

Can fences stop wild boar movement across the landscape?

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Can really long border fences stop ASF?

- Denmark border: under construction
70 km / 1,5 m height / 50 cm buried / 11 M€
Other countries considering to construct it: Poland, Lithuania



Ritzau Scanpix / Reuters

The guidelines provided are evidence-based

- A low number of peer review papers evaluating fences effectiveness.
- A big number of projects:
 - Monitoring wildlife mitigation at fenced **Roads** and **High Speed Railways**
 - Evaluating performance of airfield's fences in the framework of **Airports Wildlife Hazard Management Programmes**
 - Testing effectiveness of 'scent barriers' and electric fences to protect **crops and pastures**



More information at 'Guidelines about measures to reduce damage caused by wildlife' (main target wild boar)

Guia de mesures
per reduir els danys
causats per mamífers
de la fauna salvatge
en zones rurals, urbanes
i infraestructures



Catalan version
available [on-line](#)

Spanish and English
version by May 2019

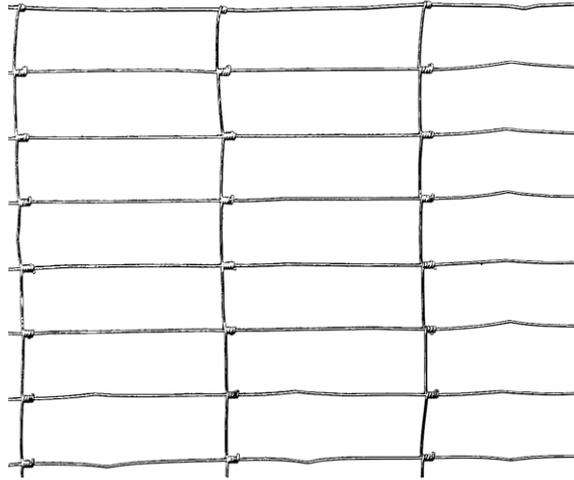
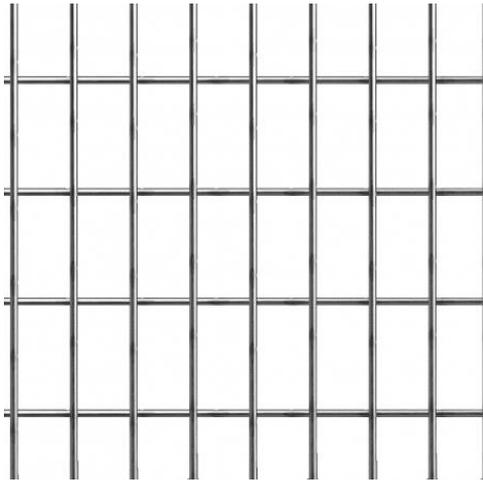
'Standard' wild boar fencing

- Knotted wire mesh with progressive density anchored at poles
- Buried minimum 20 cm



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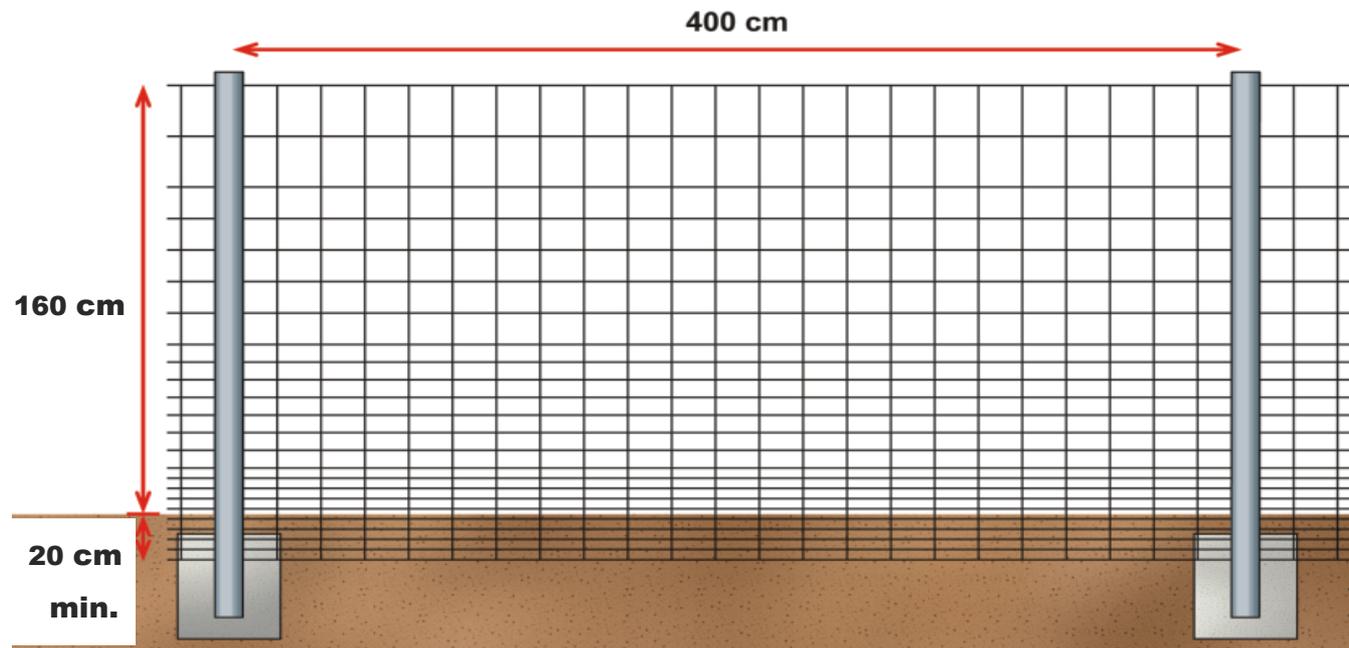
Mesh typologies



