uP_running Final Event
30th April 2019

TOWARDS A CIRCULAR BIOECONOMY SCHEME:

THE ROLE OF WOOD FROM AGRARIAN PRUNING AND PLANTATION REMOVAL AS BIOMASS

Hosted by:

Organized by:

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 691748
This document reflects only the author´s view and INEA is not responsible for any use that may be made of the information it contains

09:30 – 10:00	**WELCOME**
10:00 – 10:45	**PROMOTION OF AGRARIAN PRUNING AND PLANTATION REMOVAL BY THE UP_RUNNING PROJECT**
	- Main results and lessons learnt. CIRCE *- Building capacities to new consultants on pruning biomass. UCAB* *- Policy guidelines to support the pruning-to-energy iniciatives. HPK*
10:45 – 11:30	**EXPERIENCES OF PRUNING AND PLANTATION REMOVAL USE TO ENERGY**
	- Sustainable use of wood from fruit plantations in a large power plant. ENCE *- Heating of municipal buildings with bales of fruit tree pruning. WUELS* *- Olive tree pruning valorization in a local industry. FIUSIS*
11:30 – 12:00	**NETWORKING COFFEE**
12:00 – 12:20	**BENEFITS, CHALLENGES AND SOLUTIONS FOR AGRICULTURAL BIOMASS IN EUROPE**
	-Bioenergy Europe
12:20 – 12:40	**PROMOTION OF AGRO-RESIDUES IN THE NEW CAP REGULATION**
	- COPA COGECA
12:40 – 13:00	**INSTRUMENTS TO SUPPORT SUSTAINABLE BIOECONOMY IN RURAL AREAS**
	-ENRD
13:00 – 14:00	**PANEL DISCUSSION**
Panel discussion with participation from:	*- COPA-COGECA* *- ENRD* *- Bionergy Europe*
14:00 – 14:30	**CLOSING REMARKKS**

Workshop *"Towards a circular BIOeconomy scheme: The role of wood from agrarian pruning and plantation removal as biomass"*

