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Roadmap to Control Invasive Hornets

(*Vespa velutina* & *Vespa orientalis*)

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Introduction

Invasive alien species are a **top-five driver of global biodiversity loss**, with reported costs exceeding **US\$1.2 trillion (1980–2019)**. Social wasps are highly successful invaders due to their adaptability and predatory behaviour. *Vespa velutina* and *Vespa orientalis* continue to expand in Europe, while control remains **fragmented, underfunded and inconsistently implemented**.

Objectives

This roadmap aims to:

- Analyse the spread and impacts of invasive hornets in Europe
- Identify why current management is failing
- Propose governance recommendations for a coordinated EU response

The work combines scientific literature with field experience from beekeepers, pest controllers and stakeholders in France, Germany, Italy, Portugal and Spain.

Key Findings



Biology

- Highly adaptable
- High reproductive capacity
- Generalist predator



Operational Challenges

- Limited monitoring & difficult nest detection
- Costly nest removal
- Burden on beekeepers & landowners



Governance

- Uneven implementation of Regulation (EU) 1143/2014
- Fragmented responsibilities & insufficient funding
- Poor national and cross-border data sharing

Conclusion

Invasive hornets increasingly threaten **biodiversity, agriculture, beekeeping and public health**. Effective management requires **coordinated European surveillance, professional control, research, data sharing and sustainable funding**.

References

Feás (2021); García-Arias et al. (2024); Herrera & Leza (2026); O'Shea-Wheller et al. (2023, 2024); Pedersen et al. (2025); Regulation (EU) No 1143/2014; Roy et al. (2023); Turbelin et al. (2023).



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Recommendations



EU level

- Recognise invasive hornets as a cross-sectoral issue
- Harmonise implementation of Regulation 1143/2014
- Strengthen stakeholder coordination
- Improve EU data-sharing mechanisms



National level

- Create National Vespa Coordination Units
- Establish monitoring standards and performance indicators
- Classify *V. orientalis* as (neo)invasive where appropriate
- Secure long-term funding



Regional & local level

- Assign nest removal to trained professionals
- Ensure legal access for nest destruction
- Designate one operational authority per territory
- Build stakeholder surveillance networks



Surveillance & research

- Expand monitoring programmes
- Use AI-assisted reporting tools
- Increase public awareness
- Support research on nest detection, sustainable biocides and improved trapping methods