



Progetto LIFE+ "Onedeertwoislands" - Meeting finale - Cagliari, 1-2 marzo 2018

REINTRODUCTION OF *C. E. CORSICANUS* TO OGLIASTRA

FRANCESCO RIGA

ISPRA





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The LIFE+ project "*Onedeertwoislands*" for the conservation of *C. e. corsicanus* in Sardinia and Corsica is part of an organic action, aimed at the full recovery of this *taxon*, already started in the past with:

- the establishment of breeding areas of *C. e. corsicanus*;
- the reintroduction initiatives carried out since the 90s of last century to Sardinia and Corsica





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The LIFE+ project main aims are:

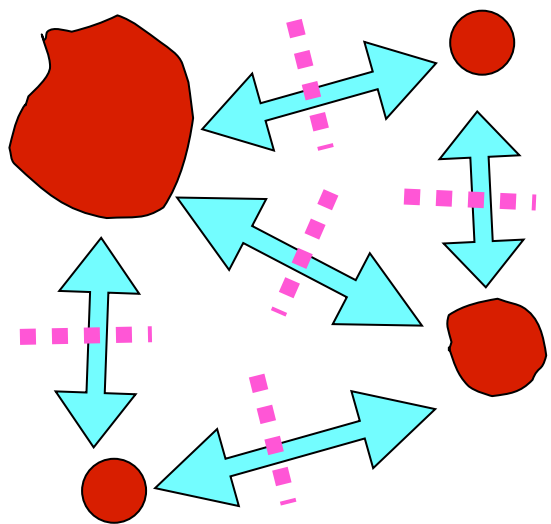
1. establishing new wild populations of deer in Sardinia;
2. increasing the number of individuals in the populations inhabiting Ogliastra;
3. promoting the natural expansion of the deer populations that live close to the reintroduction areas in Sardinia;
4. increasing the genetic variability of deer populations inhabiting Corse;
5. creating a **metapopulation**, through ecological corridors identified by models of habitat suitability developed for the Sardinian-Corsican red deer, in order to allow the interconnection between all the populations present in nature;
6. involving stakeholder implicated in the wildlife management (hunters, environmentalists, farmers) in order to create a **shared positive attitude** towards the activities of conservation and wildlife in general.



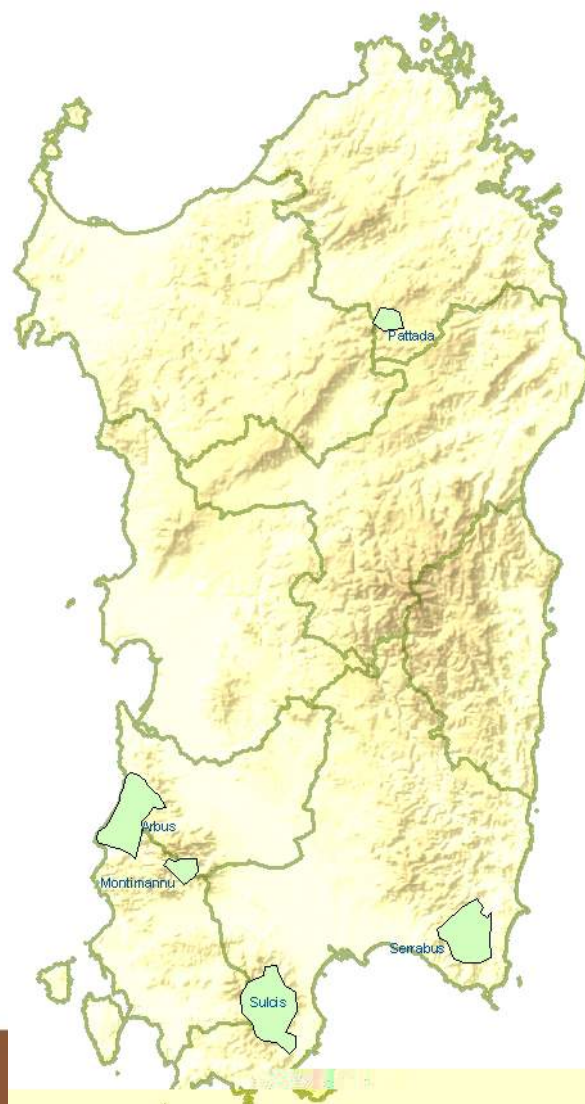
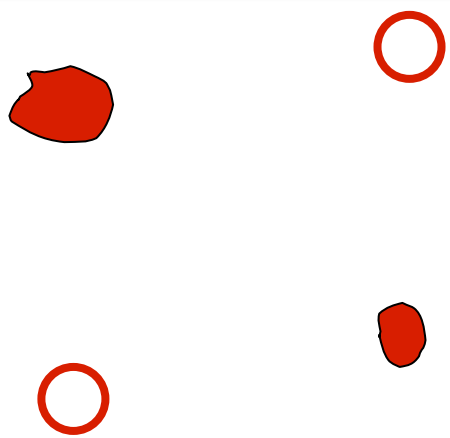


