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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

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Complaints on stand-by

Wind energy: Possible threats to an endangered natural habitat in Izmir (Turkey)

- REPORT BY THE GOVERNMENT -

Document prepared by
the Ministry of Forestry and Water Affairs, Turkey

REPUBLIC OF TURKEY

MINISTRY OF FORESTRY AND WATER AFFAIRS

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GOVERNMENT REPORT ON COMPLAINT NO. 2014/6 "WIND ENERGY: POSSIBLE THREATS TO AN ENDANGERED NATURAL HABITAT IN İZMIR (TURKEY)"

Background

This complaint was submitted in July 2014 by a citizen of Çeşme, İzmir. It claimed that wind energy installations (WEIs) in Karaburun Peninsula could affect a natural area and its wildlife. The Bureau assessed this complaint and requested for further information from the national authorities. The Turkish Government submitted their report in July 2016 which can be reached at the website of the Convention among the documents: T-PVS/Files(2016)24E.

After the 36th Standing Committee meeting, on Jan 10, 2017, the Secretariat sent another request to national authorities, to receive an updated report on (1) the measures put in place to assess the eventual cumulative impact of the wind farms constructed and to be constructed in the whole area, (2) on the monitoring already schemes put in place and (3) the eventual findings they have already produced.

General information about Turkish wind energy strategy within the frame of ecological continuity

The procedures conducted by the General Directorate of Nature Conservation and National Parks (GDNCNP) during the permission and operation processes of WEIs and monitoring of the activities are as follows;

- The WEIs in critical bottleneck regions like İstanbul Strait, Çanakkale Strait, Hatay (Belen), Artvin (Borçka), are prohibited with a Ministerial decision, as important bird migration routes pass over these sites.
- As with these, WEIs are not allowed in protected areas which are under the responsibility of the Ministry of Forestry and Water Affairs, since those are protected through national legislation.
- Apart from the sites mentioned above, the rest of the WEIs are subjected to an EIA procedure which is conducted by the Ministry of Environment and Urbanization. According to the Regulation on EIAs, those WEI applications which happen to fall into the category of Appendix 1 of the Regulation (with a capacity greater than 50 MW) are evaluated by a commission. The GDNCNP, under the Ministry of Forestry and Water Affairs is in this commission. It requests the enterprises to prepare a report on the effects of WEI to all the elements of biodiversity including both flora and fauna for two years (one year during construction and one year during operation) and to take the necessary measures by evaluating these reports. All the measures to be taken are included as enterprise's commitments in the EIA report.
- For those WEIs which do not fall into category of Appendix 1 (less than 50 MW capacity), the EIA is conducted in a different way. The GDNCNP directly requests (without being part of a commission) a report from the enterpreuners in which the installment's effects are evaluated in terms of particularly for but not limited to birds and bats, and also for biodiversity, elements of wildlife, natural landscapes. The WEIs effects are stated and the measures that will be taken to

mitigate these effects are also indicated in the reports. The reports are evaluated in the light of guidance document "Wind Energy Development and Natura 2000" prepared by European Commission in 2011. Then the permission is given after evaluation of these reports by the GDNCNP.

After evaluation of the reports, if the project is permitted, there are some obligations for all projects, such as, landscape restoration, two year monitoring of the project (1 year for construction and 1 year for operation), placing bat and bird repellers, plantation of the area. These activities are regulated through notarised commitments.

Moreover, either within the scope of Appendix 1 of the regulation or not, each WEI is subject to national authorities' sanctions. In case a clear threat to biodiversity is foreseen, the government bodies may request for further measures in the project like changing the place of the project, changing the locations of turbines, shutting down the turbines in the migration season, appointing a permanent observer for migration, placing bird detecting radars to the turbines.

All of the monitoring reports of the WEIs, which are prepared by ornithologists, are sent to the GDNCNP and the effects of the projects are followed through these reports. As the results of the evaluations of GDNCNP implies, no threatening activity for biodiversity is reported so far. Some of the monitoring reports are given as examples below.

Cumulative Effects Evaluation Report

Currently there are 12 wind energy facilities, either in construction or in operation, around Çeşme peninsula region, all of which have passed through the detailed Environmental Impact Assessment process. Furthermore, there is a cumulative evaluation report about the Çeşme basin to regulate planned WEIs.

