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Heraklion, 11 September 2020

SUBJECT: **Licensed Windfarm project threatening Bonelli's eagle territory in site of LIFE project: «Conservation & Management of the Bonelli's eagle population in east Mediterranean» [LIFE17 NAT/GR/000514 – LIFE Bonelli eastMed], project's website: https://www.lifebonelli.eu/el/**

Dear Mr. N. Notaro, Dear Mr. A. Salsi, Dear Mrs. Bacchereti,

We would like to draw your attention to an immediate threat identified as part of the LIFE17 NAT/GR/000514 – LIFE Bonelli eastMed project. Recently a group of local stakeholders on the island of Andros in Greece, requested a visit by environment inspectors on the island, in order to investigate works that resulted in the widening of a small farm road and destroying terraces. The road was widened in preparation of the construction of a new windfarm.

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The LIFE Bonelli eastMed project was asked to support the requested visit by the environment inspectors which it did. The inspectors observed that indeed the road had been greatly widened in violation of environmental conditions set by the decision licensing the windfarm in an area called 'Frangkaki' on the southern part of the island. The environmental conditions mandated that no work is carried out during the breeding season. The road was widened within February 2020.

Following this investigation, we analysed the licences, studies and data available for this windfarm and realised that:

The Andros Island hosts 3% of the national population of the Bonelli's eagle One of the species territories is located on south Andros at the area of Frangkaki -Raxi Xirokampoi which is part of SPA GR4220028 (KENTRIKO KAI NOTIO TMIMA, GYRO NISIDES KAI PARAKTIA THALASSIA ZONI). A management plan for the SPA was elaborated in the framework of the LIFE10 NAT/GR/637 ANDROSSPA which delineated with accuracy this territory and proposed as a core zone (Zone A) the nesting and foraging sites of the species where wind farming should be prohibited (Map 1). This Management Plan was submitted to the Greek Ministry of Environment for approval in 2014 but this was never achieved because certain wind farms were to be installed within the Zone A. As a result: a) the south part of the SPA was legally unprotected, b) the LIFE10 NAT/GR/637 ANDROSSPA was financially damaged by 80.000 euros from EU co-funding and c) wind farms were successfully licenced and approved for installation.

Presently two wind farms are approved in the southern part of the island of Andros and part of SPA GR4220028 (KENTRIKO KAI NOTIO TMIMA, GYRO NISIDES KAI PARAKTIA THALASSIA ZONI), both within the limits of the SPA.

- One is of five turbines of 3 MW each at location 'Frangkaki' by company GREEK WINDPOWER A.E (approved).
- And the other is six turbines of 3.6 MW each at the same location, by company AKTINA LAKONIAS (under licensing process).

The first windfarm has been already licensed (in March 2020) and the licensing decision is accompanied by environmental conditions as the Greek law mandates. This decision is dated April 2018 and has been contested by local groups at the Council of State but their application was rejected (04/12/2019), mainly due to the fact that the procedure leading to the licensing has been correct. The second windfarm has applied for construction approval but not yet licensed.

As LIFE Bonelli eastMed project, we have since examined all the studies submitted such as the two Special Ornithological Studies, the decision of approval of environmental conditions, and compared these to data collected through the LIFE Bonelli eastMed project.

The Bonelli's Eagle is not a qualifying species for this SPA but it is a delimitation species, which according to Greek practice and law is a species that has to be taken into account in Appropriate

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Assessments for a particular site as it is important for reaching favourable conservation status for the species and for the site.

We have determined that:
The two windfarms are both wholly within the above SPA and within the 3rd Bonelli Eagle's breeding territory on the island of Andros, there are three pairs on the island.
The Special Ornithological Studies do not fully assess the impacts to the species, even though they document and record the presence of the species, the breeding and rearing of chicks in great proximity to the proposed developments.