PROMOTION OF AGRARIAN PRUNING AND PLANTATION REMOVAL BY THE UP_RUNNING PROJECT

Main results and lessons learnt

30th April 2019

COPA-COGECA

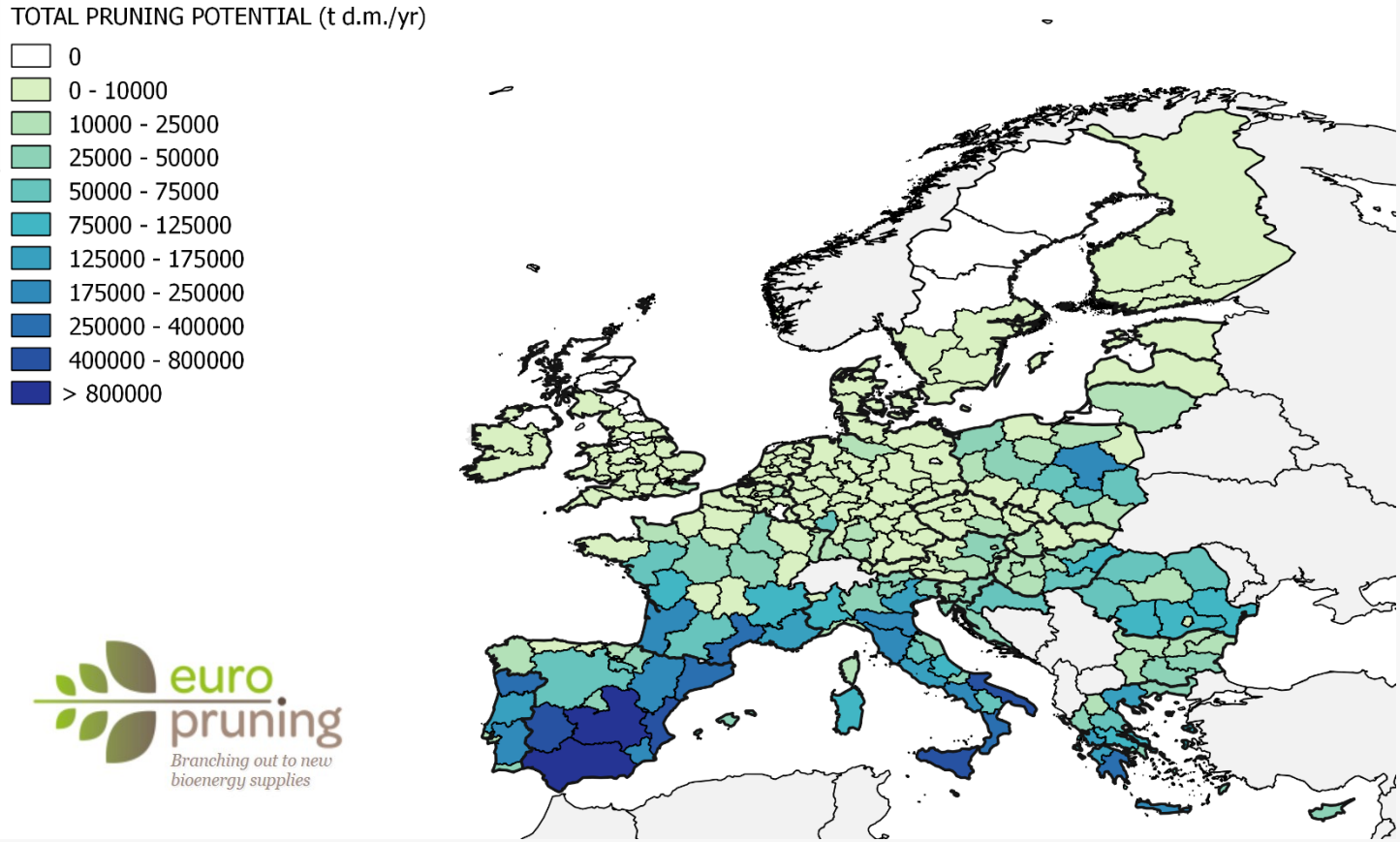
circe
RESEARCH CENTRE FOR ENERGY RESOURCES AND CONSUMPTION

Adeline Rezeau

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 691748
This document reflects only the author´s view and INEA is not responsible for any use that may be made of the information it contains

Current situation

1. European potential of wood from pruning and plantation removal is huge (> 20 Mt/y dry matter)



Current situation

1. European potential of wood from pruning and plantation removal is huge (> 20 Mt/y dry matter)
2. Its energy use is technically feasible and several success cases demonstrate it

Private - Public Partnership for the production of heat from vineyard prunings (Villafranca del Penedés, Spain)

Use of vineyard pruning for heat production in winery / distillery (Odessa, Ukraine)