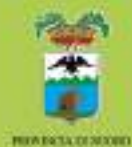
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Originale status



Fragmentation

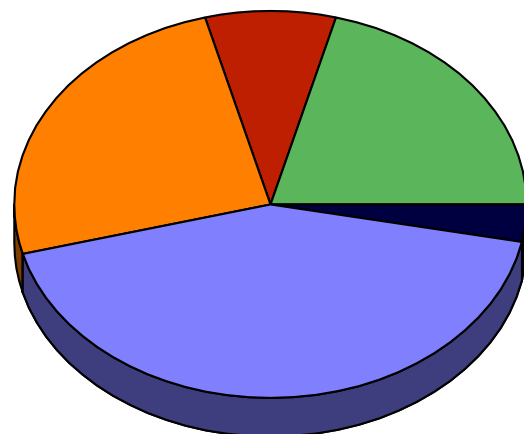




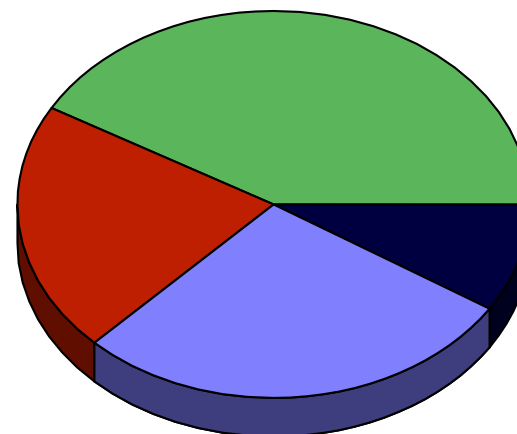
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Human dimension survey – Aburese

The deer population in future should ...



