

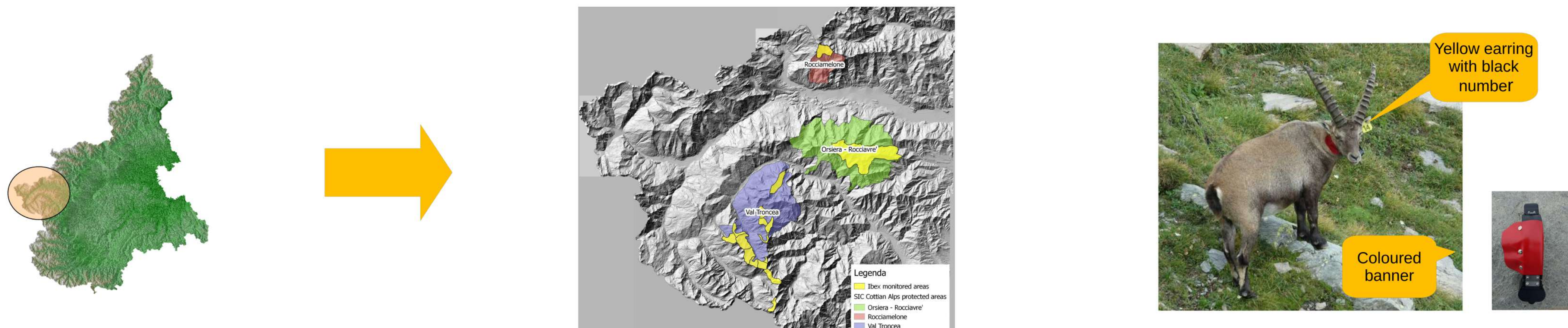
The Project Alcotra LEMED-IBEX: Monitoring Alpine Ibex in the Alpi Cozie Regional Park

Maurino L.¹, Boetto E.¹, Careddu G.¹, Cellerino A.¹, Costanzi L.^{1,2}, Miletto D.¹, Peyrot V.¹, Ramassa E.¹, Rosselli D.¹, Rosso M.¹, Vita A.¹

¹Ente di gestione delle aree protette delle Alpi Cozie – Via Gransuà fontan 1, 10050 Salbertrand (TO), Italy – maurino@alpicozie.eu

