LIFE15 ENV/IT/000392

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LIFE15 CCM/IT/000039 - Forage4Climate

How the management of forage systems can improve carbon sink and reduce GHG emissions

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LIFE15CCM/IT/000039 Forage4Climate

Forage systems for less GHG emission and more soil carbon sink in continental and Mediterranean agricultural areas

Total amount: € 2,850,980

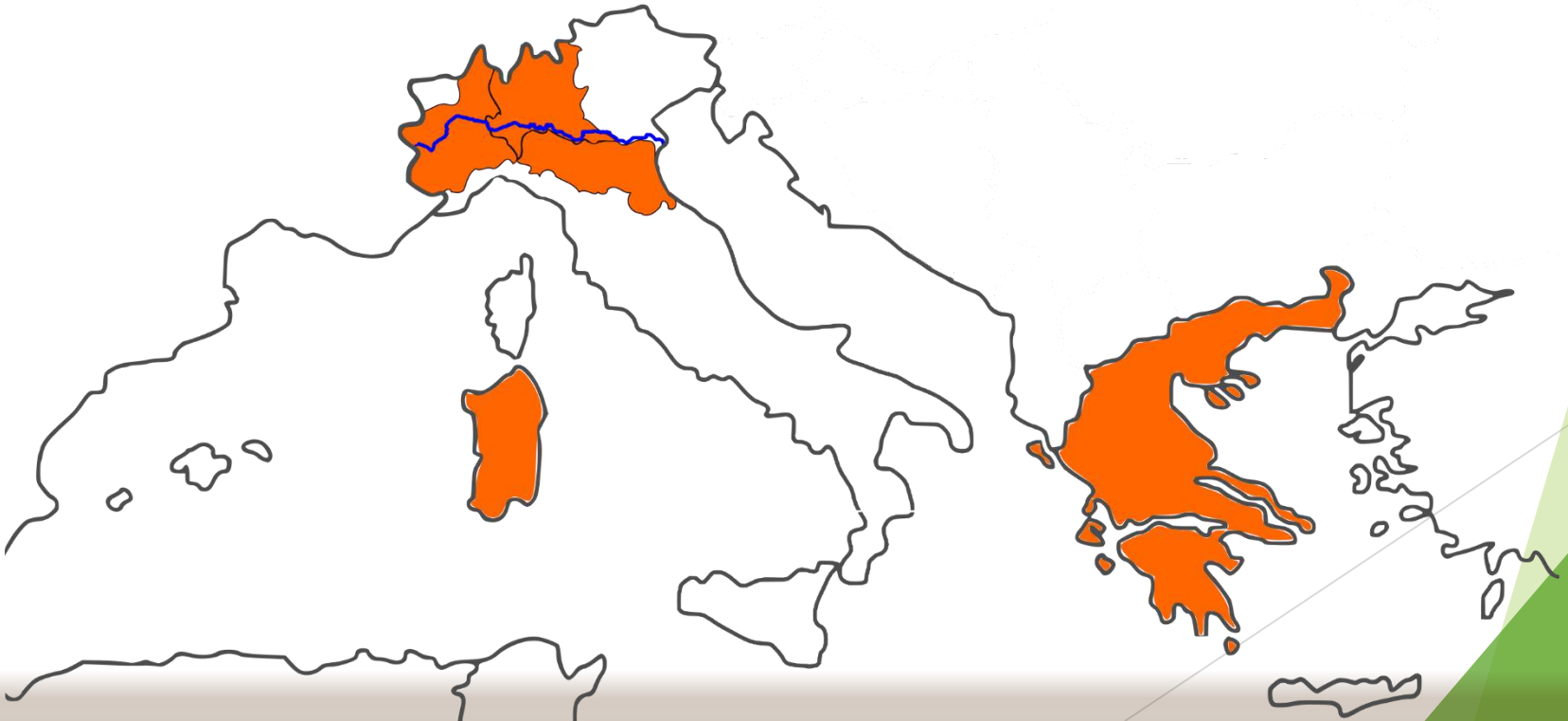
EC Co-funding: 59,80 %

1st September 2016 - 31st August 2020

forage4climate.crpa.it

Location

The project involves 3 Regions of the Po Valley (Piedmont, Lombardy and Emilia - Romagna), Sardinia and 4 Greek Regions (Peloponnese, Thessaly, Sterea Ellada and Epirus).



Beneficiaires

C.R.P.A S.p.A.

