



The project LIFE Puffinus Tavolara

“Protection of the largest world population of *Puffinus yelkouan*”

Paolo Sposimo

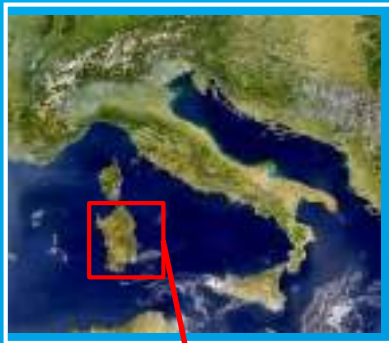
Milano, November 2017



Background



The Marine Protected Area (MPA) Tavolara - Punta Coda Cavallo hosts 9,991-13,424 pairs of Yelkouan shearwaters (*Puffinus yelkouan*), between 1/3 and 2/3 of the global population, estimated in 15,337-30,519 pairs.



Vulnerable at global level and listed in Ann. I of EU Birds Directive. Its protection is therefore one of the main goals of the MPA

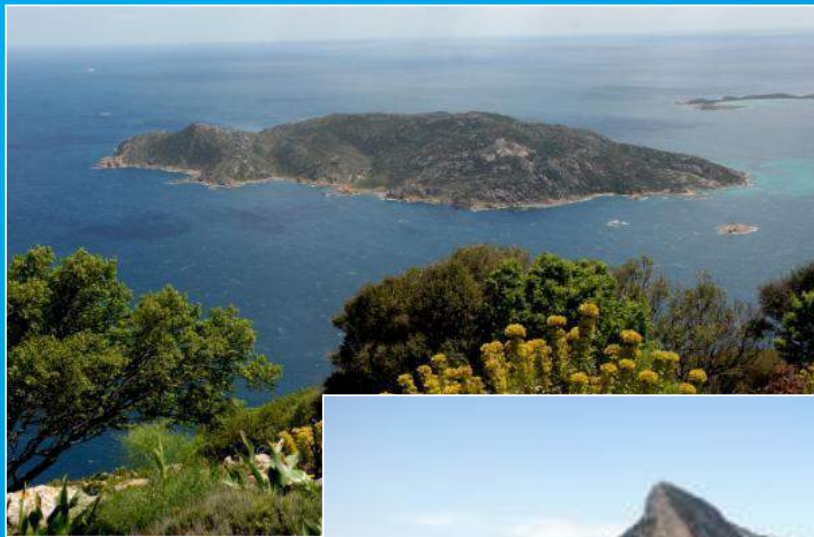
Main threat: predation by Black rats *Rattus rattus* was recorded on 100 % of examined nests of Yelkouan shearwater on both islands, with the exceptions of single caves of Tavolara and of exceptional years with very low density of rat populations





Rat eradication is the solution! But the islands are large and, especially Tavolara, the topography is steep and rugged ... the aerial distribution of bait appears to be the best or the only feasible option

Molara hosts 300-600 pairs of Yelkouan shearwaters, Tavolara > 10.000



2008: rat eradication with aerial distribution, the first in Italy and in Mediterranean region, had been successfully completed on Molara.

Now a new rat population (as confirmed by genetic analysis) is present, probably an intentional introduction by man

For the shearwaters, even considering rat recolonization, we believe that ours has been a significant conservation action: 3 years of high productivity, estimated cost = 100 €/chick fledged



Propedeutic for larger island eradications acquisition of bucket and GPS control system and experience for our staff



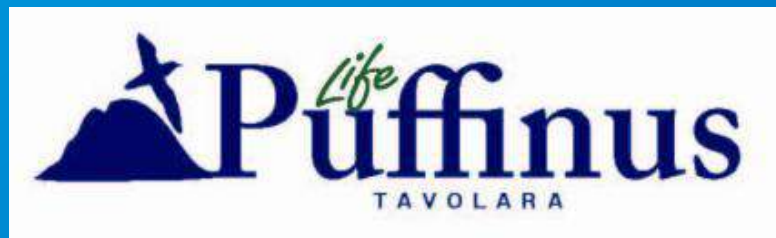
OPTIONS FOR THE FUTURE

- New eradication on MOLARA => important (but opposition of one of the new owners...)
- Eradication on TAVOLARA => difficult but by far the priority for Yelkouan shearwater conservation at global level





