

## Supplementary Information

**Article title:** Conservation ecology of the Balkan chamois: the role of human disturbance and renewable energy plans on Mount Oiti, Greece.

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**Table S1** Livestock animals per type on Mt. Oiti based in 2015 [1] and estimation of the Livestock Units per hectare for the study area (15,600 ha). This estimate assumes that all animals graze exclusively within the study area and that no external animals from nearby pens enter the area to graze

| Livestock type | Animals      | Livestock Unit coefficient | Livestock Units | Livestock Units per ha |
|----------------|--------------|----------------------------|-----------------|------------------------|
| Goats          | 2,375        | 0.1                        | 237.50          |                        |
| Sheep          | 6,449        | 0.1                        | 644.90          |                        |
| Cattle         | 495          | 1                          | 495.00          |                        |
| Calf           | 119          | 0.4                        | 47.60           |                        |
| <b>Sum</b>     | <b>9,438</b> |                            | <b>1,425.00</b> | <b>0.09</b>            |

**Table S2** Habitat types used in the analysis of habitat suitability for the Balkan chamois on Mt. Oiti, according to EUNIS typology [4], their area (km<sup>2</sup>) and percent cover (%) of the study area

| Habitat    | Code | Description                                                                                               | Area (km <sup>2</sup> ) | Percent cover (%) |
|------------|------|-----------------------------------------------------------------------------------------------------------|-------------------------|-------------------|
| Forests    | G1   | Broadleaved deciduous woodland                                                                            | 13.5                    | 8.6               |
|            | G2   | Broadleaved evergreen woodland                                                                            | 1.8                     | 1.1               |
|            | G3   | Coniferous woodland                                                                                       | 75.6                    | 48.5              |
|            | G4   | Mixed deciduous and coniferous woodland                                                                   | 10.2                    | 6.5               |
|            | G5   | Lines of trees, small anthropogenic woodlands, recently felled woodland, early-stage woodland and coppice | 13.9                    | 8.9               |
| Grasslands | E1   | Dry grasslands                                                                                            | 0.04                    | 0.02              |
|            | E2   | Mesic grasslands                                                                                          | 0.7                     | 0.45              |
|            | E4   | Alpine and subalpine grasslands                                                                           | 6.1                     | 3.9               |
|            | F2   | Arctic, alpine and subalpine scrub                                                                        | 17.8                    | 11.4              |
| Scrubs     | F5   | Maquis, arborescent matorral and thermo-Mediterranean brushes                                             | 7.6                     | 4.9               |

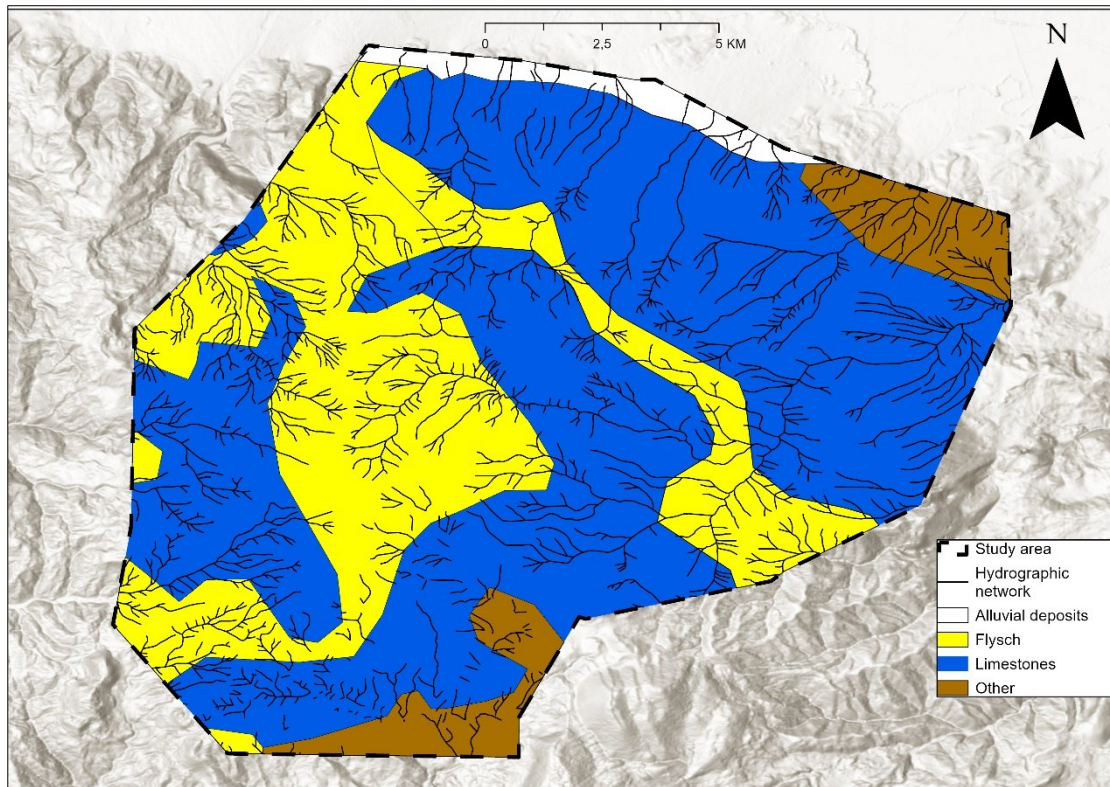
**Table S3** Seasonal and total observations of Balkan chamois on Mt. Oiti during 2023 surveys