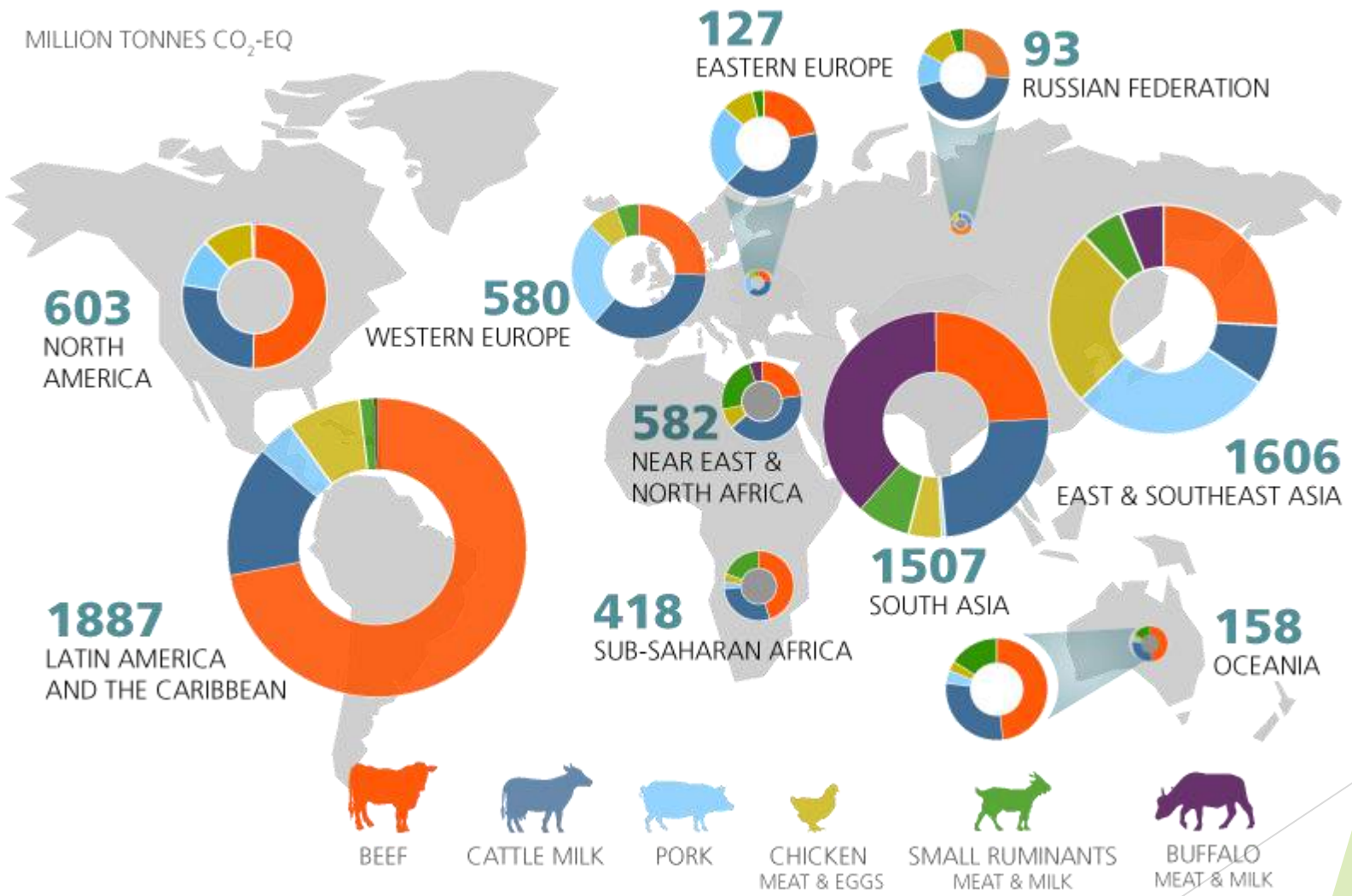
Agricultural University of Athens (AUA)