FARMERS



TOURISTS

- be stable
- decrease
- I do not care
- increase
- less damages





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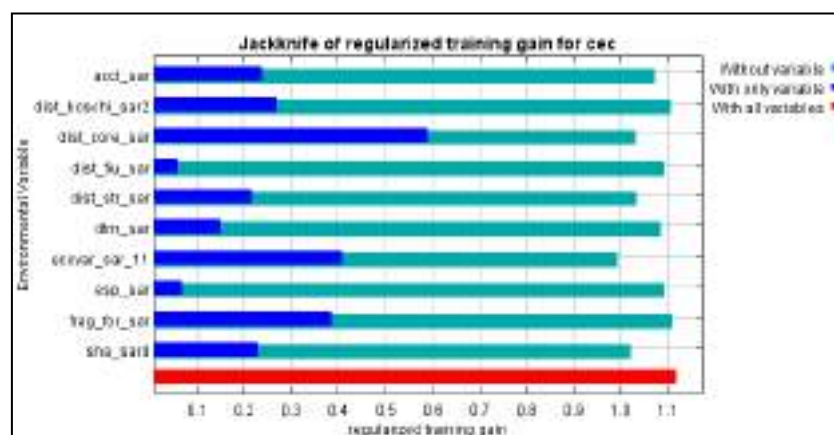
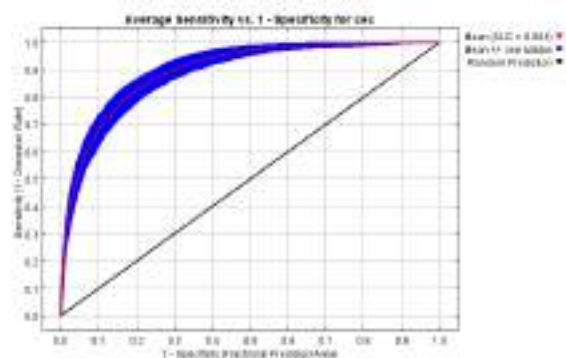
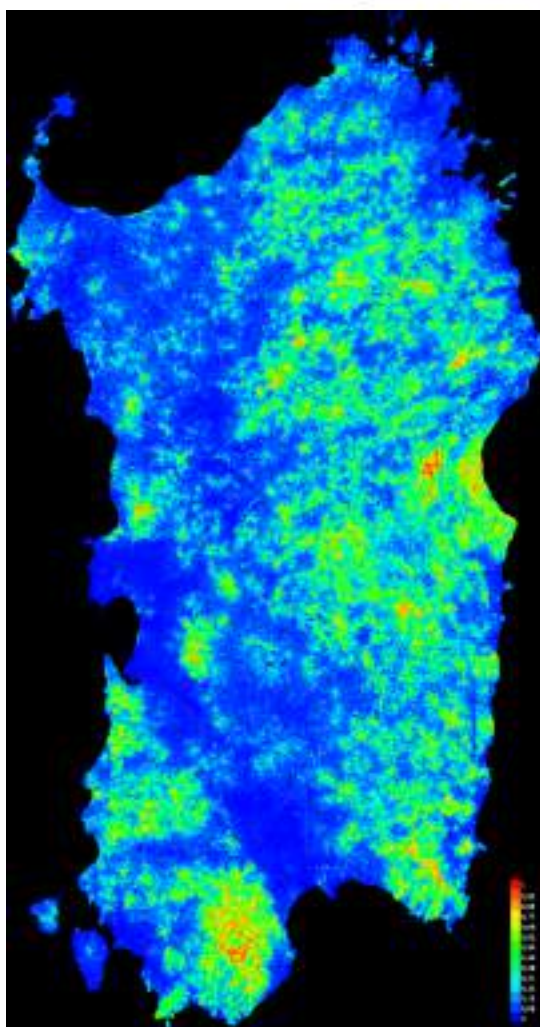
CHANGELLES IN TAXA CONSERVATION....





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Habitat Suitability Model Maximum entropy methods





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Project areas

Source areas



Monte Arcuentu e Rio Piscinas (ITB040031). The site covers a surface of 11,487 ha and is characterized by disused mining sites and a coastal area of great ecological relevance, due to the presence of one of the most important dune areas in Europe.

Reintroduction areas



Golfo di Orosei (ITB020014). With a surface of 28,941 ha located in the north-east coast of Sardinia, it consists of about 40 km of limestone cliffs, dotted with numerous coves known as "codule".



