

# Animal waste treatment on Farma Spreča

**Interreg**  
*Mediterranean*



Project co-financed by the European  
Regional Development Fund



**RE-LIVE WASTE**

# FARMA SPREČA



FARMA SPREČA  
STARTS  
OPERATING

2008.

2009.

2009.-today

BEGINNING OF  
BIOGAS PLANT  
CONSTRUCTION

BIOGAS  
PLANT  
BEGINS  
OPERATION

1978.

CHANGE OF  
OWNERSHIP  
AND MILKOS  
MERGER

RECONSTRUCTION  
,  
ADAPTATION AND  
MODERNIZATION

LEADING PRODUCER  
OF TOP QUALITY COW  
MILK IN THE REGION

2019.

Interreg  
Mediterranean



RE-LIVE WASTE

2021.



# PRODUCTION DEPARTMENTS

- MILK PRODUCTION– 5 milion  
liters/year
- HUSBANDRY – 2500 animals
- FODDER PRODUCTION
- ELECTRICAL POWER  
PRODUCTION – 4.800 MWh/year



# FARMA SPREČA WASTE PRODUCTION

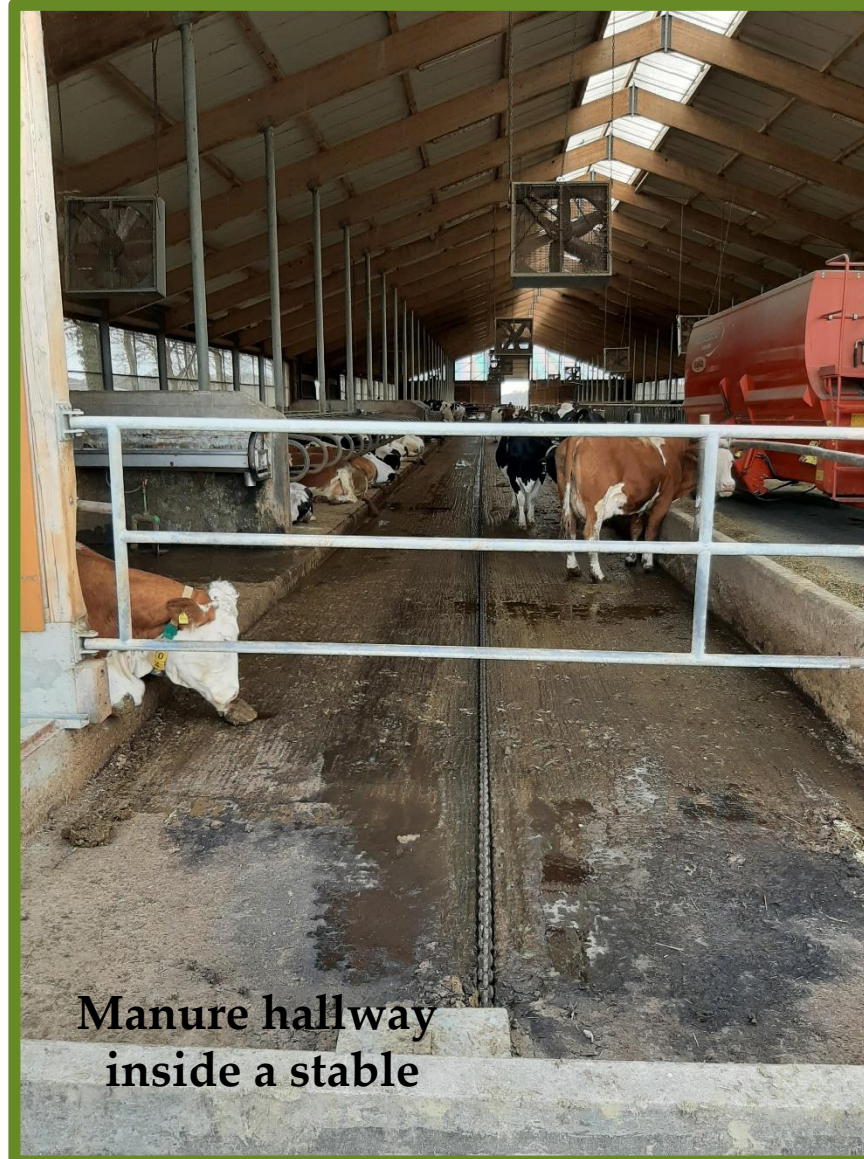
Sustainable and careful management of:

- Municipal waste
- Secondary raw materials (paper, plastics)
- Animal waste
- Other



# Animal waste treatment system

- Animal by-products generated in stables are collected from the manure hallways through a scraper system
- By-products are conveyed from the stables to the Plant through a waterproof reinforced concrete drainage system



