



AERIAL PROTOCOL FOR RADIOTAGGED BEAR CAPTURE IN CATALAN PYRENEES -GOIAT CAPTURE 2018-

ISIL. Bear house. 3/5/2019



AERIAL PROTOCOL BEAR CAPTURE

1. GENERAL PROTOCOL: BIG MAMMALS AERIAL CAPTURE PROTOCOL

- Red deer *cervus elaphus*
- Isard-Pyrenean chamois *Rupicapra pyrenaica*
- Other: fallow deer, roe deer, wild boar, wildered domestic goat...

2. SPECIFIC PROTOCOL: AERIAL CAPTURE FOR RADIOTAGGED BEARS

- SPECIAL INSTRUCTIONS FOR GOIAT CASE. OCTOBER 2018



AERIAL PROTOCOL BEAR CAPTURE

PROTOCOL STRUCTURE

Preface

Backgrounds

Target species

Operation plan

Goal

Direction of the plan

Staff and tasks

-Minimum staff needed.

-Support staff.

Actions of the plan

Euthanasia

Necropsy

Actions (Steps)

1. Previous conditions evaluation.
2. Briefing.
3. Aerial bear location.
4. Chase and “conduction”.
5. Shot.
6. Distancing and surveillance.
7. Aerial check.
8. Terrestrial approach.
9. Animal handling.
10. Sedative reversal and retreat.
11. Aerial check.
12. Closure of the operation plan.



AERIAL PROTOCOL BEAR CAPTURE

Operation plan

Goal. Capture and collar substitution of a concrete individual

Direction of the plan. Designation of the operative director

Staff and tasks

Minimum staff needed:

- Helicopter pilot (experience in mountain flying)
- Fly and pilot assistant operator
- Anesthetic shooter (Fire armed when in ground)
- Assistant of the shooter (laser distance meter, fire armed when in ground)
- Veterinarian (Substitute of shooter assistant, monitoring the bear status when on ground)
- Director (radio tracking)

Support staff:

- Other people for help with the tasks during the bear handling (and potentially a dog)



AERIAL PROTOCOL BEAR CAPTURE

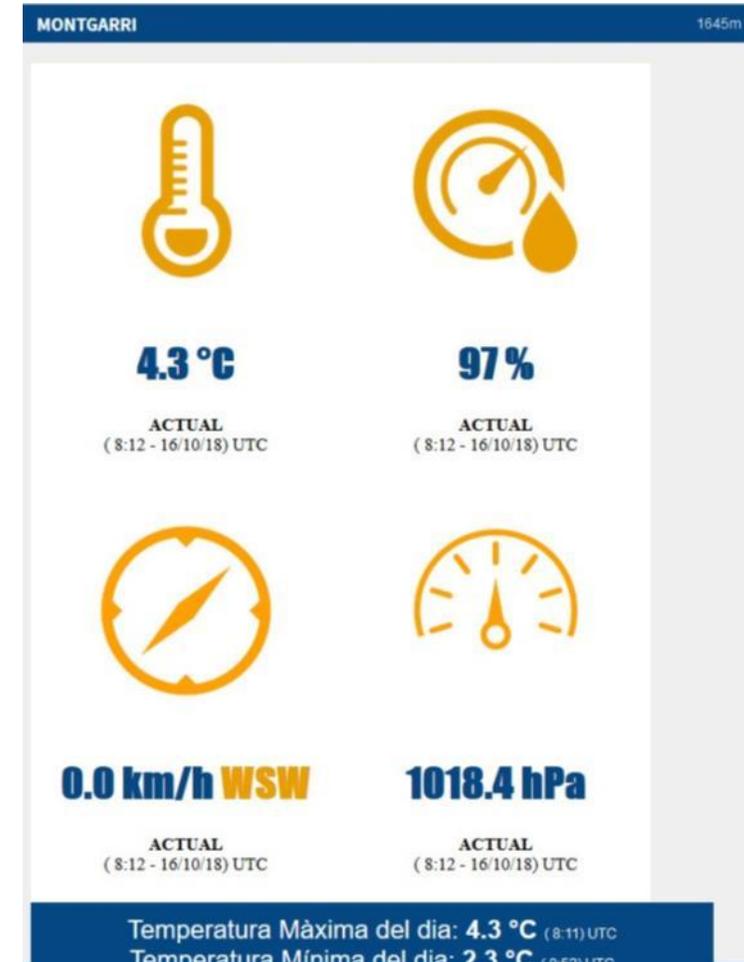
Actions of the plan

1. Previous conditions evaluation.
 - Fly conditions
 - Favourable location of the bear (terrain slope, forest coverage)
 - Availability of staff and materials
 - Choose the meeting point