The main inadequacies noted in the Special Ornithological Studies can be summarized as follows:

- ✓ The observations of the species have not been spatially mapped (i.e. *flight trajectories*) so they cannot be accurately compared to the proposed location of the wind turbines;
- ✓ The sampling of the observations is not complete enough to represent all the area and all hours of the day, so as to capture all the regular movements of the species;
- ✓ The main thing missing is a calculation of the 'dangerous' or 'potentially lethal' flights and an extrapolation to potential population impact after applying a Collision Risk Model;
- ✓ Although all recent bibliography about minimum distances from wind turbines regarding large eagles recommends between 3-6 km and sometimes 6 km (Fielding & Haworth 2010, Martinez *et al* 2010, Langgemach & Meyburg 2011, Atienza et al. 2011, Meyburg & Meyburg 2013[11]) between the nearest nest and the wind turbines, more than 50% of the wind turbines proposed are located between 650-850m from the nest and the average distance from all the wind turbines is 2.9km (Map 2);
- ✓ The exact boundaries of the breeding territory have not been determined as there has been no data from telemetry used; In the meantime considering that the species is a "*central place forager*" namely mostly active around its nest site and (depending on food availability) its territory size ranges between 32-130 km² (Wetterer 1989, Bell 1990, Cheylan & Ravayrol 1996, Mure 1999, Sanz et al. 2005, Bosch *et al.* 2010[22]), major activity takes place at a radius

[1] Fielding, A.H. & Whitfield, P.F. 2010. Wind farms and golden eagles. Unpublished report to SNH. SNH, Edinburgh.
Martinez, J.E., Cálvo, J.F., Martinez, J.A., Zuberogoitia, I., Cerezo E., Manrique, J., Gómez, G.J., Nevaso, J.C., Sánchez, M., Sánchez, R., Bayo, J. Pallarés, A., González, C., Gomez, J,.M., Pérez, P. & J. Motos 2010. Potential impact of wind farms on territories of large eagles in south-eastern Spain. Biodiversity and Conservation 19: 3757-3767
Langgemach, T. & B.-U. Meyburg 2011. Funktionsraumanalyse - ein Zauberwort der Landschaftsplanung mit Auswirkung auf den Schutz von Schreiadlern (Aquila pomarina) und anderen Großvögeln. Berichte zum Vogelschutz 47/48: 167 - 181.
Atienza, J. C., Martín Fierro, I., Infante, O., Valls, J., & Domínguez, J. (2011). Directrices para la evaluación del impacto de los parques eólicos en aves y murciélagos (versión 3.0). Madrid: SEO/BirdLife.
Meyburg B-U & C. Meyburg 2013. Telemetrie in der Greifvogelforschung. *Greifvögel und Falknerei*: 26–60. Neumann-Neudamm, Melsungen.

[2] Wetterer, J.K. 1989. Central place foraging theory: When load size affects travel time. Theoretical Population Biology 36:267-280
Bell, W. J. 1990. Central place foraging. Pages 171-187 in Searching behaviour. Springer, Dordrecht, The Netherlands.
Cheylan, G. & A. Ravayrol 1996. Programme de baguage del'aigle de Bonelli en France. Compte rendu. Faune de Provence 17: 95–100.
Mure, M. 1999. Détermination par suivi visuel des habitats utilise ´s par l'Aigle de Bonelli Hieraaetus fasciatus en Ardéche. Alauda 67: 289–296.
Sanz, A., Mínguez, E., Anadón, J.D. & V.J. Hernández 2005. Uso heterogéneo del espacio en trés territorios de reproduccion del aguila-azor perdicera (Hieraaetus fasciatus). Ardeola 52:347–350.

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of **3.2-6.4 km²** from the nesting cliffs. The respective radii coincide fully with the safe distance for siting wind turbines proposed in the existing literature but to our disappointment has been completely overlooked in the present case.