Manure hallway  
inside a stable



Scraper system









Farma Spreča

Biogas  
Plant

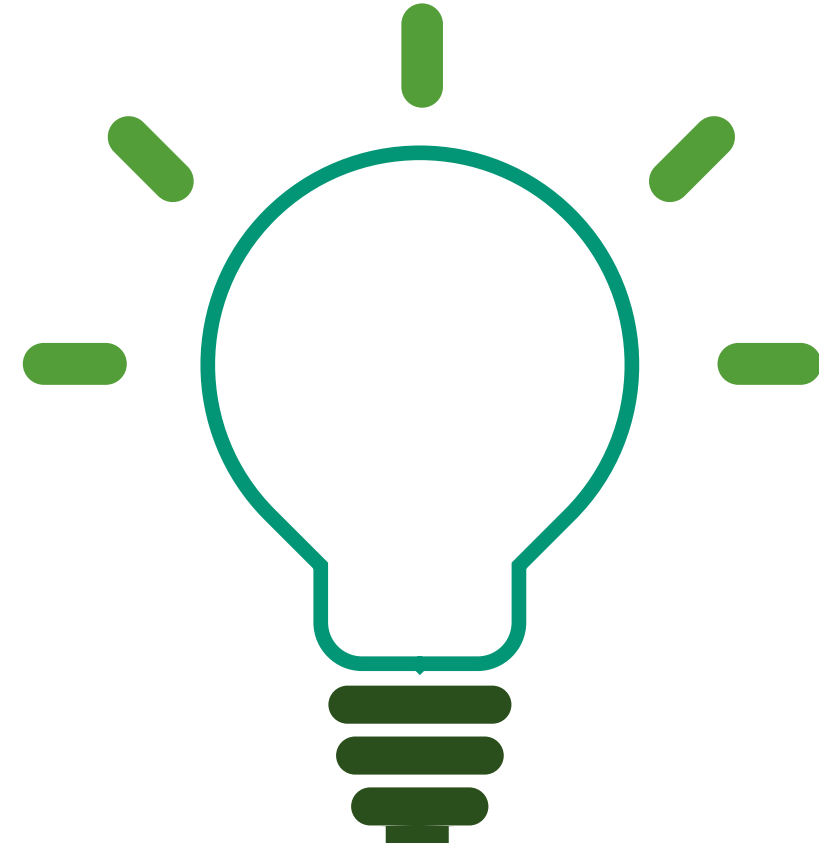
Mediterranean



RE-LIVE WASTE

# ADVANTAGES OF BIOGAS

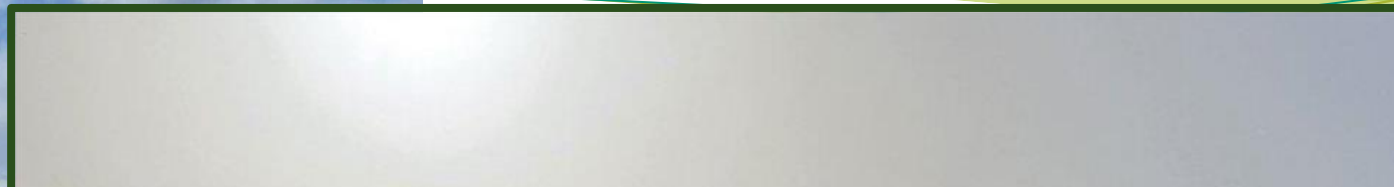
- Reusing agricultural by-products
- Cow manure is readily available, virtually free & environmentally-friendly raw material with good heat value (~14 MJ/kg)
- Implementing „zero-waste“ principles
- Closer to circular economy
- Fulfilling requirements for joining EU