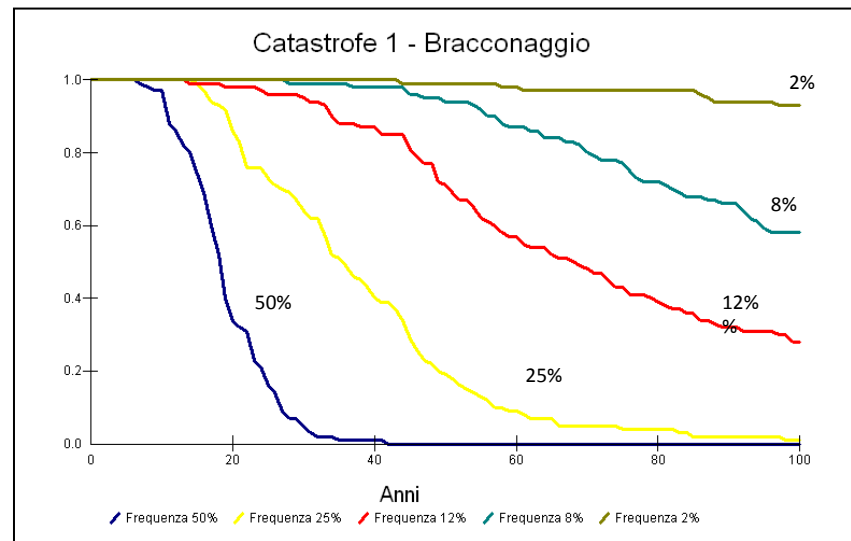
Monti del Gennargentu (ItB021103). The site covers a surface of 44,713 ha and stretches into the most important mountainous area of Sardinia, with peaks exceeding 1,800 m above sea level.





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Simulation of the population dynamics



The figure shows that the achievement of the carrying capacity of the population will only be possible in case of low levels of poaching. As a consequence, it should be ensured the maximum effort to control poaching, both through advocacy for the reintroduction projects and through the increased surveillance in the areas of release and in the territories most used by individuals after the range stabilization





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SWOT analysis to assess the project's feasibility

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	Strengths	Weaknesses
Internal factors	<ul style="list-style-type: none"> Presence of suitable habitat for the species Lack of natural predators that can affect the dynamics of the species Presence of protected areas within the territory of intervention Collaboration with organizations and institutions for the health monitoring Monitoring of reintroduced animals (radiotracking, thermic scanner, etc.) 	<ul style="list-style-type: none"> Risk of overlapping of the intervention area with the mouflon habitat area, in case of expansion of the latter Complex socio-cultural framework, with high risks of poaching acts and excessive hunting pressure, with the presence of free dogs used for hunting activities
	Opportunities	Threats
External factors	<ul style="list-style-type: none"> Creating a population of Sardinian-Corsican red deer that should get in touch in the medium term with other population wildliving Increased ecological knowledge on the species thanks to monitoring activities Cultural growth of the local human population and of the hunters' community thanks to awareness campaigns and training courses Increased surveillance in areas currently at risk with regard to illegal hunting practices 	<ul style="list-style-type: none"> Possible presence of diseases Anthropogenic disturbance in the summer season Disturbance due to hunting of other species, with the hound Presence of domestic livestock





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Reintroduction

Golfo di Orosei: 37 deer released (24 females and 13 males). The first 16 deer came from a fence managed by Forestas Agency, the remaining 21 deer were captured in Costaverde (Sud Sardegna) and reintroduced to the release area. 12 deer were equipped with a GPS/GSM radiocollar and all the animals have been marked with colored ear tags. In total 4 collared animals were found dead after 1 – 2 months the release in nature.

Monti del Gennargento: 32 deer released (18 females and 32 males), all captured in Costaverde and reintroduced to two sites (Montarbu and Rio Nuxi). 10 animals were equipped with GPS/GSM radiocollar, of them 2 were found dead.

Furthermore 15 deer captured in Costaverde were moved to three sites of Corsica (15 December 2015, 15 March 2016 and 2 December 2016), in order to increase the genetic variability.