² Parco Nazionale Gran Paradiso, via Pio VII 9, 10135 Torino, Italy

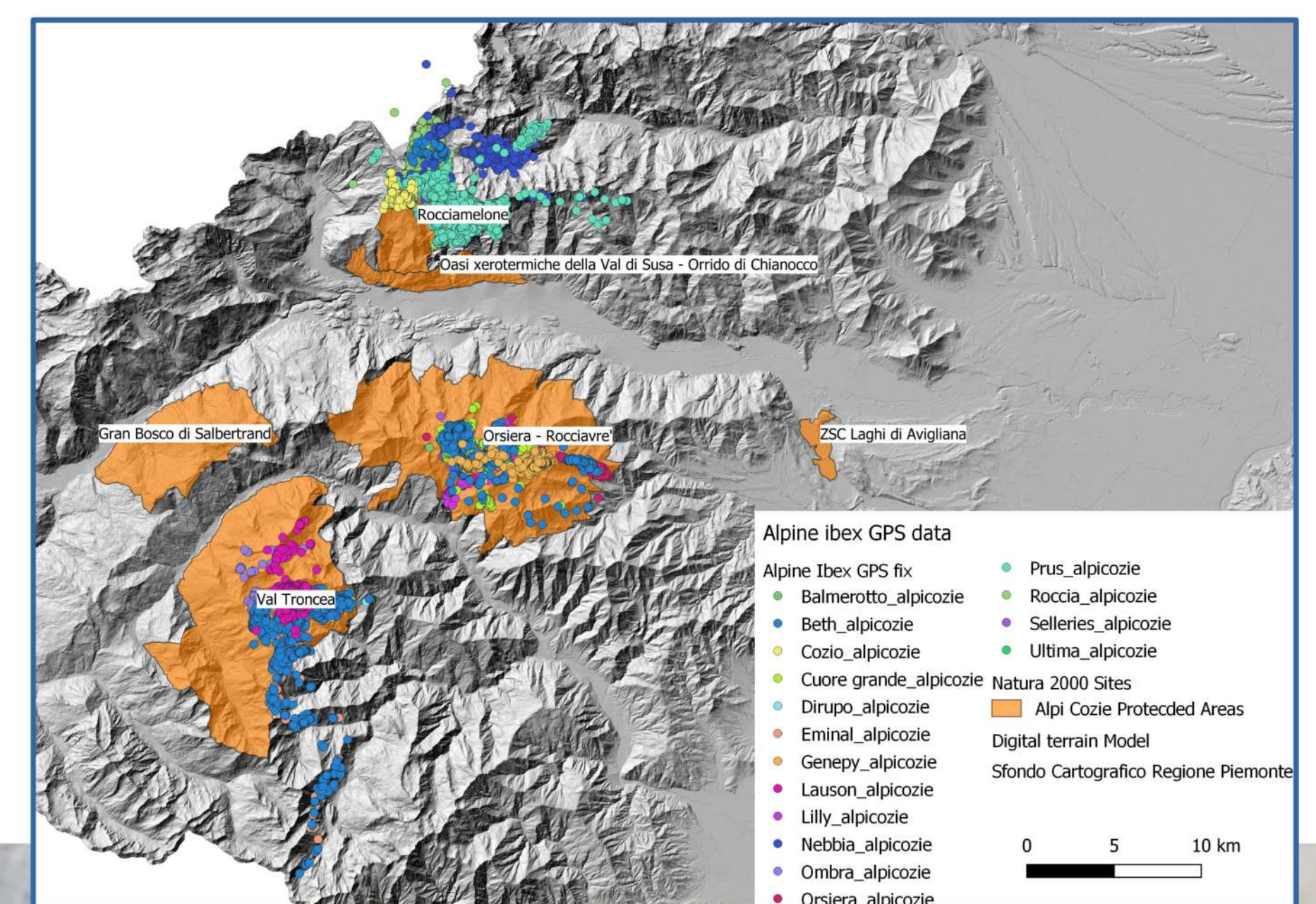
As part of the Alcotra Lemed Ibex 2017 - 2020 project, the Rangers of Cottian Alps protected areas (NO 313664 - 5010625, SE 364622 – 4966910, UTM 32 N, WGS 84) have captured alpine ibex (*Capra ibex*) on which they have positioned satellite GPS collars, with the aim of knowing the home ranges of the animals, checking their seasonal movements and collect data on the interconnection of the different populations present in the area.



For the first time 16 animals (5 females and 11 males) were captured and tagged in 3 Natura 2000 sites (IT1110006 Orsiera Rocciavere, IT1110039 Rocciamelone and IT1110080 Val Troncea). The GPS collars were programmed to determine the animal's position 4 times a day and in total 37462 fixes were collected, with an average of 2341 GPS points / animal (min 201, max 4080). Some collars stopped working after a few weeks, others remained active until June 2020, when they were deactivated to retrieve the tool and free the animal: each captured ibex kept the collar on average for 431 days (min 23, max 724).

Name	Sampling site	Sex	Age	Year of birth
Ultima	Orsiera – Rocciavere	F	3	2016
Balmerotto	Orsiera – Rocciavere	M	5	2014
Selleries	Orsiera – Rocciavere	M	6	2012
Cuore grande	Orsiera – Rocciavere	M	4	2014
Orsiera	Orsiera – Rocciavere	F	5	2013
Genepy	Orsiera – Rocciavere	M	6	2012
Lilly	Orsiera – Rocciavere	F	4	2014
Nebbia	Rocciamelone	M	7	2011
Prus	Rocciamelone	M	7	2011
Ombra	Rocciamelone	F	4	2014
Roccia	Rocciamelone	F	3	2015
Cozio	Val Troncea	M	11	2007
Beth	Val Troncea	M	10	2008
Eminal	Val Troncea	M	10	2008
Dirupo	Val Troncea	M	6	2012
Lauson	Val Troncea	M	4	2015