| Season       | Animals   | Pellets    | Tracks    | Total      |
|--------------|-----------|------------|-----------|------------|
| Spring       | 7         | 293        | 18        | 318        |
| Summer       | 18        | 64         | 11        | 93         |
| Autumn       | 28        | 58         | 0         | 86         |
| Winter       | 10        | 126        | 19        | 155        |
| <b>Total</b> | <b>63</b> | <b>541</b> | <b>48</b> | <b>652</b> |

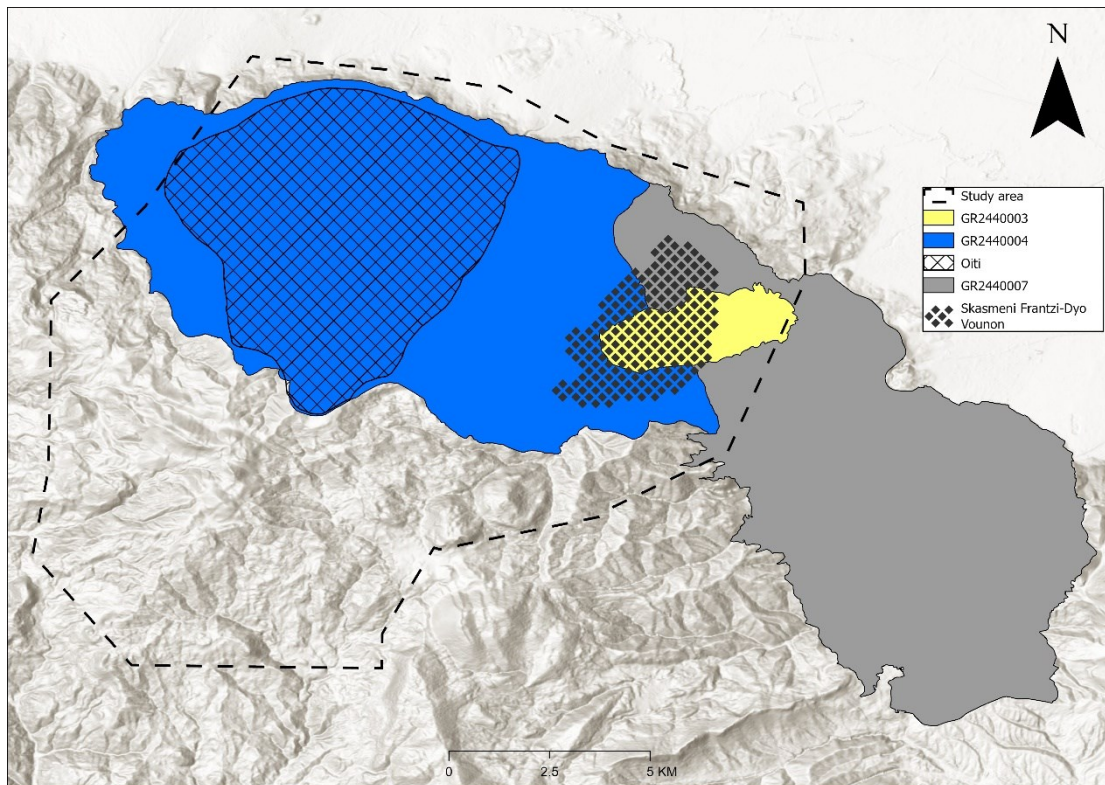
**Table S4** Renewable energy infrastructures planned in the study area of Mt Oiti as downloaded from the national database [5], and their technical characteristics, indicating the spatial overlap with the chamois annual range (R), suitable habitat defined by values greater of 60% (H), and the Natura 2000 network of protected areas (N2000)

