Methane Roadmap Action Programme (M-RAP)

Virtual workshop series
BB1 workshop

ccacoalition.org
Sophie Bonnard – CCAC Methane Flagship Coordinator - Welcome, Introduction to M-RAP and workshop objective (5 mins)

Chris Malley – Researcher, SEI – Methodology for BB1 (10 mins)

Felipe García Olaso, vice-coordinator Livestock & Climate project, former AFOLU Inventory coordinator, Ministry of Agriculture (MGAP) /FAO – Approach and challenges in national GHG inventories of Uruguay to estimate Tier 2 emission factors (20 mins)

Cecilia Penengo, AFOLU inventory compiler, Climate Change advisor, Ministry of Environment

María José Alegrette, AFOLU Inventory technician, Ministry of Agriculture, Uruguay

Q&A (20 mins)

Closing (5 mins)
Since 2020, 150 countries signed the Global Methane Pledge (GMP) agreeing to take voluntary national action to contribute to a collective effort to reduce global methane emissions by at least 30% below 2020 levels by 2030.

GMP countries are encouraged to develop or update Methane Action Plans.

The CCAC, as the first point-of-call for GMP countries, has launched the Methane Roadmap Action Programme (M-RAP) to support development and implementation of transparent and consistent national Methane Action Plans or roadmaps.
METHANE TECHNICAL ASSISTANCE PORTAL

- **TOOLS**
  - M-RAP Template
  - M-RAP Workshop series
  - General and Sector specific guidelines & tools

- **EXPERT CONSULTATIONS** – match governments with external experts on methane mitigation in the Agriculture, Fossil Fuel and Waste sectors

- **NATIONAL PLANNING SUPPORT** – support integrated planning approach on climate and clean air by assessing emissions, mitigation options, implementation pathways, monitoring/evaluation

- **POLICY & REGULATORY SUPPORT** - policy design and implementation in developing countries through targeted activities such as regulatory analysis, cost-benefit analysis, or peer-to-peer exchanges

⇒ https://www.ccacoalition.org/en/content/methane-technical-assistance

GMA Country Projections
Available on request.
National-level GMA data of sources, mitigation options, costs and benefits.
CCAC RESOURCES

- CCAC support through sectoral hubs (agriculture, waste, fossil fuels). CCAC topic-specific and national Planning Hubs bring together countries and experts to share best practices, forge collaboration, and develop a community of practice for action to reduce methane and other short-lived climate and air pollutants.
- Small-scale expert assistance – $30,000 - $50,000 small-scale fund to support ODA-eligible countries.
- Country Expression of Interest and project funding process

- GMP partners who are not CCAC partners are eligible to receive funding support to develop national methane roadmap through small scale expert assistance but would need to join CCAC to access other CCAC financial support.

=> APPLY for technical assistance here: www.ccacoalition.org/en/content/methane-technical-assistance.
Building Block 1 on Inventories focuses on the quantification of national methane emissions disaggregated by major source sectors for recent historic years.
CHRIS MALLEY
RESEARCHER, SEI
 METHODOLOGY FOR BB1
Methane Roadmap Action Programme (M-RAP)

Building Block 1: Inventories
OVERVIEW OF THE GLOBAL METHANE PLEDGE

Reduce global methane emissions by at least 30% below 2020 levels by 2030.
The CCAC is the first point-of-call for GMP countries.

The CCAC runs the Methane Roadmap Action Programme (M-RAP) to support the development and implementation of transparent and consistent National Methane Action Plans.
M-RAP BUILDING BLOCKS

BB1 – Inventories (Emissions Sources/Profile)

BB2 – Analytics (Reduction Commitments/Options)

BB3 – Targets (Objectives of strategies/plans/policies)

BB4 – Policies and Measures (Policy implementation pathways)

BB5 – Monitoring, Reporting and Verification

National Context

Agriculture
Fossil Fuels
Waste

UNEP convened initiative
## M-RAP BUILDING BLOCKS

<table>
<thead>
<tr>
<th>Magnitude</th>
<th>Sources</th>
<th>Trends</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Understand the magnitude of emissions in a country and contribution to global methane emissions</td>
<td>• Understand contribution of major methane-emitting sectors (agriculture, waste, fossil fuel production) to national methane emissions</td>
<td>• Provides basis for monitoring long-term trends in methane emissions</td>
<td>• Identify uncertainties in methane emissions where support could be provided to improve</td>
</tr>
</tbody>
</table>

