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MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

THE ALPINE
CONVENTION
IS THE FIRST
INTERNATIONAL
TREATY FOR
THE PROTECTION
AND PROMOTION
OF THE SUSTAINABLE
DEVELOPMENT
OF A CROSS-BORDER
MOUNTAINOUS
REGION

italian presidency 2013-2014
alpine convention

Overview on the status of bear, wolf and lynx on the Alps

Claudio Groff
Alparc meeting
Admont – National Park Gesause December 11 2014

Photo Matteo Zeni - ABNP

Program:



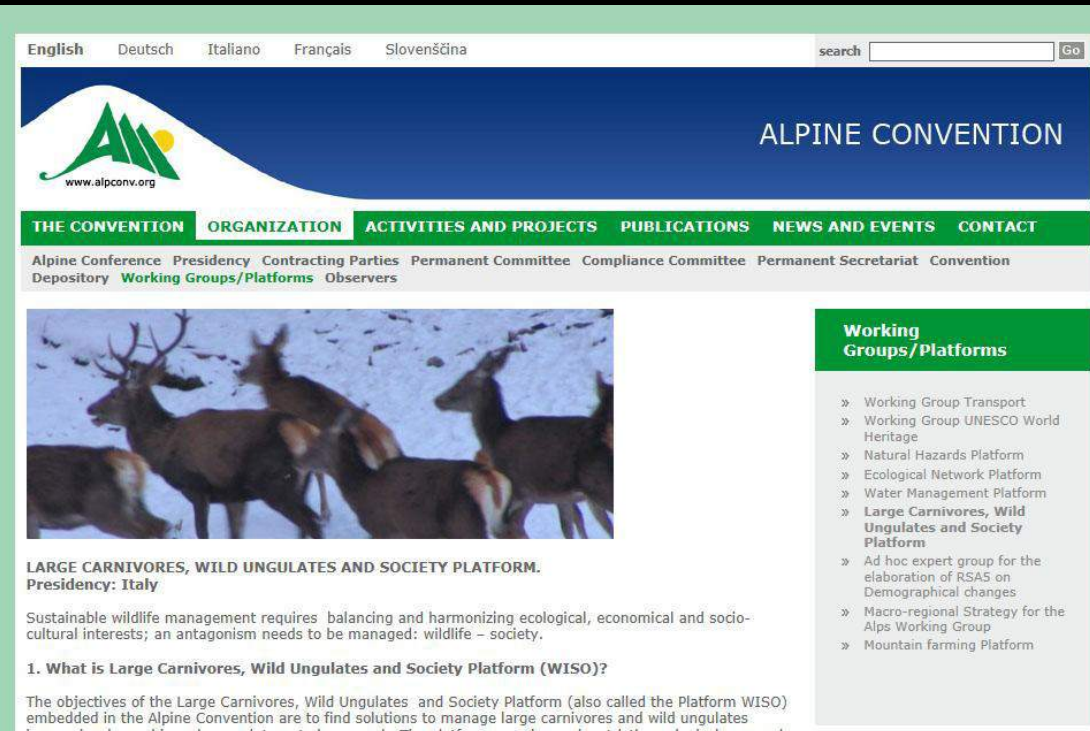
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- I - Introduction: the **WISO-A.C.** framework
- II - **History, Status and Management** of the brown **bear** in the Alps
- III - Status of **wolf** and **lynx**
- IV – **Ecological connectivity** for L.C.

Part I

LARGE CARNIVORES, WILD UNGULATES AND SOCIETY PLATFORM:

- Alpine Convention as political host, mandated by ministerial conference;
- GOs as driving forces, interest groups and stakeholders as observers;
- Forum for cross-border and cross-sectorial cooperation.
- Strategic documents and guidance;
- Expert opinion based;
- No or limited stakeholder involvement;
- **Need for a new cross-border and participatory approach!**




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ALPINE CONVENTION

www.alpconv.org

THE CONVENTION ORGANIZATION ACTIVITIES AND PROJECTS PUBLICATIONS NEWS AND EVENTS CONTACT

Alpine Conference Presidency Contracting Parties Permanent Committee Compliance Committee Permanent Secretariat Convention Depository **Working Groups/Platforms** Observers



LARGE CARNIVORES, WILD UNGULATES AND SOCIETY PLATFORM.
Presidency: Italy

Sustainable wildlife management requires balancing and harmonizing ecological, economical and socio-cultural interests; an antagonism needs to be managed: wildlife – society.

1. What is Large Carnivores, Wild Ungulates and Society Platform (WISO)?

The objectives of the Large Carnivores, Wild Ungulates and Society Platform (also called the Platform WISO) embedded in the Alpine Convention are to find solutions to manage large carnivores and wild ungulates harmoniously, and based on an integrated approach. The platform goes beyond a strictly ecological approach

Working Groups/Platforms

- » Working Group Transport
- » Working Group UNESCO World Heritage
- » Natural Hazards Platform
- » Ecological Network Platform
- » Water Management Platform
- » **Large Carnivores, Wild Ungulates and Society Platform**
- » Ad hoc expert group for the elaboration of RSAs on Demographical changes
- » Macro-regional Strategy for the Alps Working Group
- » Mountain farming Platform

Guidelines for Population Level Management Plans for Large Carnivores



Prepared by Large Carnivore Initiative for Europe
via Istituto di Ecologia Applicata, May 2007
Via Cassanese 71 – IT-00161 Roma

Final Draft 7th May 2007

The Alpine Convention

Italian Presidency 2013-2014

Mandate of Platform on large carnivores 2013-14

- To develop **practical goals and management options** for the recovery and conservation of wolf, lynx and bear populations in the Alps
- To work towards an Alpine-wide genetic monitoring program for large carnivores.
- To develop a map with the distribution and abundance of the Alpine ibex population, in cooperation with the Alpine Ibex Group.

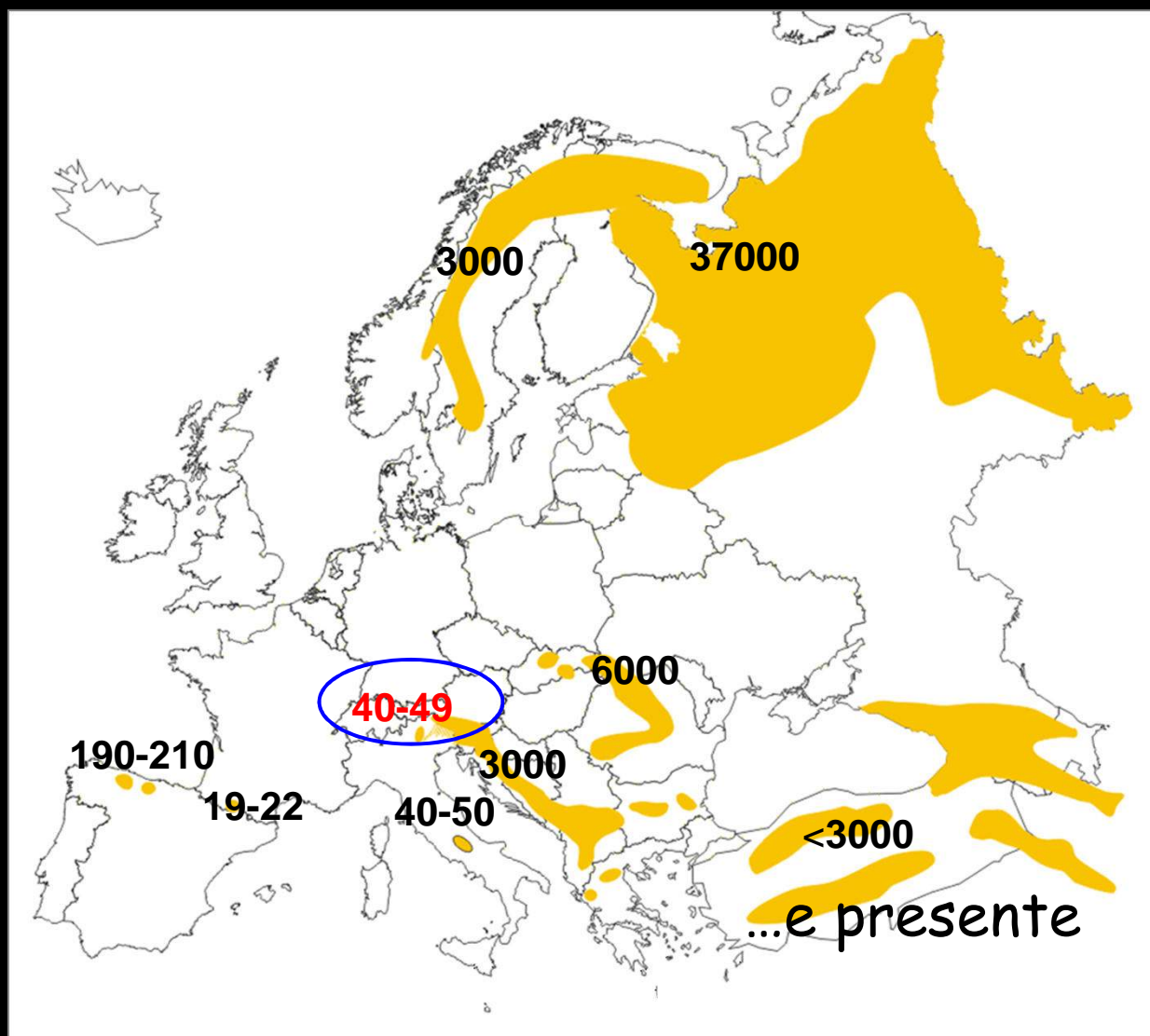
WISO-Ecological connectivity

Reasons of platforms cooperation

- L.C. move on huge distances
- Natural corridors needed
- L.C. force regions and states to get (and stay) in touch
- Beacouse of “umbrella” species benefits of good territory management are disseminated on “lower” species

Part II

History of the brown bear in Europe



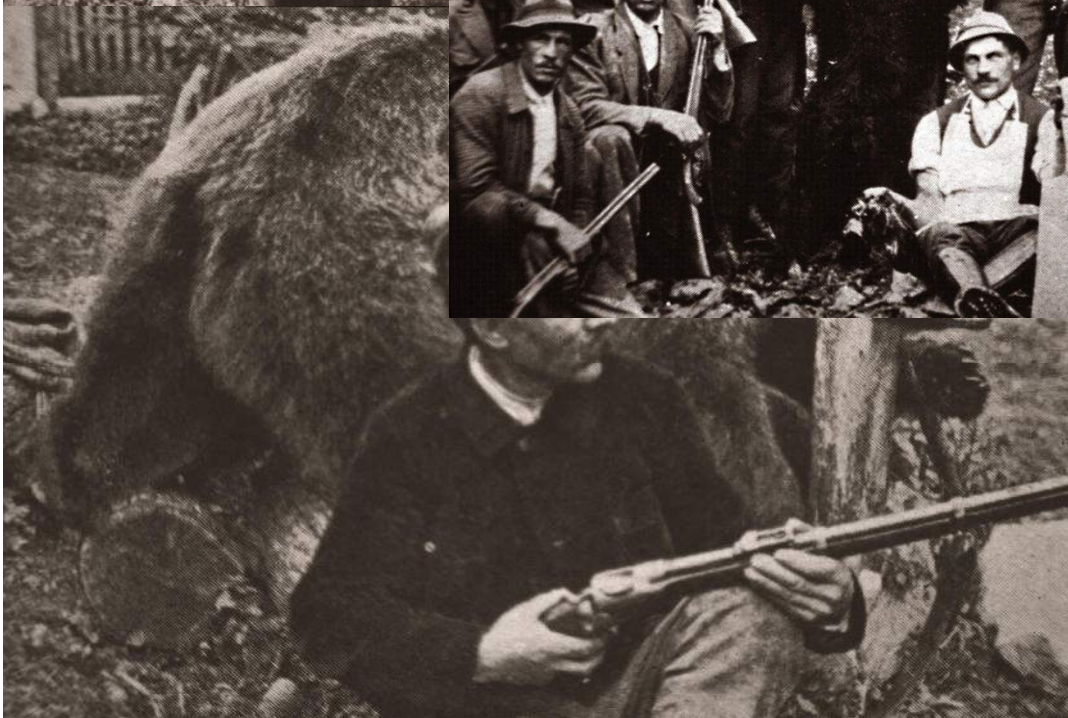
Brown bear at the scale of the continent

- Species is **expanding**.
- Many populations extend far beyond national borders.
- Despite initiatives, not much population-level, transboundaries monitoring or management.





The persecution



The “reintroduction” of the brown bear

project *Life Ursus* (1997-2004)

Goal: To have a minimum viable population (around 50 bears) within a period of 20-40 years