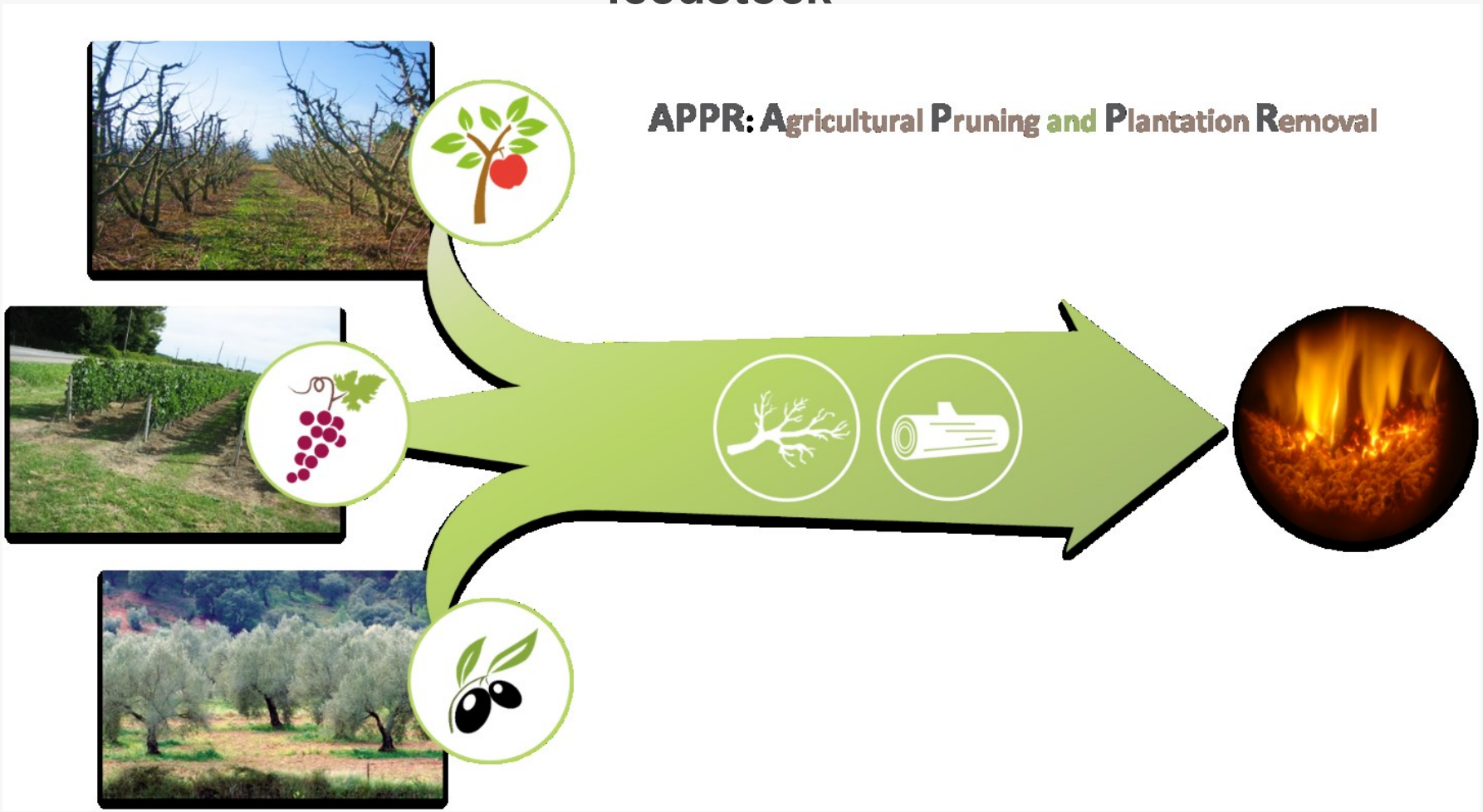
Current situation

1. European potential of wood from pruning and plantation removal is huge (> 20 Mt/y dry matter)
2. Its energy use is technically feasible and several success cases demonstrate it
3. Its utilization is a straightforward strategy for:
   - Diversifying the activity of the primary sector
   - Creating value in rural areas
   - Contributing to European strategies for climate change, rural development, circular economy and bioeconomy

