



The LIFE STOPVESPA project: progress and achievements



LIFE14 NAT/IT/001128 STOPVESPA - Spatial containment of *Vespa velutina* in Italy and establishment of an Early Warning and Rapid Response System

Partners

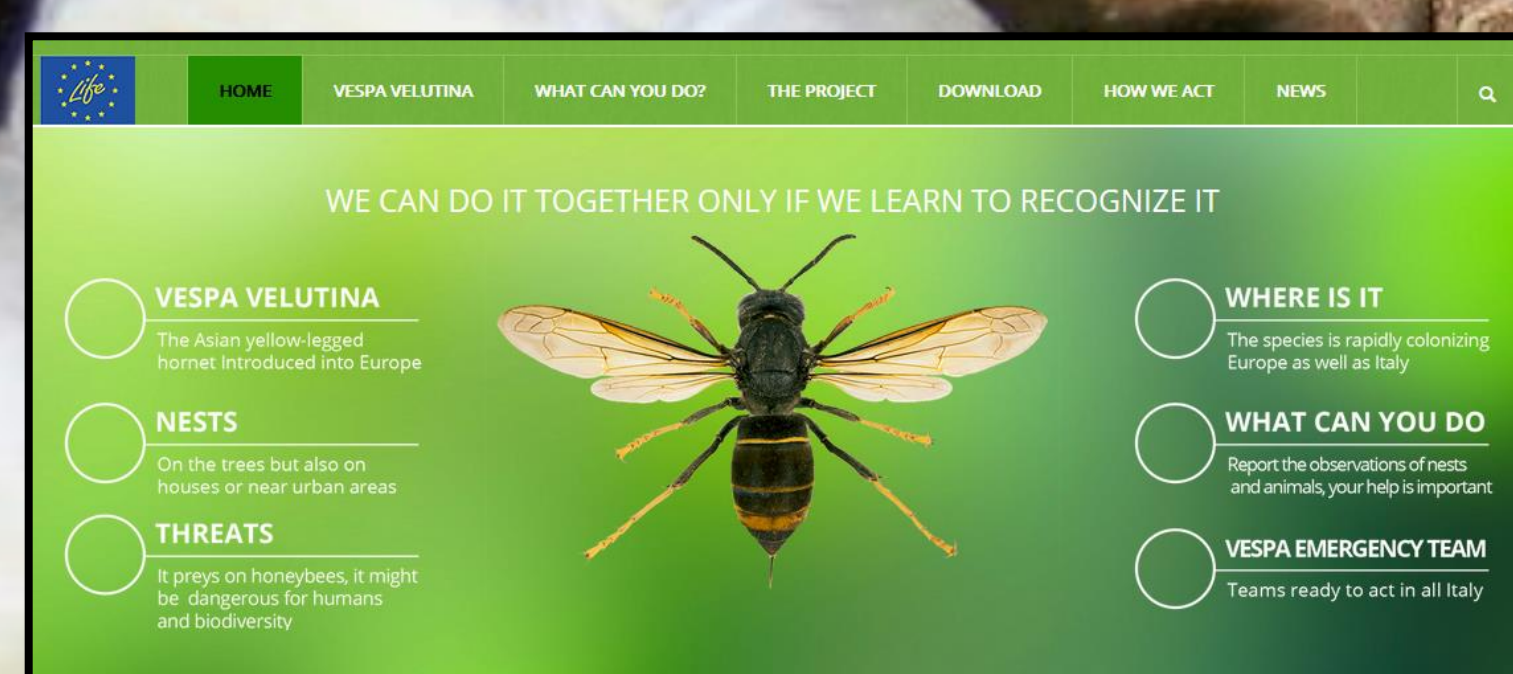
- Dipartimento di Scienze Agrarie, Forestali e Alimentari, Università di Torino
- Associazione Regionale Produttori Apistici del Piemonte ASPROMIELE
- Dipartimento di Elettronica e Telecomunicazioni, Politecnico di Torino
- Abbazia dei Padri Benedettini Santa Maria di Finalpia

The LIFE STOPVESPA project (LIFE14 NAT/IT/001128 STOPVESPA) aims to contain the spread of the Asian yellow-legged hornet *Vespa velutina* in Italy, an invasive species that causes serious damage to beekeeping and biodiversity, and establish an Early Warning and Rapid Response System. This will be achieved by the development of a harmonic radar prototype able to track the hornets flying back to the nests and by establish an effective monitoring and control system in project area, which is located in the north-western part of Italy (Liguria and Piedmont regions). The project started in August 2015 and will end in July 2019.