Method: To move 9 bears from Slovenia to Trentino in 4 years



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Project goal



1999-2002 – Bears release



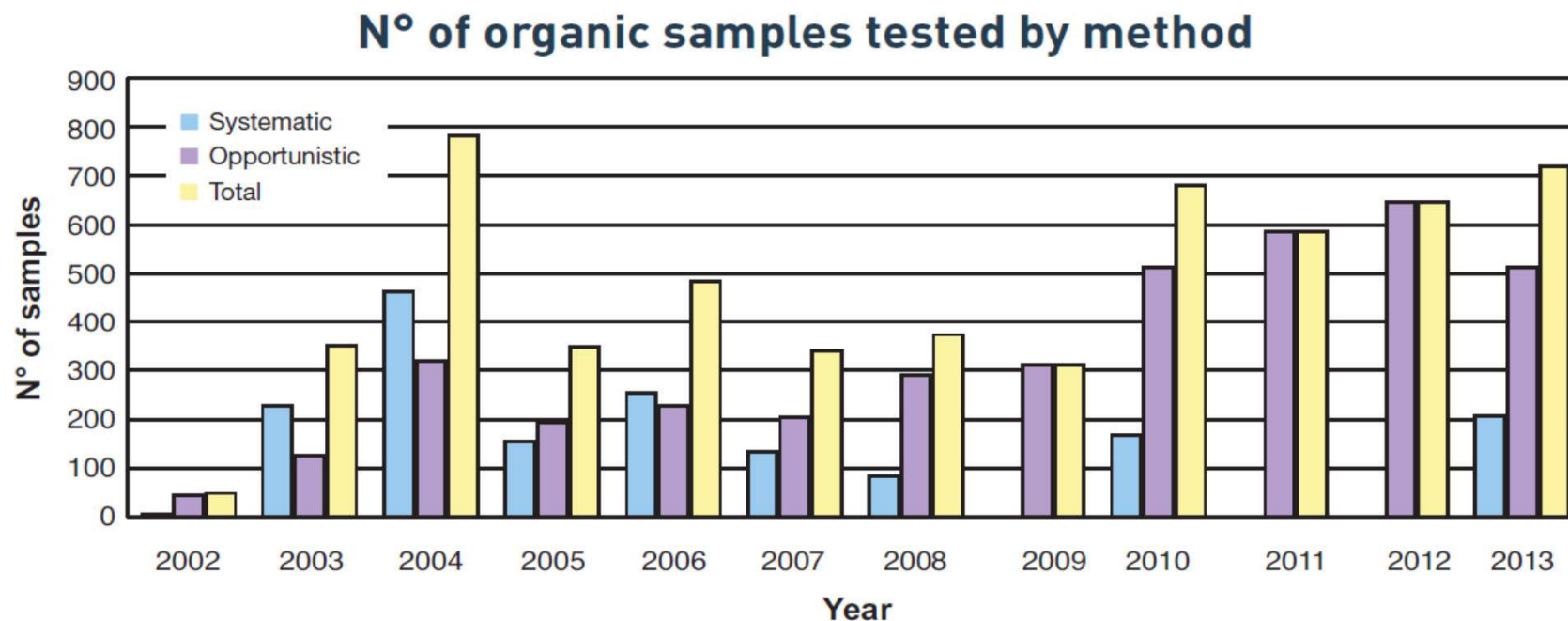
L.C. are part of the alpine ecosystem,

our ecosystem



Monitoring: huge genetic monit. effort

Graph 1

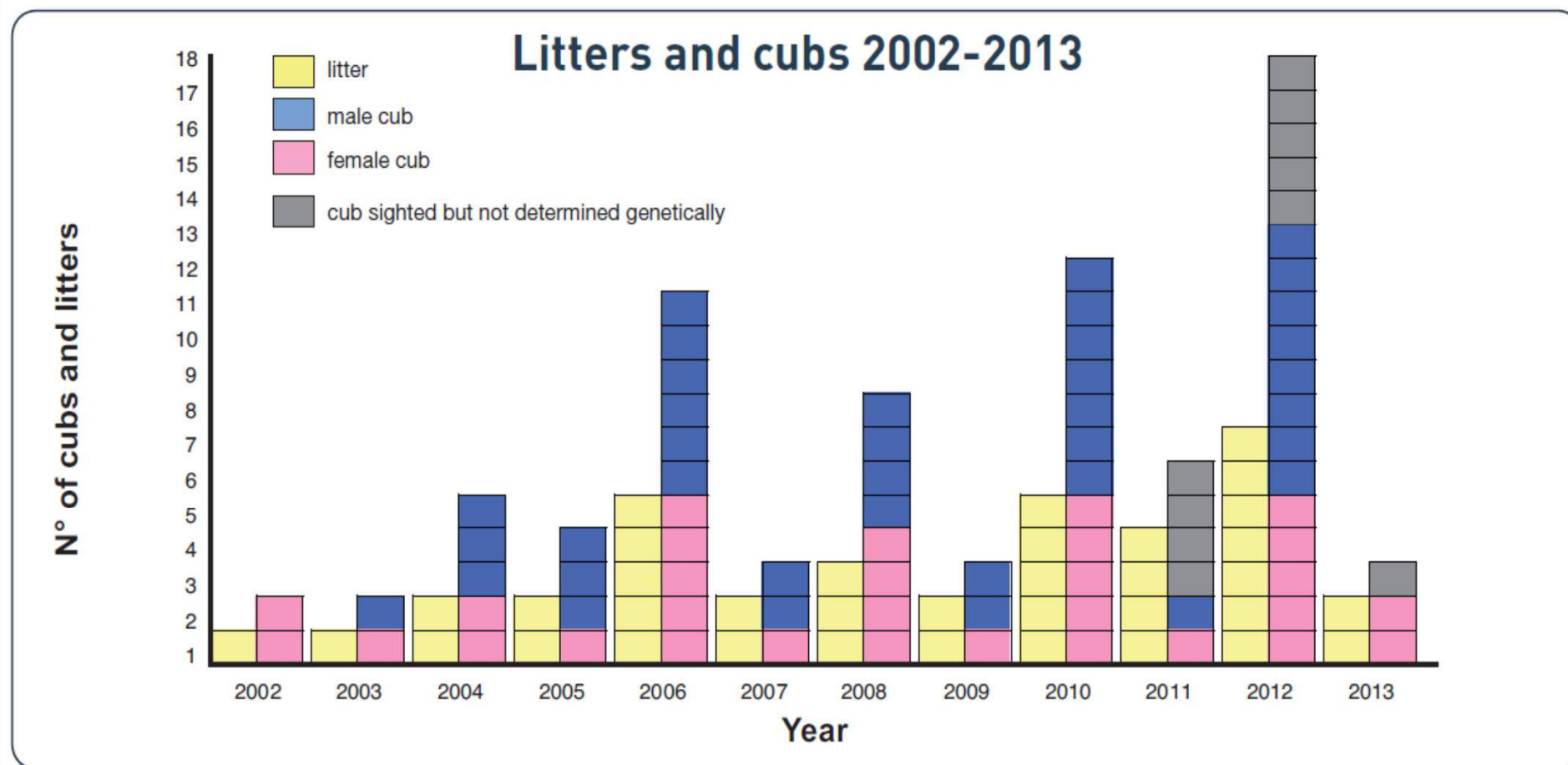


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TOT.
Opport.	45	125	319	193	228	205	290	311	514	587	646	513	3976
System.	4	227	464	154	255	135*	83	-	167	-	-	206	1695
TOTAL	49	352	783	347	483	340	373	311	681	587	646	719	5671
N° of traps	4	39	41	42	47	17*	57	-	57	-	-	50	

* within the ABNP alone

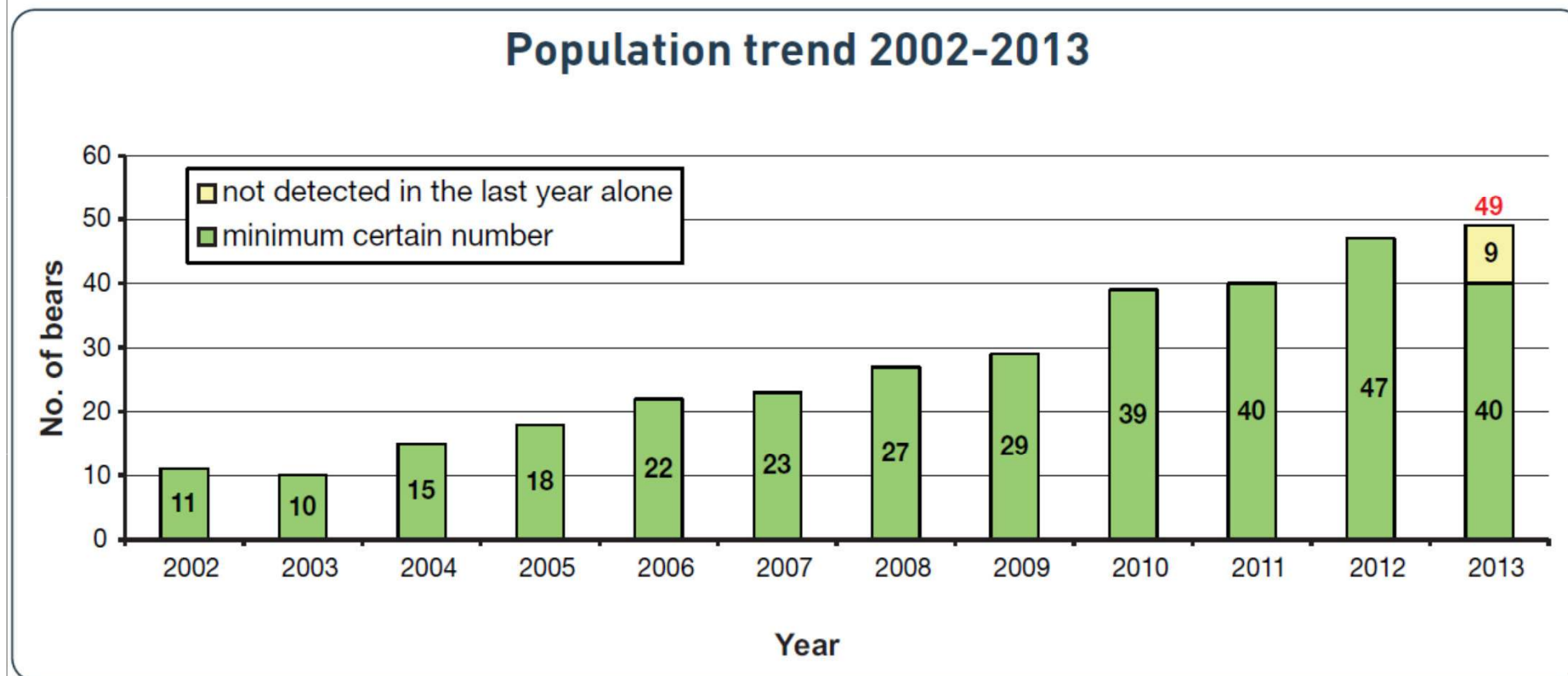
Main monitoring results: litters (36) and cubs (77) 2002-13

Graph 7



Population trend

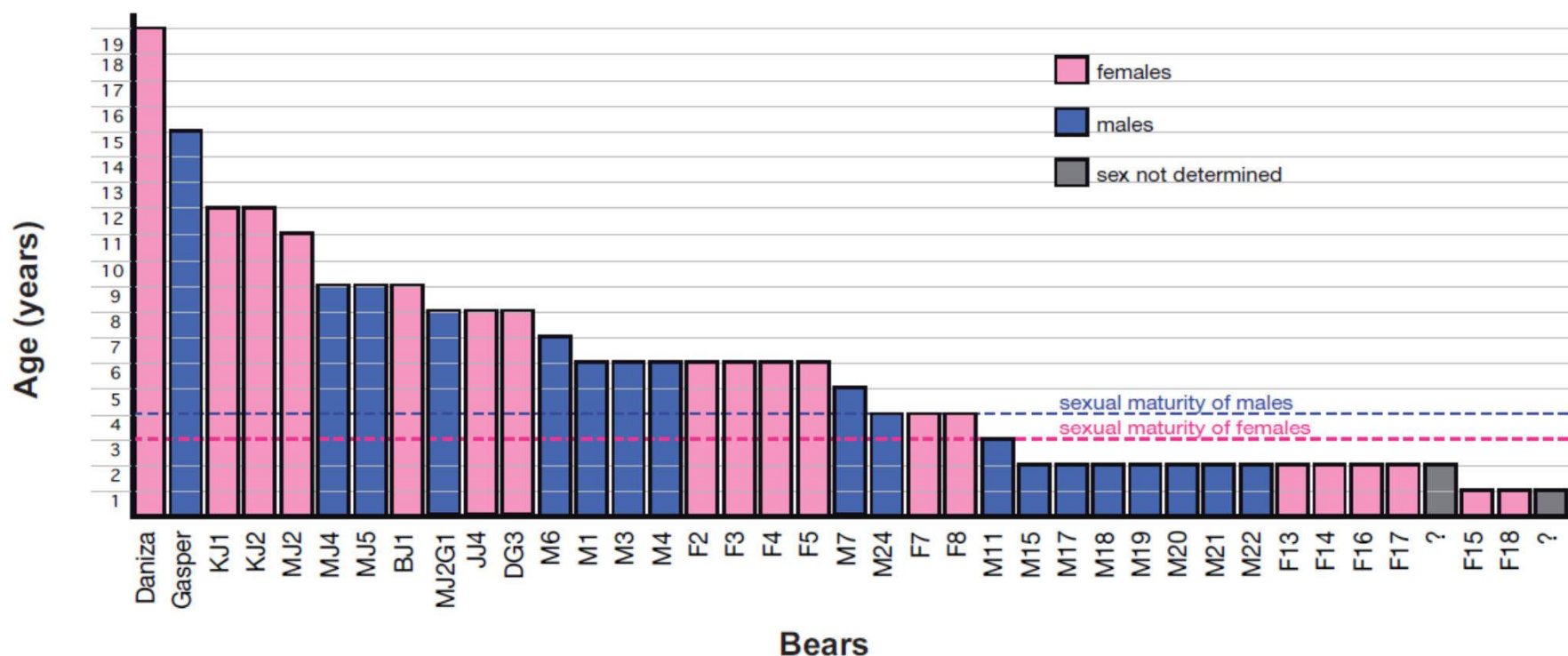
Graph 5



Structure of the population

Graph 2

Structure of the population at the end of 2013

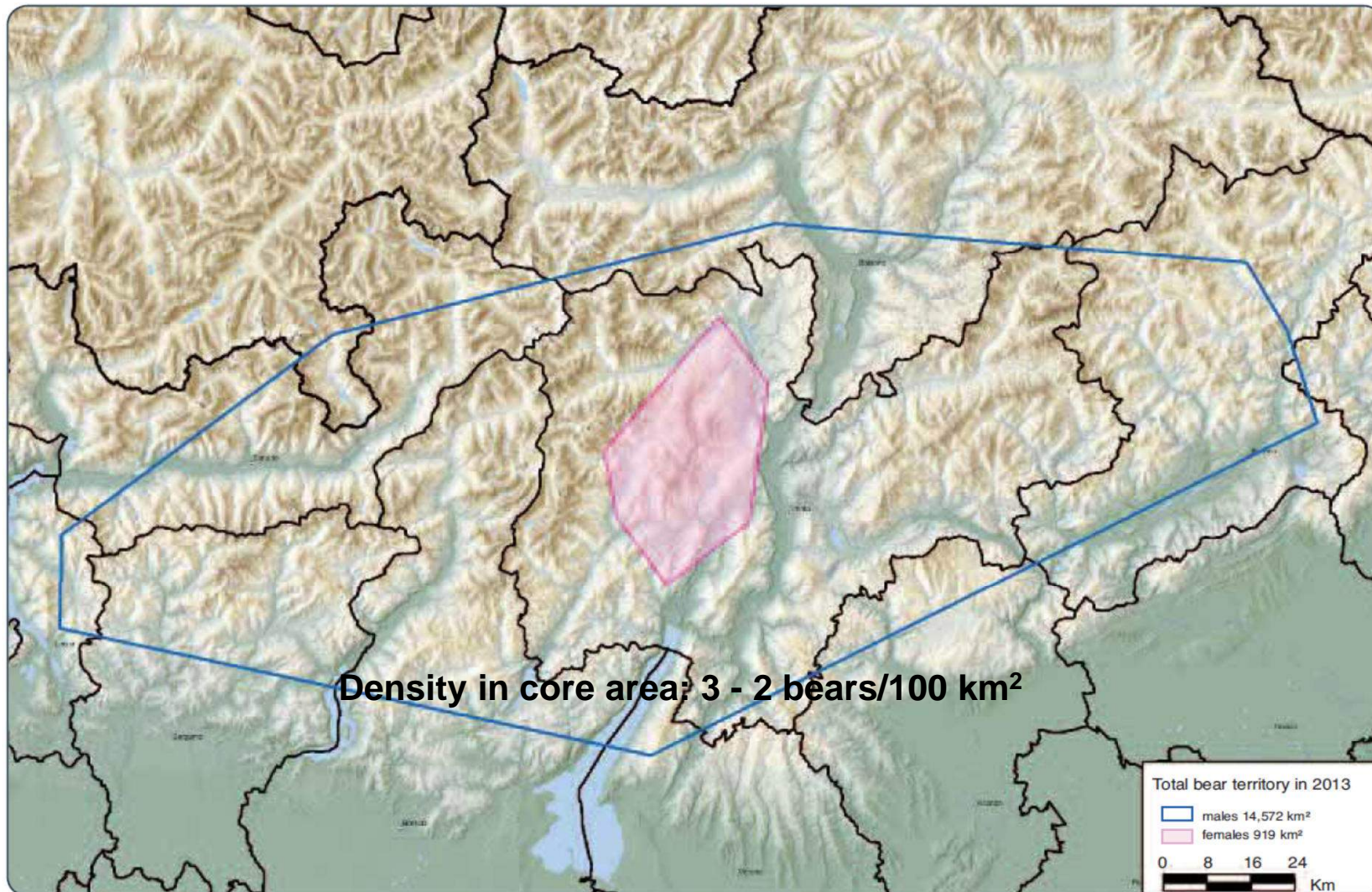


Minimum certain population (40) : 18 males, 20 females, 2 indeterminate

Use of territory – 2013 (genetic)

Figure 2

Area occupied by bears in the central Alps in 2013 (in light blue), highlighting the area within this occupied by the females (in pink).