Name	Captured	Drop-off	GPS collar/days	Fix number
Ultima	24/07/2019	10/06/2020	322	1601
Balmerotto	03/07/2019	28/07/2020	391	1924
Selleries	06/07/2018	06/11/2019	488	2451
Cuore grande	06/07/2018	30/03/2020	633	3184
Orsiera	10/07/2018	15/06/2020	706	3579
Genepy	10/07/2018	28/06/2020	719	4026
Lilly	04/07/2018	27/06/2020	724	4080
Nebbia	17/09/2018	21/07/2019	307	1841
Prus	17/09/2018	07/11/2019	416	2444
Ombra	02/10/2018	10/06/2020	617	3421
Roccia	28/09/2018	25/06/2020	636	3500
Cozio	18/09/2018	11/10/2018	23	201
Beth	03/08/2018	12/12/2018	131	799
Eminal	02/08/2018	17/12/2018	136	831
Dirupo	02/08/2018	23/04/2019	264	1457
Lauson	23/05/2019	14/06/2020	388	2123



GPS data analysis	
Total GPS points	37462
Mean GPS points / ibex	2341.4
Minimum number GPS points	201
Maximum number GPS points	4080
Average days with active collar	431.3
Minimum days with active collar	23
Maximum days with active collar	724

The monitoring of animals marked after the drop off of the satellite collar was difficult to apply due to small number of staff involved, however in June 2022 two animals (1 male and 1 female) captured in the Orsiera Rocciavere Regional Park were sighted and they appeared in excellent conditions.

The three Natura 2000 sites were found to be disjoint and not interconnected areas for marked ibexes, which however in two cases moved around France and demonstrated the presence of ecological corridors through these two countries.

Acknowledgements

Thanks are due to the Cottian Alps Protected Areas staff and to all participants in the field operations.

References:

- Caprio E., Jähmig S., Uliana R., Maurino L., Chamberlain D., 2020. Interazione tra attività antropiche e stambecco sull'arco alpino occidentale. Atti della conferenza finale del Progetto ALCOTRA LEMED-IBEX / Project ALCOTRA LEMED-IBEX. Valdieri (CN), 11 settembre 2020.
- Caprio E., Jähmig S., Uliana R., Chamberlain D., Maurino L., 2020. Modello di distribuzione spaziale degli stambecchi sull'arco alpino occidentale. Atti della conferenza finale del Progetto ALCOTRA LEMED-IBEX / Project ALCOTRA LEMED-IBEX. Valdieri (CN), 11 settembre 2020.
- Maurino L., 2015. Alpine ibex *Capra ibex* survey and Maximum Entropy Modeling application in Western Cottian Alps (Piedmont, Italy). Atti del 23 st Meeting of the Alpine Ibex European Specialist Group 29-31 OCTOBER 2015 KALS AM GROSSGLOCKNER (A)
- Maurino L., 2019. The status of Alpine ibex in the Cottian Alps protected areas. Atti del 23 st Meeting of the Alpine Ibex European Specialist Group. Pont-du-Fossé, Saint-Jean-Saint-Nicolas (Fr) 8-10 October 2019.
- Maurino L., Bruno M., Costanzi L., Zoppi S., 2019. Sinergia tra Enti nel progetto Lemed ibex: il caso di Dirupo. Riassunti del 37èmes Rencontres du Groupe d'Etude sur l'Ecopathologie de la Faune Sauvage de Montagne (GEEFSM). Entroubles (AO). 14-16 giugno. <https://www.geefsm.eu/fran%C3%A7ais/rencontres-geefsm/2019-etroubles-val-d-aoste-i/>