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22 individuals have been fitted with GPS/GSM radio-collars: 4 fix per day
A pilot study was performed to assess the GPS collar efficiency and to evaluate the error of the localization



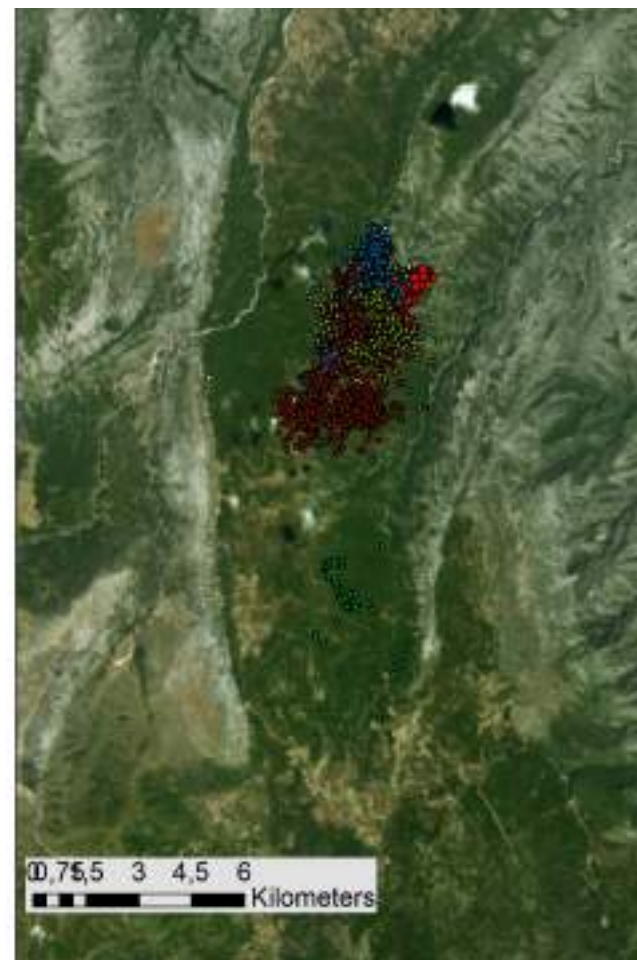