Dispersion

- 20 bears moved out of the province (2005-2013)
of these:
- 3 killed for management reasons
- 2 run over cars
- 1 found dead in Lombardia region
- 2 are currently considered to have emigrated
- 1 disappeared
- 2 are missing just since 2013
- 9 were still present during 2013

Alpine bears of the Dinaric population I: Friuli Venezia Giulia - 2012



5 bears in 2012

Source:
Friuli V.G. Region
University of Udine
Corpo Forestale Tarvisio

-KJ2G2

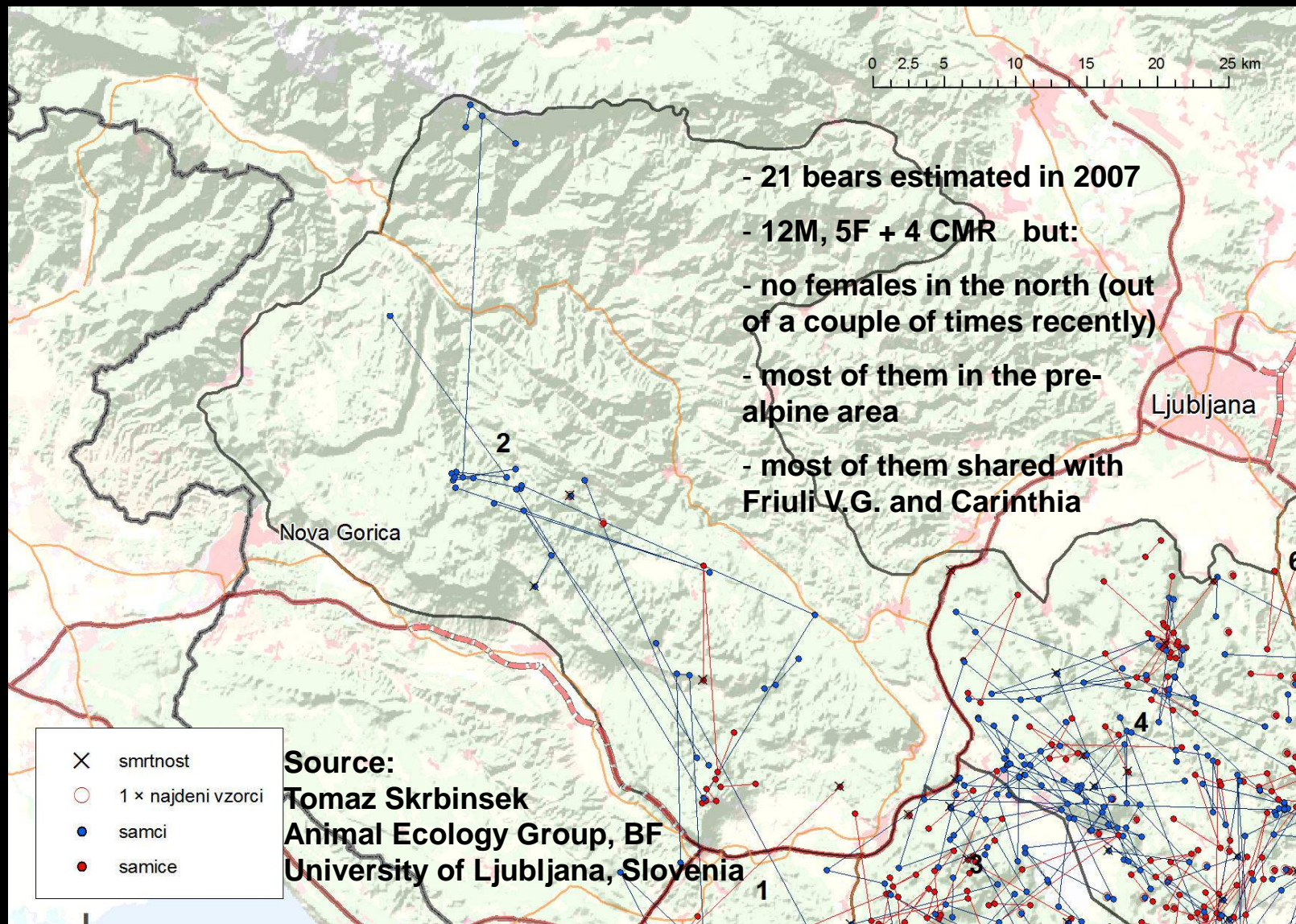
-M8

-Gen 04-E

-Gen 17

-Gen 15

Alpine bears of the Dinaric population II: Slovenian Alps - 2007



Alpine bears of the Dinaric population III: Carinthia (A)



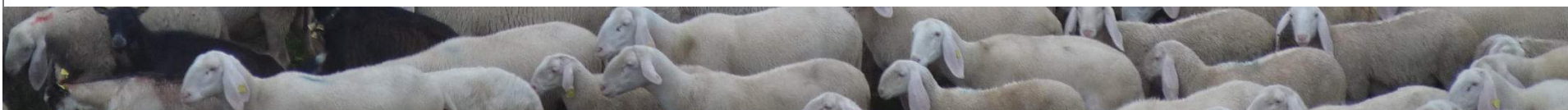
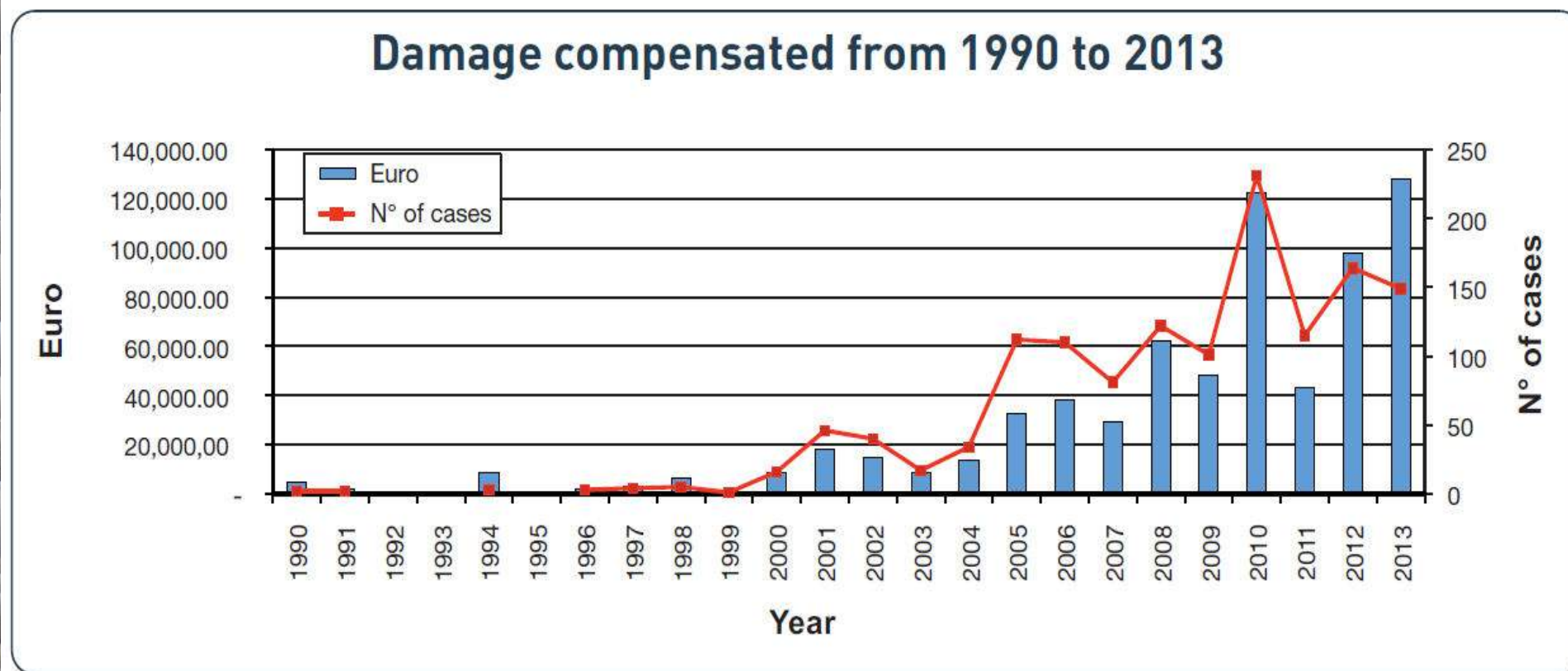
Source:
Jorg Rauer
Fiwi
University of Wien, Austria

- No systematic monitoring in Carinthia, just opportunistically
- 6 bears detected in 2004-2011, 2 in 2011 and 1 in 2012.
- All males



Main management data in the Central Alps

Graph 19



Problem bears

Problem bears 2010:

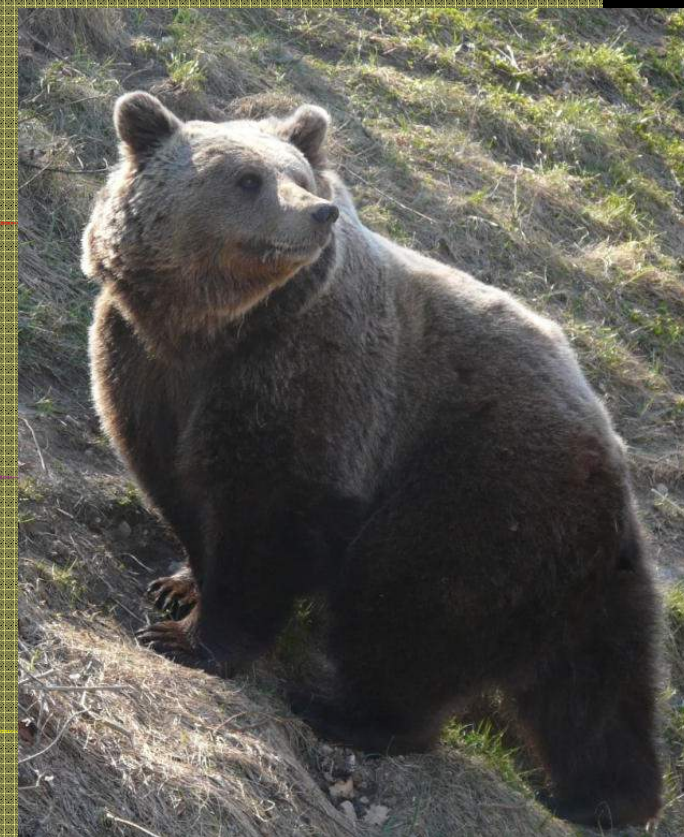
- M6 - JJ5 - M2 — Daniza - D~~X~~3

Problem bears 2011:

- M6 - JJ5 - M2 – Daniza

Problem bears 2012:

- Daniza - M6 - J~~X~~5 - M2

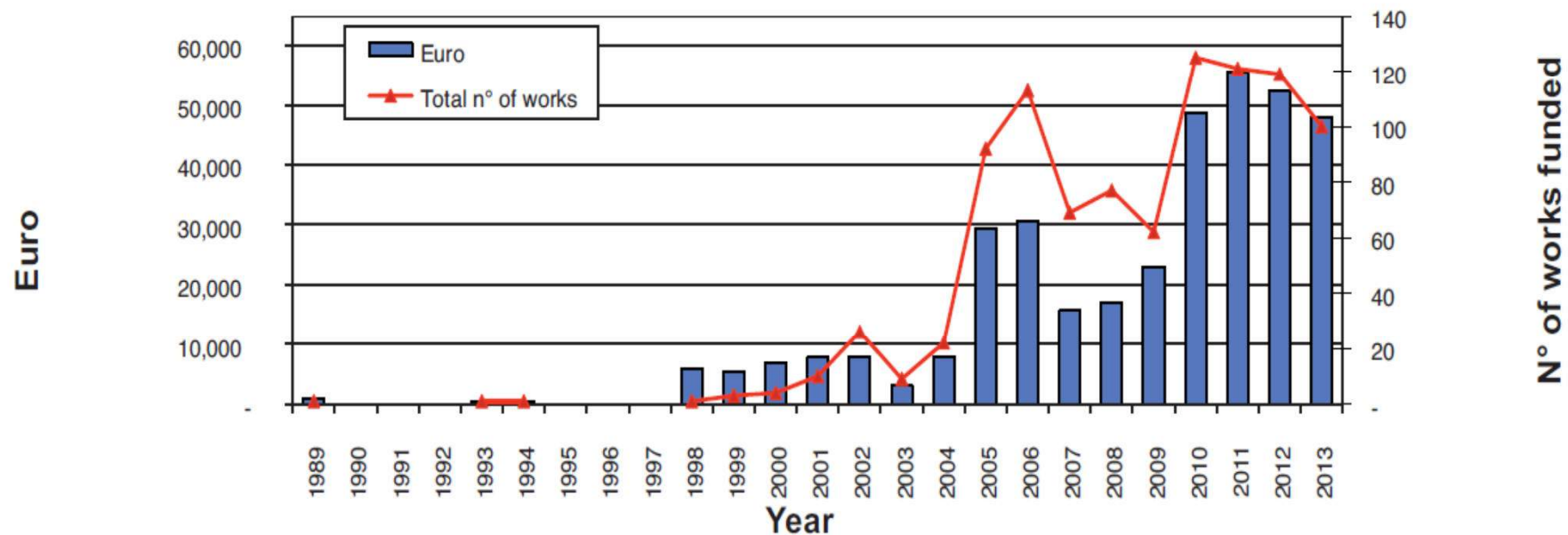


73% of all damages in 2012 caused by 4 bears

Damages prevention

Graph 22

Prevention works funded from 1989 to 2013



The costs

- Costs afforded by the local Government
- Life Arctos (2010-2014) e Life Dinalp (2014-2019): 282.000 euro UE in ten years
- Yearly “live” costs around 200.000 euro





The benefits: “The bear business”

Benefits are (much) less known and monitored:

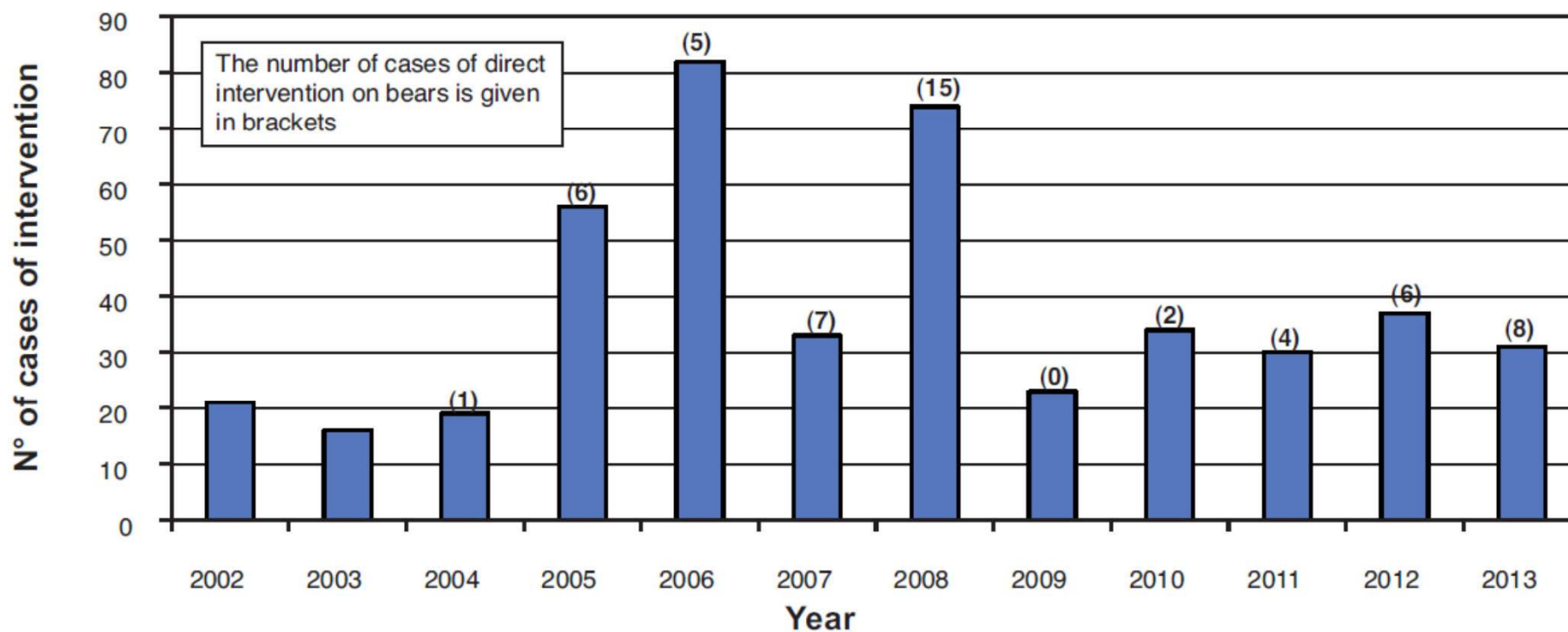
- 11 times on national TV in three weeks
- 361.449 euro the corresponding value in terms of publicity