| Renewable energy type  | Technical characteristics |          |                         |           |                  |                     | Altitude (m) | Spatial overlap (%) |           |          |
|------------------------|---------------------------|----------|-------------------------|-----------|------------------|---------------------|--------------|---------------------|-----------|----------|
|                        | Permission stage          | Code     | Area (km <sup>2</sup> ) | N         | Rotor length (m) | Total capacity (MW) |              | R                   | H         | N2000    |
| Wind Power Stations    | p                         | 36763    | 3.7                     | 8         | 131              | 31.20               | 2,072        | 92                  | 57.5      | 0        |
|                        | p                         | 36754    | 2                       | 4         | 131              | 15.60               | 1,663        | 0                   | 0         | 0        |
|                        | p                         | 41985    | 0.5                     | 4         | 158              | 34.80               | 1,790        | 80                  | 0         | 0        |
|                        | <b>Sum</b>                | <b>3</b> | <b>6.2</b>              | <b>16</b> | -                | <b>81.6</b>         | -            | <b>61</b>           | <b>34</b> | <b>0</b> |
| Hydroelectric Stations | p                         | 14033    | Point                   | -         | -                | 0.95                | 1,390        | No                  | No        | Yes      |
|                        | p                         | 14034    | Point                   | -         | -                | 0.95                | 1,218        | No                  | No        | Yes      |
|                        | p                         | 14270    | Point                   | -         | -                | 0.50                | 174          | No                  | No        | Yes      |
|                        | p                         | 14269    | Point                   | -         | -                | 0.50                | 212          | No                  | No        | Yes      |
|                        | p                         | 13410    | Point                   | -         | -                | 0.77                | 141          | No                  | No        | Yes      |
|                        | p                         | 14467    | Point                   | -         | -                | 0.48                | 1,225        | No                  | No        | No       |
|                        | p                         | 14466    | Point                   | -         | -                | 0.48                | 1,338        | No                  | No        | No       |
|                        | e                         | 14920    | Point                   | -         | -                | 0.5                 | 141          | No                  | No        | Yes      |
|                        | e                         | 14943    | Point                   | -         | -                | 0.5                 | 140          | No                  | No        | Yes      |
|                        | <b>Sum</b>                | <b>9</b> | <b>Point</b>            | -         | -                | <b>5.6</b>          | -            | -                   | -         | <b>7</b> |

p: production permit (the project should obtain approval of environmental terms before getting a construction permit and then operation permit), e: under evaluation (the project has not yet entered the production permit). N: number of wind turbines. Rotor length refers to the diameter of wind turbine rotors (m).



**Fig. S1** Geological bedrock and hydrographic network in the study area of Mt. Oiti



**Fig. S2** Sites of the Natura 2000 network overlapping with the study area of Mt. Oiti

**GR2440003:** “Farangi Gorgopotamou”. Area: 5.3 km<sup>2</sup>. Protected area category: Natura 2000 site: Special Area of Conservation (SPC). WDPA ID: [555527069](#)

**GR2440004:** “Ethnikos Drymos Oitis”. Area: 71.2 km<sup>2</sup>. Protected area category: Natura 2000 site: Special Area of Conservation (SPC). WDPA ID: [555527070](#)