Çeşme basin, which currently includes 12 WE projects, is not on one of the two main migration routes passing over Turkey (Figure 1). It is also 250 km west of the largest secondary route which comes from Eastern Europe and enters Turkey from Thrace, passing through Marmara Sea, over Manyas and Uluabat lakes and reaches to Burdur and Eğridir lakes (Figure 1). However, it is close to a third degree migration route which passes over Çeşme peninsula.

Some migration routes detected by satellite transmitters mounted on white stork (*Ciconia ciconia)*, black stork (*Ciconia nigra*), imperial eagle (*Aquila heliaca*), lesser spotted eagle (Clanga pomarina), saker falcon (*Falco cherrug*), European honey buzzard (*Pernis apivorus*) are given in Figures 2-6, which Show that most of the migration routes are far from the Çeşme basin.

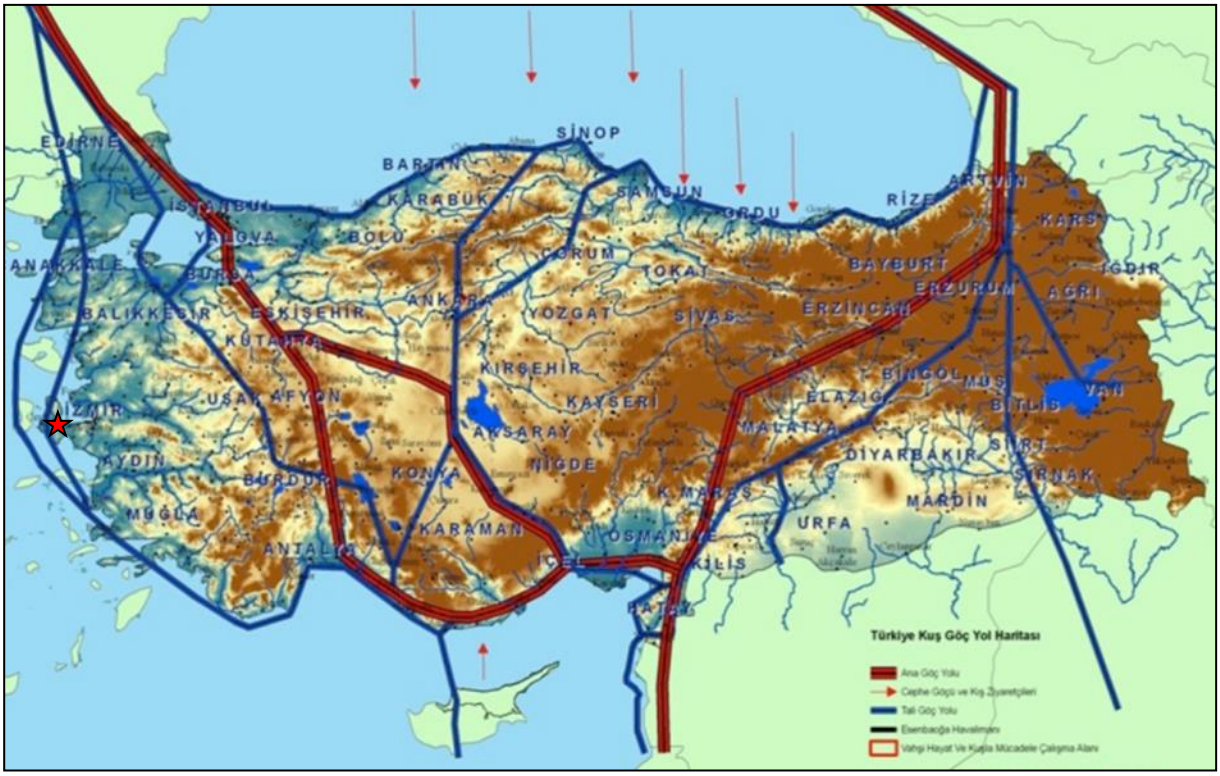


Figure 1. The position of Çeşme basin in comparison with the two main migration routes passing over Turkey. (Kiziroğlu et al, 2011)