BB1
HOW CAN BUILDING BLOCK 1 BE INCLUDED?
• Report methane emissions disaggregated into IPCC source sectors categories

• Report emissions in tonnes methane (rather than CO2-equivalent)

• Report methodological Tier used to estimate emissions

• Report historic trends (e.g. 1990-2020)

• Include details of activity data and emission factor sources

Source: Ghana’s 5th National Inventory Report
IPCC Tier 1: Default method with international default emission factors

IPCC Tier 2: More detailed method (e.g. further disaggregation of emissions) and/or country specific emission factors

IPCC Tier 3: Most detailed and country-specific methods

Source: Ghana’s 5th National Inventory Report
IPCC Tier 1: Default method with international default emission factors

IPCC Tier 2: More detailed method (e.g., further disaggregation of emissions) and/or country specific emission factors

IPCC Tier 3: Most detailed and country-specific methods

Source: Ghana’s 5th National Inventory Report
WHERE CAN I FIND INFORMATION ON BB1?

**National Sources**

- National Greenhouse Gas emission inventory
- Biennial Update Reports
- National Communications

**International Sources**

- EDGAR emission database: https://edgar.jrc.ec.europa.eu/
- Community Emission Data System (CEDS): https://github.com/JGCRI/CEDS/
Key characteristics:

- National total methane emissions
- Long-term trends

Source: South Africa National Inventory Report 4th BUR
EXAMPLE OF BUILDING BLOCK 1

- Methodological detail
- Activity and Emission Factor Data

Source: South Africa National Inventory Report 4th BUR
FELIPE GARCÍA OLASO
VICE-COORDINATOR LIVESTOCK & CLIMATE PROJECT, FORMER AFOLU INVENTORY COORDINATOR, CLIMATE CHANGE UNIT, OFFICE OF PLANNING AND POLICY, MINISTRY OF AGRICULTURE /FAO, URUGUAY

APPROACH AND CHALLENGES IN NATIONAL GHG INVENTORIES OF URUGUAY TO ESTIMATE TIER 2 EMISSION FACTORS

CECILIA PENENGO
AFOLU INVENTORY COMPILER, CLIMATE CHANGE ADVISOR, CLIMATE CHANGE NATIONAL DIRECTORATE, MINISTRY OF ENVIRONMENT, URUGUAY

MARÍA JOSÉ ALEGRETTE
AFOLU INVENTORY TECHNICIAN, CLIMATE CHANGE UNIT, OFFICE OF PLANNING AND POLICY, MINISTRY OF AGRICULTURE (MGAP), URUGUAY
Present approach and challenges of Uruguay to estimate methane Tier 2 emission factors

Felipe García
María José Alegrette
Cecilia Penengo

CCAC - M-RAP Virtual Workshop
25th May 2023
Content

1. Introduction to the country livestock production and sources of information

2. Enteric fermentation methane for non dairy cattle: Tier 2

3. Challenges and opportunities
1 – Introduction

17% of the Pampa Biome is in Uruguay
31% of remaining natural grasslands are here
70% of the country is grazing land and 51% is natural grasslands
Production Systems in Uruguay

COW CALF SYSTEMS
64% of the Producers  
avg area = 300 ha

REARING
6% of the Producers  
avg area = 134 ha

FINISHING
14% of the Producers  
avg area = 465 ha

Complete Cycle 16% of the Producers  
avg area = 556 ha

+44,000 Farmers
National Livestock Information Systems

DICOSE

100% FARMS

Affidavit (mandatory reporting form) (Ministry of Agriculture)

- Animals by species and category
- Land Use

SNIG

100% FARMS

Individual Electronic Traceability (Ministry of Agriculture)

SEIIC

100% SLAUGHTERHOUSES

Industrial Traceability (National Meat Institute)

Both systems are mandatory by law, tracing the animal from birth until slaughter
Livestock Production and Stock distribution

~630,000 ton CWE per year
80% is exported
5% of GDP
Livestock distribution related to grasslands productivity

2 Billion liters
740 thousand heads
5,430 liters/dairy cow

Meat production per species (%)

- 85%
- 3%
- 2%
- 10%

Chicken  |  Ovine  |  Pork  |  Beef
Uruguay livestock GHG emissions

- Livestock GHG emissions are 62% of total national emissions.
- Therefore, livestock is a key sector for mitigation and it is a great win-win opportunity with economic, social and other environmental cobenefits.
### Key categories of AFOLU