Activities of emergency team

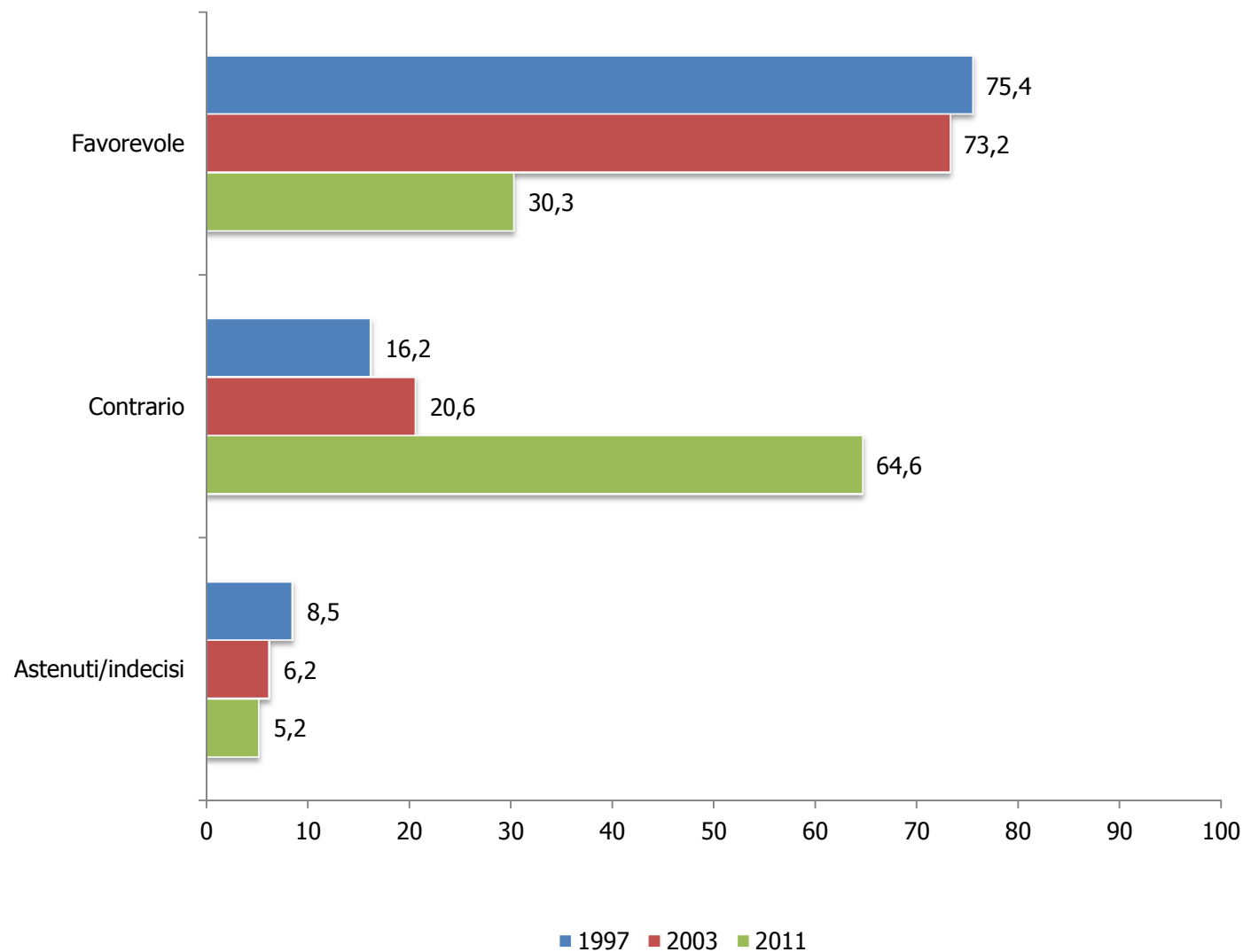
Graph 24

Emergency team call-outs 2002-2013



The social context

dramatic decrease in public support



Reasons of the public support drop:

- Strong **increase** of bears population and related **conflicts** with humans
- Weakness of G.O. **communication** and media “management”
- Lack of efficacy and coordinated **management** for potential removal of the few **problem bears**, and consequent dramatic bad “advertising” on bears

International networking

WISO Platform in the Alpine Convention

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italian presidency 2013-2014
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The Bear Specialist Group of IUCN

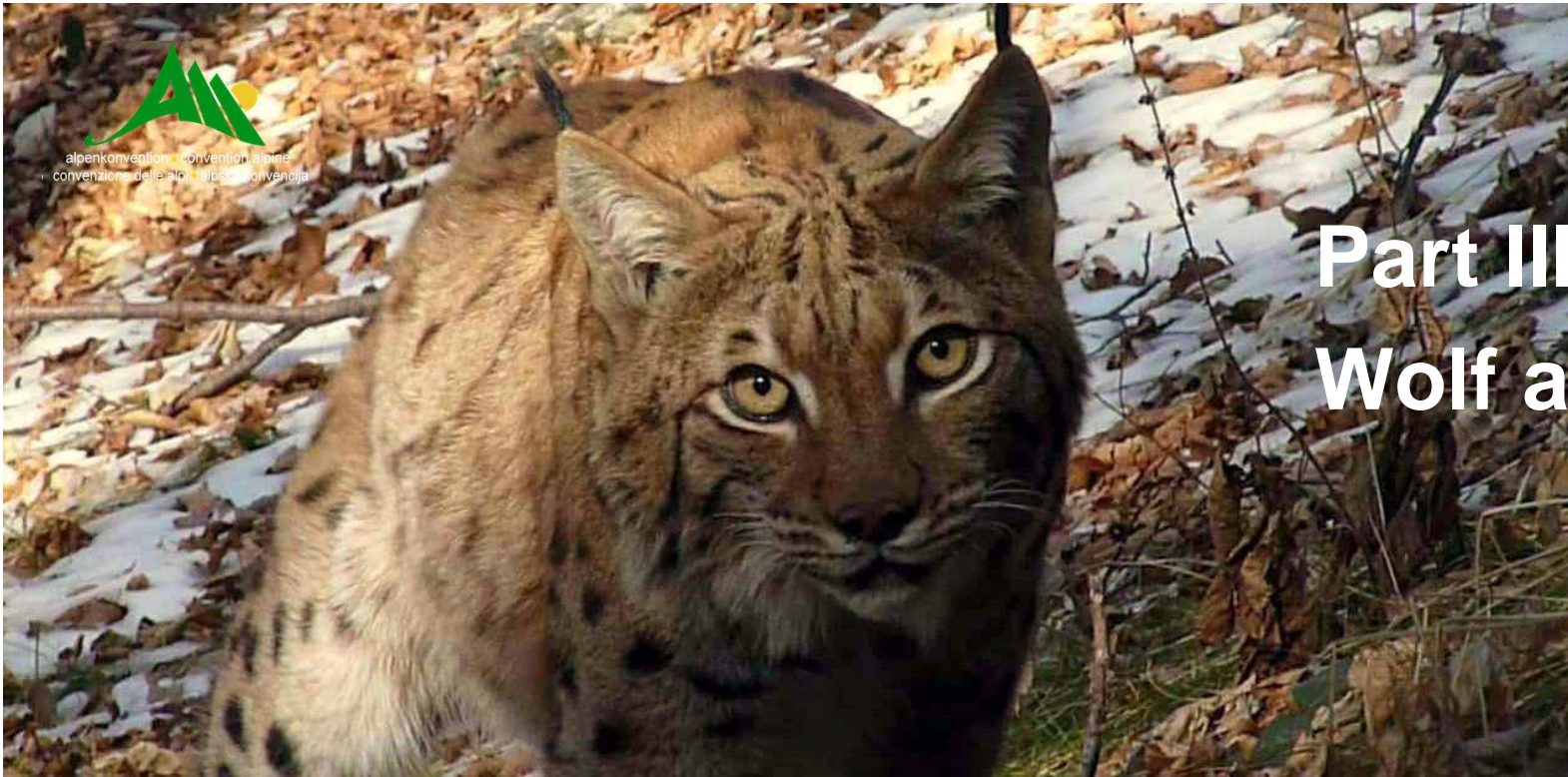
Large Carnivore Platform in the E.U.



Final remarks (bear)

- Good genetic monitoring standards and networking, out of Carinthia (A)
- Minimum Viable Population (MVP) reached in 10-12 years
- Active management needed and possible
- Genetic viability to keep strictly monitored in the central Alps
- Stagnant situation in the eastern Alps; very few females
- No gene flow occurred between the two populations
- Negative data from the social context





Part III

Wolf and lynx



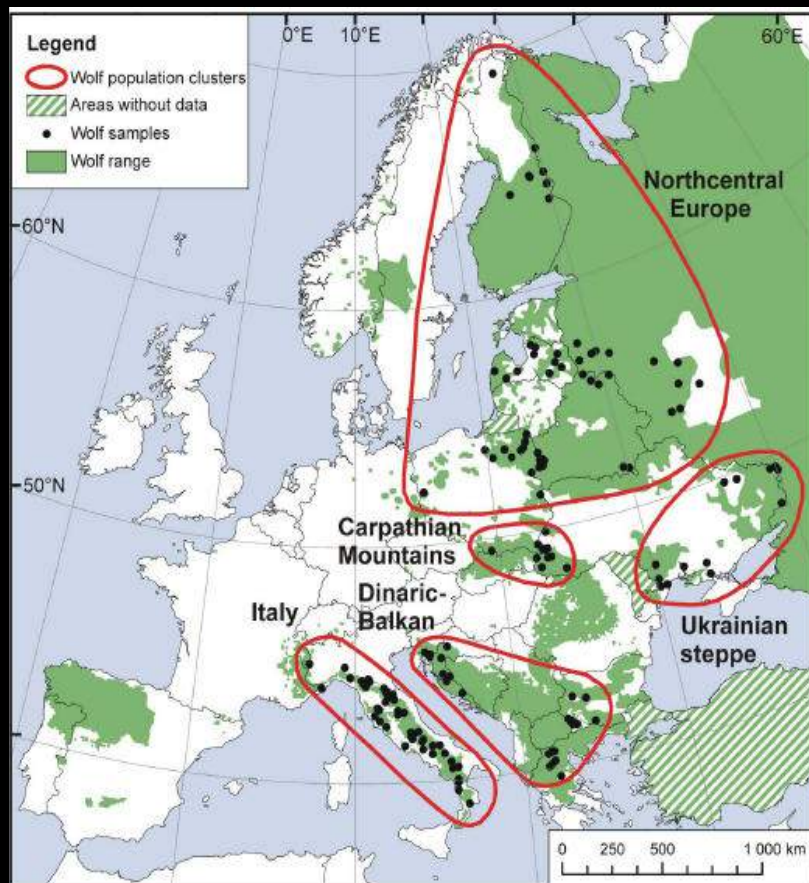


Part III: the wolf



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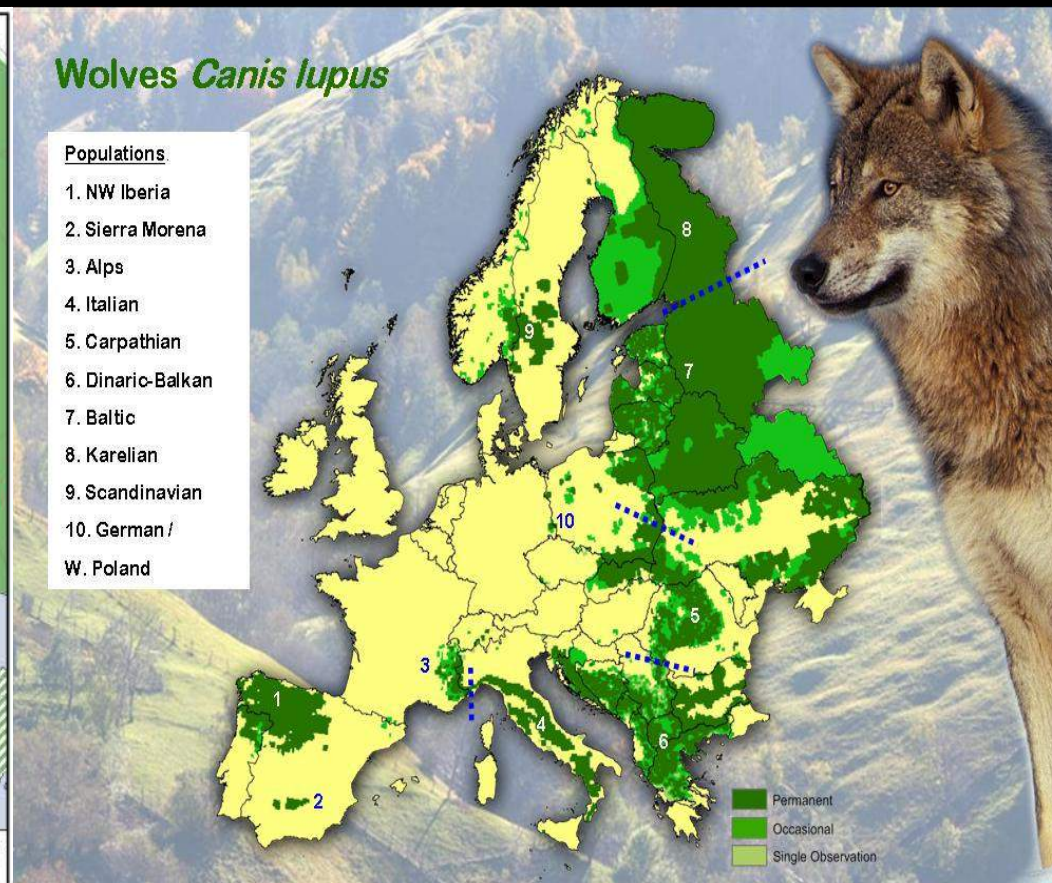
Wolf distribution in Europe



Wolves *Canis lupus*

Populations

1. NW Iberia
2. Sierra Morena
3. Alps
4. Italian
5. Carpathian
6. Dinaric-Balkan
7. Baltic
8. Karelian
9. Scandinavian
10. German / W. Poland