But …

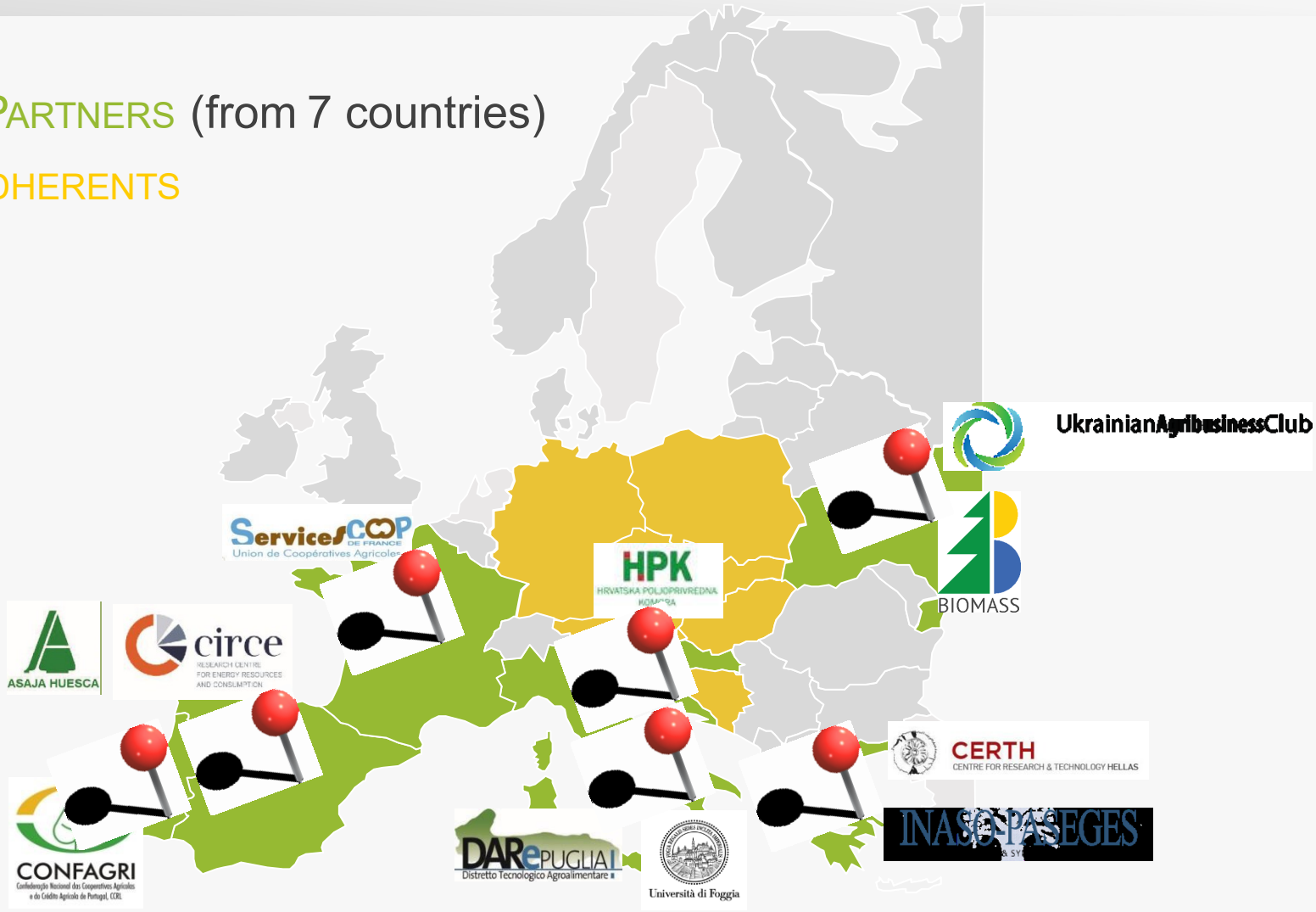
… the (initial) situation is of stagnation and general skepticism

uP_running project aims to unlock the EU strong potential of APPR wood and promote its sustainable use as energy feedstock



uP_running project

- 11 PARTNERS (from 7 countries)
- 7 ADHERENTS



From April 2016 to June 2019

Develop an Observatory and support entrepreneurs to implement new value chains

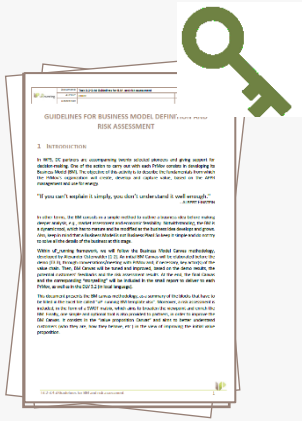
Transfer knowledge and create capacities for consultants

Sector analysis and policy recommendations

To show that APPR-to-energy is a reality

- More than 20 existing value chains in Europe detected by uP_running and EuroPruning projects. Many others of small size existing but not documented.
- 10 flagship cases reported in detail and available on the project web.