#### Enteric Fermentation – Other Cattle (Non dairy)

<table>
<thead>
<tr>
<th>Código de categoría IPCC</th>
<th>Categoría IPCC 2006</th>
<th>Gas</th>
<th>Emisiones o Remociones, Año 2019 (Gg CO₂-eq)</th>
<th>Emisiones o Remociones en valor absoluto, Año 2019 (Gg CO₂-eq)</th>
<th>Nivel, Año 2019</th>
<th>Acumulado</th>
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<tbody>
<tr>
<td>3.B.1.b</td>
<td>Tierra convertida en tierras forestales - Biomasa</td>
<td>CO₂</td>
<td>-17,570,7</td>
<td>17,570,7</td>
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<td>3.A.1.a.ii</td>
<td>Fermentación entérica - otro ganado</td>
<td>CH₄</td>
<td>12,581,5</td>
<td>12,581,5</td>
<td>0,20</td>
<td>0,48</td>
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<td>3.C.4</td>
<td>Emisiones directas de N₂O de suelos gestionados</td>
<td>N₂O</td>
<td>6,282,4</td>
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<td>3.B.1.a</td>
<td>Tierras forestales que permanecen como tales</td>
<td>CO₂</td>
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<td>0,08</td>
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<td>1.A.3.b</td>
<td>Transporte carretero - Combustibles líquidos</td>
<td>CO₂</td>
<td>3,622,0</td>
<td>3,622,0</td>
<td>0,05</td>
<td>0,72</td>
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<td>3.B.2.b</td>
<td>Tierras convertidas en Tierras de cultivo</td>
<td>CO₂</td>
<td>2,399,9</td>
<td>2,399,9</td>
<td>0,03</td>
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<td>Tierra convertida en tierras forestales - DOM</td>
<td>CO₂</td>
<td>2,041,1</td>
<td>2,041,1</td>
<td>0,03</td>
<td>0,79</td>
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<td>3.B.3.b</td>
<td>Tierras convertidas en Pastizales - Biomasa</td>
<td>CO₂</td>
<td>1,547,4</td>
<td>1,547,4</td>
<td>0,02</td>
<td>0,82</td>
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<td>3.C.5</td>
<td>Emisiones indirectas de N₂O de suelos gestionados</td>
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<td>0,84</td>
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<td>Tierras convertidas en Pastizales - SOC</td>
<td>CO₂</td>
<td>-1,067,9</td>
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<td>0,02</td>
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<td>4.A</td>
<td>Disposición de residuos sólidos</td>
<td>CH₄</td>
<td>907,5</td>
<td>907,5</td>
<td>0,01</td>
<td>0,87</td>
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<td>1.A.2</td>
<td>Industrias Manufacturera y de la Construcción - Combustibles líquidos</td>
<td>CO₂</td>
<td>839,1</td>
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<td>0,89</td>
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<td>3.A.1.a.i.</td>
<td>Fermentación entérica – ganado lechero</td>
<td>CH₄</td>
<td>746,3</td>
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<td>0,90</td>
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<td>3.A.1.c</td>
<td>Fermentación entérica – avícolas</td>
<td>CH₄</td>
<td>682,8</td>
<td>682,8</td>
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<td>0,91</td>
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<td>3.B.1.b</td>
<td>Tierra convertida en tierras forestales - SOC</td>
<td>CO₂</td>
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<td>515,1</td>
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<td>0,92</td>
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<tr>
<td>1.A.1.b</td>
<td>Refinación de Petróleo - Combustibles líquidos</td>
<td>CO₂</td>
<td>414,0</td>
<td>414,0</td>
<td>0,01</td>
<td>0,92</td>
</tr>
</tbody>
</table>
Progress towards national NDC goals - 2021

Source: Uruguay’s NDC MRV

**CH₄/PBI**
Reducir 57% la intensidad de emisiones de CH₄ por unidad de PBI

- Valor meta: 57%
- Último valor disponible: 54%
- Avance: 95%

**N₂O/PBI**
Reducir 48% la intensidad de emisiones de N₂O por unidad de PBI

- Valor meta: 48%
- Último valor disponible: 46%
- Avance: 96%

**CO₂/PBI**
Reducir 24% la intensidad de emisiones de CO₂ por unidad de PBI

- Valor meta: 24%
- Último valor disponible: 27%
- Avance: 113%

**Pastizales**
Evitar las emisiones de CO₂ del COS en el 10% de la superficie de pastizales (1.000.000 ha)

- Valor meta: 1,000,000 ha
- Último valor disponible: 652,455 ha
- Avance: 65%
Design of Tier 2 calculations