Milan University

Sassari University

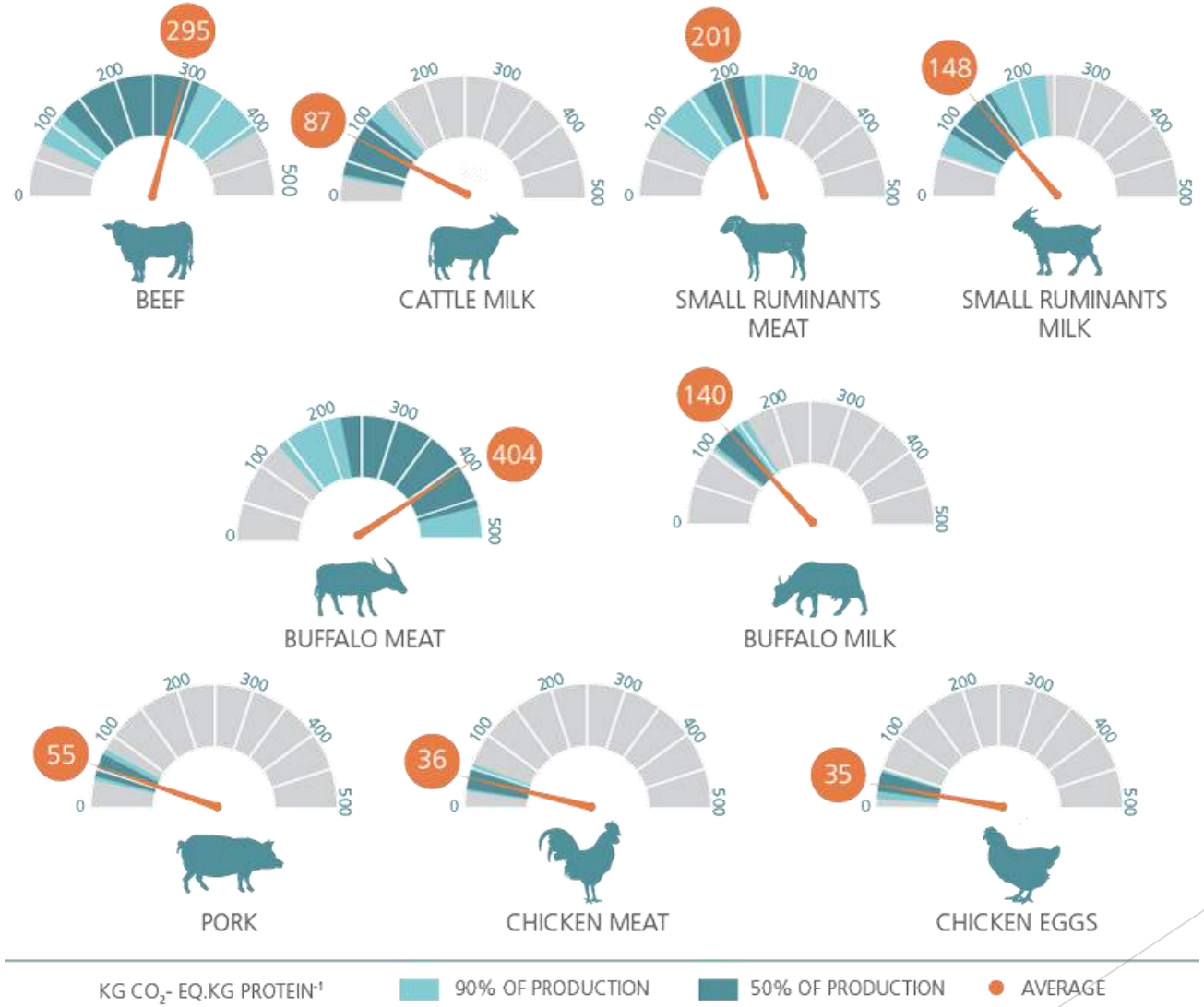
Turino University

Livestock and GHG emissions (FAO GLEAM 2.0)