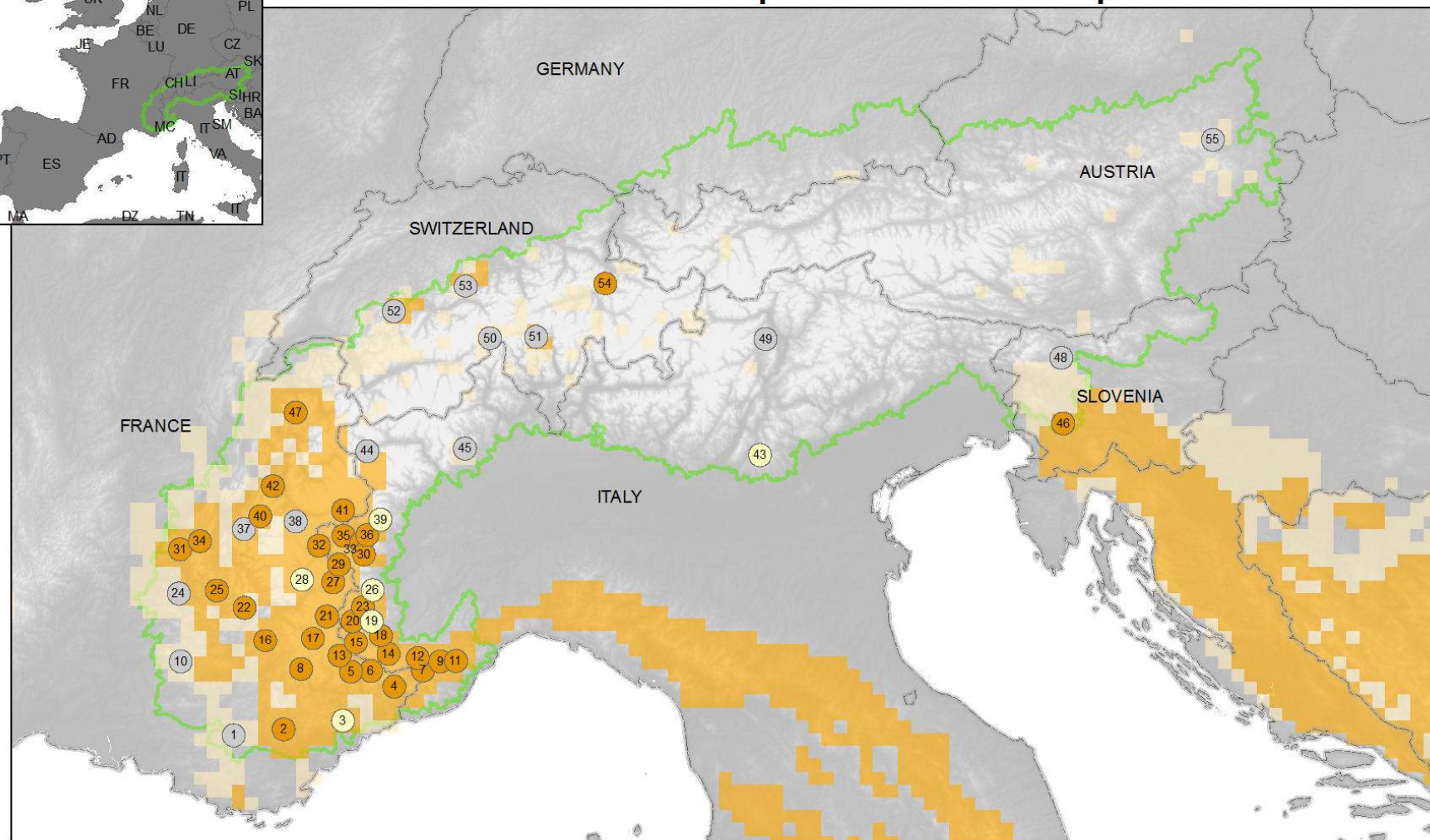
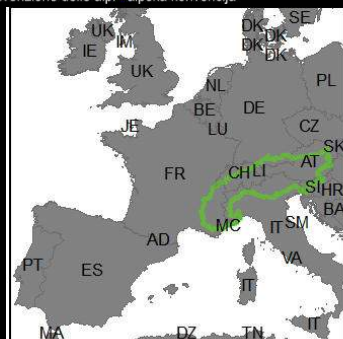
LCIE, Large Carnivore Initiative for Europe (Linnell et al 2008).



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The wolf on the Alps

Distribution of wolf packs in the alps 2012



Wolf Presence (LCIE - 2012) Pack structure

Regular presence
Sporadic presence

Pack
Pair
Single

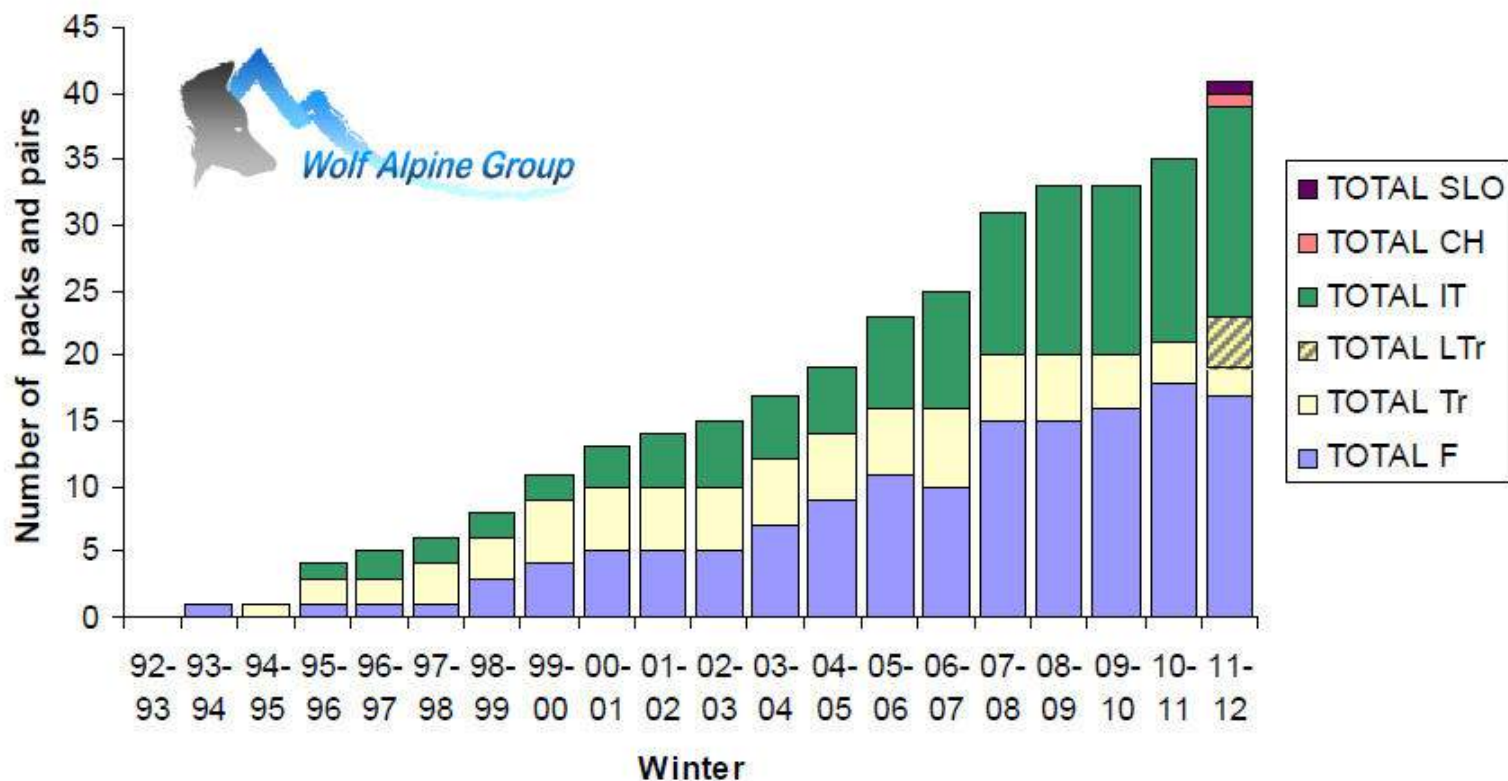
Alpine range
State boundary

© Wolf Alpine group

N
0 30 60 120 Km
Arcmap 9.3 - Mars 2014

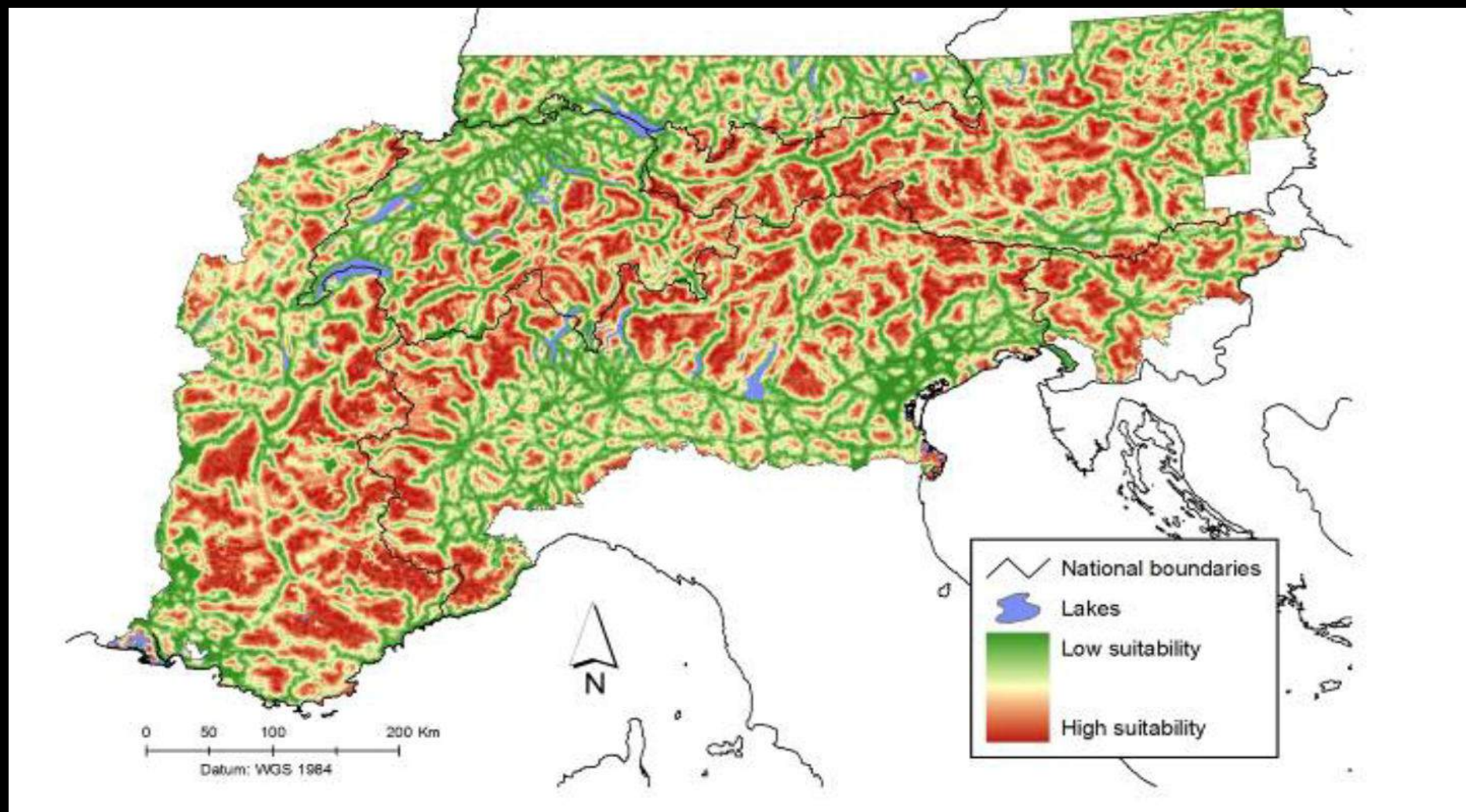
Wolf packs trend across the Alpine range

NB/ packs and pairs = at least 1M + 1 F for two consecutive winter or breeding evidence next summer



Source: Wolf Alpine Group (WAG – 2014)

Potential distribution model



Source: University of Rome “La Sapienza”

Haplotypes diversity in Austria

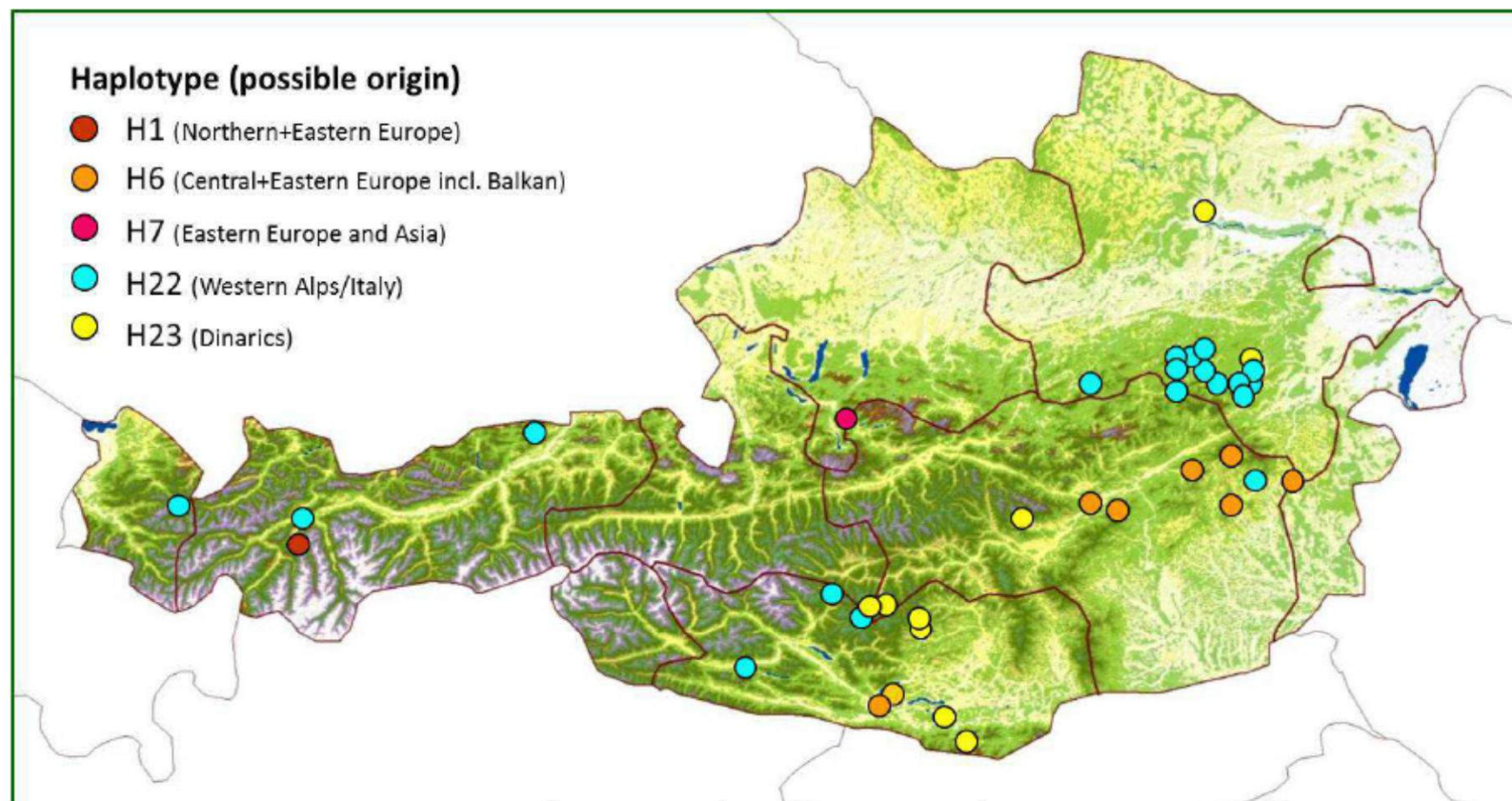


Figure 2 : Identification of haplotypes diversity in Austria based on DNA_{mt} sequencing