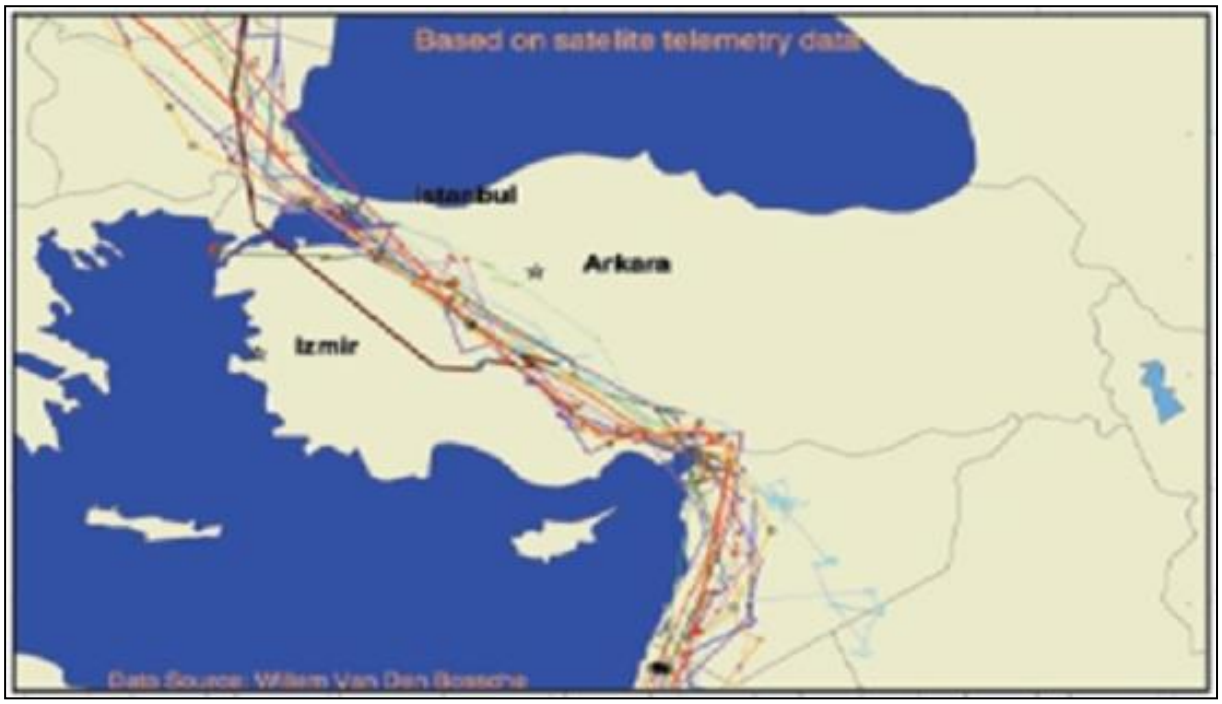


Figure 2. Migration route of white storks (Shamoun-Baranes et al. 2003)