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Monti del Gennargentu



Golfo di Orosei

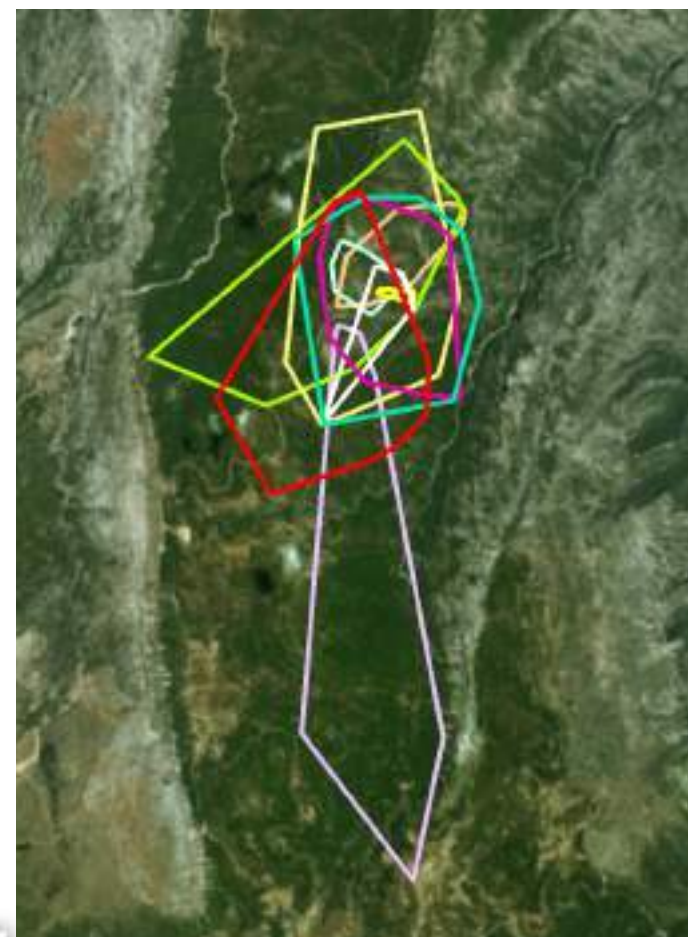


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Monti Gennargentu



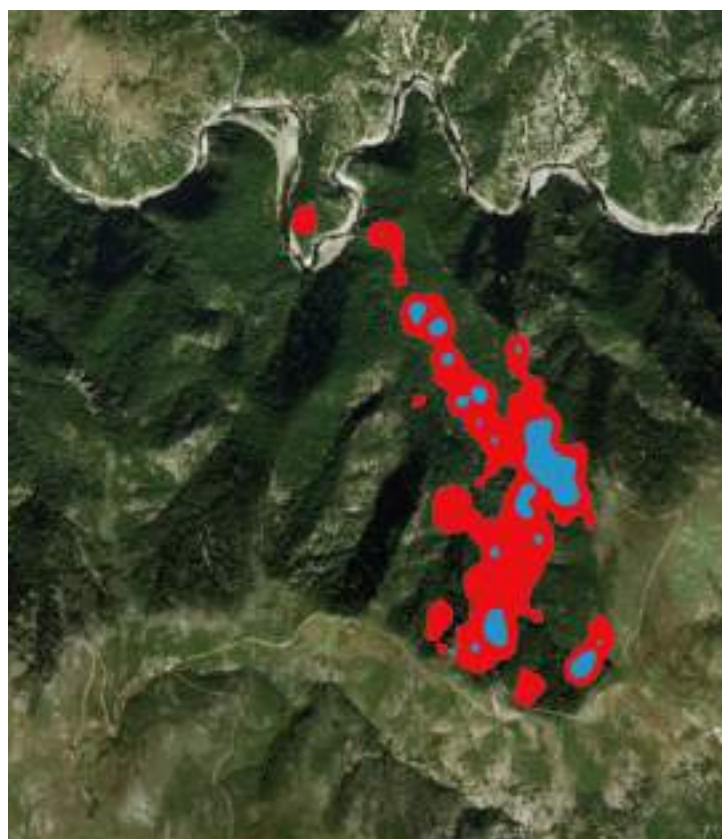
Golfo di Orosei



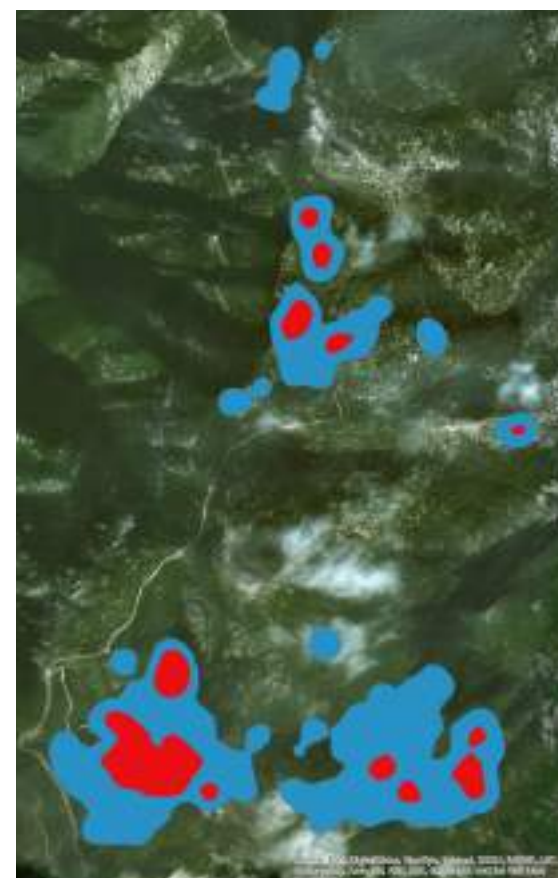


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Monti Gennargentu