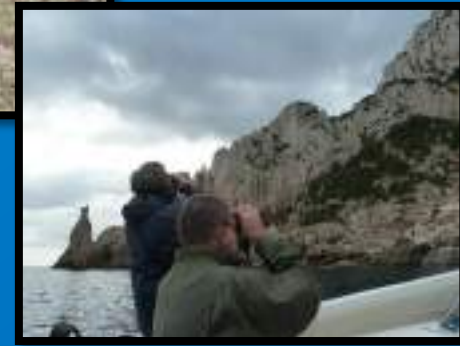
A proposal submitted to the EU for the 2012 LIFE call was approved and co-financed



The project includes:

Introduced Rodents eradication on Tavolara and surrounding islets
and other actions more or less related:

- Control of the feral goats population (capture and translocation)
 - Eradication of *Carpobrotus* sp. on Tavolara
 - Communication and dissemination activities
- Monitoring of effects on target and non-target species





Rodents (Black rat and House mouse) eradication

Scheduled for October 2015, delayed for 2 year due to authorization difficulties (unclear Health Ministry ordinance, now according with an EU regulation a specific authorization is needed)

Authorization obtained in March 2017!!!

Instruments, and experiences, from Molara and Montecristo



GPS-based distribution control system

Main (technical) difficulties:

- Extremely steep morphology, with caves (inhabited by rats) in high cliffs, with consequent risks that some rat habitats remain unbaited
- integration with hand distribution along parts of the island's coastline



Not so easy to explore: a problem during preliminary surveys



“Lots of people have baited cliffs but I don’t think any of them have been quite like Tavolara” (Pete McClelland, Island Conservation NZ, *in litt.*)



Military base with network of cables running up to the pylons located on the area's highest peaks (up to 400 m above ground level)



Feral goats (that have an high impact on vegetation) assume pellets, increasing the risk of poisoning scavenger birds and of eradication's failure, by removing pellets potentially from relatively large areas



House mouse!



Areas with small settlements and
harbours (= reinvasion risks)



Risk of mortality for non target species





Eradication Plan of introduced Rodents on the island of Tavolara (Sardinia)



Draft

January 2015

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LIFE12 NAT/IT/000416 - LIFE Puffinus Tavolara "Protection of the largest world population of *Puffinus yelkouan*"



After 2 years of preliminary surveys, including rodent monitoring, field tests on bait assumption by rodents and on bait disappearance, a peer-reviewed eradication plan (collaboration with Island Conservation), shearwaters monitoring ...