- Uruguay and Methane from Non-dairy cattle enteric fermentation case
- conceptual presentation, non completely comprehensive
- continuous improvement
- emphasis on data and methodology (not institutional arrangements, planning, resources, training)
Differences between TIER 1 and Tier 2: Enteric Fermentation

Tier 1

\[
E_{\text{EF(T)}} = \frac{N(T)}{10^6}
\]

Number of heads of a livestock species (Activity data): DICOSE

Tier 2

<table>
<thead>
<tr>
<th>Regional characteristics</th>
<th>Cattle category</th>
<th>Emission factor (1) (kg CH(_4) head(^{-1}) yr(^{-1}))</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America: Commercialised dairy sector based on grazing. Separate beef cow herd grazing pastures and rangelands. Minor amount of feedlot feeding with grains. Growing non-dairy cattle comprise a large portion of the population.</td>
<td>Dairy</td>
<td>72</td>
<td>Average milk production of 800 kg head(^{-1}) yr(^{-1})</td>
</tr>
<tr>
<td></td>
<td>Other Cattle</td>
<td>56</td>
<td>Includes beef cows, bulls, and young.</td>
</tr>
</tbody>
</table>
Tier 2: Enteric Fermentation

**Equation 10.21**

\[ EF = \left[ GE \cdot \left( \frac{Y_m}{100} \right) \right] \cdot \frac{365}{55.65} \]

**CH₄ Emission Factors for Enteric Fermentation from a Livestock Category**
### Equations for Tier 2 Enteric Fermentation?

<table>
<thead>
<tr>
<th>Equation number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.3</td>
<td>Net Energy for maintenance</td>
</tr>
<tr>
<td>10.4</td>
<td>Net Energy for Activity (for Cattle and Buffalo)</td>
</tr>
<tr>
<td>10.6</td>
<td>Net Energy for Growth (for Cattle and Buffalo)</td>
</tr>
<tr>
<td>10.8</td>
<td>Net Energy for Lactation</td>
</tr>
<tr>
<td>10.13</td>
<td>Net Energy for pregnancy</td>
</tr>
<tr>
<td>10.14</td>
<td>Ratio of net energy available in a diet for maintenance to digestible energy (REM)</td>
</tr>
<tr>
<td>10.15</td>
<td>Ratio of net energy available for growth in a diet to digestible energy consumed (REG)</td>
</tr>
<tr>
<td>10.16</td>
<td>Gross energy for cattle/buffalo and sheep</td>
</tr>
<tr>
<td>10.21</td>
<td>Emission factor for enteric fermentation</td>
</tr>
</tbody>
</table>

**Weight by category:**
- Mature Weight, Daily Weight Gain
- Milk, Fat
- Pregnancy rate

**Diet digestibility by category:**
- All of the above

**For each category ➔ Weighted average**
Data for Tier 2

Weight by category       Virtual sales data has weights and is available on the web

Diet digestibility by category       Based on land use declared and a forage balance of each police district

By Agroecological Zone

Pregnancy rate       Annual consultation workshop at Research Institute
Milk, Fat       Research reference (Non dairy cattle)
Tier 2: Enteric Fermentation

