

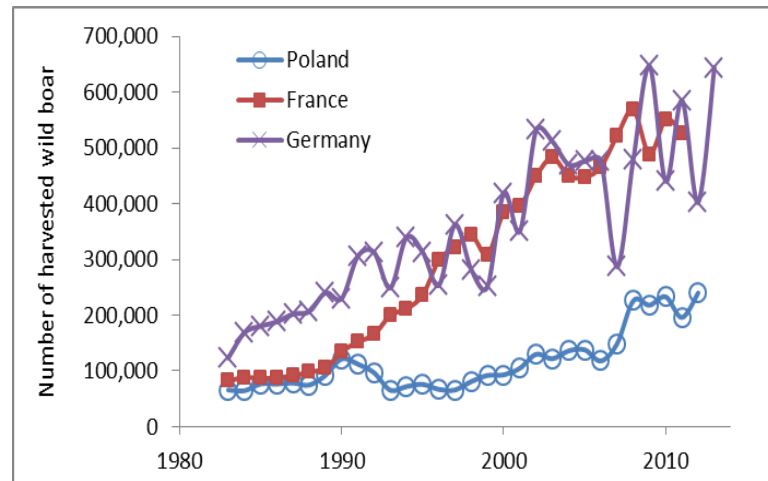
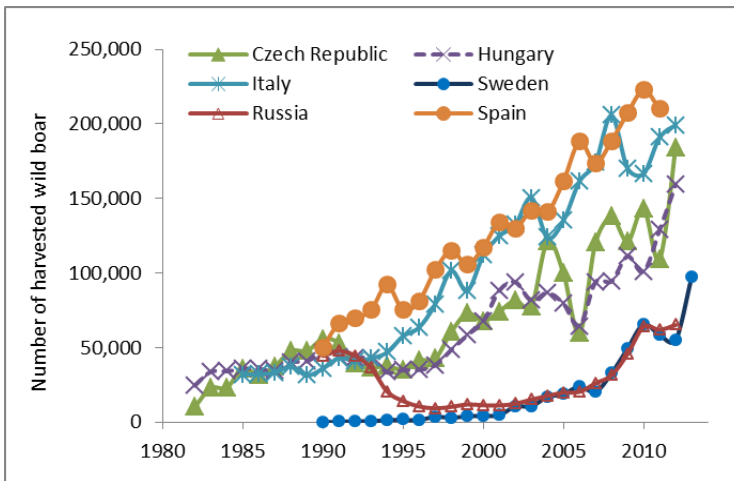
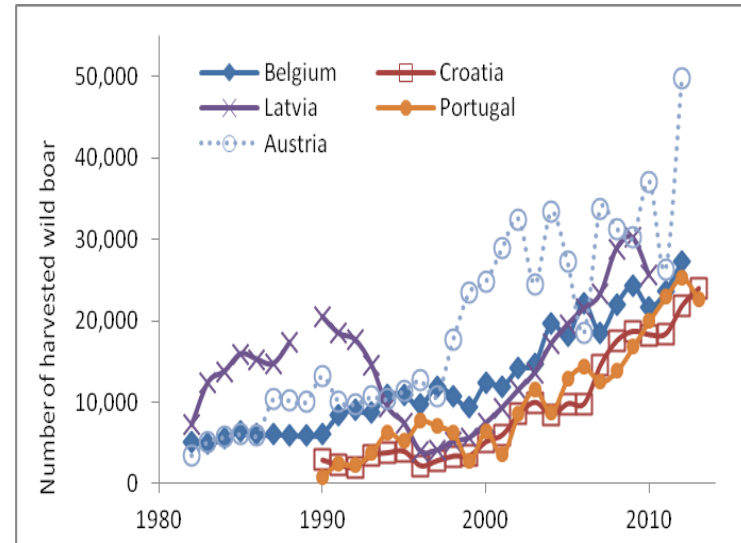
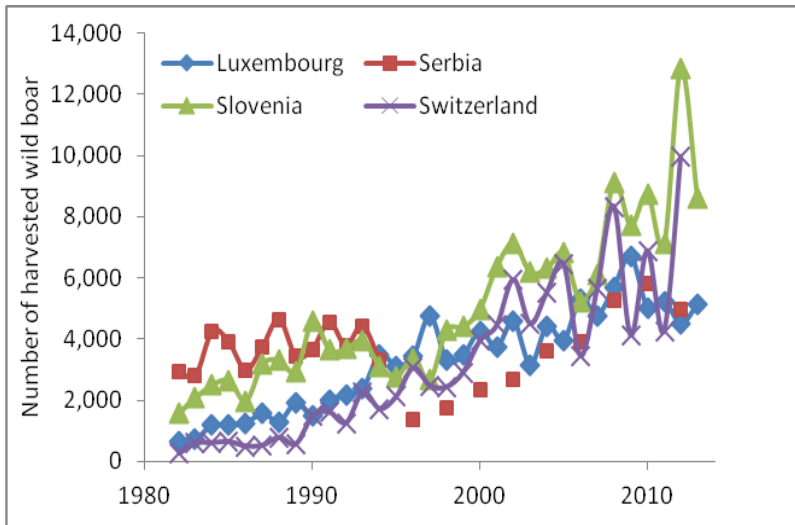
Methods to manage wild boar populations in Europe