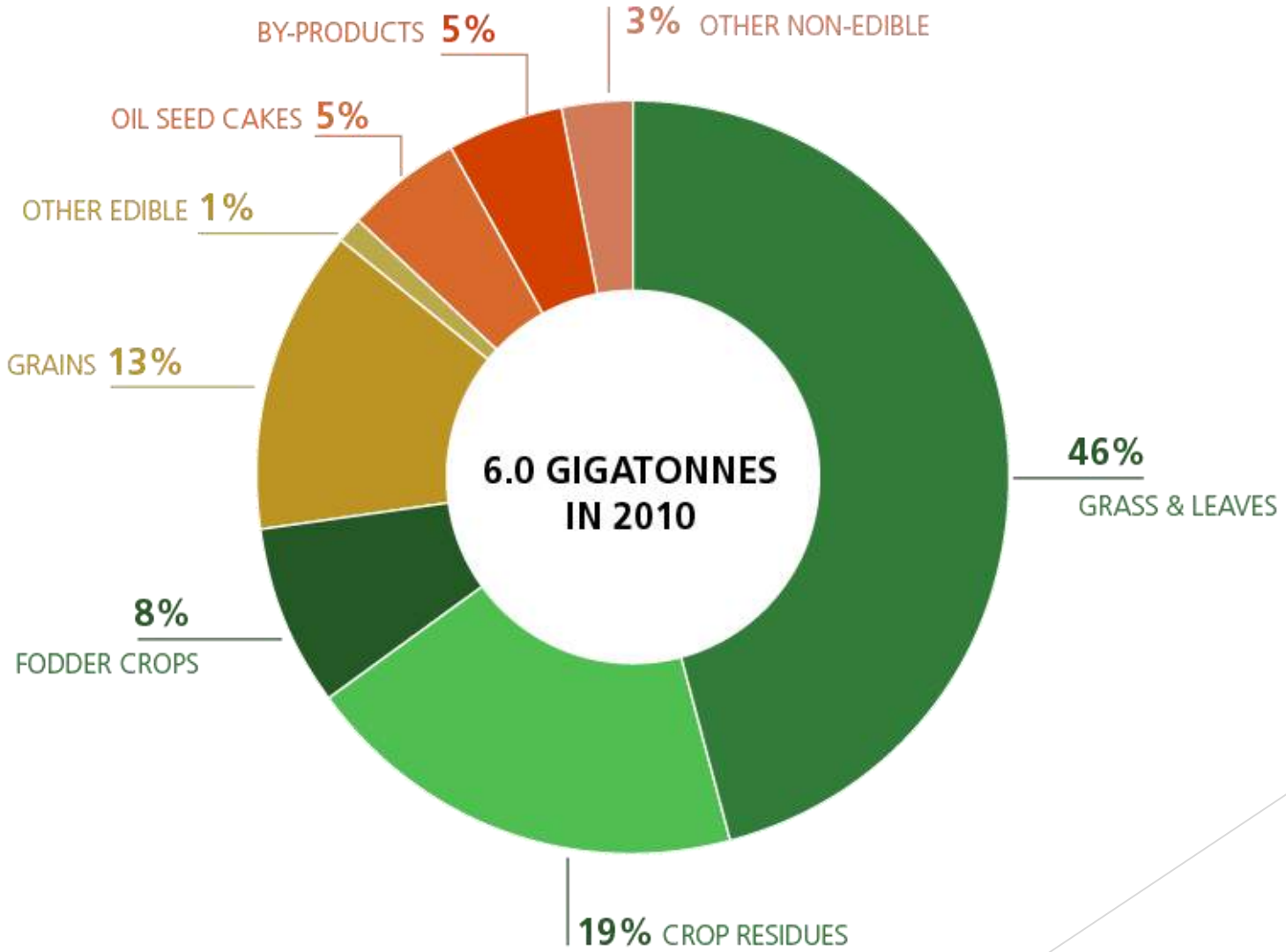


Global emission intensities by commodity

(FAO GLEAM 2.0)



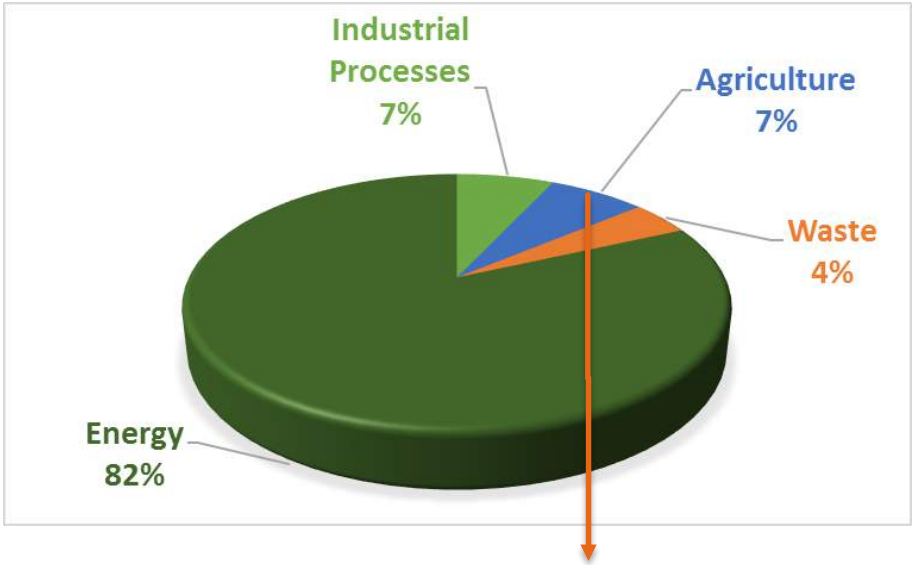
Global livestock feed intake (FAO GLEAM 2.0)