Observatory map of biomass from agrarian pruning and plantation removal



http://www.up-running-observatory.eu/

To provide useful data about pruning productivity and machine performance

- 366 data from field measurement of APPR wood productivity (t/ha)
- 41 experiences of mechanized collection

Search Filters

Select the data to be visualized

- [x] Field Measurements Prunings
- [x] Field Measurements Plantation Removal
- [x] Mechanized Collection Prunings
- [x] Mechanized Collection Plantation Removal
- [ ] Value chains

Select/Deselect All

Country

All Countries

Search | Advanced Search

Crop Species

- [ ] olives
- [ ] vineyards
- [ ] apples
- [ ] pears
- [ ] peaches
- [ ] apricot
- [ ] nectarine
- [ ] plum
- [ ] cherries
- [ ] oranges
- [ ] tangerines
- [ ] lemons
- [ ] grapefruit

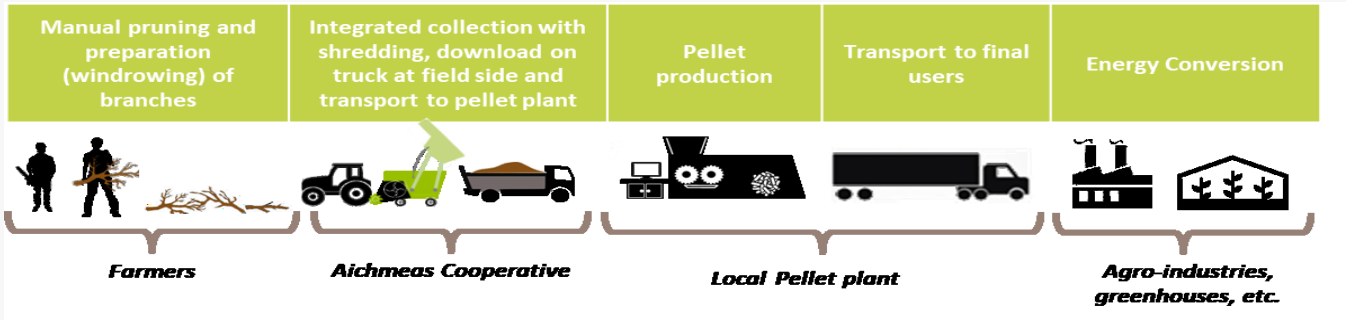
Observatory map of biomass from agrarian pruning and plantation removal

Legend for agrarian pruning and plantation removal experiences

Type of Experience	Biomass Type	up_running experiences	Other experiences	Flagship case
Biomass productivity (field measurement)	Agrarian prunings			-
	Plantation removals			-
Mechanized Collection	Agrarian prunings			-
	Plantation removals			-
Value Chains	Both			

Support entrepreneurs for their decision-making

- Field measurements of pruning productivity
- Business model prospection
- Field tests of biomass collection and treatment
- Analysis of the biomass produced and validation in potential end-users
- Techno-economical feasibility analysis
- Assessment of soil conditions and GHG emissions

