

# EMPRESA PÚBLICA DE SERVICIOS AGRARIOS GALEGOS, S.A. (SEAGA)

Pablo Arbones  
Managing Director



seaga

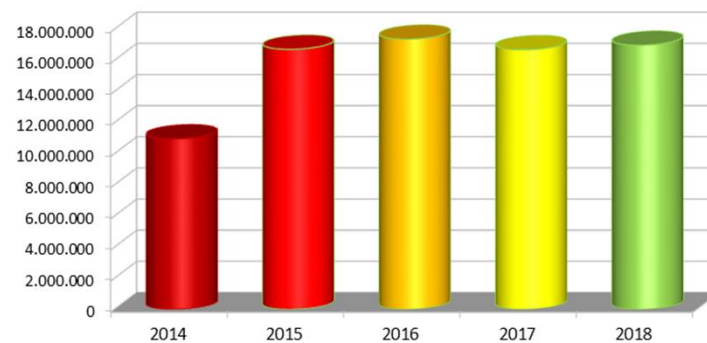


# THE COMPANY

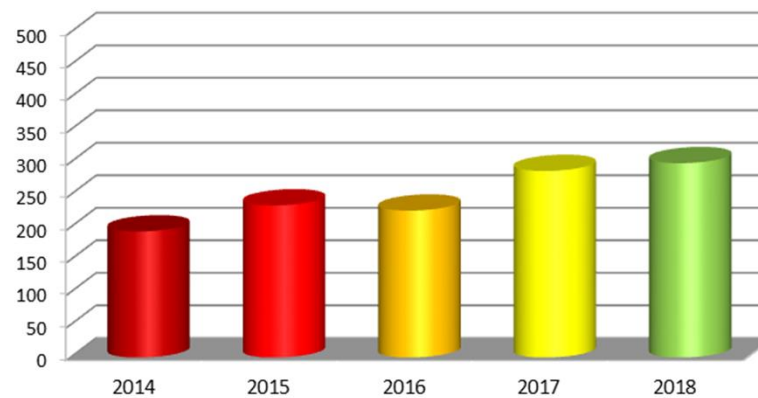
- Public company.
- Owner: Xunta de Galicia.
- Area of operation: Galician Region.
- Established: 2006
- Average annual budget: 16 M €
- Average number of employees: 250

# MAIN FIGURES

Annual budget



Average number of employees



# AIMS

To be an effective instrument supporting public administrations.

- Risks prevention.
- Crises response.

Participate in projects aimed to improve the quality of life in rural areas.