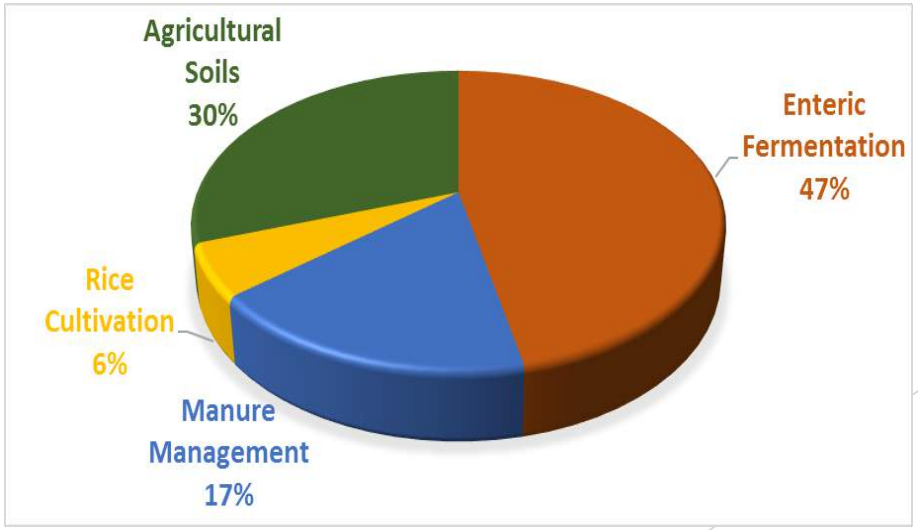


Agriculture and GHG emissions (Ispra 2017)

Italy in 2015 emitted

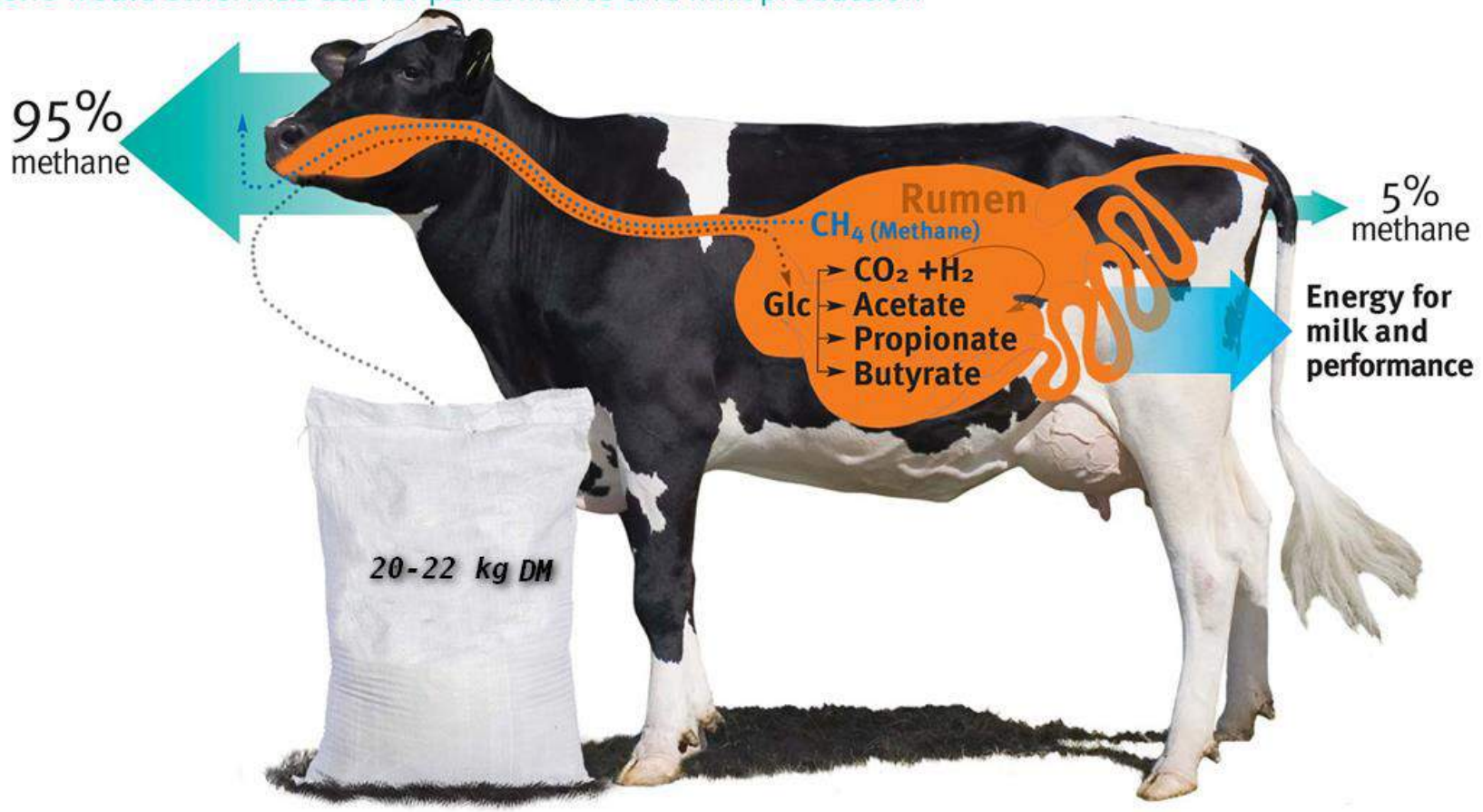
- ✓ 433 Mt CO2-eq escluding LULUCF
- ✓ 397 Mt CO2-eq including LULUCF