Giovanna Massei and Simon Croft

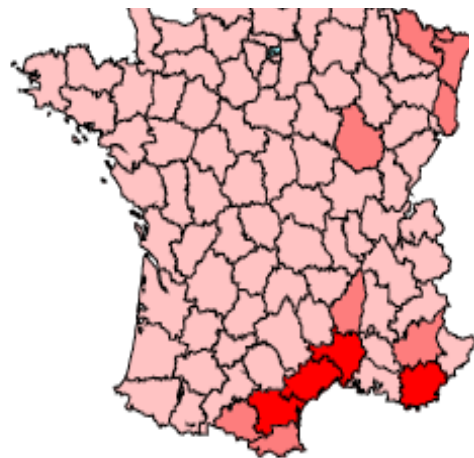
¹ *National Wildlife Management Centre Animal and Plant Health Agency, UK*
Civil Dialogue Group- Animal Products Brussels, 28 May 2019

Wild boar populations in Europe

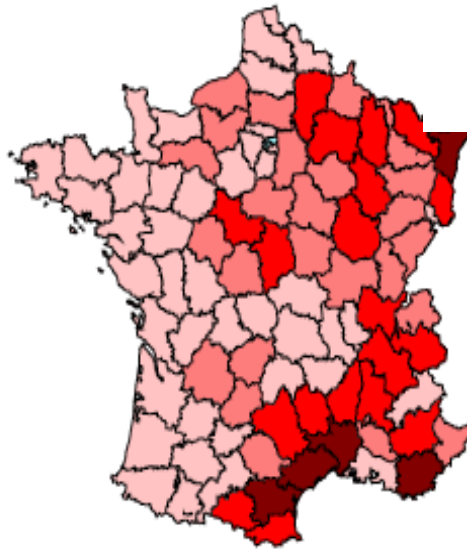


Wild boar expansion in France

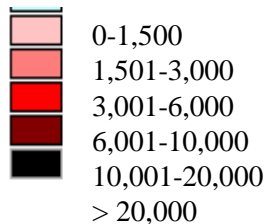
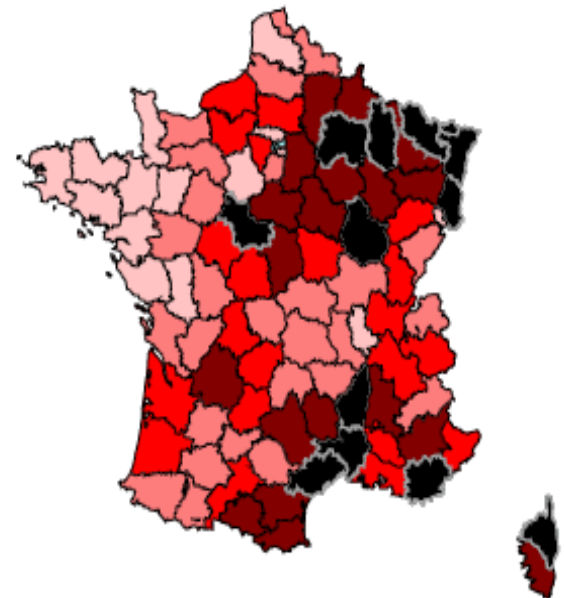
Average shot per
year in 1983-1986