- Knotted or Welded are suitable mesh typologies

Sources: Rivisa, Bricolemar, RGM.

Buried on the soil: a critical point to guarantee effectiveness



Wild boar

Minimum height	160 cm (+20cm buried)
Separation between poles	200 - 400 m

Source: Catàleg per reduir danys de senglar (2018); Prescripciones técnicas pasos de fauna y vallados (2006, updated 2015).



Fencing small areas: more feasible!



Parc Natural Aiguamolls de l'Empordà

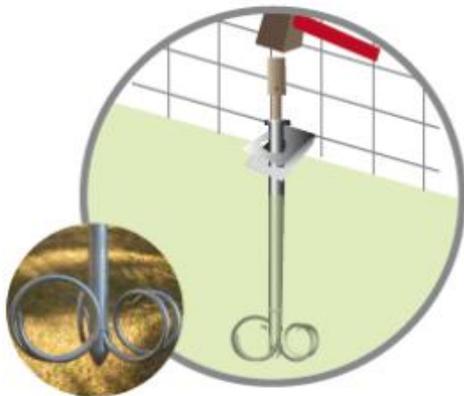
Existing fences can be reinforced against wild boar

- Welded wire mesh



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- Anchoring racks



Fenox. Agrofurnitures

Fenced roads and railways

reinforcement provide an opportunity to reduce wild boar movements, BUT ...



High maintenance is needed

Vulnerable points exist at locations where fences are damaged



Vulnerable points

Escape devices for animals that enter in a fenced road



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Wildlife manage to find vulnerable points



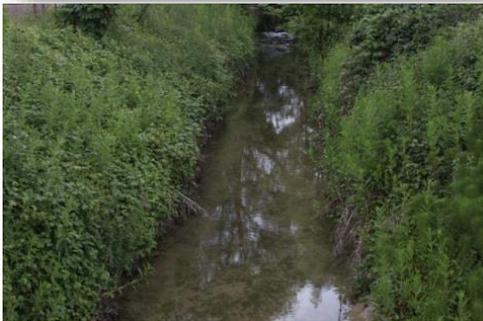
Vulnerable points

Crossing of ditches, culverts, ...