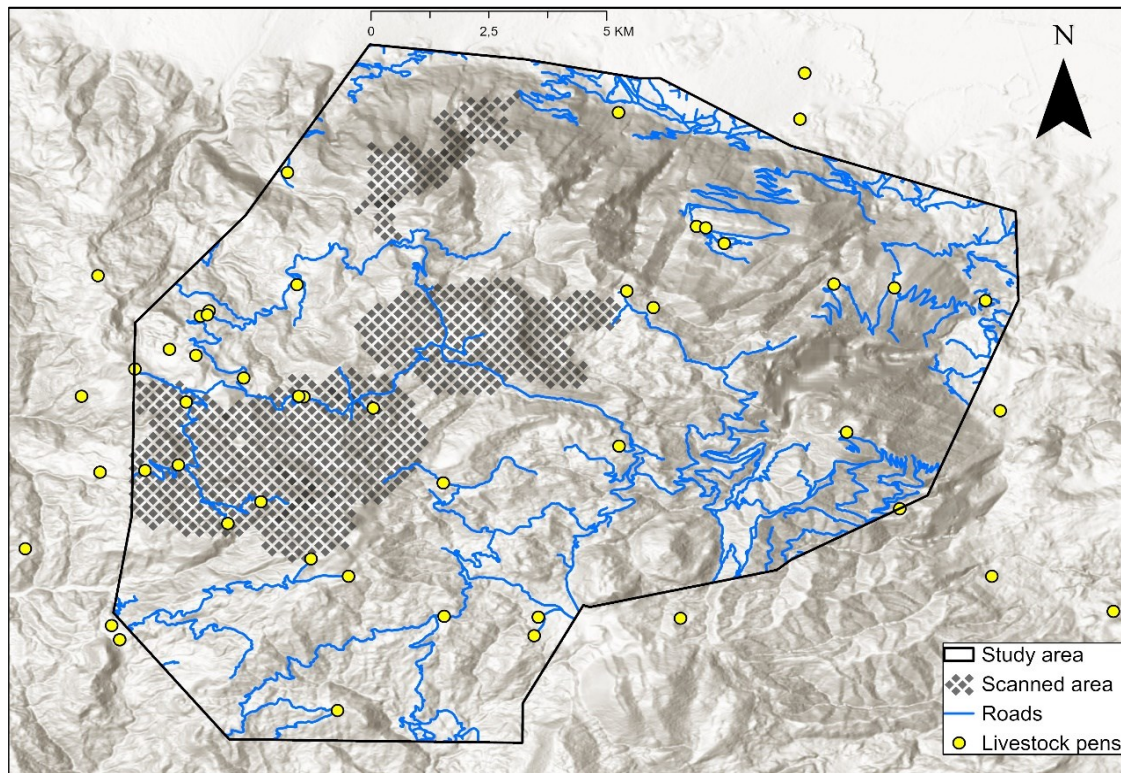
**Oiti:** Area: 34.7 km<sup>2</sup>. Protected area category: included in the Natura 2000 site GR2440004. WDPA ID: [2487](#). IUCN category: II (National Park)

**GR2440007:** “Ethnikos Drymos Oitis-Koilada Asopou”. Area: 132.1 km<sup>2</sup>. Natura 2000 type: Special Protection Area (SPA). WDPA ID: [555539707](#). IUCN category: none