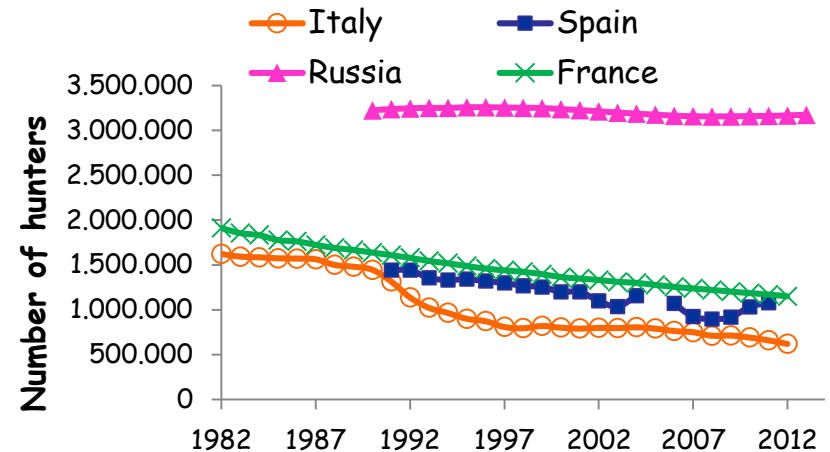
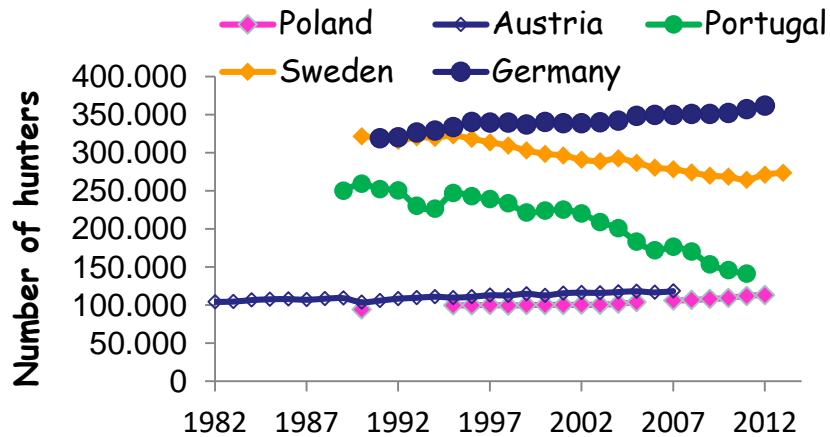
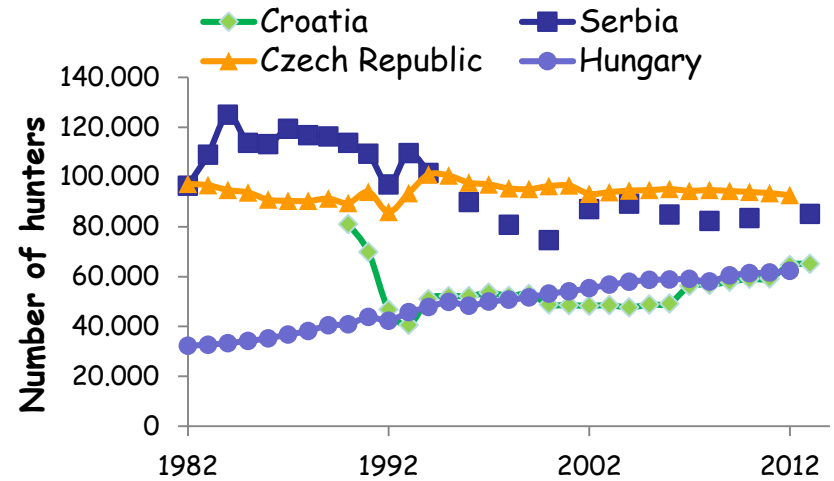
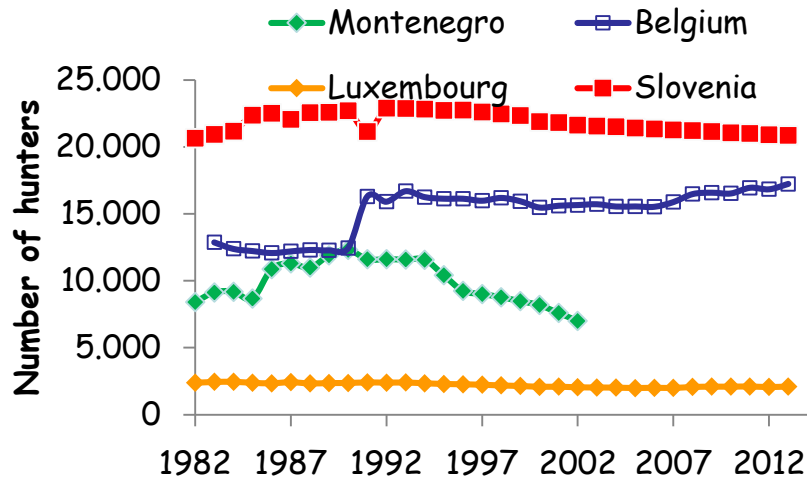
Average shot per year in
1993-1996