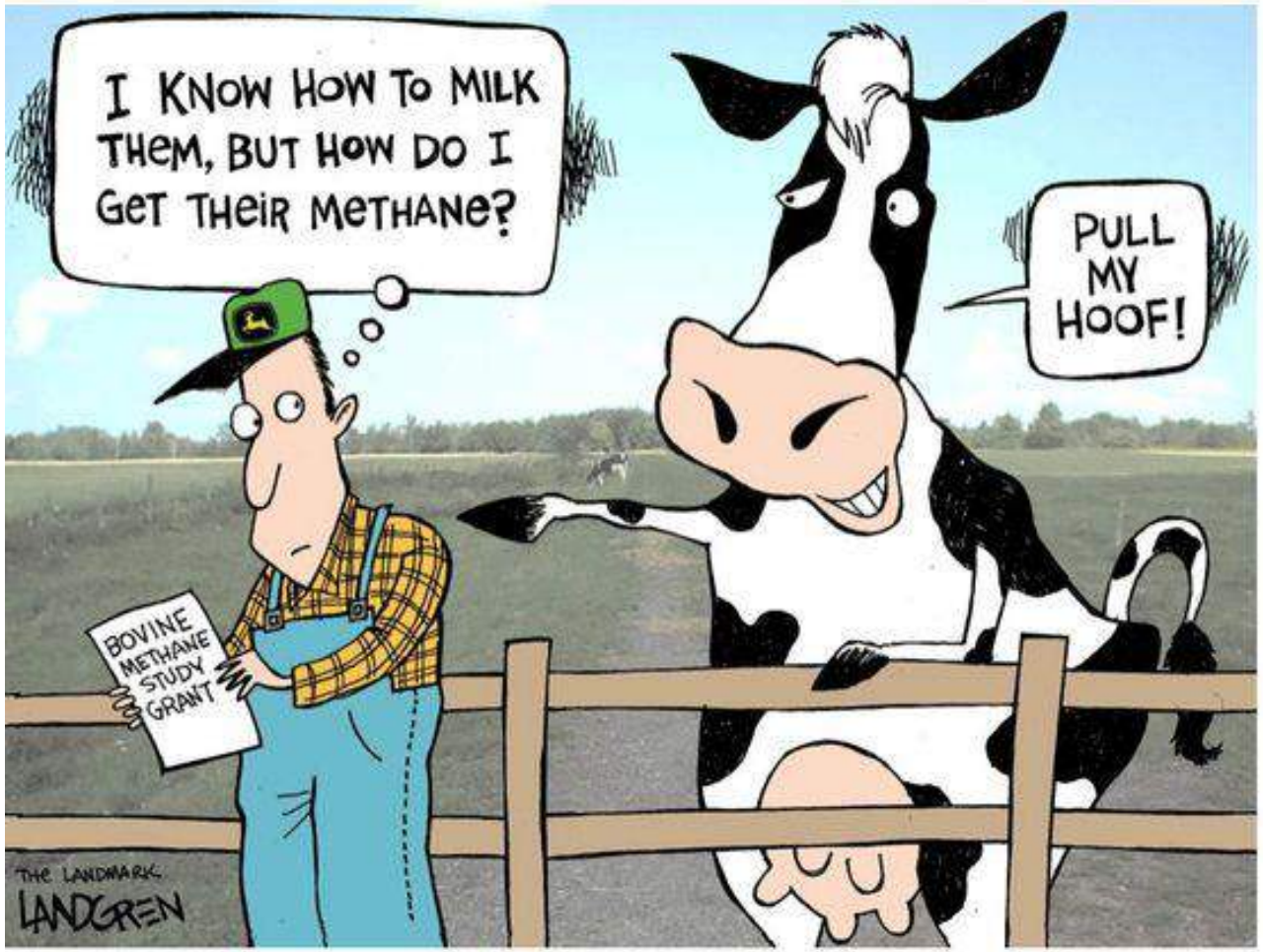


Agriculture and GHG emissions (Ispra 2017)

A cow emits 500l of methane per day, which is equivalent to 10% of the energy she would otherwise use for performance and milk production



Objectives


I KNOW HOW TO MILK THEM, BUT HOW DO I GET THEIR METHANE?
PULL MY HOOF!
BOVINE METHANE STUDY GRANT
THE LANDMARK
LANDGREN

Objectives

- **To demonstrate** how agricultural systems connected to milk production can contribute to CCM.
  - ✓ Good Practices effective in reducing GHG emissions and increasing carbon stock in soil (croplands, grasslands, and pastures);
  - ✓ Tools for the evaluation of the C stock and GHG emissions in order to evaluate the effects of mitigation interventions.
- **To contribute** to spread the contents of Decision n. 529/2013/EU on accounting rules on GHG emissions and removals from activities related to land use, land use change and forestry (LULUCF).