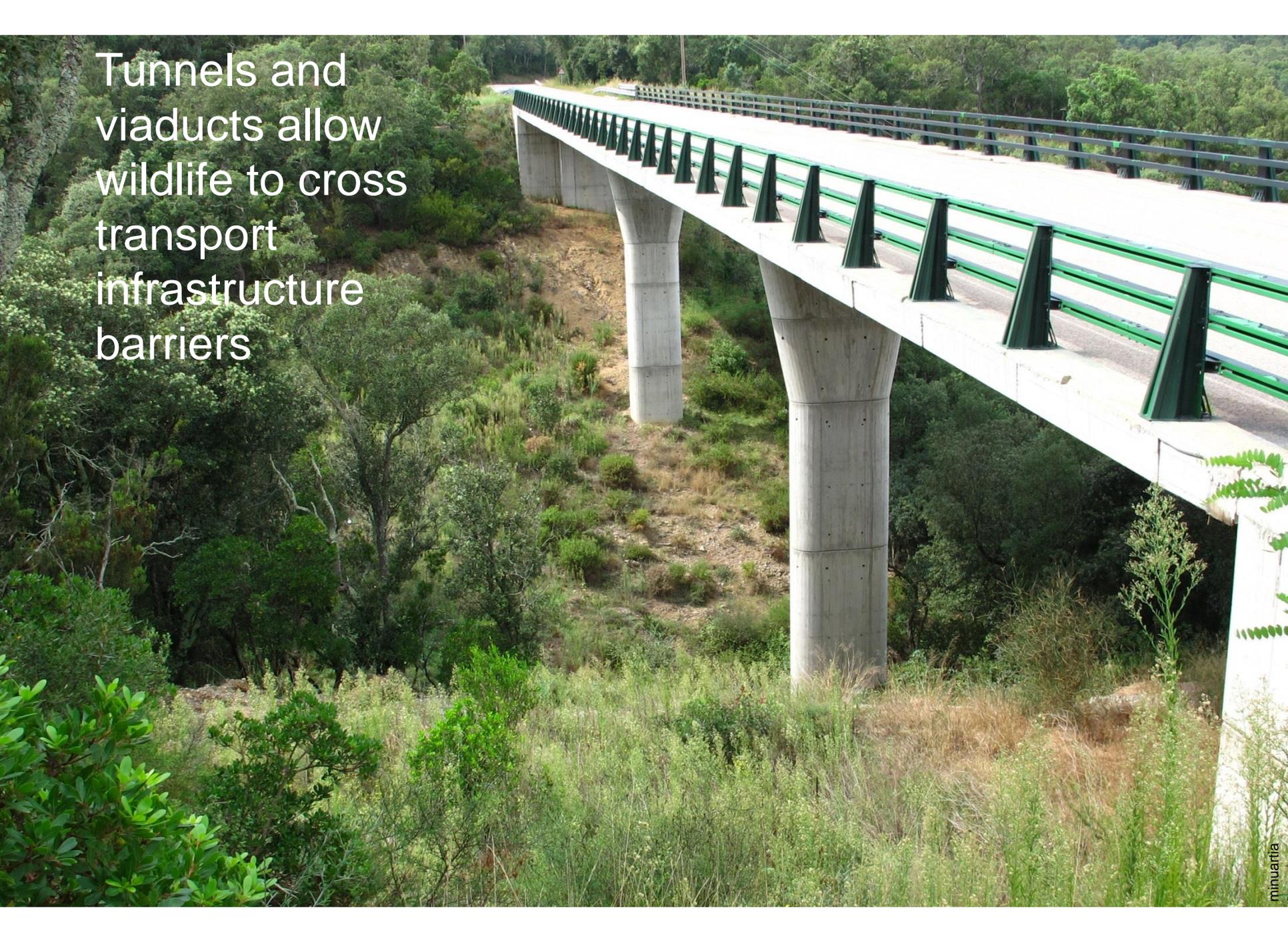


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River crossing



Tunnels and viaducts allow wildlife to cross transport infrastructure barriers



Tunnels and viaducts allow wildlife to cross transport infrastructure barriers

Wildlife crossings must maintain their functionality:

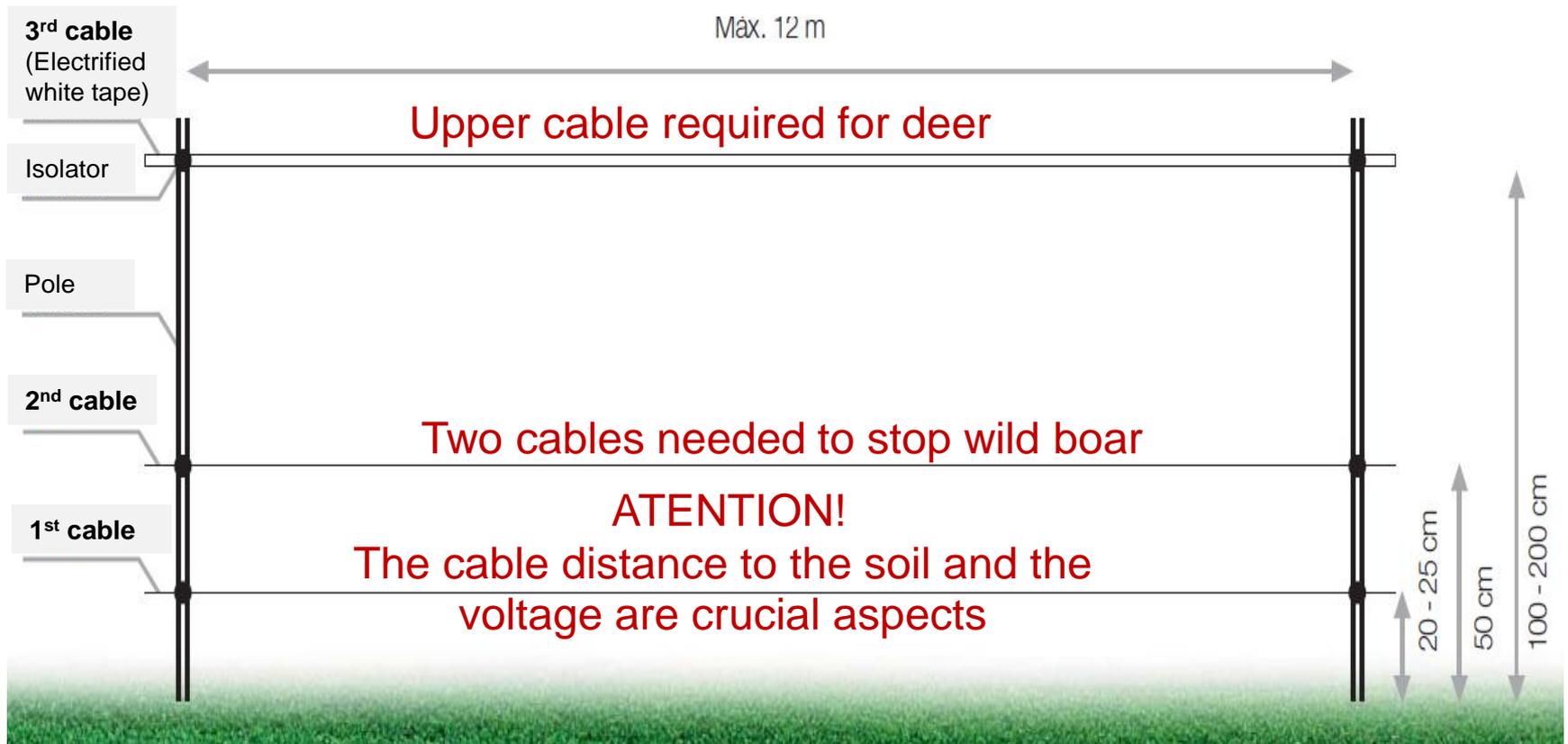
- contribute to maintain ecological connectivity
- make part of the European 'Green Infrastructure'





Other techniques to restrict movements

Electric fence



Minuartia, Parc Natural de l'Alt Pirineu (2005)

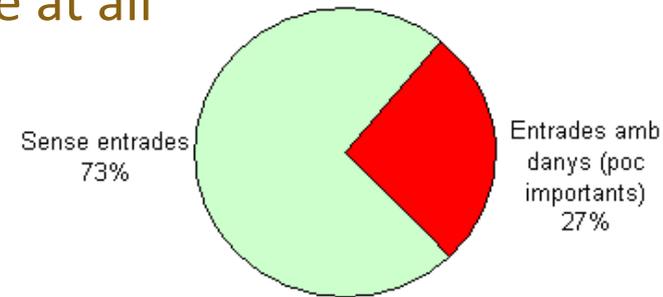
Electric fence



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'Scent barriers' Olfactory repellent – spraying

- Product diluted in water
- Temporary effects only / wild boar get used to it
- Be aware, some products are NOT effective at all

