Innovations in Uruguay to address issues related to livestock climate and natural resources use

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Uruguay is a country with an economy strongly based on the livestock sector.
Half of the territory is covered with high biodiversity Pampa’s rangelands.
Uruguay’s Beef Sector

Mostly grass-fed beef

Mandatory individual traceability system

From farm to export product

Growth promoters are prohibited by law

Zero deforestation
Importance of GHG emissions of livestock in Uruguay

Key sector in NDCs, NAMAs and NAP
Policies have set simultaneous targets to be achieved

1. More food and fibers.

2. Less environmental footprint.

3. Mitigation and adaptation of/to CC.
A new paradigm to guide the transformational change of livestock in Uruguay:
in search of higher social and environmental value added
Approach: co-benefits (What?) & Co-innovation (How?)

Co-benefits
- Productivity
- Economic
- Social
- Welfare
- Biodiversity
- Soil fertility
- Ecosystem services

Co-innovation
- Farmer <-> Adviser <-> Institutions
- Learning <-> Planning
- Systemic vision of the farm and the value chain
Innovations in grazing management: “Working with more grass”

**Baseline:** overgrazing, low NPP and low forage supply; low productivity and low efficiency

**Alternative:** high leaf area and high NPP, high forage supply; high productivity and efficiency
Innovations in herd management to increase efficiency and productivity

- Improve body condition of cows at birth
- Temporary and early weaning
- Flushing
- Reduce age of heifers at first mating
- Increase weaning rate
- Decrease slaughter age
C sequestration in soils and biomass can play a key role in sustainability and climate action.

The challenge of transparent and sound monitoring. GHG inventories are a key piece.
Less SOC

+ C

y

+ N

Rebuilding SOC
Uruguay’s NDC: first developing country to set mitigation targets in terms of emissions intensity in the beef sector (per kg beef)

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<th>2030 vs. 1990 unconditional</th>
<th>2030 vs 1990 with MOI</th>
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<tbody>
<tr>
<td>CH(_4)</td>
<td>33% less</td>
<td>46% less</td>
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<tr>
<td>N(_2)O</td>
<td>31% less</td>
<td>41% less</td>
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Finally, co-innovation should let us

- Use animals better for what they are good for.
- Make better use of the one third of terrestrial surface covered with grasslands.
- Increase recycling of residues/by products of cropping and other activities contributing to a circular bioeconomy.
- Recognize the multiple values of nature contributions to people via animal husbandry (meat & ecosystem services): environmental value added.
- Minimize trade-offs.
- Innovation requires re-design production systems based on socio-ecological principles.
¡Thank you!