- ✓ No cumulative effects have been estimated as within the ANDROS SPA GR4220028 five more wind farms (of 138 MW) are planned whereas 12 wind farms in total with 352 land and 87 offshore wind turbines are already sited on the island (http://www.rae.gr/geo/ accessed 30/6/2020) (Map 3).
- ✓ No proper evaluation was made on the significance of the study area for migrating raptors. Telemetry data and direct observations selected during the LIFE BonelliEastMed project demonstrate that south Andros constitutes an important passage for dispersing young Bonelli's eagles and migratory birds of prey in the Cyclades region (Map 4).
- ✓ The conclusion of the Special Ornithological Study is not in line with the general objectives of the Natura 2000 sites, i.e. reaching favourable conservation status for the site or the Favorable Reference Values (FRVs) for the species in the ANDROS SPA GR4220028 (i.e. 3-4 breeding pairs).

Apart from the problematic Special Ornithological Studies it's also noteworthy that some of the environmental conditions for the license are also problematic.

Specifically:

- ✓ One term includes a four year bird monitoring program which should start one year before the construction and continue to one year after. This violates the precautionary principle and the Article 6.3 assessment given that it licenses a project on incomplete information and data.
- ✓ Another problematic term includes the mandated use of a radar that detects approaching birds and then emits sounds to scare birds away. Apart from the fact that radar's effectiveness is questionable, it's definitely problematic for resident birds as is the case with Bonelli's eagles and would therefore act as an added source of disturbance resulting very soon in territory abandonment and habitat loss and degradation in the long term.

We are particularly concerned about the potential construction of a windfarm in location 'Frangkaki' of Andros, because most of the LIFE Bonelli East Med project sites (Peloponnese, Cyclades and Crete) have a high potential for wind development. We are therefore particularly concerned that the continuation of this project would become a dangerous precedent, given that this is the first time that scientific data has been ignored or sidelined in such obvious way, the distances proposed between the wind turbines and the nest are extremely short, and the mitigation measures promoted (i.e. Radar) untested and of questionable effectiveness. In the latter case we have to stress that mitigation measures cannot be regarded as legally-binding technical solutions that could justify wind development plans within the NATURA 2000 site network.

Bosch, R., Real, J., Tinto, A., Zozaya, E.L. & C. Castel 2010. Home-ranges and patterns of spatial use in territorial Bonelli's Eagles Aquila fasciata. Ibis 152: 105-117

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Please note that we have already written to the authorities expressing our concerns about this project and are awaiting their answers. Please also note that the company promoting the windfarm for which the environmental inspectors were invited to the island of Andros, has reacted by suing all the stakeholders, including the Natural History Museum of Crete, LIFE Bonelli East Med project scientific coordinator.

In conclusion, apart from the dangers posed to the species conservation, these wind energy projects represent serious risks to the attainment of the LIFE Bonelli East Med project objectives (i.e. augmentation of the species breeding success rates and achieving FRVs for the Andros-SPA Bonelli's eagle population). Without doubt, certain deliverables such as sensitivity mapping will be meaningless for the species population management.

More specifically for the Andros SPA, it is imperative to re-evaluate the licensing process of the planned wind farms due to the new and most updated telemetry data collected by the LIFE BonelliEastMed project. The cumulative effects of wind farms in the south Evvoia-north Cyclades region which holds a significant Bonelli's eagle metapopulation of (min) 8-10 breeding pairs and also constitute a raptor migration corridor will be immense. Our data demonstrate a clear violation of article 6.3 of the 92/43/EEC Directive and jeopardize the ecological coherence of the NATURA 2000 sites network in Greece.

In addition the new Greek Law 4685/2020 on the updating/ modernization of the environmental legislation, simplifies further the licensing process of development plans (primarily targeting energy investments) and practically makes certain articles of the EIA Directive (85/337/EEC, 2011/92/EU) invalid for the *"screening", "scoping"* and *"consultation"* stages for Impact Assessments.

Needless to mention that other national and transnational LIFE projects (e.g. with Bulgaria) will face soon similar problems that might impede certain deliverables (e.g. implementation of Action Plans, restocking/ reintroduction programmes of European vulture species and rewilding nature activities). In any case proper conservation planning should focus on the **Amendment of the Special Land Plan for Renewables in Greece**, which is presently based primarily on wind potential, without adequately evaluating and assessing conflicts with nature legislation and Natura 2000 site objectives.