Example: Agroecological Zone: BASALTO

<table>
<thead>
<tr>
<th>Basalto</th>
<th>Nº animales</th>
<th>Vacas</th>
<th>UG</th>
<th>% de la</th>
<th>% en UG</th>
<th>PV kg (2)</th>
<th>Ganancia</th>
<th>%</th>
<th>% Proteina</th>
<th>EN mant</th>
<th>EN act (4)</th>
<th>EN crecim</th>
<th>EN lactancia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toros</td>
<td>49395</td>
<td>59274</td>
<td>1.7</td>
<td>2.5</td>
<td>500.0</td>
<td>0.00</td>
<td>56.99</td>
<td>9.51</td>
<td>39.12</td>
<td>10.37</td>
<td>1.13</td>
<td>0.09</td>
<td>0.00</td>
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<tr>
<td>Vacas de cría</td>
<td>1085030</td>
<td>1079575</td>
<td>36.6</td>
<td>45.4</td>
<td>370.0</td>
<td>0.00</td>
<td>56.99</td>
<td>9.51</td>
<td>27.16</td>
<td>7.20</td>
<td>1.25</td>
<td>1.18</td>
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<td>Vacas de invernada</td>
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<td>110936</td>
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<td>5.0</td>
<td>392.4</td>
<td>0.27</td>
<td>58.40</td>
<td>11.15</td>
<td>28.39</td>
<td>7.52</td>
<td>1.33</td>
<td>1.24</td>
<td>0.23</td>
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<td>Novillos +3</td>
<td>121257</td>
<td>121257</td>
<td>4.1</td>
<td>5.1</td>
<td>459.6</td>
<td>0.32</td>
<td>58.40</td>
<td>11.15</td>
<td>31.96</td>
<td>8.47</td>
<td>1.24</td>
<td>1.18</td>
<td>0.29</td>
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<td>Novillos 2-3</td>
<td>182470</td>
<td>182470</td>
<td>6.2</td>
<td>7.7</td>
<td>336.5</td>
<td>0.28</td>
<td>58.40</td>
<td>11.15</td>
<td>25.30</td>
<td>6.70</td>
<td>0.91</td>
<td>0.93</td>
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<td>9.4</td>
<td>8.2</td>
<td>242.6</td>
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<td>58.40</td>
<td>11.15</td>
<td>19.79</td>
<td>5.25</td>
<td>0.66</td>
<td>0.73</td>
<td>0.23</td>
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<tr>
<td>Vaquillas +2</td>
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<td>123875</td>
<td>4.2</td>
<td>5.2</td>
<td>287.8</td>
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<td>5.06</td>
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<td>0.98</td>
<td>0.23</td>
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<tr>
<td>Vaquillas 1-2</td>
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<td>223823.6</td>
<td>10.8</td>
<td>9.4</td>
<td>232.9</td>
<td>0.17</td>
<td>57.49</td>
<td>10.08</td>
<td>19.20</td>
<td>5.09</td>
<td>0.79</td>
<td>0.84</td>
<td>0.14</td>
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<td>Teneros</td>
<td>684770</td>
<td>273908</td>
<td>23.1</td>
<td>21.5</td>
<td>152.4</td>
<td>0.31</td>
<td>57.42</td>
<td>10.00</td>
<td>13.97</td>
<td>3.70</td>
<td>0.51</td>
<td>0.61</td>
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<td>Total</td>
<td>2964713</td>
<td>2959258</td>
<td>100.0</td>
<td>100.0</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

EN gestación | EN total | REM | REG | EB | EF CH4 | EF CH4 |
2.15 | 49.49 | 0.48 | 0.26 | 180.64 | 77.01 | 1.28 |
40.11 | 0.48 | 0.26 | 146.40 | 62.41 | 22.84 |
42.26 | 0.48 | 0.27 | 166.84 | 71.13 | 2.86 |
47.95 | 0.49 | 0.27 | 190.28 | 81.12 | 3.32 |
37.04 | 0.49 | 0.27 | 144.76 | 61.71 | 3.80 |
28.76 | 0.49 | 0.27 | 111.85 | 47.69 | 4.49 |
33.37 | 0.48 | 0.26 | 135.33 | 57.70 | 2.41 |
26.85 | 0.48 | 0.26 | 104.61 | 44.60 | 4.81 |
21.35 | 0.48 | 0.26 | 88.43 | 37.70 | 8.71 |
54.51

CH4 - Enteric Fermentation

<table>
<thead>
<tr>
<th>Agroecological zone</th>
<th>Number of Animals</th>
<th>Emissions Factor for Enteric Fermentation (kg/head/yr)</th>
<th>Emissions from Enteric Fermentation (kg/head/yr)</th>
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<tbody>
<tr>
<td>Basalto</td>
<td>2,959,258</td>
<td>54.51</td>
<td>161,323,07</td>
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<td>Sierras del E</td>
<td>1,119,897</td>
<td>53.94</td>
<td>60,409,74</td>
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<td>Llanuras del E</td>
<td>511,890</td>
<td>52.33</td>
<td>26,789,23</td>
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<td>Cristalino y lomas del E</td>
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<td>52.31</td>
<td>154,687,39</td>
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<td>Arenicas y NE</td>
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<td>54.46</td>
<td>112,020,22</td>
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<td>Litoral W</td>
<td>1,226,855</td>
<td>51.15</td>
<td>62,753,69</td>
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<td>Sur lechero</td>
<td>763,171</td>
<td>49.44</td>
<td>37,734,53</td>
</tr>
<tr>
<td>Total</td>
<td>11,595,318</td>
<td>53.36</td>
<td>615,715,87</td>
</tr>
</tbody>
</table>
3. Challenges and opportunities