Source: Wolf Alpine Group (WAG – 2014)

Part III: the lynx



Eradicated from the Alps

Eastern Alps first half XIX c.; western Alps 1920 - 1930

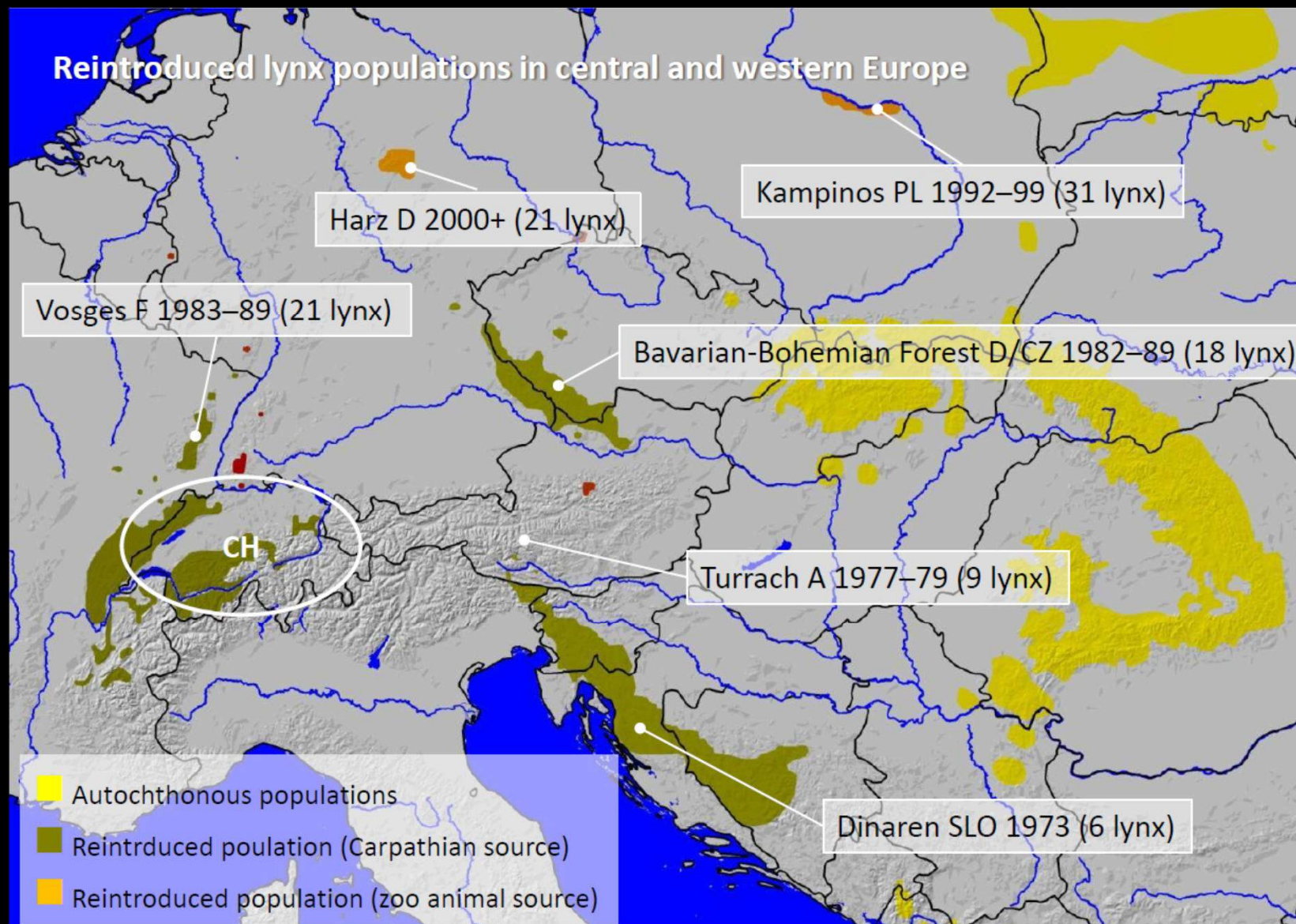




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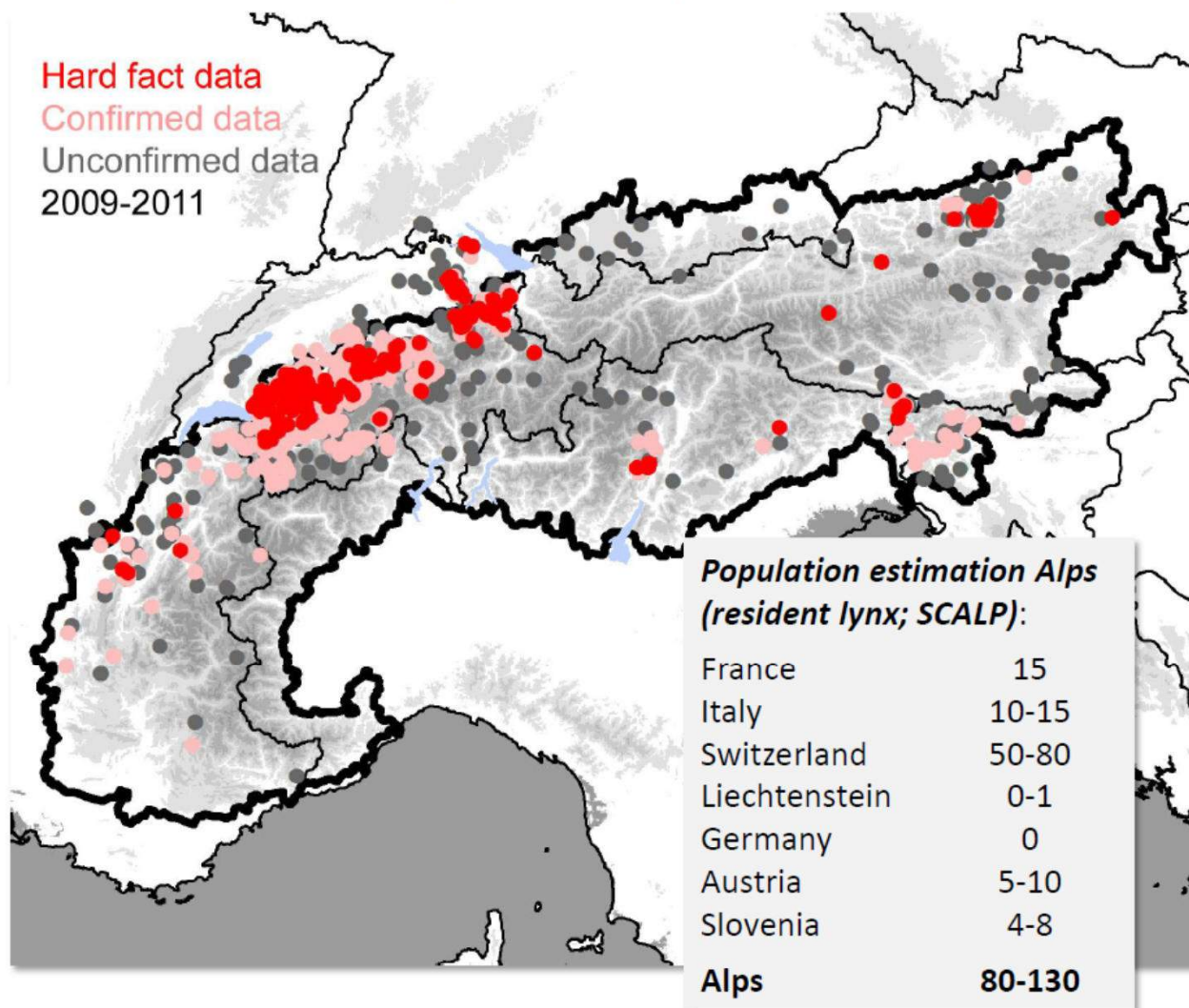
The reintroduction of the lynx in the Alps

Source: KORA



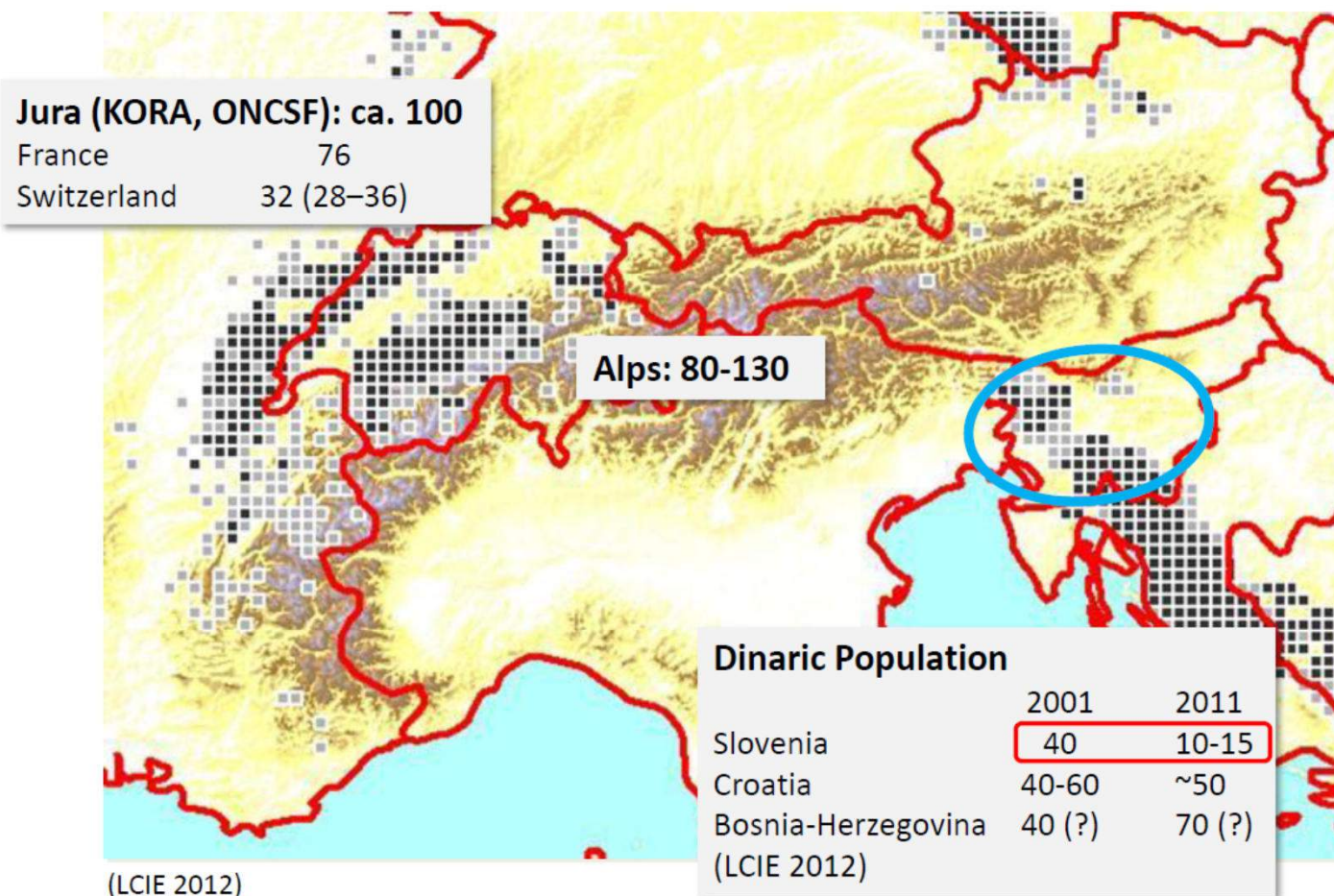
Status of the lynx in the Alps

Distribution and abundance of lynx in the Alps 2009–2011



Distribution and abundance

Distribution and abundance of lynx in the Alps and neighbouring populations



A recovery strategy

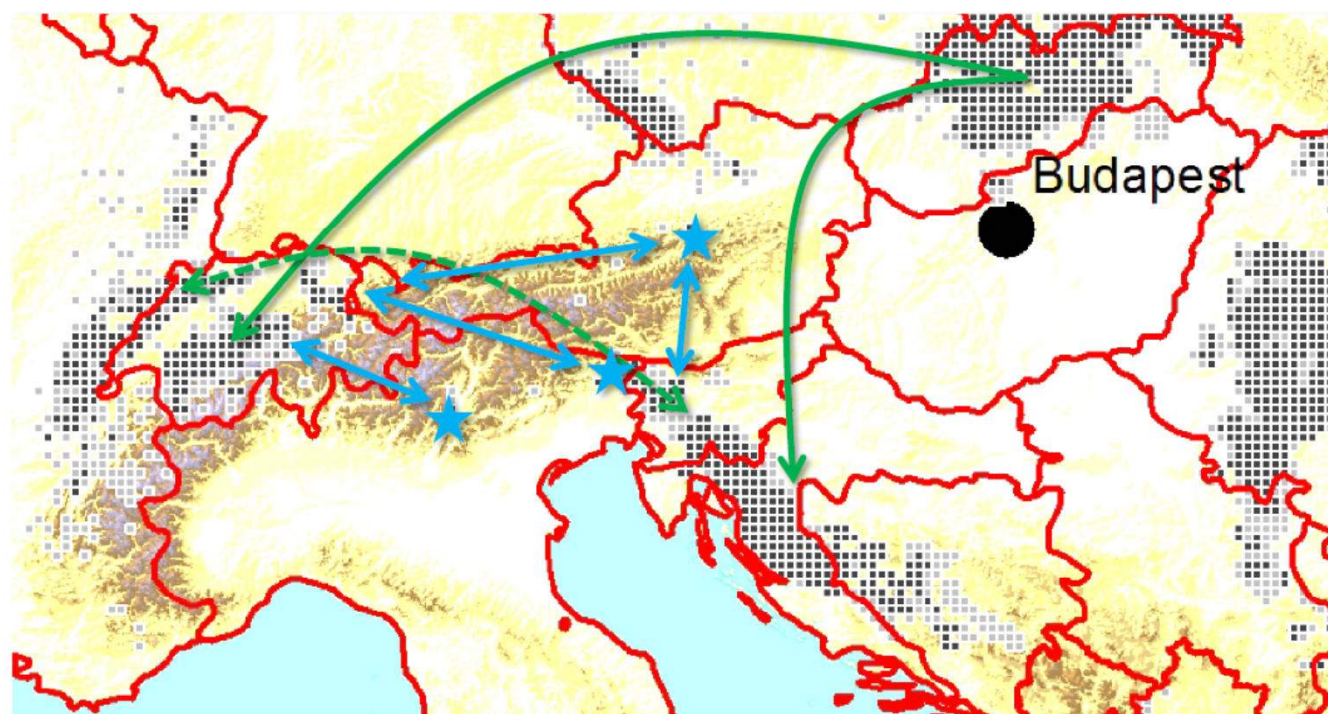
3. Perspectives: A recovery strategy for the Alps and beyond...