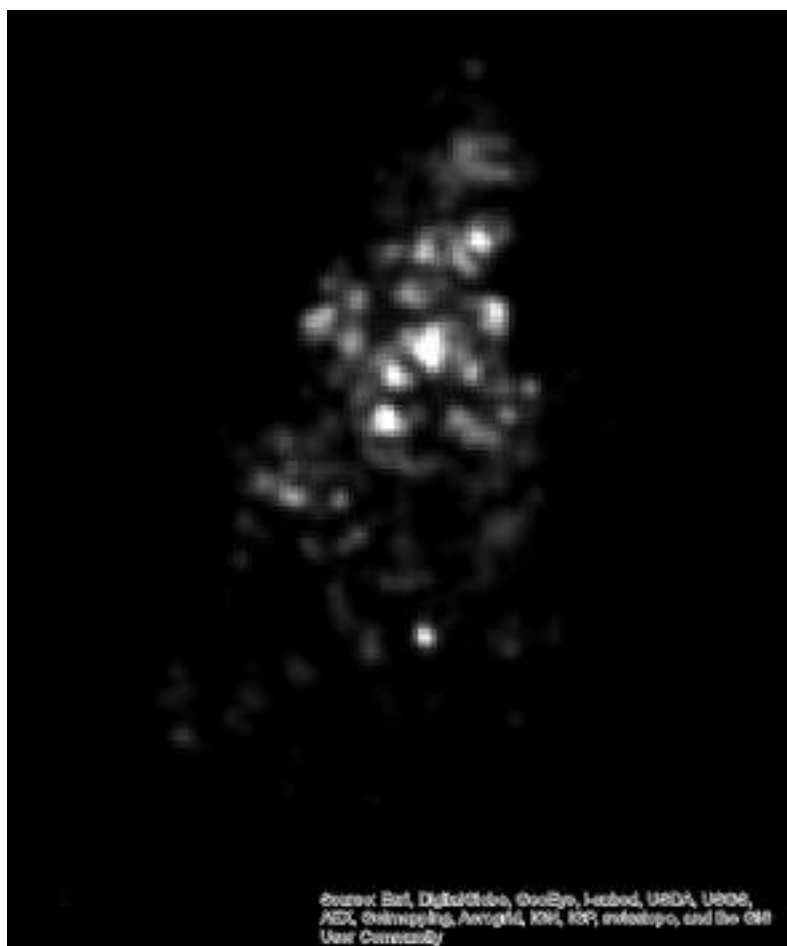


Golfo di Orosei

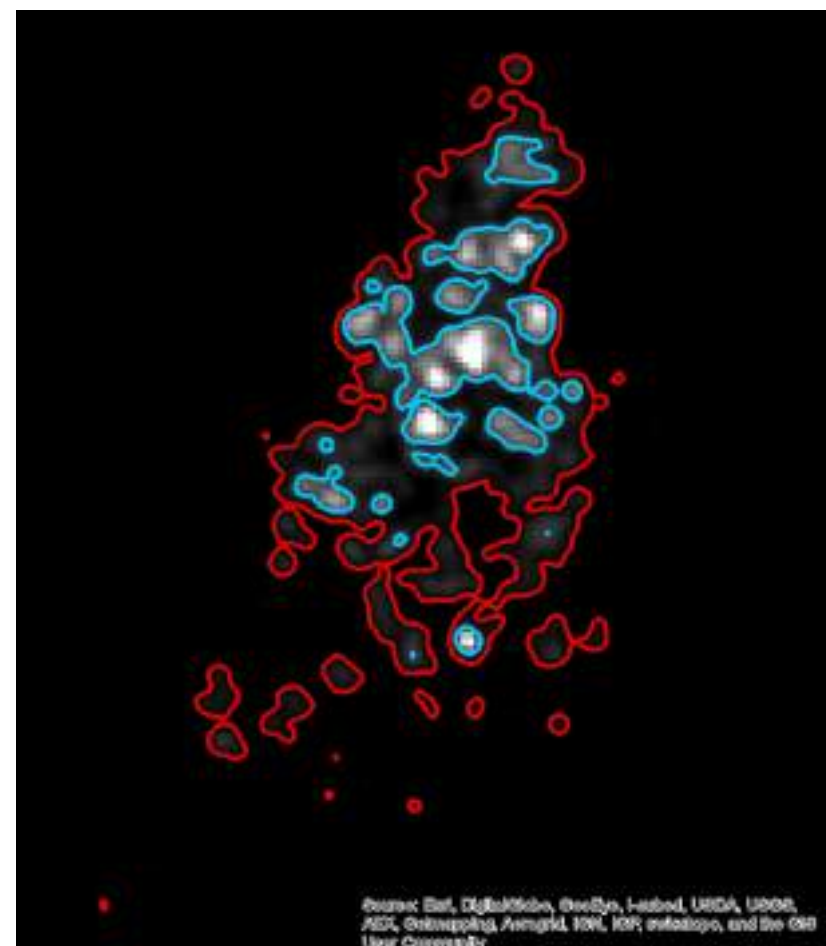




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Source: Esri, DigitalGlobe, GeoEye, IGN, AerGRID, USDA, USGS, Aero, Bing, CNR, DeLorme, NAVTEQ, Swirex, and the GIS User Community