Figure 3. Migration routes of black storks tagged in Estonia

Figure 4. Migration route of imperial eagle tagged in Hungary

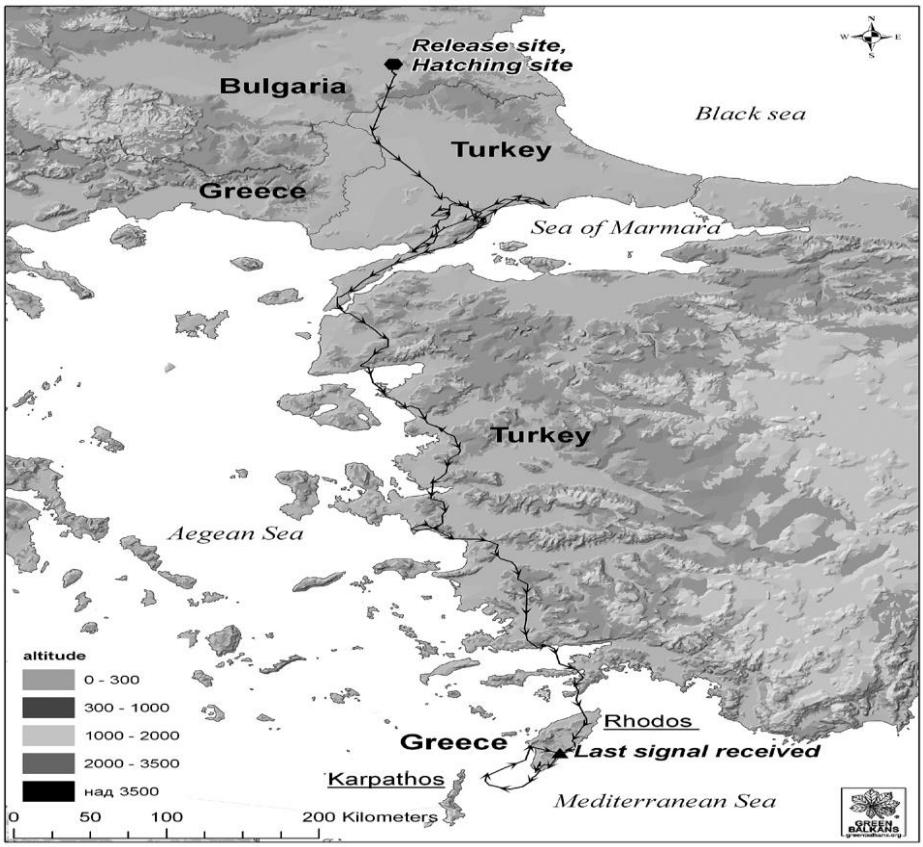


Figure 5. Migration route of another imperial eagle tagged in Hungary

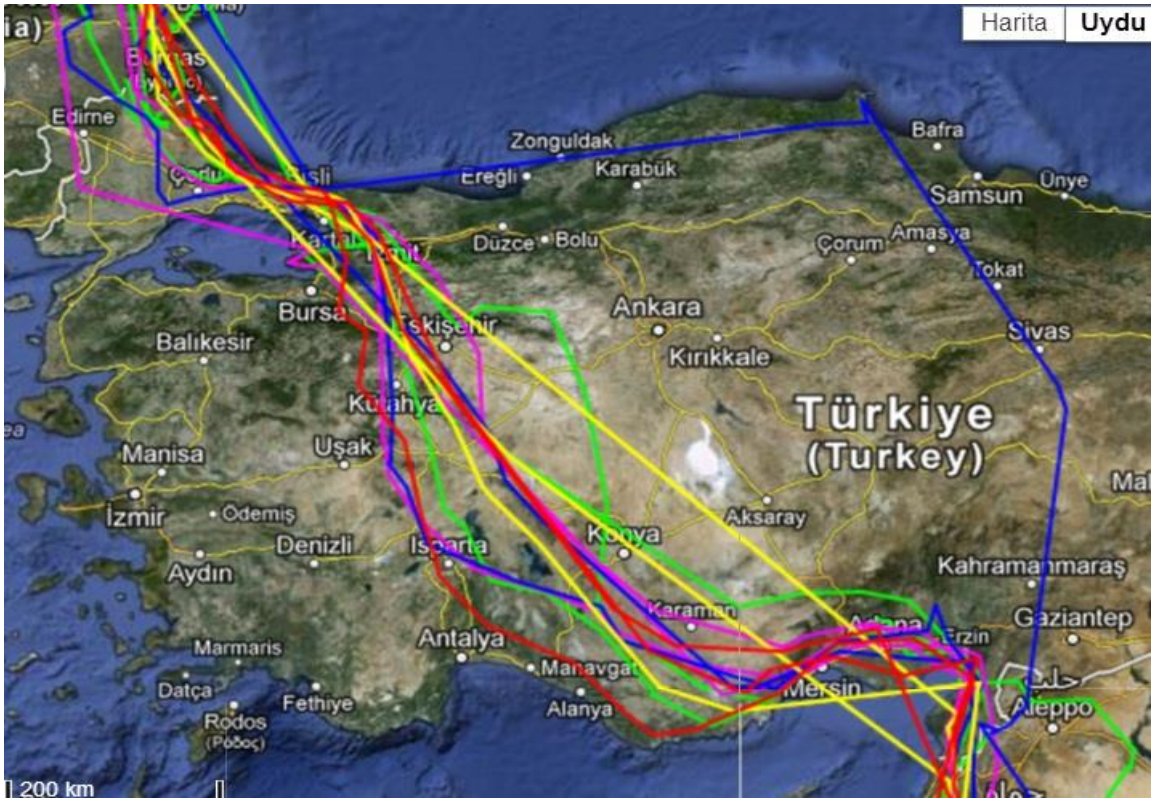


Figure 6. Migration route of lesser spotted eagles tagged in Romania.