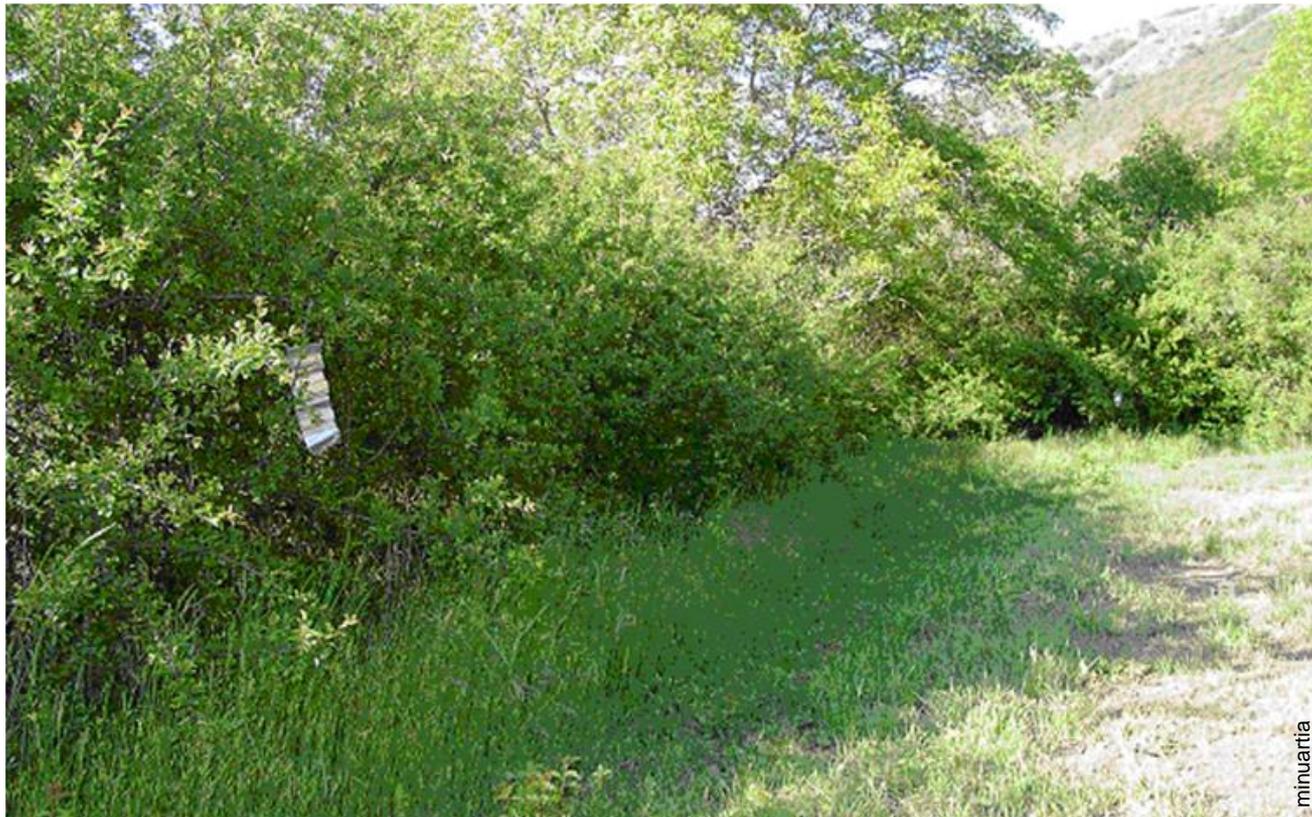


Minuartia (2005)



'Scent barriers' Olfactory repellent – spraying

- Product applied in felts or bags / Different substances
- Temporary effects only / wild boar get used to it
- Be aware, some products are **NOT** effective at all



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'Scent barriers' Olfactory repellent – fixed on foam

- Awareness, but do not really deter the wild boar to cross
- Temporary effects only / wild boar get used to it
- Be aware, some products are NOT effective at all



Conclusions

- We have the knowledge on how to build wild boar fencing, BUT
 - **high maintenance is required**
 - **many vulnerable points**
- Fences (wire mesh and electric) **can limit wild boar movements in small-medium size areas if strategically designed and well constructed.** Scent barriers have only temporary effect, but could be also considered
- **Long fences are not recommended**
 - low effectiveness due to vulnerable points
 - high impacts on ecological connectivity and biodiversity.



Thank you for your attention

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Acknowledgments to all those who contributed to projects development. Particularly, to my colleagues from MINUARTIA Ferran Navàs, Marina Torrellas, Albert Cama and Joana Colomer. To the project responsables in different organisations: Sergi Romero, Jordi Ruiz Olmo, Antoni Sorolla, Jordi Solina, (Catalan Government), Jordi Padrós, Dani Guinart (Barcelona Regional Government), technical staff at ADIF, AENA, ACESA, and Infraestructures.Cat.

Special thanks to the colleagues from the INFRA ECO NETWORK EUROPE (IENE) Governance of Board.