Please do not hesitate to contact us regarding further information.

Yours sincerely,

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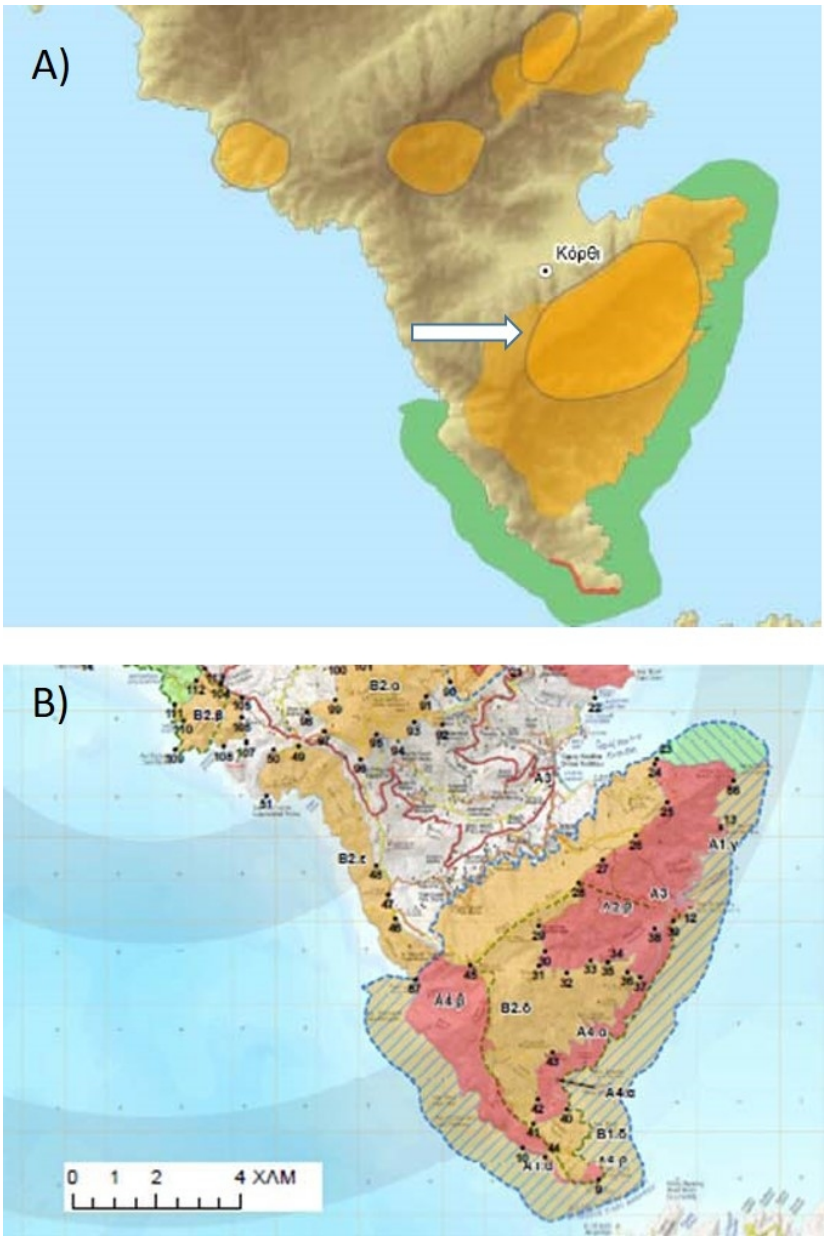
ANNEX I: Maps of the area.

MAP 1. Bonelli's Eagle territory in south Andros (A) and proposed delineation of strict Protection Zone (red) and Buffer Zone (orange) in the ANDROS-SPA Management Plan (B).