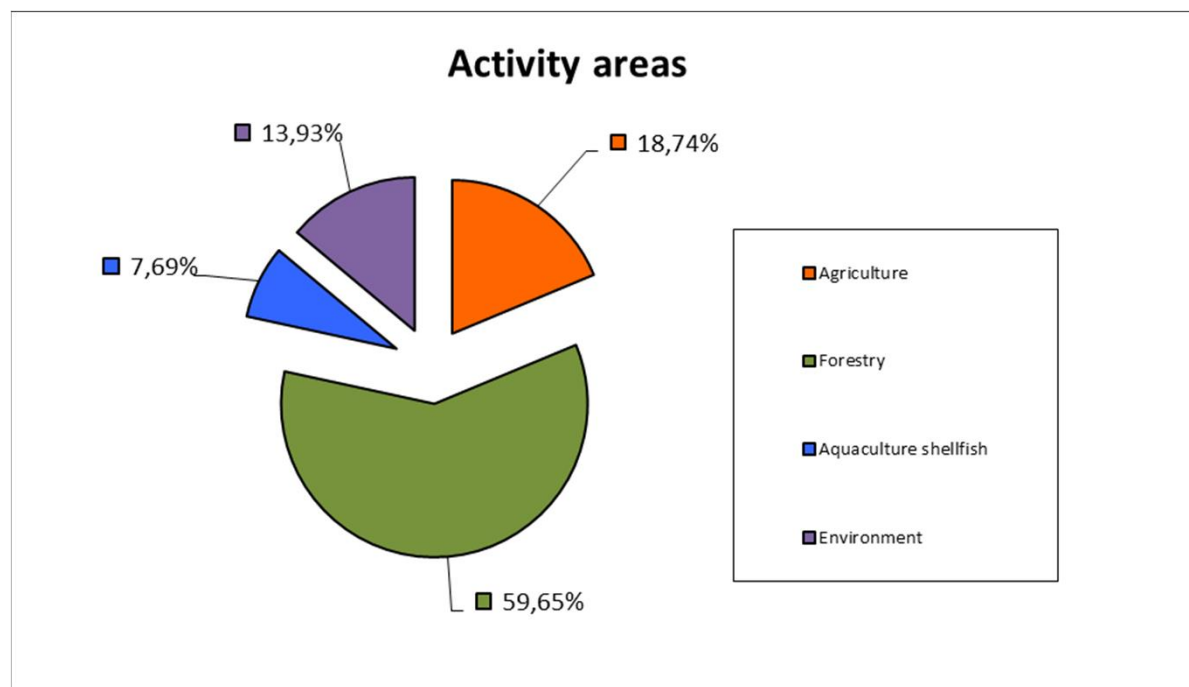


# MAIN ACTIVITIES

## Services and works in primary sector.

- Forestry: Forest management, pests and diseases control, forest fires.
- Agriculture: Agricultural infrastructures, pests and diseases control.
- Environment: Maintenance of protected natural areas, environmental restoration.
- Aquaculture, shellfish and fishing: Marine ecosystems restoration, shellfish management.

# ACTIVITY AREAS



# FORESTS RISKS/CRISES SYNOPSIS

## Basic conditions:

- Effects on environment, public health, rural economy.
- Urgency, not emergency; not always considered as humanitarian crises.
- Public control needed, public budget and legal procedures.
- Very short response times.

## Needs:

- Strategic agility with execution.
- Skilled teams; accuracy in the deployment.
- Respect to procedures and reasonableness of costs.

# NON-EXHAUSTIVE SUMMARY

Works developed by SEAGA:

- Post- fire treatments.
  - Biological pests an diseases control
    - Dryocosmus kuriphilus.
    - Gonipterus platensis.
    - Cryphonectria parasitica.
- (...)



# CONTRIBUTIONS OF PLURIFOR PROJECT

SEAGA participates as associated partner to Centro de Investigación Forestal de Lourizán (Axencia Galega de Calidade Alimentaria - AGACAL), as a result of the collaboration on post-fire soil stabilization works.



# POST-FIRE TREATMENTS



# POST-FIRE TREATMENTS 2010 - 2018

Year	Fires	WORKS DEVELOPED				
		Straw mulch helicopter (ha)	Straw mulch manual (ha)	Cut-shrub barriers (m)	Wood crushing (ha)	Infrastructures restoration (m)
2010	8	180,00	82,00			6.100,00
2013	10	111,80	61,05	3.385,00		62.023,00
2015	2	65,00	3,00	2.090,00		
2016	6	145,29	19,42	3.157,05	436,50	83.000,00
2017	16	160,00	134,35	7.882,00	347,63	69.878,00
Total	42	662,09	299,82	16.514,05	784,13	221.001,00





# POST-FIRE TREATMENTS

## Critical paths

- Mapping working area, evaluation of severity.
- Work planning.
- Logistics: transport and supplies.
- Feedback: correction of deviations.

# BIOLOGICAL CONTROL DRYOCOSMUS KURIPHILUS



# BIOLOGICAL CONTROL DRYOCOSMUS KURIPHILUS

- 1) Previous inventory 17.179 sampling points.
- 2) Release *Torymus sinensis*.

Year	2015	2016	2017	2018	2019
Individuals	1.500	66.500	134.000	705.000	1.600.000*

\* Estimated data.

- 3) Check inventory 1.200 sampling points.

Critical issues:

- *Torymus sinensis* supply.
- Changing conditions.



# BIOLOGICAL CONTROL GONIPTERUS PLATENSIS



# BIOLOGICAL CONTROL GONIPTERUS PLATENSIS

- 1) Permanent damage inventory.
  - 122 Priory sampling points (weekly)
  - 52 Secondary sampling points (monthly)
- 2) Releases *Anaphes nitens* Huber.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bags	3.030	4.800	5.248	6.024	6.341	6.680	10.000	10.500	9.000	9.000*

\* Estimated data. Each bag contains 50 ootheca.

- 3) Integrated treatment studies based on *Gonipterus* biology.

# BIOLOGICAL CONTROL CRYPHONECTRIA PARASITICA



# BIOLOGICAL CONTROL CRYPHONECTRIA PARASITICA

- Hypovirulent strain inoculations.

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
Inoculations	1.476	4.454	4.663	13.993	25.218	16.037	23.983	7.002	18.000*

\* Estimated data

# SUMMARY

- Public companies should play an important role in these kind of works.
  - Public administration controls.
  - Agility of private companies.
- Needs:
  - Skilled teams.
  - Flexible organization.
  - Search for synergies with public and private actors.

# CONTACT

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