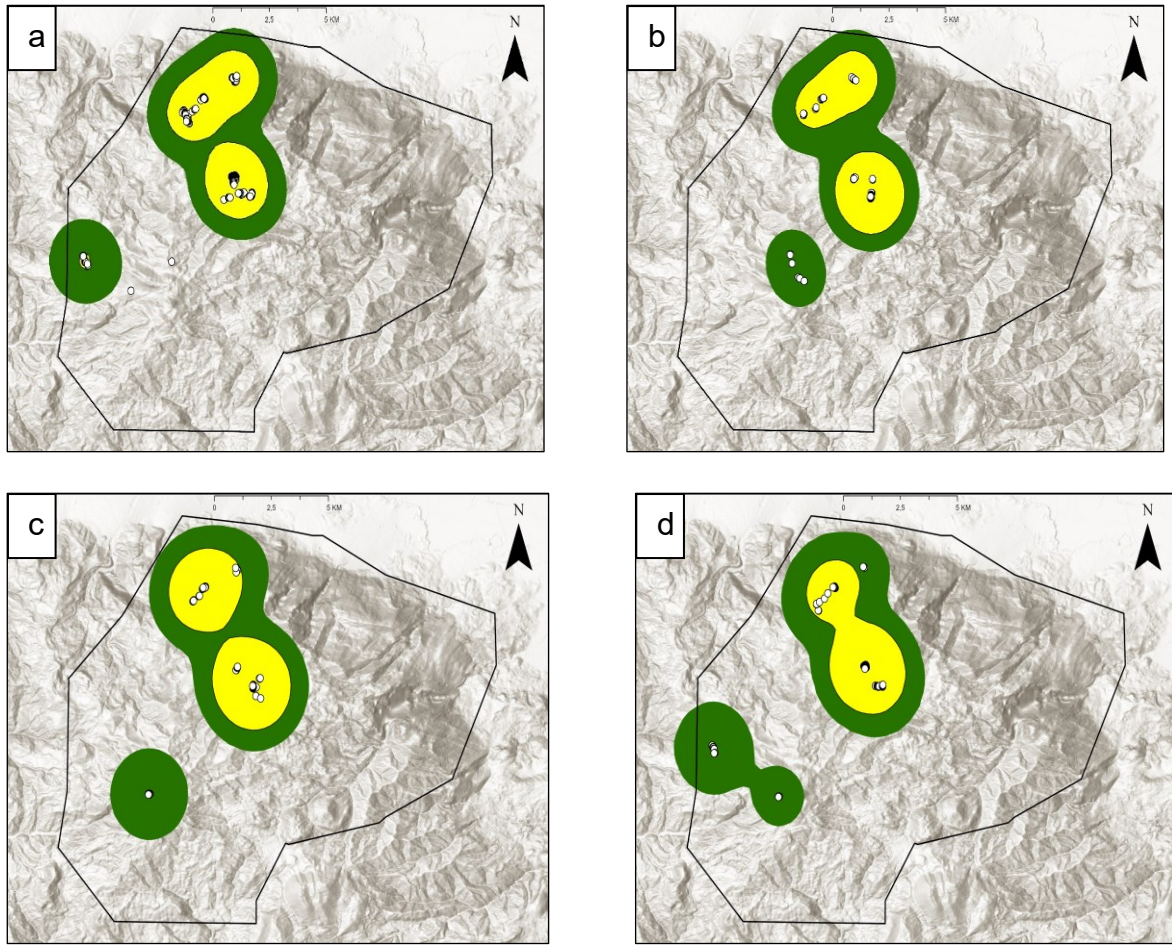
**Skasmeni Frantzi -Dyo Vounon:** Area: 8.5 km<sup>2</sup>. Protected area category: Wildlife refuge. WDPA ID: [341703](#). IUCN category: IV (Habitat/Species Management Area)

WDPA: World Database on Protected Areas [\[2\]](#), IUCN categories according to [\[3\]](#)





**Fig. S3** Scanned area for chamois surveys (2023), road network and livestock pens in the study area of Mt. Oiti



**Fig. S4** Seasonal ranges and their respective core areas of the Balkan chamois population on Mt. Oiti in 2023: a) Spring, b) Summer, c) Autumn, d) Winter

## References

- 1 Iliopoulos, Y., Petridou, M., Giannakopoulos, A., Ntolka, E. & Tsaparis, D. Addressing the conflict with the wolf in Mt. Oiti National Park., 185 (Callisto NGO, Management Body of Oiti National Park., 2015).
- 2 Protected Planet. *World Database on Protected Areas (WDPA)*, <<https://www.protectedplanet.net/en>> (2025).
- 3 Dudley, N. *Guidelines for applying protected area management categories*. (IUCN, 2008).
- 4 Davies, C. E., Moss, D. & Hill, M. O. EUNIS habitat classification revised 2004. 127-143 (2004).
- 5 RAE. *Geospatial map for energy units and requests*, <<https://geo.rae.gr/?lang=EN>> (2024).