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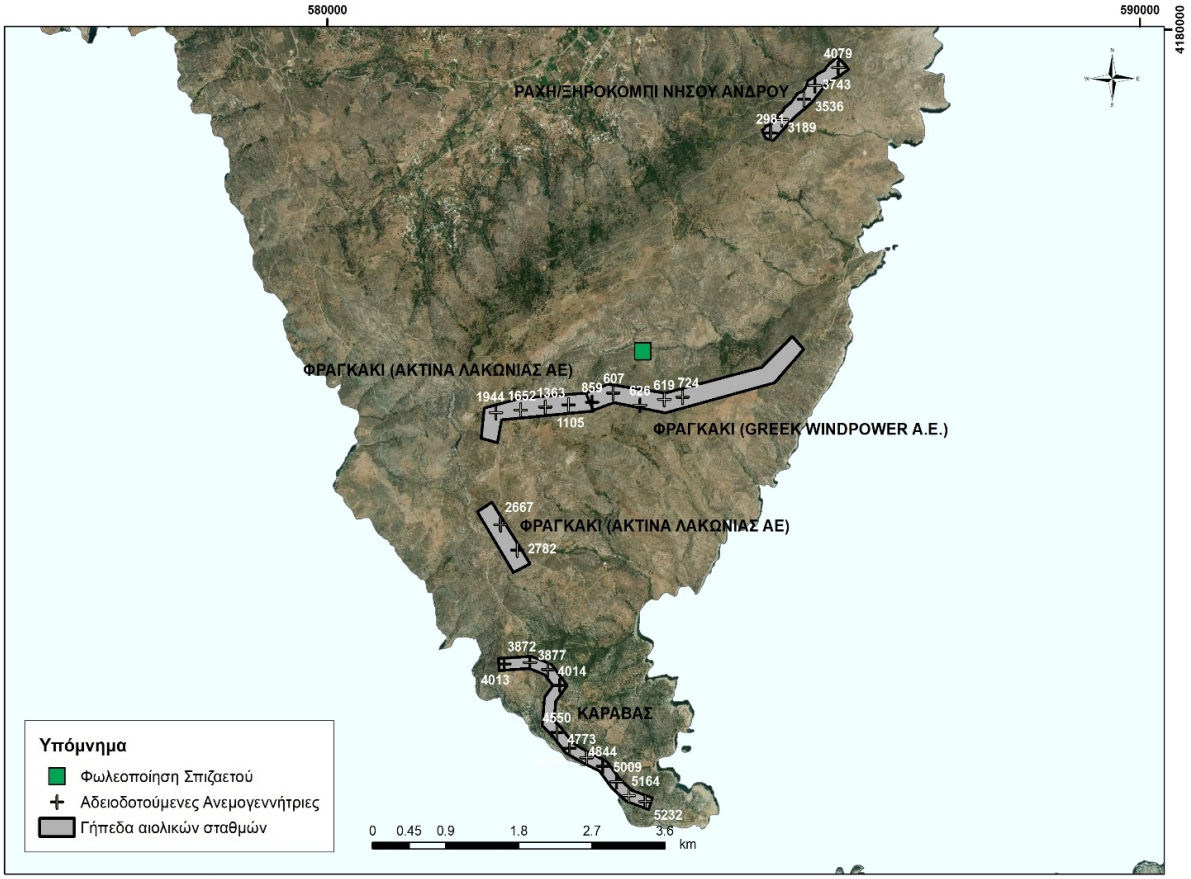
MAP 2. Nesting site of the Bonelli's eagle in the "Frangkaki" area in south Andros and respective distances (m) from wind turbines of licensed and planned wind farms.



