Equipment powerline by drone for birds
LIFE13/NAT/FR/000093
Alparc conference- Drone in protected areas
Toblach/Dobbiaco, 26 & 27/03/2018
Sandrine Berthillot, Vanoise national park
Action included in the LIFE GypHelp (2014-2018)
= Objective and scale of the Life project GypHelp

Focus on equipment powerline by drone
Coordinator: ASTERS

6 partners:
* 2 national Park (Vanoise and Mercantour)
* Association Observatoire des Galliformes de Montagne
* Departemental federation of hunters from Haute Savoy
* Vulture Conservation Fundation

and Electricity company
Objective of the Life project GypHelp

Conservation of the population of Bearded Vulture in the French Alps

- Decreasing human threats
  - Percussion with overhead cables (skilifts and powerlines)
  - Poisoning and intoxication
  - Disturbance of nests by human activities

- Increasing the population and the demographic parameters
Objective of the Life project GypHelp

Life GypHelp: conservation of the bearded vulture population in the French Alps

Bearded vulture as “umbrella species”: benefits for raptors, black grouse particularly in ski resort

reducing the anthropogenic mortality risk in the project area, collision against aerial cables in particular

securing the increase of the population of Bearded Vultures in the project area
12 breeding pairs in the French Alps

2 territorial pairs in the French Alps

30% of the alpine pairs
Focus on equipment powerline by drone
Focus on equipment powerline by drone

- Cooperation with national electricity company for powerlines Enedis 20000 voltage (ERDF)

- Inventory and hierarchisation of the risks of percussion and electrocution (multi species)
- Improvement and test of visualization material
- Equipment of power lines promotion and communication
- Data entry in an Internet platform
Focus on equipment powerline by drone

- **Current equipment of powerlines Enedis**
  - Equipement by truck with a cabine or from the ground with a pole
  - Mainly lines easily accessible
Focus on equipment powerline by drone

Current equipment of powerlines Enedis

- Materiel: « Firefly alpine » produced by Hammarprodukter
- New materiel tested at present
Focus on equipment powerline by drone

- Limitation for current equipment
  - Price: 500 € for 100 m linear (material and human means)
  - 1000 € per pylon
  (budget 50 000 € per year consacred to equipment in Haute-Savoy and Savoy), => 4 years would be needed to equip all

- Conditions to equip a line: accessible by humans means and height < 6/7 meters equipped => some dangerous powerlines cannot be equipped: mountain area, forest, high level line...

New experimentation of powerline equipment by drone
Video
Test powerlines equipment by drone
First in France in October 2016
https://youtu.be/uLSoLdNf8g4

Collaboration with:

Startup Drone from Slovakia:

Tag markers for birds:
Focus on equipment powerline by drone

1 year later : october, 2017

1500 meters with drone in the same site
Villaret du Nial (France)
Focus on equipment powerline by drone

Approximately same price: * humans means = 500 € for 100 m linear
  * drone = 500 € for 100 m linear

Advantage: cable at 25 meters high equipped and time saving
Project: equipment skilifts by drone

Skilifts: problem collision Birds
Equipment program in each ski resorts (250 in France): since 20 years in Vanoise
With humans resources: from chair with a pole
For security and time saving = Test equipment chairlift by drone
A first in France: 3 July 2018, Pralognan la Vanoise (Savoy)

Partnership Vanoise National Park / e-Sense
Life GypHelp: partnership with Enedis and RTE

Video clip to promote collaboration with electricity company and present the different technical installation of visualization equipment for Birds:

- RTE: Electricity Transmission Network
- Enedis: distribution

vidéo
Thanks for your attention!

CONTACT:
Sandrine BERTHILLOT
sandrine.berthillot@vanoise-parcnational.fr