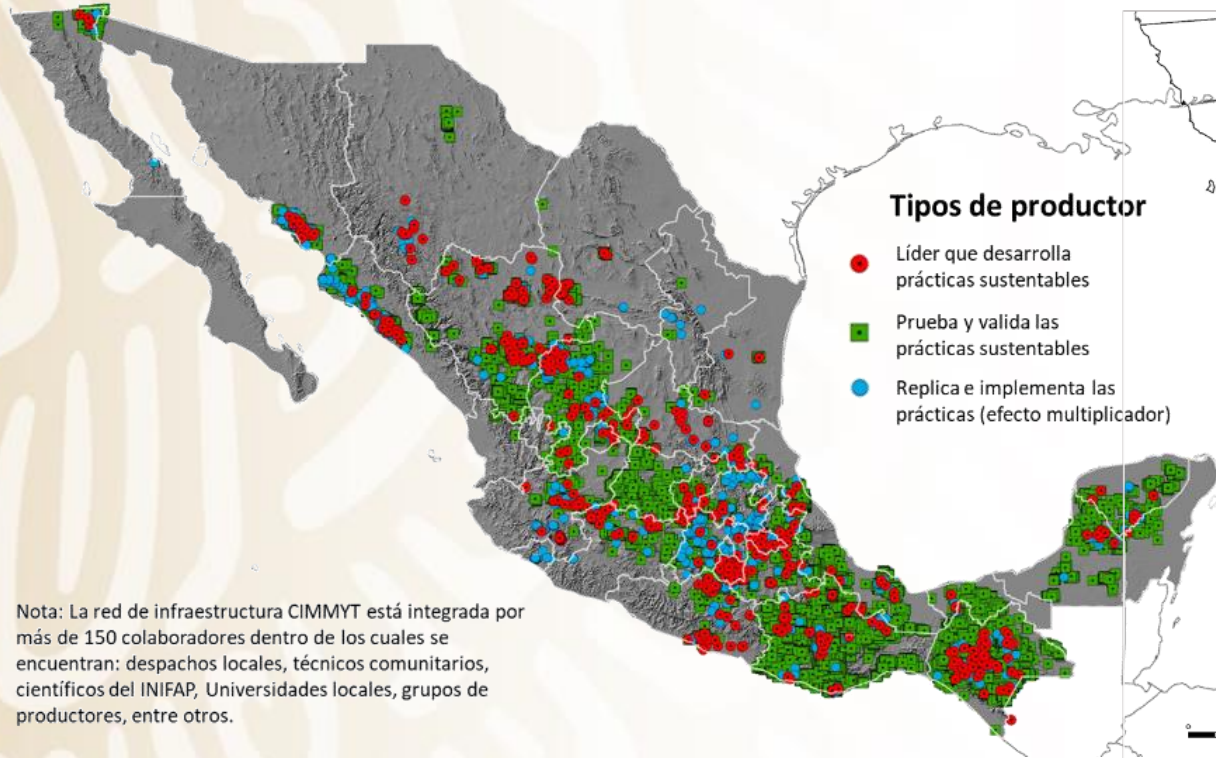
**Challenge: Measuring impact**

# Key partnerships: CIMMYT



## Network of research platforms CIMMYT innovation Hubs in México

## Increasing farmers productivity



**Leyendas**

**Gráficos y etiquetas**

**Rendimiento (Ton/ha) en:**

- Parcela utilizando soluciones CIMMYT
- Testigo regional tomado del avance de cosechas 31 de enero de 2020 (SIAP)

**% de variación:**

- < 1
- > 1

**Ubicación geográfica**

- Municipios en coincidencia con Producción para el Bienestar

**Parcelas**

% de parcelas por superficie (ha)	
Símbolo	Clasificación % Nacional
●	<5 97
●	5-10 2.0
●	10-20 0.4
●	>20 0.2

Elaborado en: MEAL\_IDP CIMMYT Marzo 2020

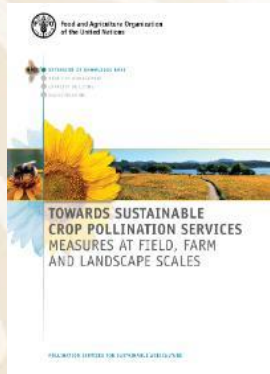
More than **300,000 small farmers** and **1.3 M of ha**,  
**80% in Centro-South and South east Mexico**

Climate-Smart  
Agriculture



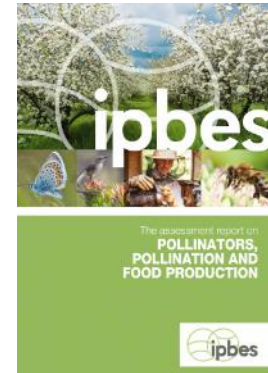


# National Strategy for the Conservation and Sustainable Use of Pollinators (ENCUSP)



FAO's Global Action on Pollination Services for Sustainable Agriculture

IPBES

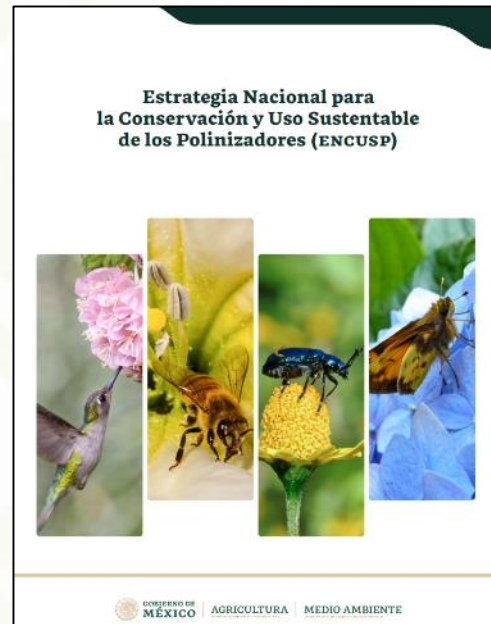


ENCUSP considered elements from:

North American Pollinator Conservation Framework

Diagnosis of the situation of Pollinators in Mexico

Several workshops with stakeholders



**General objective:**  
Guide the policies and work of the productive and environmental sectors for the conservation of ecosystem services that pollinators provide, in order to contribute to sustainable development and food security.