If so → Start of the procedure

2. Briefing with all staff. Read the protocol every day and remember the tasks assigned to everyone. Checklist of all materials.

3. Aerial bear location by radio-tracking it from the helicopter. Sometimes it's not easy. Possibility to alternate between ground and aerial radio-tracking



AERIAL PROTOCOL BEAR CAPTURE

Actions of the plan

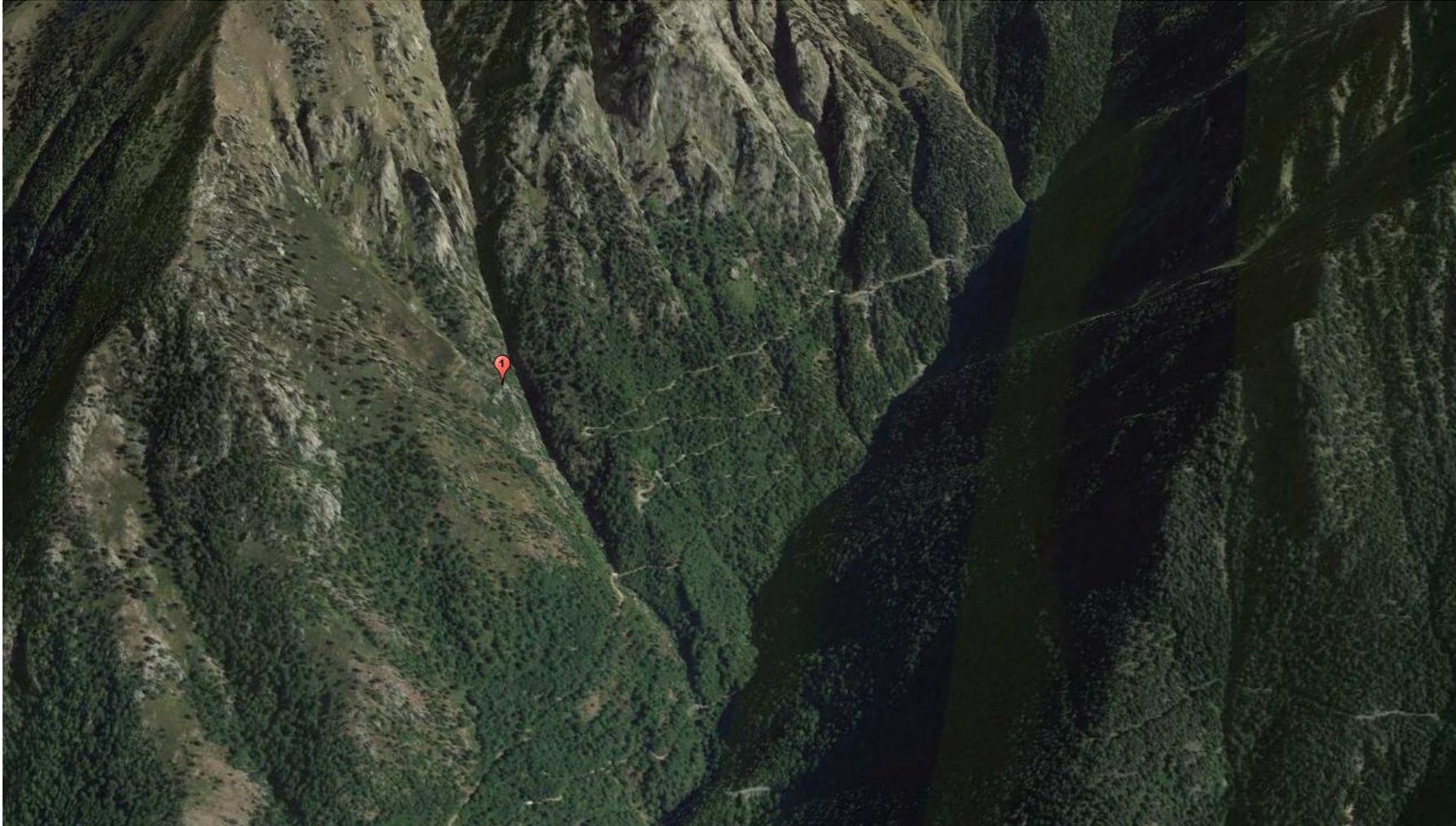
4. Chasing and “conducting” de bear. When the bear decide to scape of the helicopter, we must to move it to a favourable area. And maintain it inside this area!! Mainly after shooting it.
5. Shot. At a distance of 30-40m. Wait till the bear has a regular velocity and parallel trajectory with the helicopter.