Monitor and engage beekeepers and stakeholders

From the beginnings, the project aimed to rise consciousness of *V. velutina* impact in decision makers, beekeepers, farmers, students, other research centers, and the general public, in order to gather information on the spread of this hornet in Italy by developing a citizen science scheme through the project internet site.

www.vespavelutina.eu



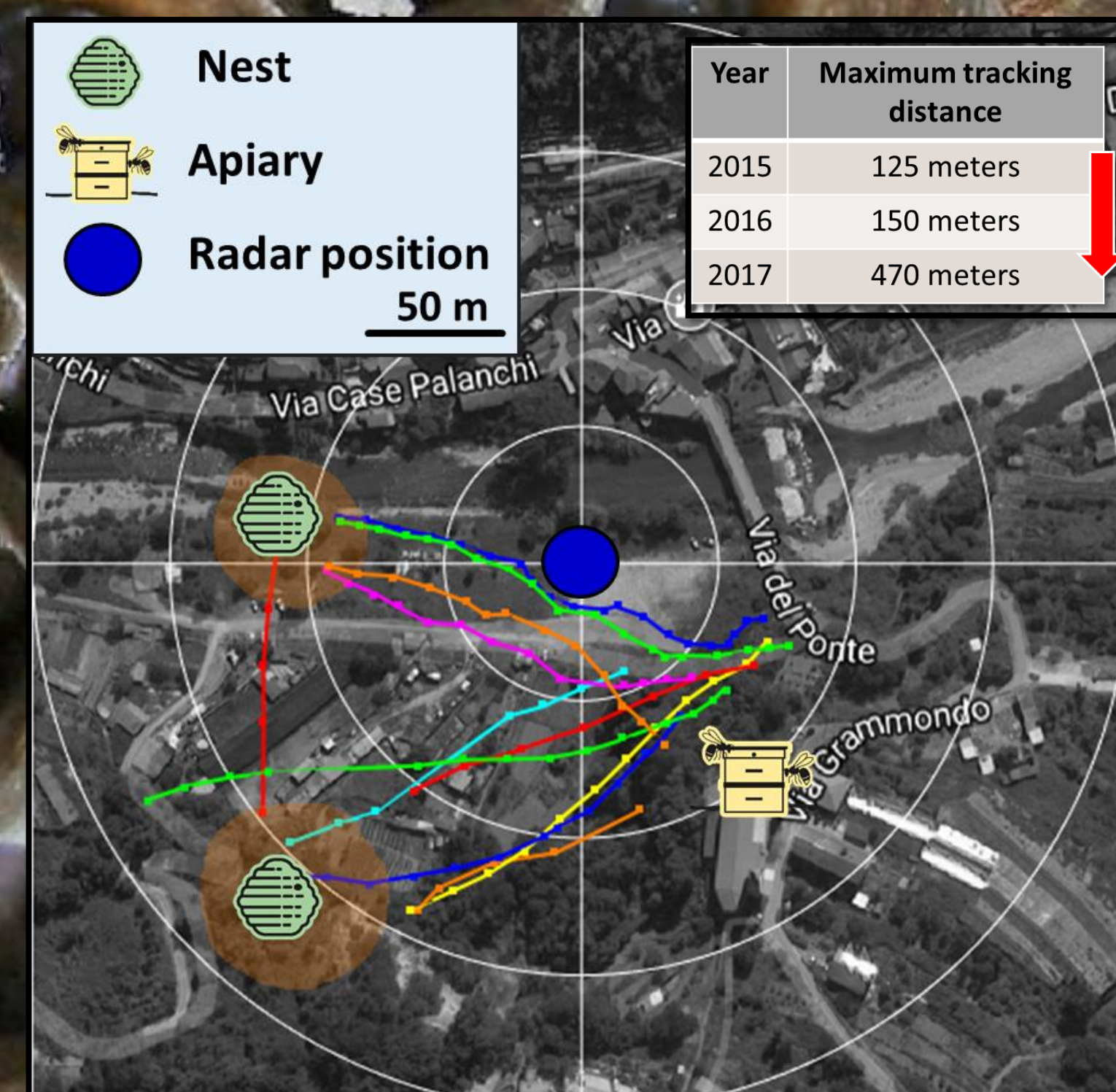
Establish an Early Warning and Rapid Response System

The involvement of beekeepers, citizens and stakeholders in monitoring schemes, the training of people in control methods and the development of new tools for the detection of nest positions will allow to establish an Early Warning and Rapid Response System in project area and in Italy, with the involvement of Regional Authorities.



Develop new tools for detecting nests of the species

A harmonic radar prototype has been developed for tracking hornets to their nests. The radar is capable to cover 360° in the horizontal plane and a large field of view in the vertical plane (20°) and allows to follow the tracks of the hornets tagged with a 12.3 mm wire antenna and a diode up to 500 m. The radar allowed to detect different nests both in 2017 and 2018.



Control of *V. velutina* populations

The identified nests are destroyed mainly by trained teams within the project activities or, to a smaller extent, by firefighters, civil defense or other volunteers. On a whole, 233 nests were destroyed in 2015, 487 in 2016, and 419 in 2017.

Besides to nest destruction, the project has evaluated queen spring trapping as a complementary control method.

Evaluate the impacts of the species on honeybees and biodiversity

Beside to the control activities, the project is evaluating also the impact of *V. velutina* on honeybees and wild bees communities, by comparing areas at different level of presence of the species. Preliminary results indicates that the presence of the hornet produce an impact on both honeybee colonies and some species of wild bees.

Reports of *V. velutina*: false and confirmed reports