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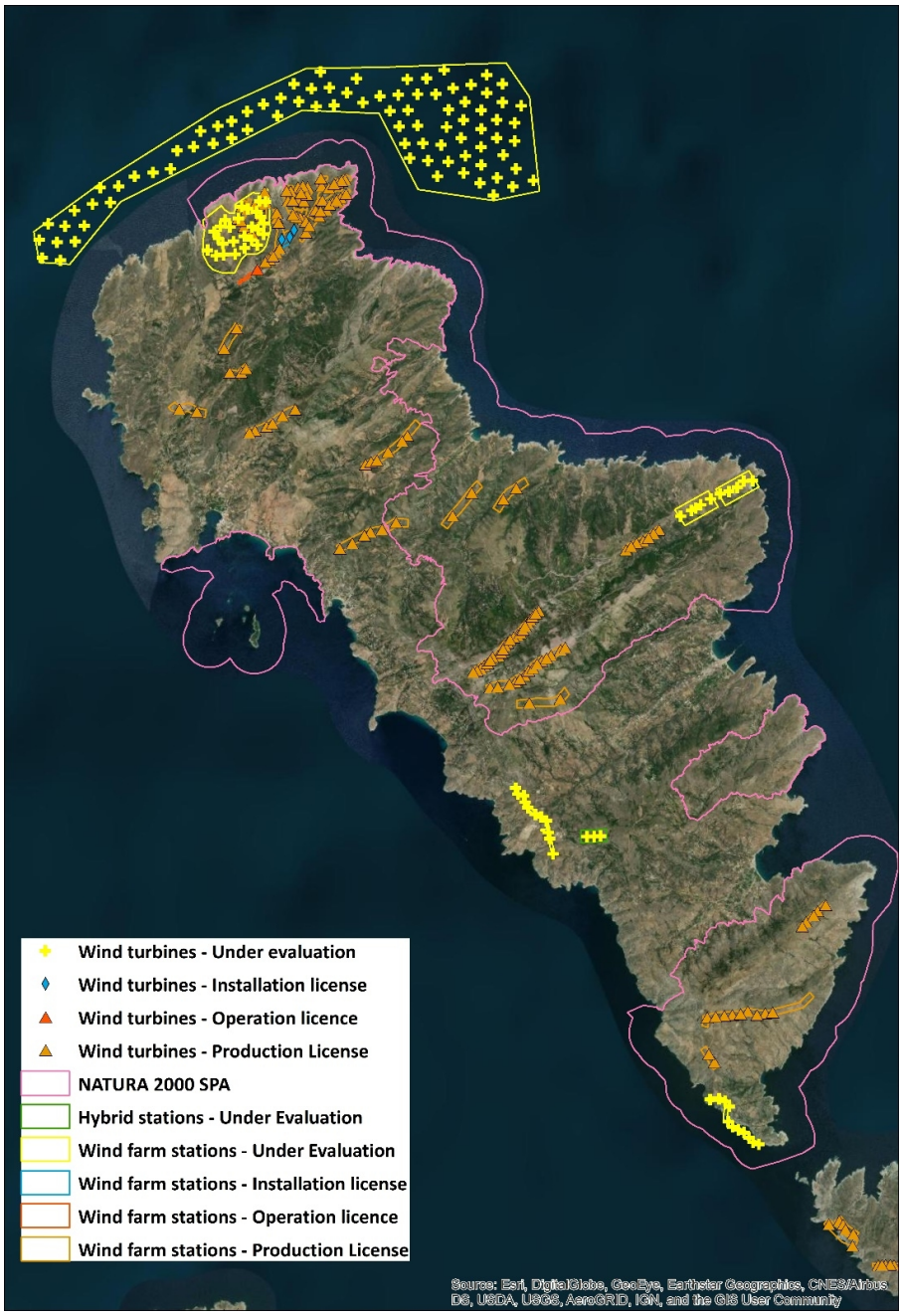
MAP 3. Wind farm siting in the Andros island (Regulatory Authority of Energy: http://www.rae.gr/geo/ accessed 30/6/2020).



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MAP 4. Space use of the NATURA 2000 site in Andros by radio tagged young Bonelli's eagles born at the "Frangkaki" territory and spatial overlap with licensed and planned wind farms. (Telemetry data selected by the LIFE BonelliEastMed project team i.e. radiolocations (green dots) with a 10-min time step during March 2019- June 2020).