- Cooperation between GOs, NGOs, scientists → common strategy, action plan
- Arrangement between stakeholders → acceptance, compromise
- Possible forum: WISO of the Alpine Convention → political agreement

The genetic management

Strategic background: Genetic management and merging of populations



- Reinforcement from original source population (remedy of genetic situation)
- ↔ Exchange between reintroduced populations (metapopulation management)
- ↔ Merging through "stepping stones" (small scale translocations)

Challenges

2. Challenges: Slow expansion, controversies, and inbreeding

Biological:

- Relative (compared to other large carnivore species) low population expansion potential;
- Inbreeding as a result of very small founder groups and isolation.

Human dimension and politics:

- Conflicts with hunters → call for “regulation”;
- Weak political will for further reintroduction.



Part IV – Ecological connectivity for L.C.

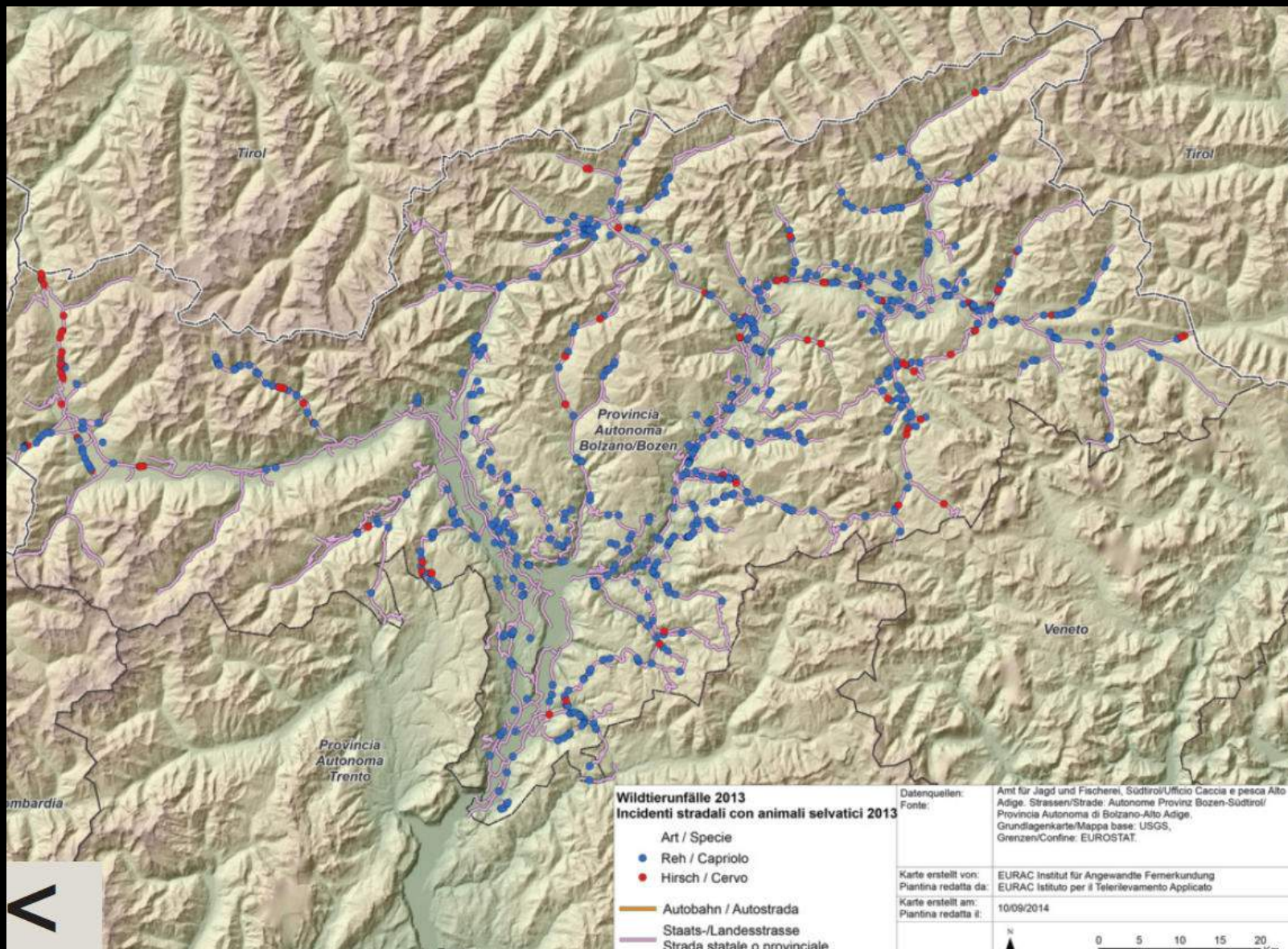
**The Alpine environment from Large
Carnivore point of view:**

Foto: T. Borghetti

Human dominated lanscape



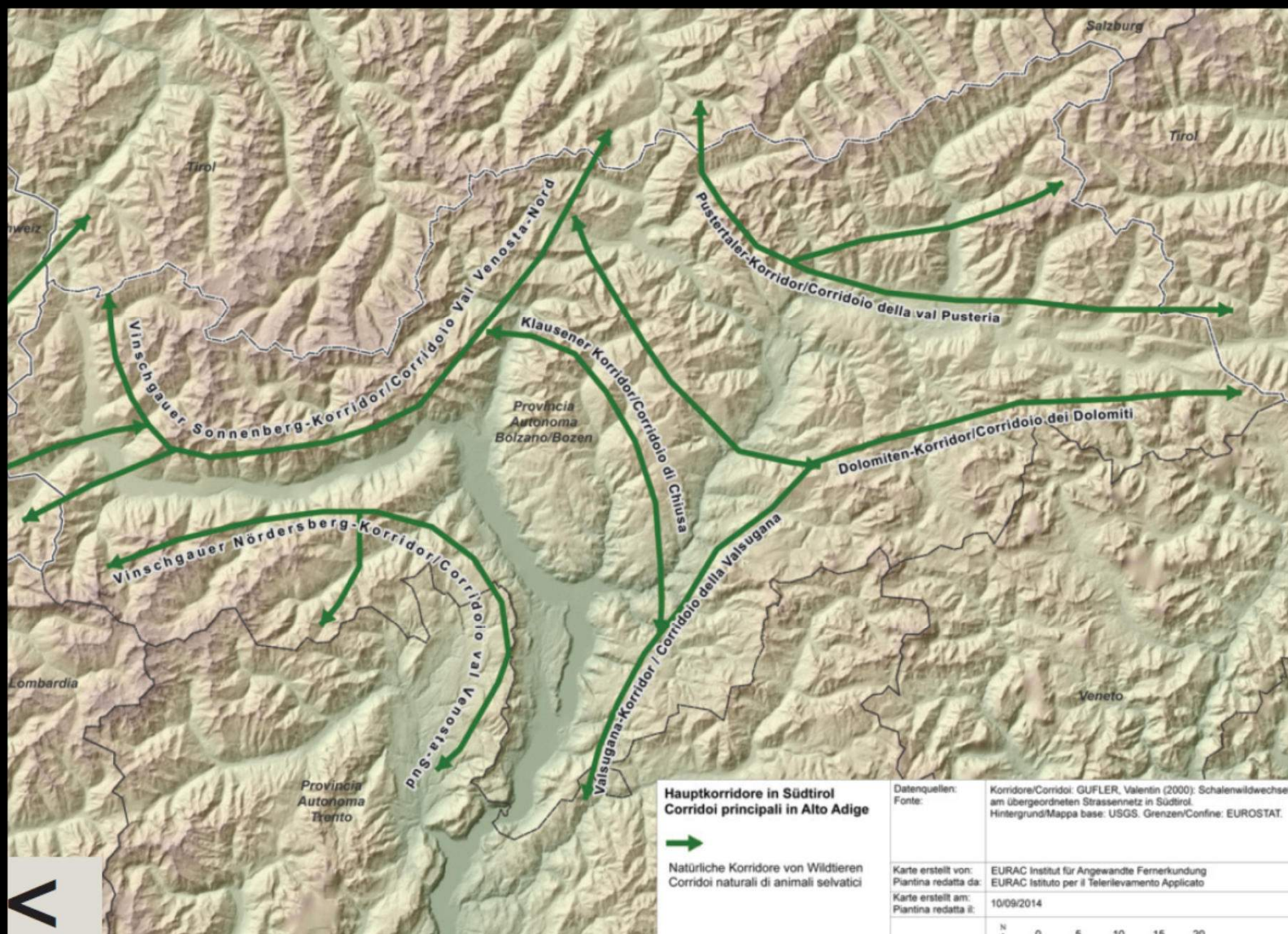
Deers road accidents





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Natural corridors



The bear

> incidenti stradali



> corridoi naturali





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Bear movements



Source: A. Zedrosser

Bear

The genetic diversity of the close population of the central Alps is strictly monitored. It's still not too bad, compared to others small and isolated populations.

Connectivity between central Alps and Dinaric mts is crucial.

So far no genetic flow between the two population occurred.

MOLECULAR ECOLOGY

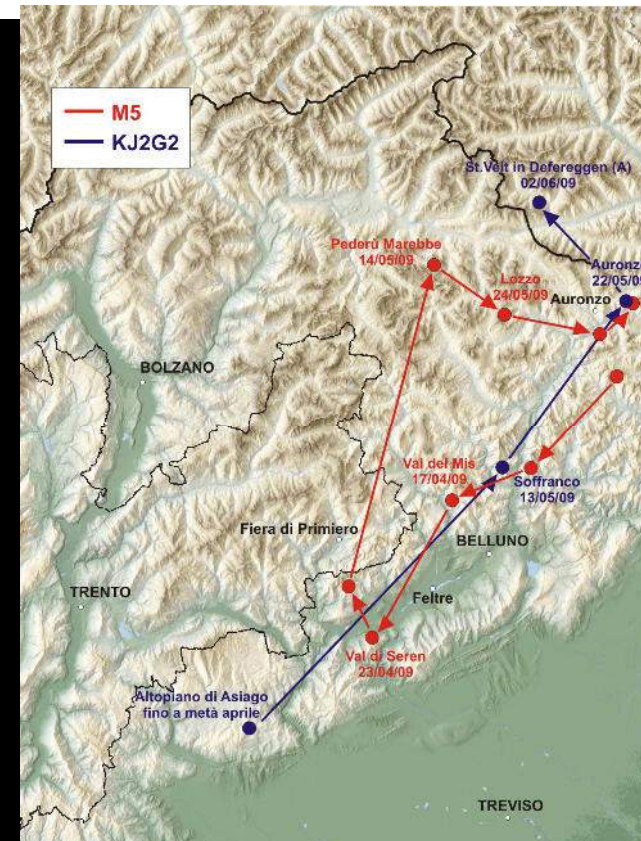
Molecular Ecology (2010)

doi: 10.1111/j.1365-294X.2010.04791.x

The power of genetic monitoring for studying demography, ecology and genetics of a reintroduced brown bear population

M. DE BARBA,*† L. P. WAITS,* E. O. GARTON,* P. GENOVESI,† E. RANDI,† A. MUSTONI‡ and C. GROFFS

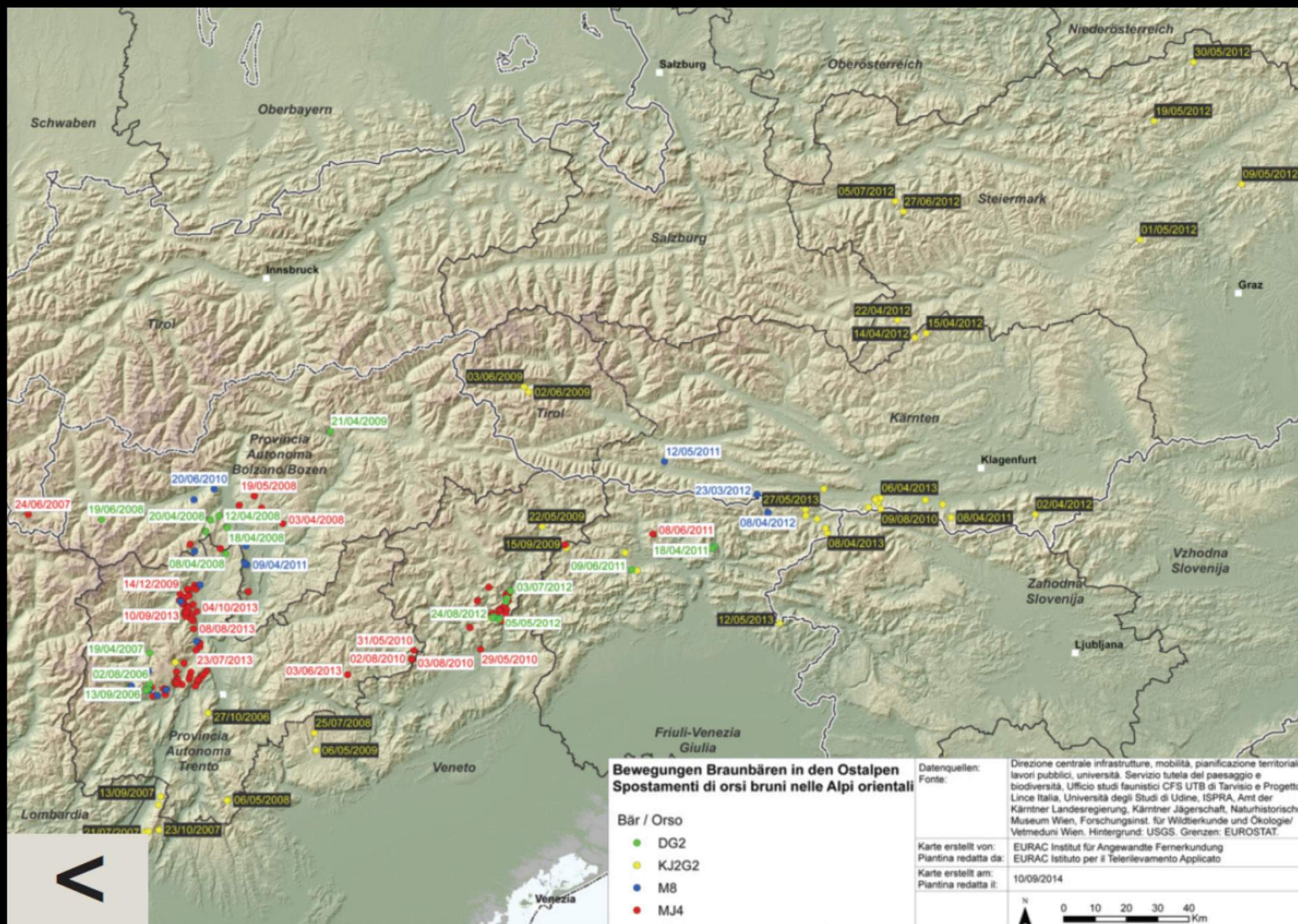
*Department of Fish and Wildlife, University of Idaho, Moscow ID 83844, USA, †Institute for Environmental Protection and Research, via Ca' Fornacetta 9, 40064 Ozzano Emilia, Italy, ‡Brown Bear Research and Conservation Group, Parco Naturale Adamello Brenta, via Nazionale 24, 38080 Strembo, Italy, §Forest and Wildlife Service, Provincia Autonoma di Trento, via G.B. Trener 3, 38100 Trento, Italy





