

**Strategies for the sustainable management of *Vespa velutina* in the North of Portugal developed under the project GESVESPA (POSEUR-03-2215-FC-000008).**

**GESVESPA consortium** <sup>(1)</sup>

**SUMMARY**

INIAV coordinates an integrated research program aimed at implementing the “Action Plan for the Surveillance and Control of the Asian Wasp in Portugal”, in relation to active surveillance, monitoring and control. This is carried out in collaboration with regional SI & ID institutions, the Intermunicipal Communities, FNAP and DGAV. The intervention area covers NUTS NORTE and adjacent counties of the NUTS CENTER in an area that spans 2,262,548 hectares. Under the umbrella of the National Beekeeping Federation and participation of 12 associations of beekeepers, a monitoring network was set up consisting of 356 “Veto-Pharma” entomological traps, situated in 178 sentry apiaries.

From October 2016 to December 2017, 2546 samples were collected, providing important information on the life cycle of the species in Portugal. Different traps and bait types were tested, and their efficacy and side effects on local entomofauna were studied. Combat strategies were developed for the destruction of nests by physical methods, under the coordination of the 4 Intermunicipal Communities covering an area of 879,080 hectares within 35 municipalities. Equipment specifically designed for the Gesvespa project was developed, including 35 incineration kits and 70 sets of individual protection equipment. Surveys of beekeepers are under way to assess the impact on beekeeping and biodiversity, with the coordination of IPVC and FNAP. From 2015 to 2017, a total of 20 training actions were carried out coordinated by the DGAV and involving 832 participants. Genetic studies of *Vespa velutina* were carried out by IPB and are being finalized, and will soon be published.

The SOS Vespa Platform was established under the management of ICNF, with the collaboration of INIAV (<http://www.sos.pt>), and aims to support the identification and control of *Vespa velutina* in Portugal. Through online georeferencing of nests, this WebSIG platform enables communication between local authorities (in particular civil protection), the public and central administration, and is also a tool for decision making. This WebSIG is a free and collaborative application of the Asian wasp, using online georeferencing and a map server to register sightings of nests or wasps. When a sighting is recorded, an automatic warnings signal is sent via the platform to local administrators so they can act more quickly and appropriately on the destruction of nests. Since its implementation in January 2006, about 12180 nests and 1006 wasp sightings have been registered on the platform. Each record is validated by the platform's local administrator and can be seen by the public only after validation. About 9168 (75%) of the nests have already been destroyed by local authorities. A brochure as well as a 7-minute video are being prepared for dissemination of results and promoting public awareness.

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