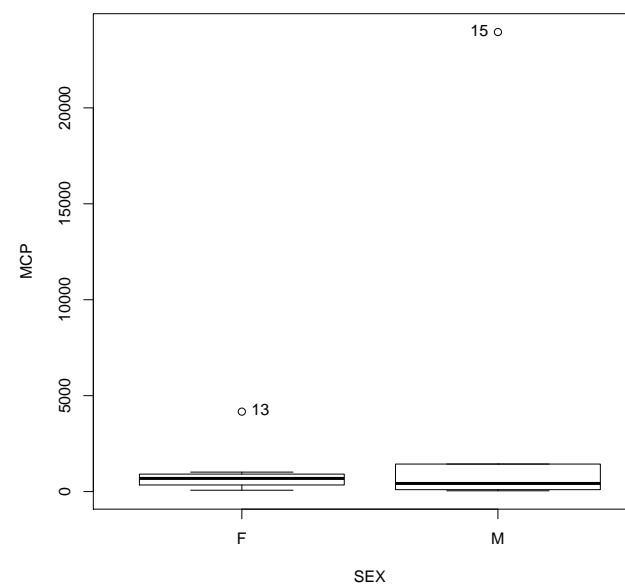
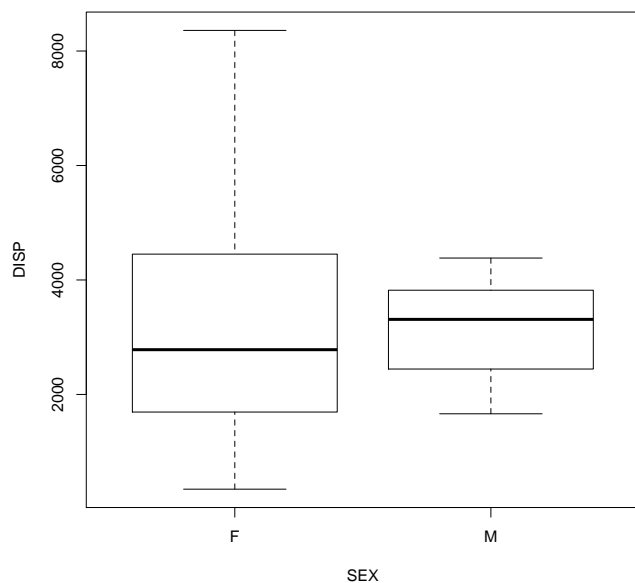
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	n.	FIX	DISP	MCP	K_90	K_50
F	11	1.058,1	3.422,4	952,1	189,0	32,98
M	6	643,6	3.155,5	4.396,3	966,8	181,6





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Thanks for the attention