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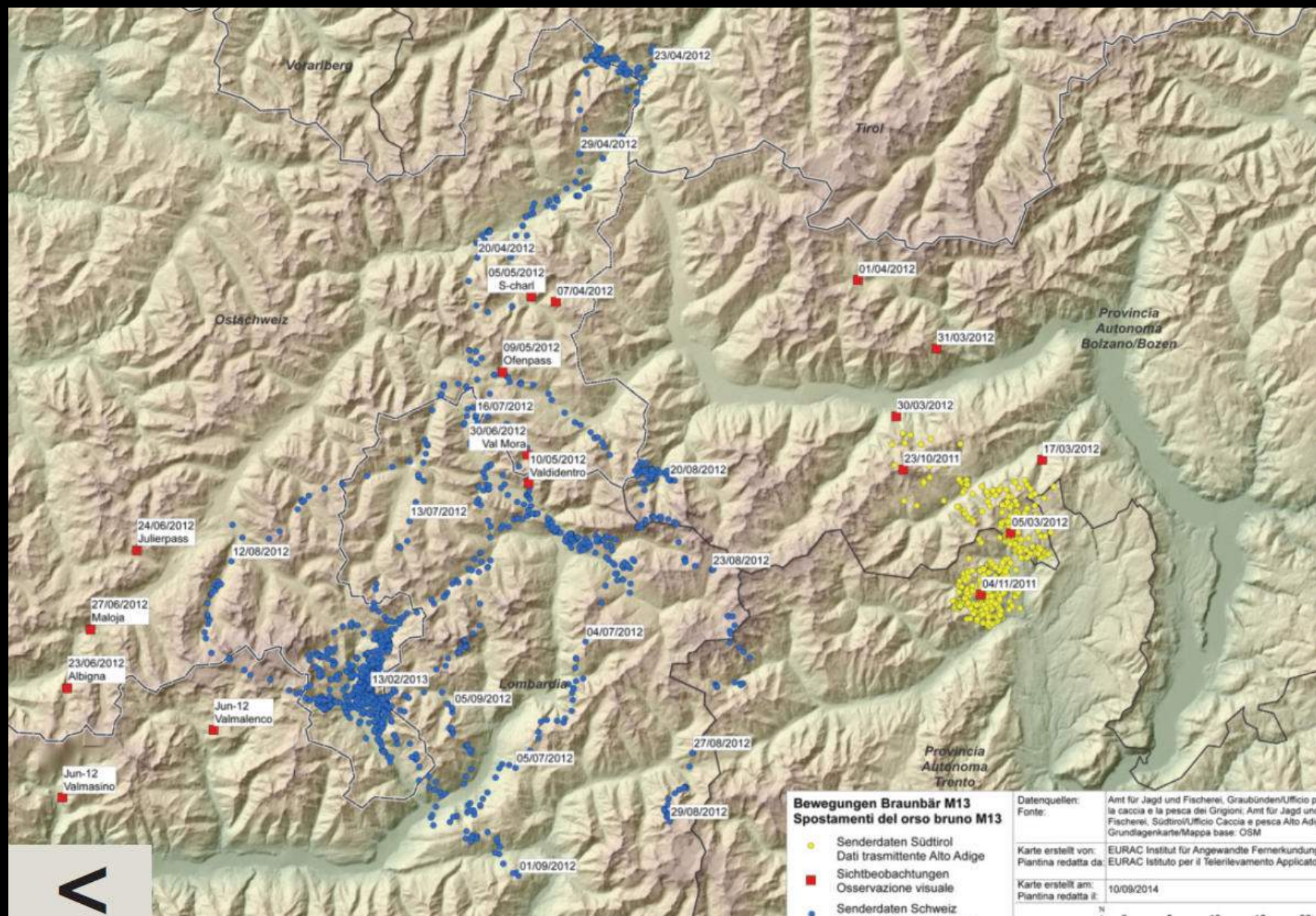
Bears moving east





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(one) Bear moving west



The wolf





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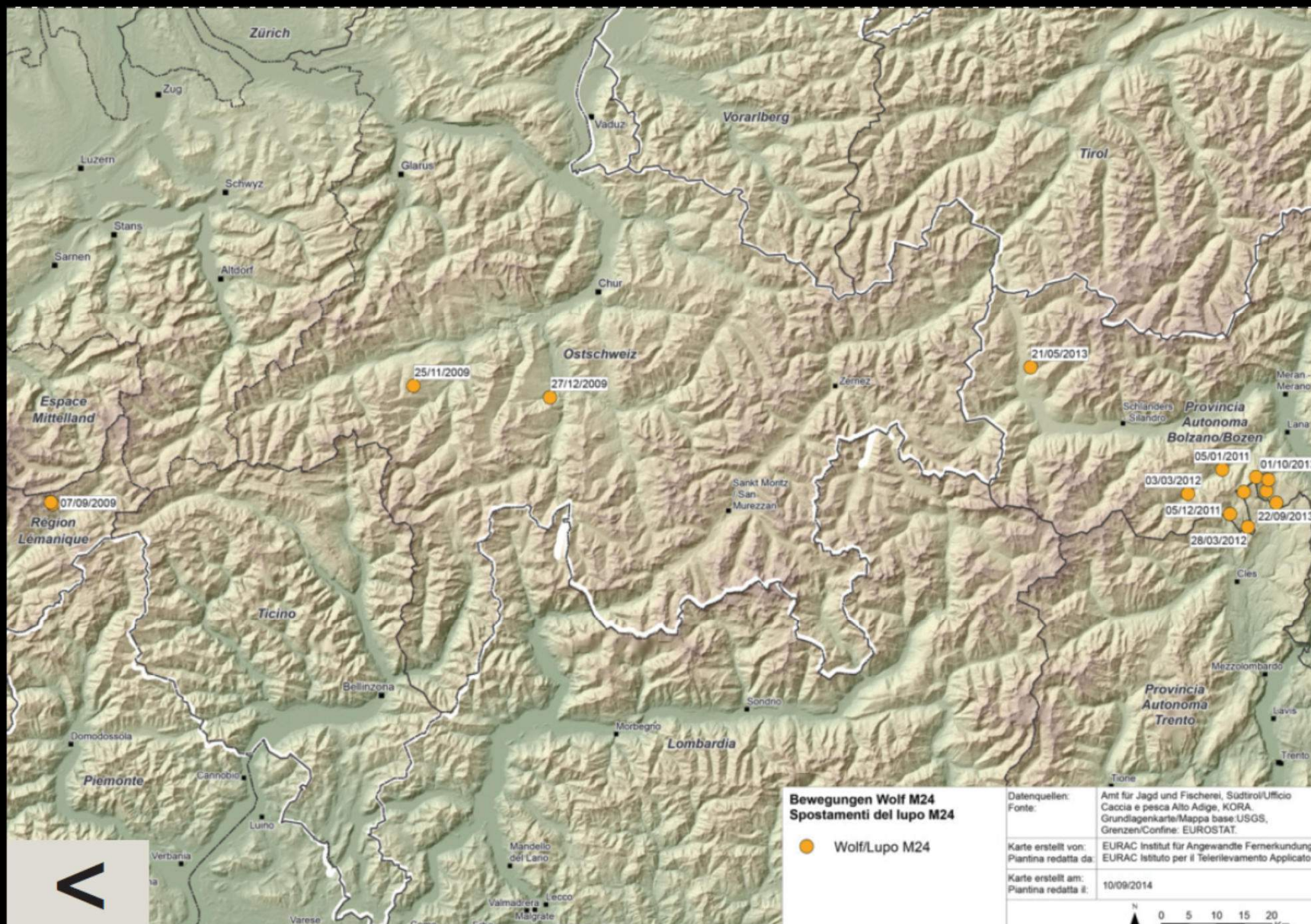
The wolf Slavc





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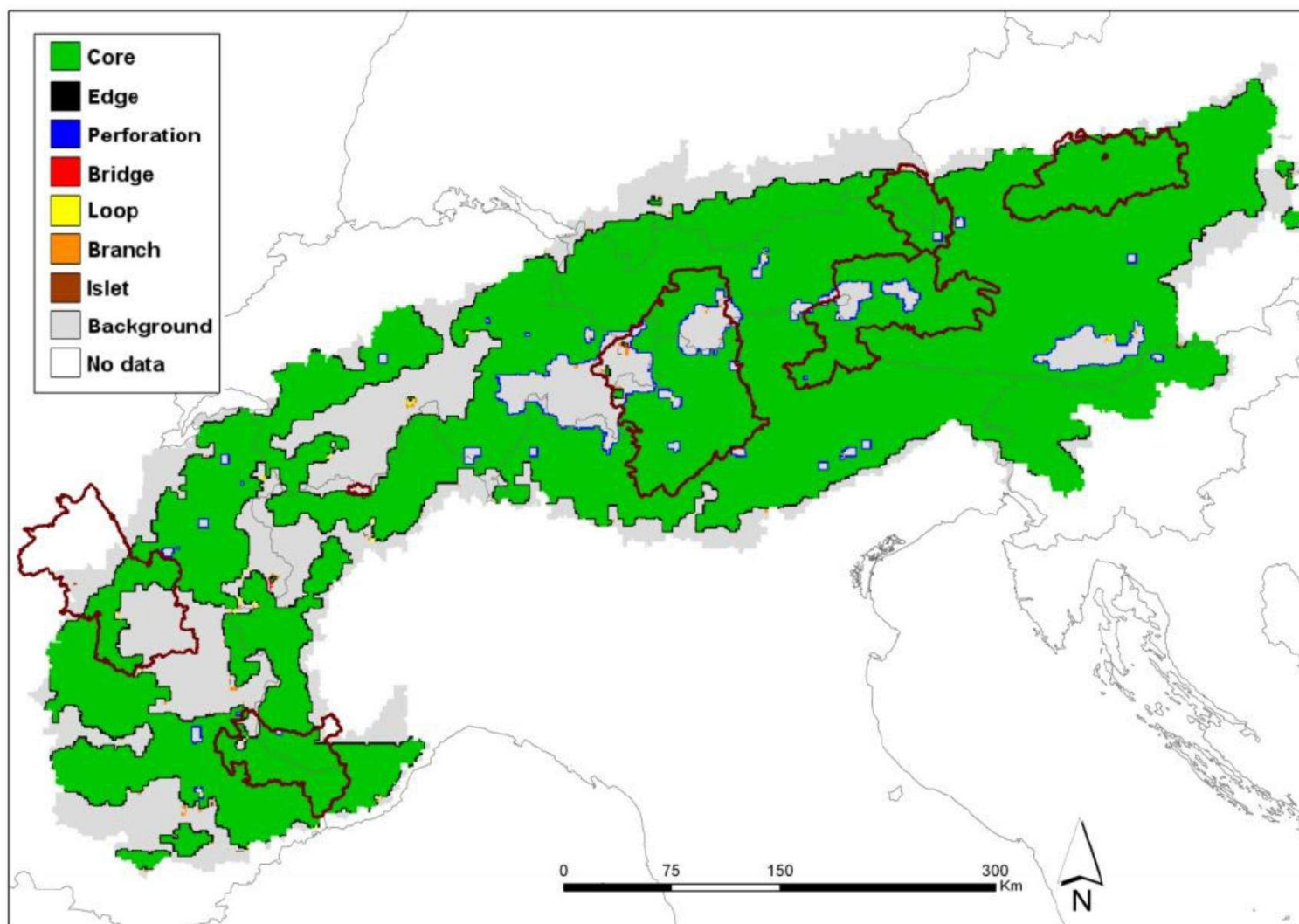
Wolf M24





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Connectivity of wolves in the Alps



Source: F. Marucco – “Distribution, habitat suitability and connectivity of wolves in the Alps” - 2011-
Environment Agency Austria



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The Lynx

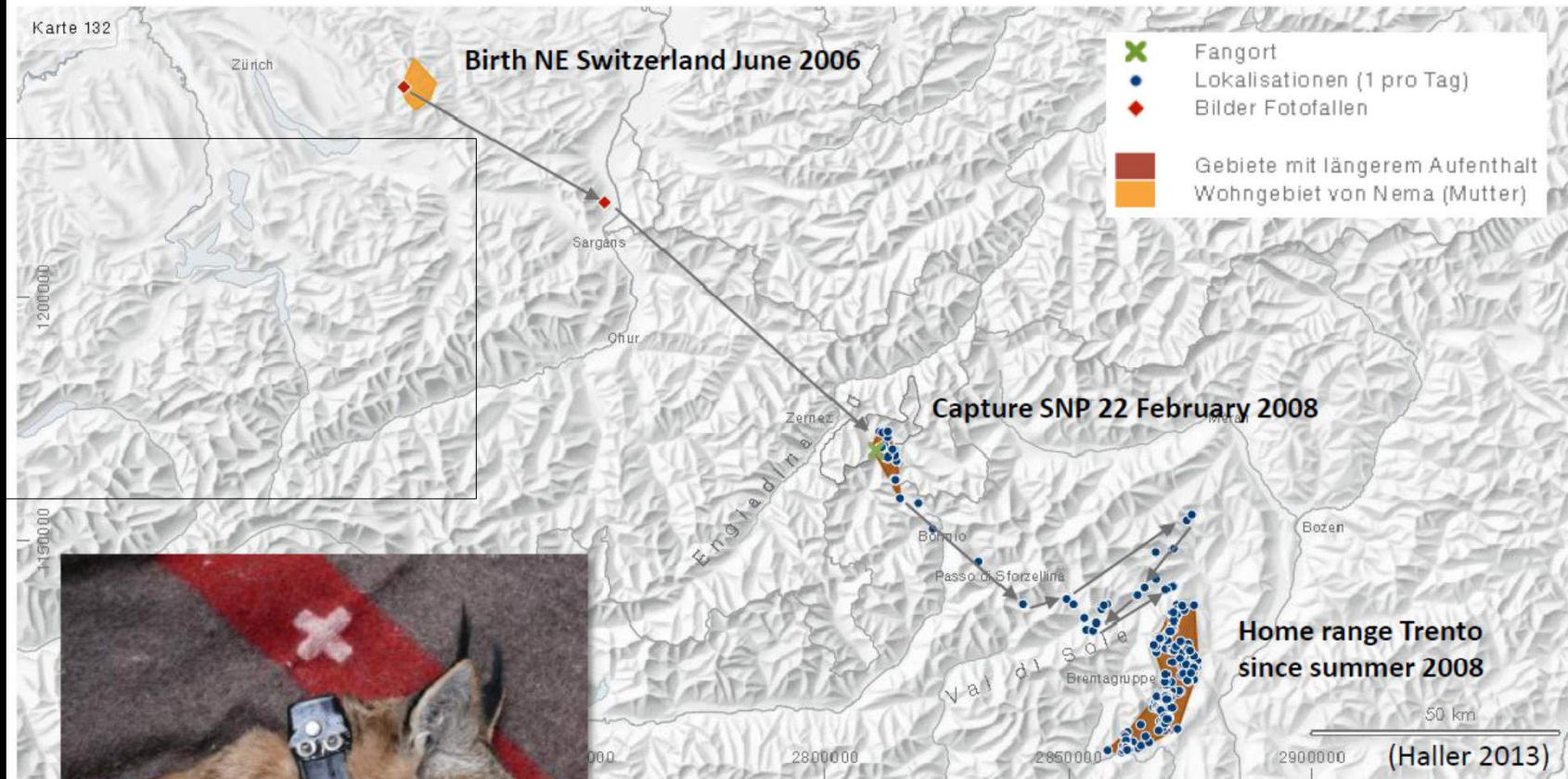




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Dispersion of lynx B132

Dispersal of B132 across the Alps



Individual dispersal capacity is no indication
for population expansion!



Thank you for your attention