... and 2 years for the authorization





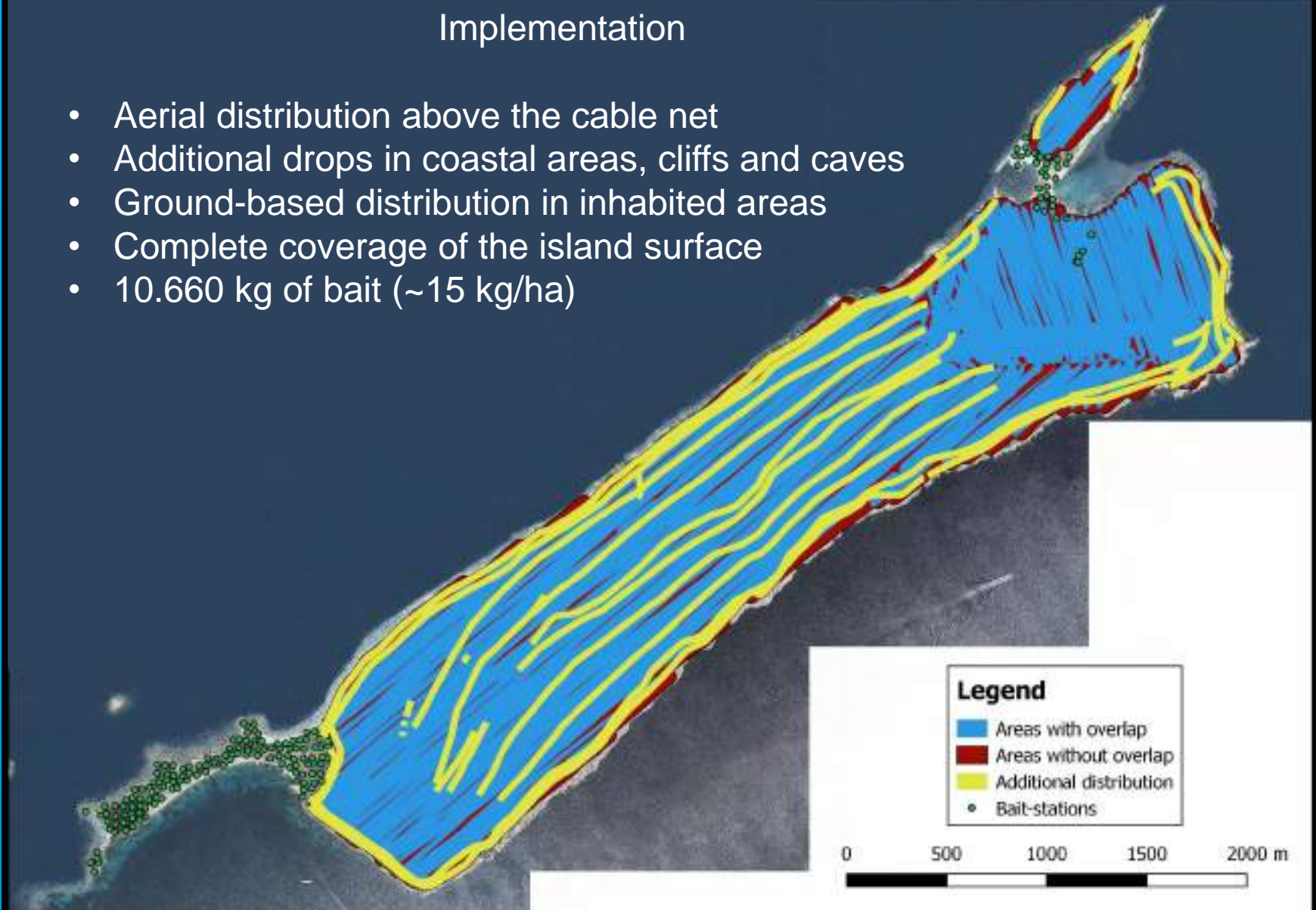
24th-25th October 2017: first aerial bait distribution



2 expert pilots from Island Conservation to support the Italian pilot, but we discovered that we had a very skilled pilot!

Implementation

- Aerial distribution above the cable net
- Additional drops in coastal areas, cliffs and caves
- Ground-based distribution in inhabited areas
- Complete coverage of the island surface
- 10.660 kg of bait (~15 kg/ha)



2nd distribution: 17th November 2017: 7060 kg (9,8 kg/ha), apparently optimal coverage of the island



We have done a good job and we have been lucky: good weather, great pilot and great staff, very few technical problems





The eradication of Rodents on Tavolara appeared to be one of the most effective conservation action that could realistically be implemented in Italy (and one of the most effective for seabirds in all Mediterranean Sea).

- Currently at global level there are 1000-1500 pairs of Yelkouan shearwaters breeding in islands without rats. The eradication of rats from Tavolara will increase this number up to 10 times (90 % of Italian population without rats), probably causing a substantial change in the species' conservation status (currently Vulnerable).

- Negative effects appears to be of a relevance incomparable with conservation benefits

- 2 years without signs of rodents presence are necessary, but we are confident about the successful eradication of Black rat and House mouse



Thanks for your attention