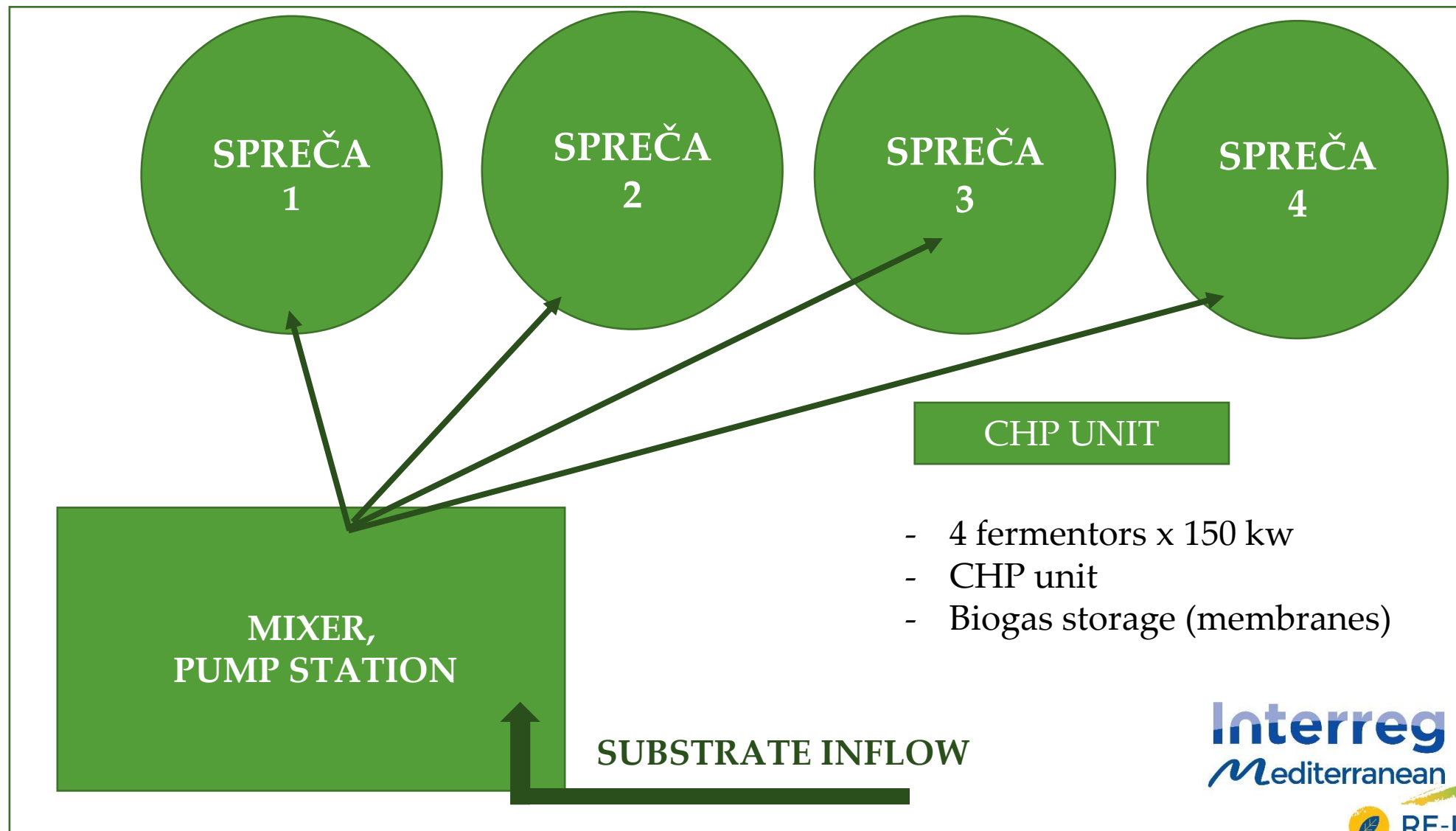
**Interreg**   
Mediterranean

 **RE-LIVE WASTE**





# „FARMA SPREČA“ BIOGAS PLANT





- **Biogas production is based on anaerobic digestion**
- **Production steps:**
  1. substrate preparation (cattle and chicken manure, silage)
  2. wet fermentation
  3. storing/conveying to grid
- **Biogas produced through fermentation is used for cogeneration**
- **All raw materials are locally available!**
  1. cattle manure from FARMA SPREČA
  2. chicken manure from local farms
  3. silage from FARMA SPREČA

- 4 fermentors with 150 kW installed power
- Electrical power production: 4.800 MWh/year
- Heat production: 5.760 MWh/year (~ 50% of generated heat is used for covering the Plant's heat needs)
- Generated power is sold at feed-in rates (0,33 €/kWh)
- Generated heat is used at FARMA SPREČA
- Fermented by-products are used for land fertilizing
- Total profit ~771.500,00 €/year
- Return on Investment ~ 4 years



## Advantages of The FARMA SPREČA Biogas Plant:

- Power production from alternative sources of energy
- Heat generation from alternative sources of energy – no fossil fuels used for heating FARMA SPREČA
- Reducing carbon footprint of agricultural activities
- **Using by-products as raw materials → circular economy and „zero waste“**
- **Sustainable development**
- **Investing in environmental protection and renewables**
- **Positive example and motivation to other local entrepreneurs**
- **Adjusting Bosnia&Herzegovina environmental practices with EU laws**
- Increasing production of power from renewable sources in Bosnia&Herzegovina
- Significant profit

You're  
wasting  
energy!

## RESTROOM

Ladies

Gentlemen

?

FLATSCH

Photo credits: Biogas Hochreiter

**Mediteranean**  
EUROPEAN UNION

**RE-LIVE WASTE**





THANK YOU

**Interreg**   
Mediterranean

 RE-LIVE WASTE