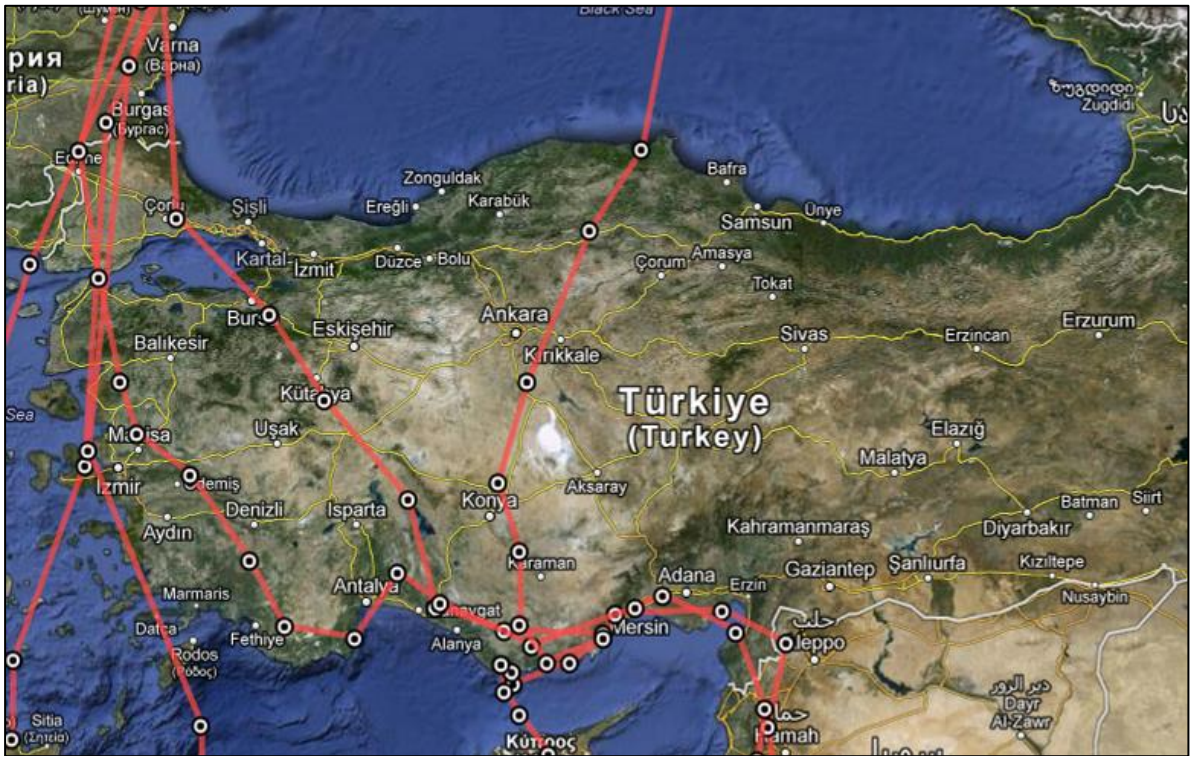


Figure 7. Migration route of honey buzzards tagged in Finland.

Figure 8. Migration route of saker falcon tagged in Ukraine.

During the monitoring for cumulative effects evaluation, 56 bird species were monitored in one year. 27 bird species are resident, 12 of them are summer migrants, 12 are winter migrants and 5 are transit migrants. The next year 44 bird species were determined. In both monitoring years, no migration in groups or no termals were detected in the whole project area.

In the light of the above evaluations, the existing wind energy projects have no detrimental effects on the continuity of wildlife and ecological balance, neither in spring migration nor in autumn migration season.