AERIAL PROTOCOL BEAR CAPTURE

GOIAT: 3 ATTEMPTS

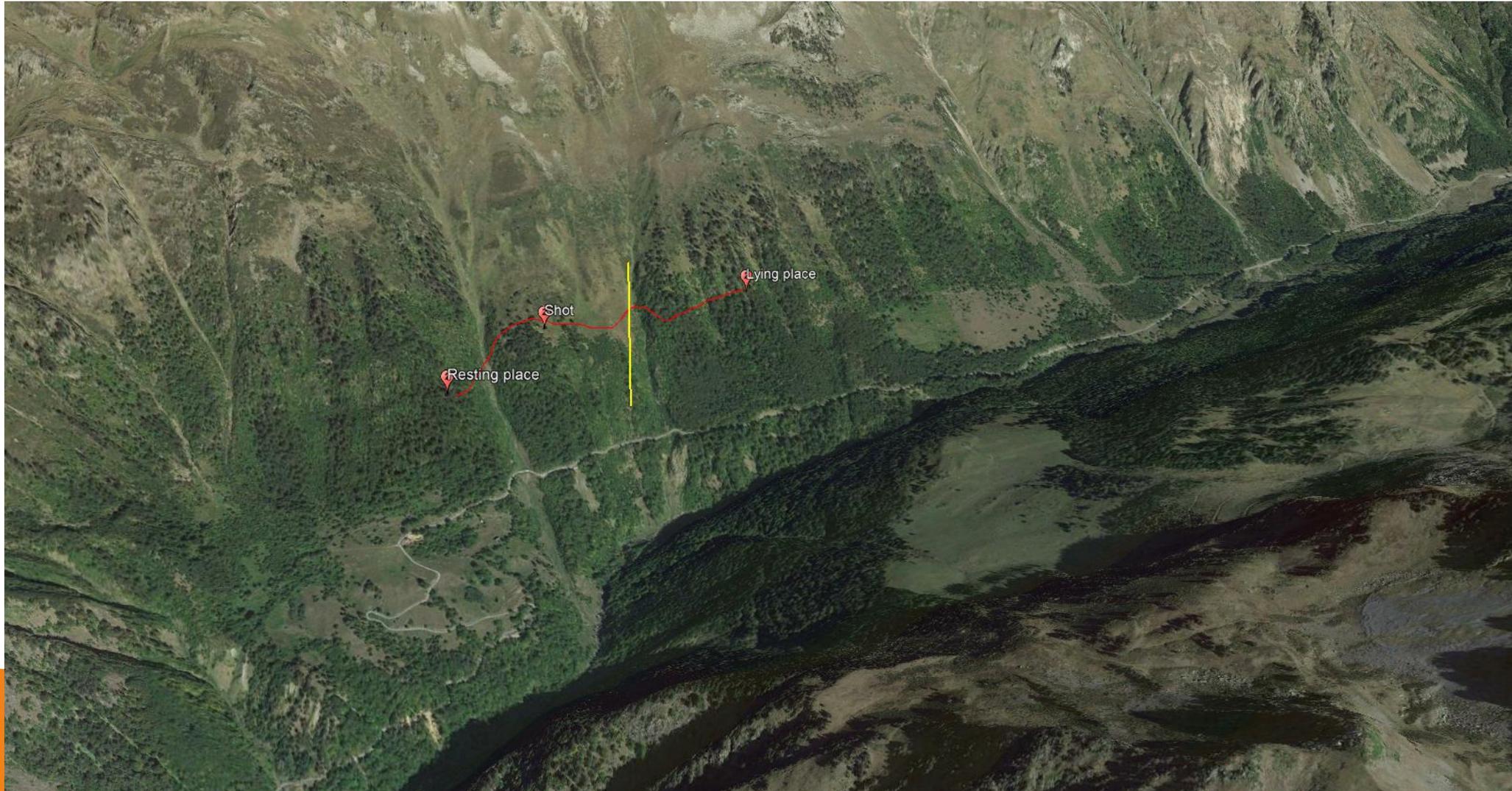
FIRST ATTEMPT → Fly and terrain conditions not suitable enough (windy day and rough terrain)