**An example of participatory process**

# Importance of multisector coordination



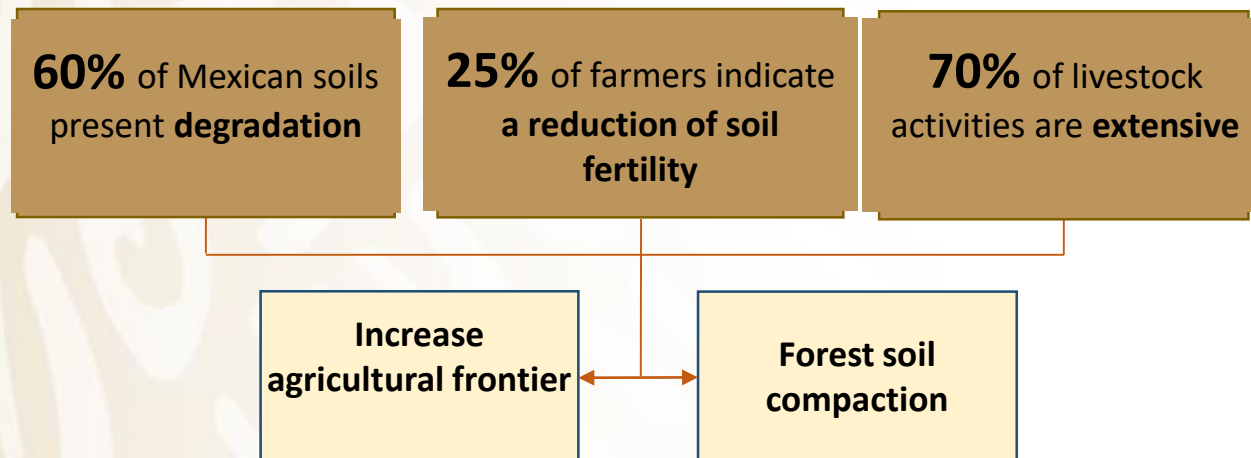


# National Soil Strategy for Sustainable Agriculture\*



**Objective:** Conservation, restoration and promotion of sustainable soil management for agriculture, food and well-being.

## Targets:



## Key actions:

- Sustainable soil management
- Information and monitoring system
- Education, awareness, and participation
- Research, innovation, development, and technology transfer
- Coordination and cooperation
- Soil governance

\*Strategy currently under development

# RECISOILMEX

## Reaching for financial support



GREEN CLIMATE FUND

Concept note: Increase resilience to climate change through the recarbonization of agricultural and forest soils in Mexico (RECISOILMEX).

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**CONAFOR**  
COMISIÓN NACIONAL FORESTAL



México



## Objetive

Mitigate local and global climate change and strengthen resilience of agricultural and forestry systems of Mexico through soil recarbonization.





# What kind of outcome of the Koronivia Joint Work on Agriculture could contribute to efforts to scale-up such practices?



- Better understanding of **potential co-benefits and tradeoffs** at different scales.
  - **Improve measuring**, management and evaluation for adaptation (impact of interventions)
  - **Increasing finance enabling access to international funding**, what we can do in Agriculture contributes to mitigation, adaptation, food security and well being
  - **private sector investment**
  - **Capacity building** in the sector for farmers and other actors in food chain
  - **Stimulating co-innovation** more at field level (not necessarily as technology transfer, according to particular conditions of farmers).
  - Better balance between SBSSTA and SBI maintaining technical and scientific work but increase advances on implementation.
-

# Enabling factors



- Political will
  - Coordination mechanisms
  - Ability to develop inter-sector collaboration
  - Institutional involvement, civil society organizations and private sector
  - Promote dialogues (at different levels local, regional, national) and lessons learn to foster transformational changes
- 
- There is **not a single way** to deal with the problems of climate change, production and food security, biodiversity loss and land degradation, we need a **combination of options, enhance knowledge intensive systems** and apply a **systemic approach**.
  - **Assess the potential contribution to sustainable production of different approaches** and farming systems on a case by case basis **according to local production conditions** and constrains, and **considering mitigation and adaptation contributions**.
  - **Consider other important actions:** reduce food waste, improve efficiency and resilience of food systems, modify demand for resource intensive food.
-



# Barriers to overcome

- Lacking financial support
  - Incentives for producers
  - How to leverage private sector support
- Reduce risk for producers and financial institutions
- Certification process for green bonus are time consuming and challenging for small farmers, and not always attractive for financing institutions
- Value other issues beyond productivity
- Better understanding of vulnerability
- Capacity development at all levels, considering scientific and traditional knowledge
- Heterogeneity of production systems each needing contextualized solutions.
- Financing directed to small and medium farmers has a limitation on ambition due to the size of land.



¡GRACIAS!

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