Project context

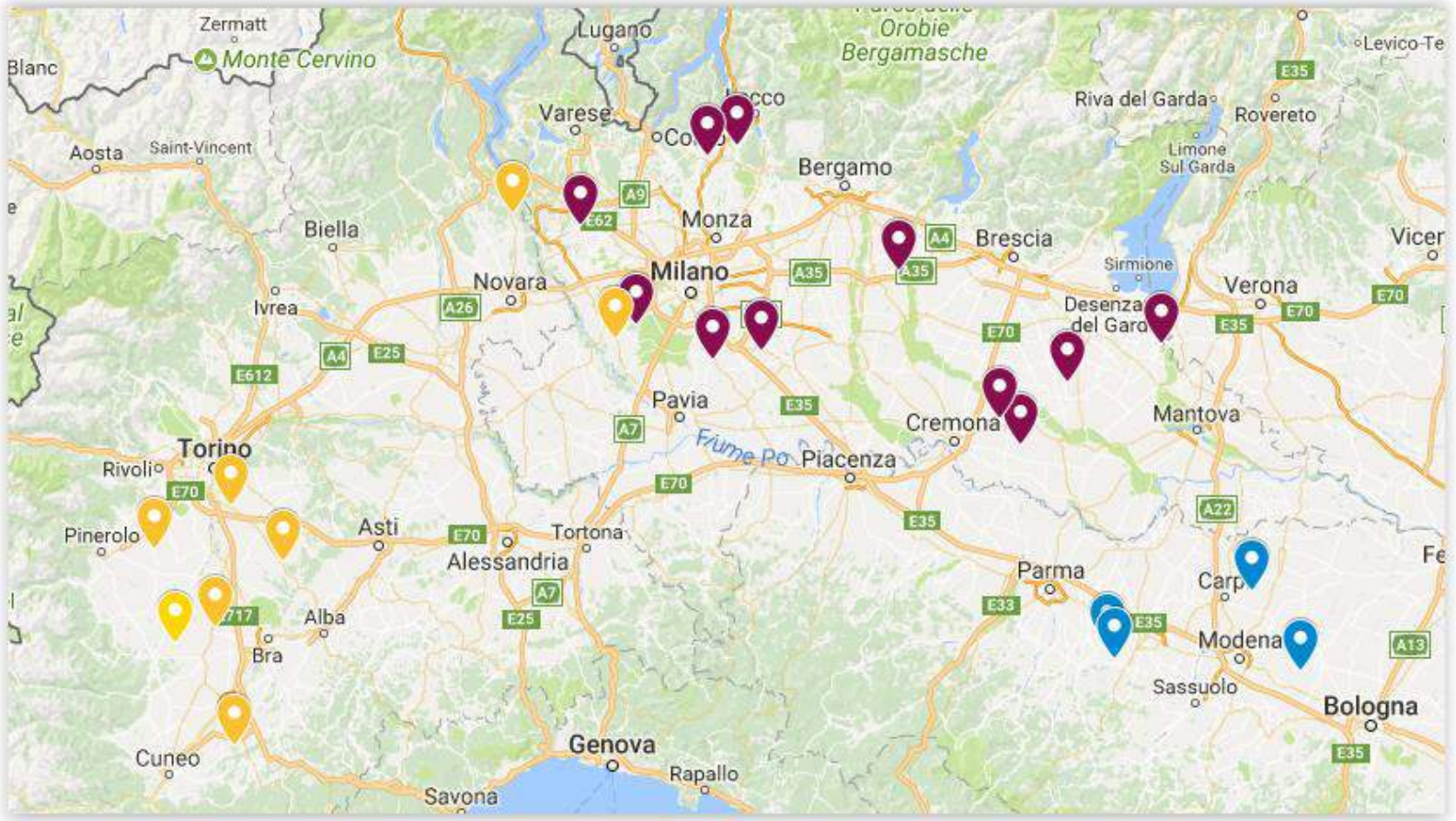
Forage4Climate deals with forage systems in European areas with continental climate for cow's milk and with Mediterranean climate for sheep and goat's milk