AERIAL PROTOCOL BEAR CAPTURE

PROTOCOL STRUCTURE

SECOND ATTEMPT → Medium quality of fly conditions and forest coverage

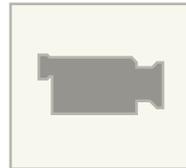


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SECOND ATTEMPT

Troubles:

- Low/bad anesthesia induction
- Interception of bear trajectory after shooting with the helicopter was very difficult for windy conditions
- When bear was under the canopy after shot, we should to follow the protocol and abort the mission. We try to relocate the bear firstly by air and, secondly, we approach it by ground. We had lost too much time. When we arrived to the bear, it was able to wake up and get out.



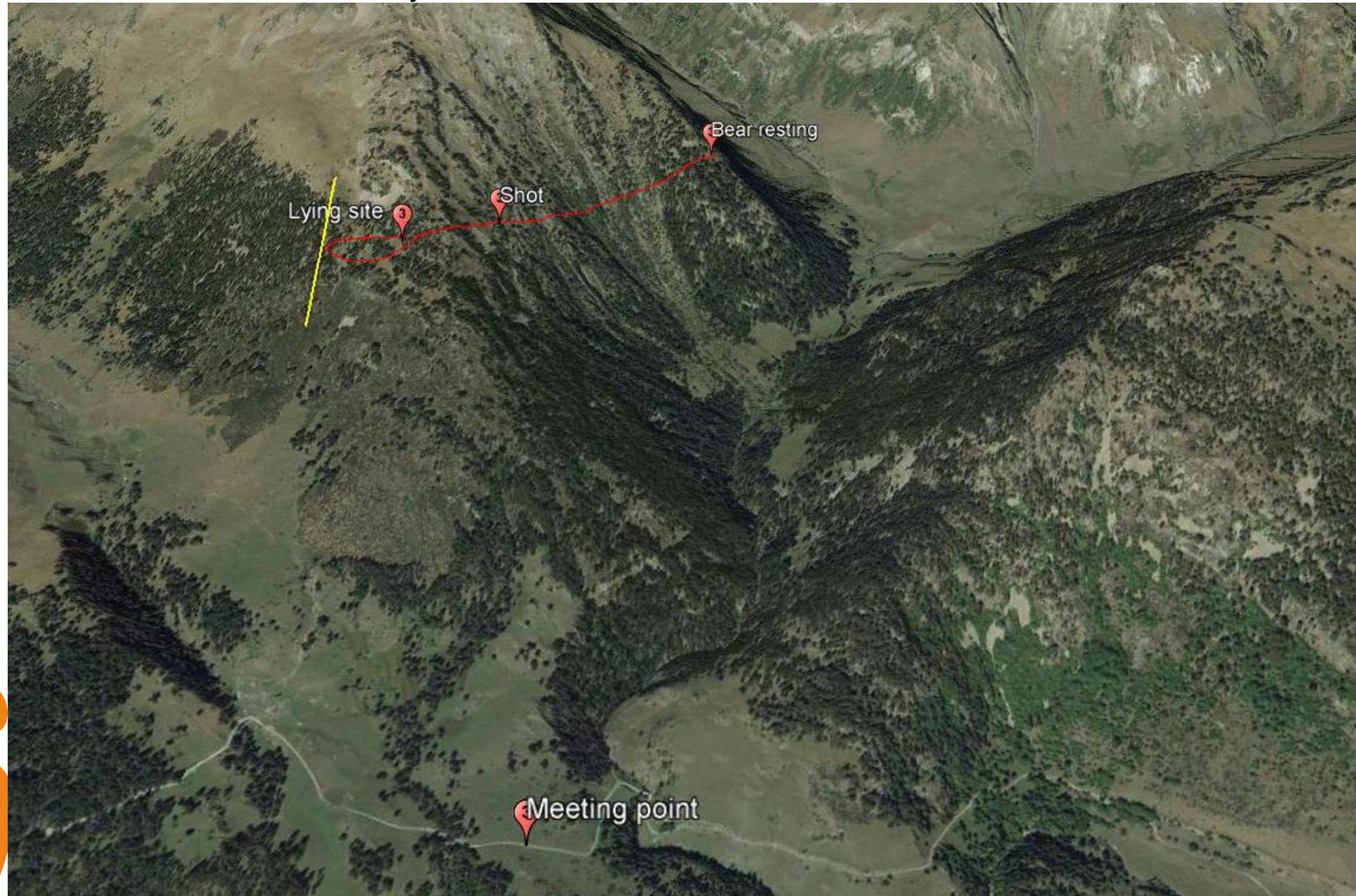
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SECOND ATTEMPT