Average shot per year in
2003-2006



Trends in hunters

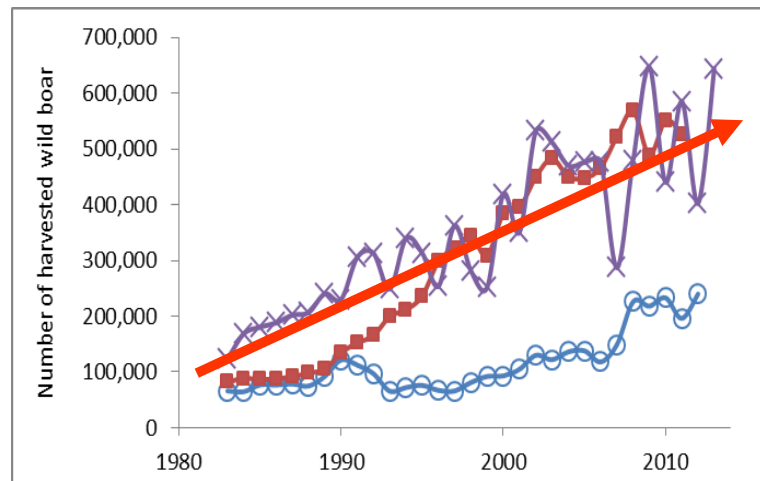


Methods to decrease wild boar numbers

Sport
hunting

Professional
shooters / trappers

Culling from
helicopters



Toxicants

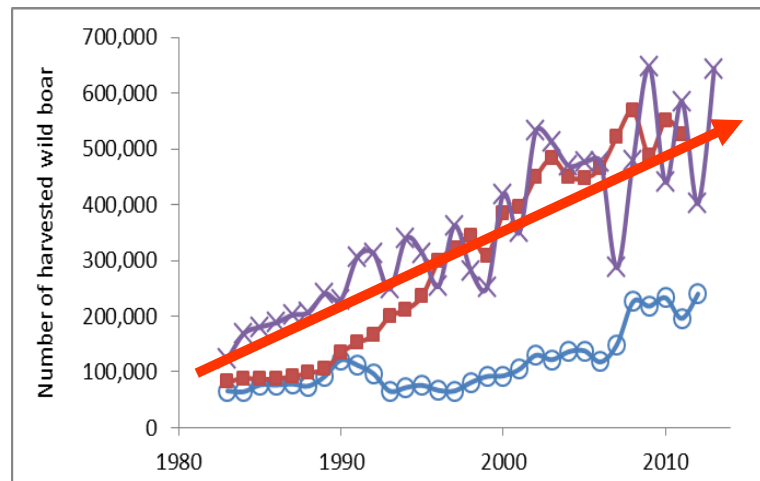
Fertility control

Methods to decrease wild boar numbers

Sport
hunting

Professional
shooters / trappers

~~Culling from
helicopters~~



~~Toxicants~~

Fertility control

Methods to decrease wild boar numbers in Europe

Sport hunting

N. of hunters decreasing
Are hunters a problem or a solution?
Inexpensive
Some countries have a ban on hunting
Proactive or reactive

Professional shooters/trappers

Quick reduction
Expensive, thus limited in time/space
Reactive

Fertility control

Slow reduction
Publicly supported (+ trained volunteers?)
Expensive if done by injected drugs
Proactive

Fertility control : when?



When lethal control is:

- illegal
- unacceptable
- unfeasible
- unsustainable
- environmentally hazardous
- ineffective when used as the sole method of management



Immunocontraception to
manage wild boar in peri-
urban areas in Spain

Immunocontraception to
manage wild boar in
Hong Kong

Hunters' interest in fertility control!