Forage system

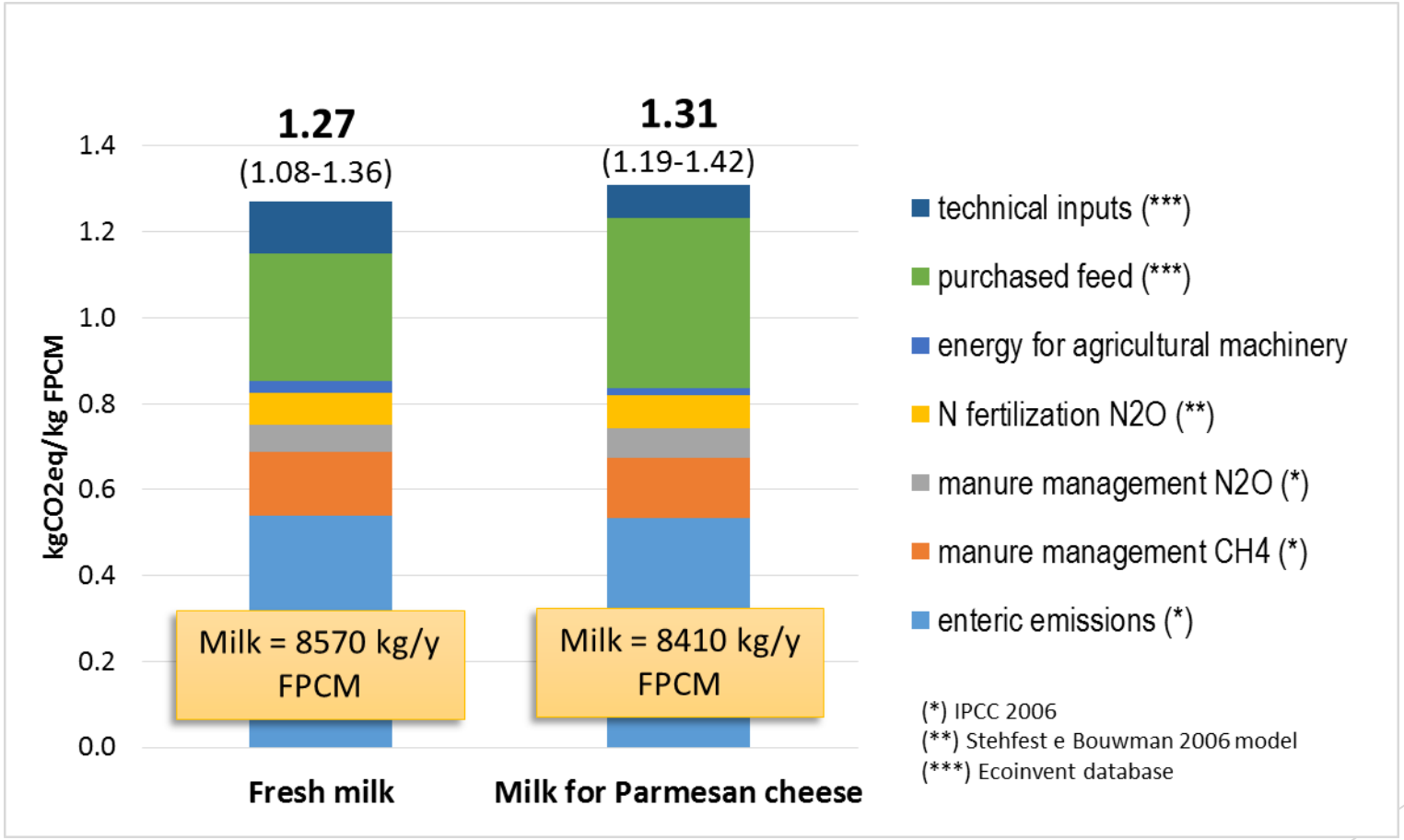
A forage system is a crop system for the production of livestock feed and fodder: the positive effects of meadows and pastures on the carbon stock cannot be separated from the greenhouse gas (GHG) emissions related to the production and use of forages in farming systems.

A network

- 37 demonstrative farms in 14 forage systems



Carbon footprint of milk



Expected impact

- **Base line GHG emission**
  - ✓ cow 1.2 kg Co_2 eq/kg FPCM
  - ✓ sheep 3.2 kg Co_2 eq/kg FPCM

- **Base line organic carbon content**
  - ✓ F4C's forage systems have from 47 to 60 tOC/ha

- **Mitigation result**

✓ **- 740,000 ton Co_2 eq/year referred to dairy sector of Italy and Greece**

Thank you for your attention