



# Strategies for sustainable management of Vespa velutina in the North of Portugal developed under the project GESVESPA

(POSEUR-03-2215-FC-000008)

## SUMMARY

INIAV contributes to the Action Plan for the Surveillance and Control of the Asian hornet in Portugal through a multi-faceted research program. This involves engagement with regional ST & ID institutions, inter-municipal communities, the National Federation of Beekeepers (FNAP) and DGAV, on active surveillance, monitoring and control of the hornet. The intervention area covers the NUTS NORTH and adjacent municipalities in the NUTS CENTER



Zone	Intervention Area (IA)		
	IA (ha)	IA (%)	
Invaded	879.080	38,85%	
Risk	1-000-137	44,20%	
Buffer	383.330	16,94%	
Total	2.262.548	100,00%	

## 1. To meet the research needs identified in the ActionPlan for the Surveillance and Control of

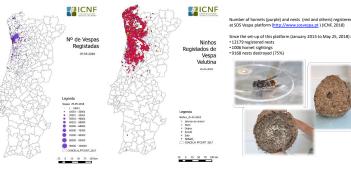
- a. Reproduction, etiology, genetics and health
- b. Evaluation of potential health risks for beekeeping
- c. Predictive models for the evolution of species spread
- d. Methods of risk management and control (elimination of hornets and destruction of nests)

the Asian Hornet(Vespa velutina) in Portugal:

- 2. Study of the impact of the Asian hornet on ecosystems and on pollination services
- 3. Analysis of species biological behavior in new areas of spread /occupation
- 4. Development and testing of good practices for control and eradication
- 5. Dissemination of problems associated with the introduction of the species and promotion of public awareness of the risks involved

Action	Name	Description	
WP 1	Identification and ecological characterization	Identification and bio-ecological characterization	
		Food and reproductive behavior	
		Knowledge of population dynamics	
		Genetic characterization of Vespa velutina	
WP 2	Monitoring / surveillance	Vespa velutina monitoring	
		Installation of surveillance network (permanent, backup and occasional network - sentry apiary)	
		Knowledge of patterns of territorial evolution of invasive species	
		Cartography of the invasion	
WP 3	Sustained control	Development of types of selective traps, food baits and pheromones	
		Protocols for the destruction of nests in a sustained way and their evaluation	
		Control methodologies	
		Capture in apiaries	
WP 4	Impact on beekeeping and biodiversity	Assessment of impact on beekeeping and biodiversity	
WP 5	Information Dissemination Promotion	Public awareness, training and dissemination	

## **WORK PLAN** WP 2.1 Monitoring network (FNAP) awareness (INIAV & DGAV) WP 2.2 Spatial models (SIGs) (UTAD) control (INIAV & IPVC) WP 2.3 Trap promotion (INIAV & DGAV) (FNAP)



# relutina captured per entity under FNAP's coordination (Sep2016 - Apr2018) Vespa velutina captured per month

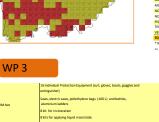
















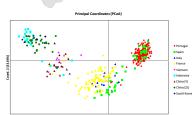
Target audience:

Technicians from various agencies of the State Central and local
Administration - DGAN; NIAN; (CNF; DRAP;
Administration - DGAN; NIAN; (CNF; DRAP;
Admicipalities (mamely CNF - forestry Technical Offices and
Municipalities (mamely CNF - forestrives);
Organizations including Beekeeping (associations, societies,
cooperatives); hunting; forestry producers;
Elements of the SEPNA / CNR; Friedfrest; Forest Resources Guards;

SOS Vespa platform - The SOS Vespa platform is a free and participative application used to register the distribution and spread of the Asian wasp through geo-referencing using an ....







Genetic distance between grouped samples by country (Yn (yunnan) and Zi (Zhejjang/liangsu) refer to provinces in China). Samples from Portugal form a cluster together with those from Spain. Some individuals from the Portuguese & Spanish populations are also found in the French cluster (yellow dots).