- Land use precision
- Sales weights are only from a fraction of the animals so they may be biased
- Not sensitive to management practices other than land use/ stock /herd structure
  - Grain based supplement feed
  - Feedlot animals diet
Cattle Characteristics

**Average weight** (kg alive/per head)

- **Steer**
  - 2010: 497 kg
  - 2020: 521 kg
  - Change: +24 kg

- **Cow**
  - 2010: 428 kg
  - 2020: 474 kg
  - Change: +46 kg

**Amount of grain-finished animals sold to meatpackers** (heads)

- 2017: 229,556 heads
- 2018: 250,602 heads
- 2019: 272,863 heads
- 2020: 275,136 heads
  - Change: +9%

**Changes in**: Body size, slaughter weight and feedlot finishing.
SNIG - Available Information
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  - Grain based supplement feed
  - Feedlot animals diet
  - Forage quality diversity in natural grasslands and different managements
The project
OBJECTIVE

To mitigate climate change and to restore degraded lands through the promotion of climate smart practices in the livestock sector.

WIN-WIN OPPORTUNITY

Technical assistance and promotion of good practices show to improve:

- productivity
- net income
- climate resilience
- work time and management capacities in farmers
- grass growth
- natural grasslands (main ecosystem)
- emissions intensity per unit of product (in a BAU scenario of increasing production)
- predicts soil carbon sequestration in models
ON FARMS AND REGIONS
Co-innovation approach
Piloting, monitoring, learning and building capacity at the local level

CLIMATE SMART PRACTICES AND PERFORMANCE GOALS
Manage and improve grass growth and supply
Synchronize annual grass growth peak with animal feeding requirements
Manage body fat reserves, improve body condition, weaning, growth speed, reproduction, fattening rates and slaughter age.
Systemic and strategic planning of management

MONITOR AND RECORD
Grass height, growth and quality, diet quality, diet methane potential (including tannins)
GHG emissions
Soil carbon content in pools
Other environmental, productive, economic and social variables
After two years of field work:

- Total GHG emissions: 10% decrease
- Beef production: 9% increase
- Sheep production: 9% increase
- Emissions intensity per kg of beef: 23% decrease
- Net family income: 32% increase
- Average stocking rate: 14% decrease
ON FARMS AND REGIONS
Co-innovation approach
Piloting, monitoring, learning and building capacity at the local level

CLIMATE SMART PRACTICES AND PERFORMANCE GOALS
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  - Forage quality diversity in natural grasslands and different managements
- Metrics
- Work together with:
  - research
  - public policy design and analysis
  - negotiation
  - funding (SLB, NAMAs, Trading Schemes; Credits)
THANK YOU!

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María José Alegrette: malegrette@mgap.gub.uy
Cecilia Penengo: cecilia.penengo@ambiente.gub.uy
SEE YOU ON 8 JUNE!

Building Block 4 – Implementation Pathways – Oil and Gas Workshop Thursday 8 June 0800-0900 EST / 1400-1500 CET / 1900-2000 BKK

Building Block 4 – Implementation Pathways – Agriculture Workshop Thursday 8 June 0900-1000 EST / 1500-1600 CET / 2000-2100 BKK

Building Block 4 – Implementation Pathways – Waste Workshop Thursday 8 June 1000-1100 EST / 1600-1700 CET / 2100-2200 BKK

Building Block 5 - Monitoring, Reporting and Verification Thursday 15 June 0900-1000 EST / 1500-1600 CET / 2000-2100 BKK

MORE INFORMATION AND REGISTRATION HERE https://www.ccacoalition.org/en/event/m-rap-workshop-series
SHARE YOUR PROGRESS WITH US

Your GMP commitment includes:
Maintaining **up-to-date, transparent, and publicly available information** on your country’s methane policies and commitments

We invite you to share with us any information about your methane related events and actions, GMP implementation progress and to submit your national Methane Roadmaps or Action Plans

So we can keep track of the pledge advancement and share your progress with the GMP community!

Thank you!
KEEP IN TOUCH

Questions and Support Requests:
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Sophie.Bonnard1@un.org

Ressources and more information:
https://www.ccacoalition.org/en/content/methane-technical-assistance

Share your Methane Action Plan and other GMP implementation progress:
support@globalmethanepledge.org