AERIAL PROTOCOL BEAR CAPTURE

THIRD ATTEMPT → Perfect fly conditions, medium terrain conditions



AERIAL PROTOCOL BEAR CAPTURE

THIRD ATTEMPT



AERIAL PROTOCOL BEAR CAPTURE

Actions of the plan

6. Distancing and surveillance. Fly away from the bear watching it from distance to allow a correct induction of anesthesia
7. Aerial check. Before landing, make an stationary fly close to the lying bear to get the waypoint and verify the anesthesia effect.
8. Terrestrial approach. Move forward in group with one fire-armed officer.



AERIAL PROTOCOL BEAR CAPTURE

Actions of the plan

9. Animal handling. Change the collar, veterinarian checking, dart extraction, sample extraction, biometrics measurements (if necessary). Avoid the risk area



AERIAL PROTOCOL BEAR CAPTURE

Actions of the plan

9. Animal handling. All was recorded with a drone camera and a go pro

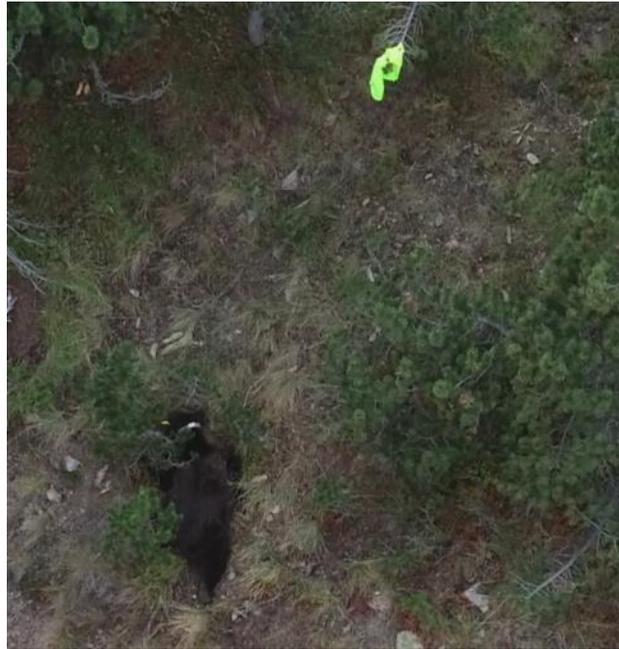


AERIAL PROTOCOL BEAR CAPTURE

Actions of the plan

10. Sedative reversal and retreat.

11. External check. Watching from far point, with camera trap, from the helicopter...



12. Closure of the operation plan. The director will finish the operation plan when bear goes away normally



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