An ideal contraceptive to manage wild boar

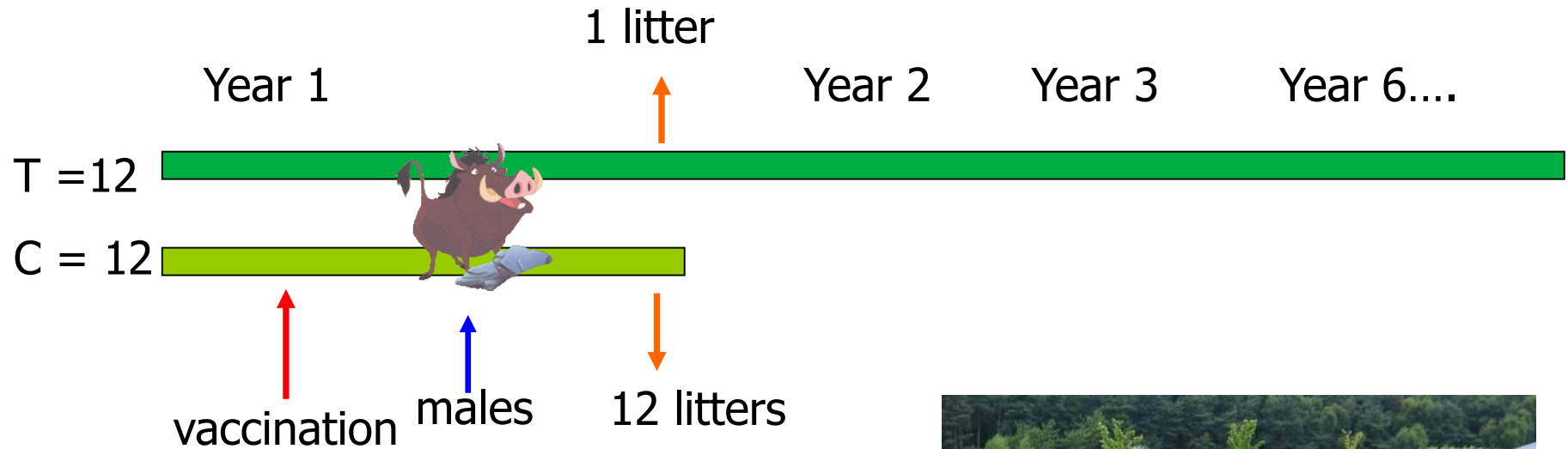
individual

- ☐ No side effects on welfare, physiology and behaviour
- ☐ Long-term effectiveness
- ☐ Single/few doses
- ☐ Oral (or injectable?)

population

- ☐ Inexpensive to produce and administer
 - ☐ Specie-specific
 - ☐ Safe for operators
 - ☐ Deliverable to a large proportion of the population
 - ☐ Registered in Europe
-

Single-shot injectable contraceptive in captive wild boar



11 sows out of 12 did not reproduce for at least 4-6 years after a **single injection**



BOS: Boar-Operated System to deliver contraceptives



RESEARCH ARTICLE

Potential effects of incorporating fertility control into typical culling regimes in wild pig populations

Kim M. Pepin^{1*}, Amy J. Davis¹, Fred L. Cunningham², Kurt C. VerCauteren¹, Doug C. Eckery¹

¹ National Wildlife Research Center, USDA, APHIS, Wildlife Services, Fort Collins, Colorado, United States of America, ² National Wildlife Research Center, USDA, APHIS, Wildlife Services, Mississippi State, United States of America

- Isolated populations: culling 20-60% pigs/year for 4 years → decline 50%-100%
- Open populations: maximum culling of 60% → maximum 50% reduction
- Sterilising $\geq 40\%$ of sows/year
 - Isolated** populations: **50%** more pop. reduction than culling alone
 - Open** populations: **30%** more pop. reduction than culling alone

An ideal contraceptive to manage wild boar

individual

- ☐ No side effects on welfare, physiology and behaviour
- ☐ Long-term effectiveness
- ☐ Single/few doses
- ☐ Oral (or injectable?)

population

- ☐ Inexpensive to produce and administer
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-

Fertility control to reduce wild boar numbers?

- ❑ Population effect: **what is the % of population to treat to achieve target?**
 - ❑ What are the *behavioural* effects of contraception (incl. contact rate)?
 - ❑ What are the *costs* of using contraception? Are these *sustainable*?
 - ❑ *Feasibility?*
 - ❑ *Integrated management*: how can we integrated fertility control with other methods of population control?
-

Conclusions: fertility control vs. culling

- Fertility control may avoid social disruption
 - Reduced initial emigration
 - Reduced long-term immigration
 - Reduced movements and hence reduce disease transmission
 - Fertility control more publicly acceptable or feasible (urban areas), hence more likely to attract volunteers to control wild boar populations
 - Fertility control could complement culling to reduce cost of population control where culling alone is not effective or sustainable
-

Conclusions

- **Wild boar** populations will continue **to grow**
- Managing wild boar will require **combined approaches**
- **Costs, feasibility, impact** of population control methods must be quantified before they are applied in proactive or reactive management
- Need **funding research on developing oral contraceptives**



Acknowledgements

❖ Thank you for your attention !



giovanna.massei@apha.gov.uk