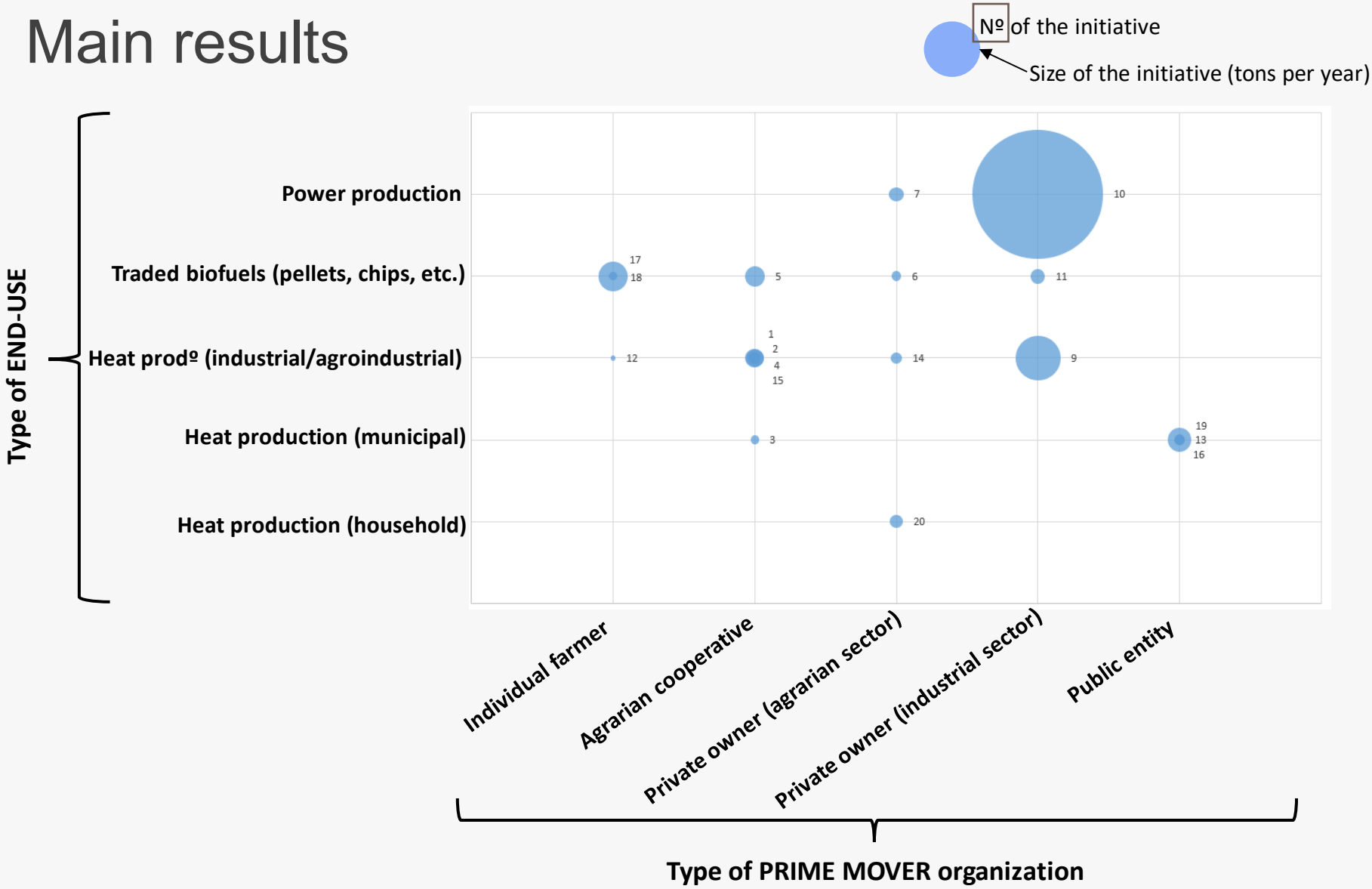


Main results

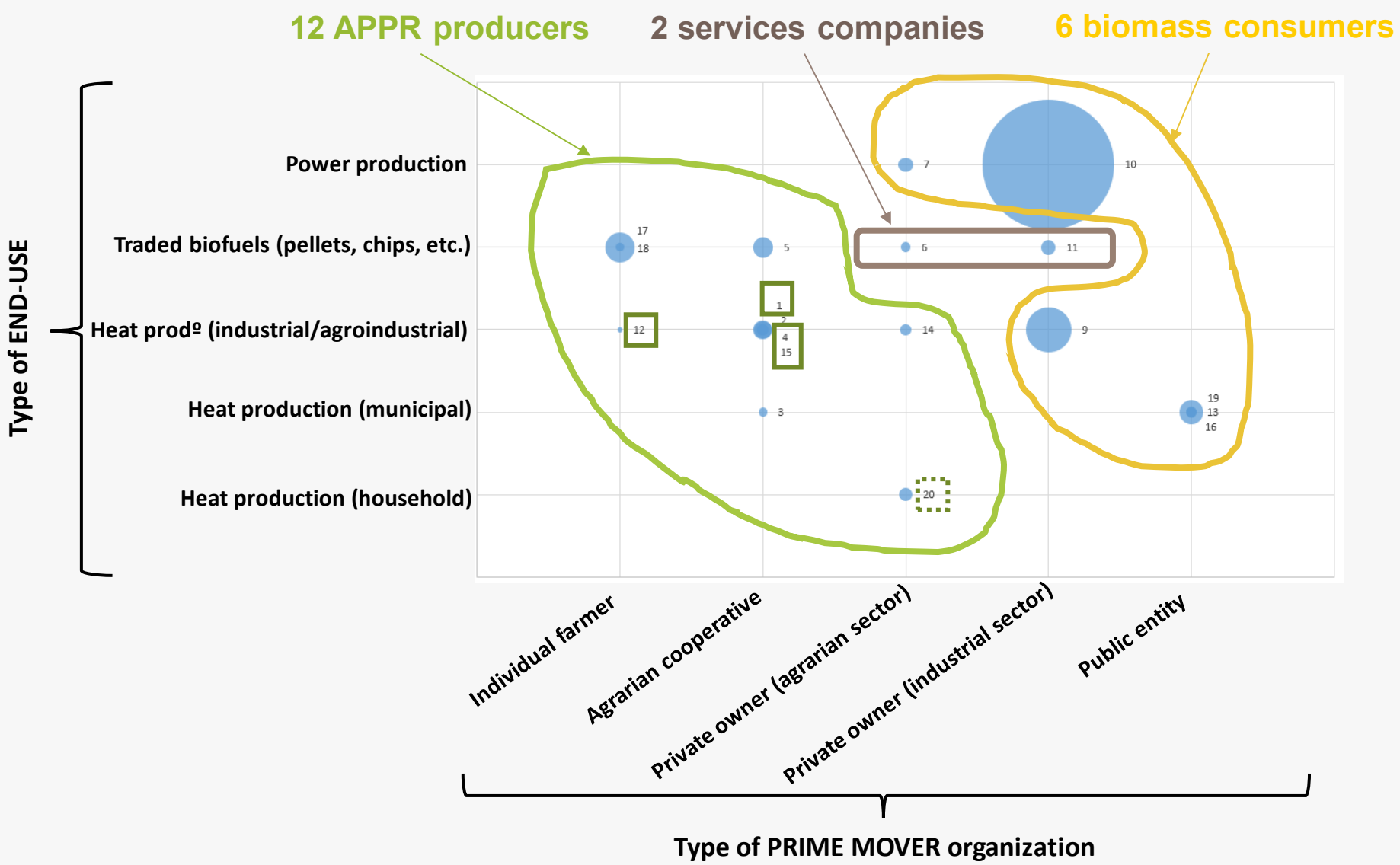
- **20 entrepreneurs** accompanied for implementing in the value chain, in Greece, Italy, Spain and Ukraine (“demo countries”)
- More than **20,000 tons of APPR biomass mobilized**
- **20 factsheets** with demo data and lessons learnt, in 8 languages
- **4 videos** of uP_running demonstrations experiences
- **4 new value chains** are currently under implementation

➢ These 20 initiatives involved many different business models, actors and scales.

Main results



Demonstration of new value chains



Lessons learnt (1/2)

- The supported initiatives are mainly based on a **local use** of APPR biomass (< 25 km).
- **Many different models** exist and depend on local conditions and peculiarities.
- The final APPR product uses to be **in form of a hog fuel** obtained either by a manually fed shredder, a harvester with integrated-shredder or a large static shredder.
- The **cost of APPR biomass at gate** varies greatly depending on the logistic scheme and machineries used, as well as the APPR productivity and many other factors.
- The **particle size distribution** may limit the use of this fuel in existing biomass installations.
- It is absolutely necessary to **start the value chain with end-users in mind** and examining in detail their capacity to handle APPR biomass.

Lessons learnt (2/2)

- Starting new APPR value chains requires efforts and a **change in agronomic practices**.
- The economic margins are tight, but **social and environmental benefits** may play a crucial role, e.g. avoid open burning, avoid plant diseases, improve business image, etc.
- For single farmers or cooperatives, the **investment capacity is limited**, and the payback time for chippers/shredders that are utilized only a few days per year is high.
- **Public authorities** may play a strategic role, by creating the demand or creating synergies with the management of green urban wastes.

Transfer knowledge and create capacities for consultants

Sector analysis and policy recommendations

uPrunning

Take-off for sustainable supply of woody biomass from agrarian pruning and plantation removal




Thank you very much for your attention!

circe
CENTRO DE INVESTIGACIÓN DE RECURSOS Y CONSUMOS ENERGÉTICOS

Adeline Rezeau
arezeau@fcirce.es