Monitoring Reports

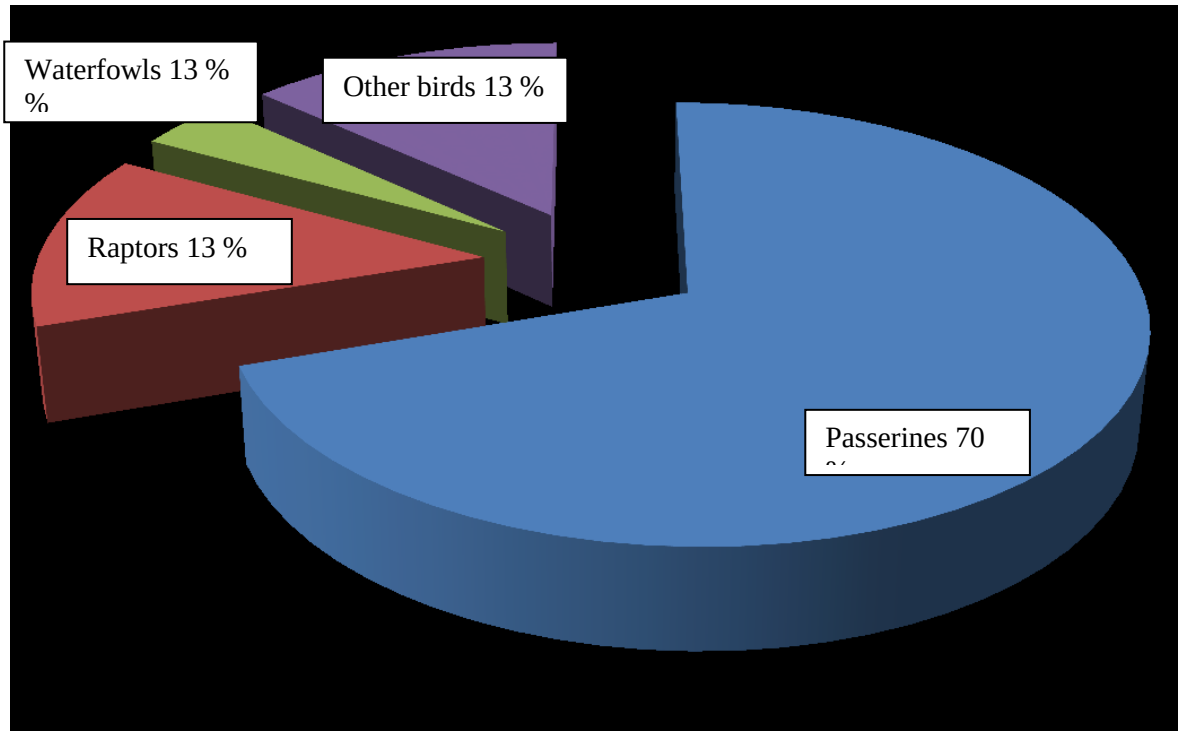
All the WEIs are monitored both in spring and autumn. As it is known, WEIs affect mostly bird species, therefore in this report, bird species will be mentioned prominently. However, one should keep in mind that monitoring studies for all taxa were conducted in the field. Here a few monitoring reports were given as examples.

1- Alaçatı WEI

This WEI is located 2,2 km away from the from the North. There are 8 turbines in this installement. The closest distance between two turbines is 236 m. Main habitat type is maquis. The nearest protected area, Alaçatı Halici, is a wetland which is 2,2 km away from this installement. According to mid-winter waterfowl counts in this wetland there are 84 birds from 8 species. From these, only ruddy shelduck and yellow-legged gull was observed around WEI area.

As for the WEI area, spring migration monitoring was conducted between 19 February and 8 June 2016. The monitoring included both point counts and transect counts. In the counts, it was aimed; i) to detect all the bird species in the area, ii) to detect breeding species in the area, iii) to detect migrating species around the area, iv) to detect possible turbine-bird hits in the area, v) to comment on the installements' effects on wildlife .

3 observation points were determined previously and, as the turbines are located in a North – South direction, observation points were chosen to see the North, the Middle and the South parts of the area. In the observations, meteorological conditions of the area, observation time and date, altitude of migration, the horizontal distance and direction of migration were all recorded.



During the spring migration, 53 birds species in 23 families were recorded. Of these, 37 species are passerines, 2 are waterfowls, 7 are raptors and 7 belong to other groups. The figure above shows the distribution of bird species in a diagram. 27 species are resident, 13 are summer migrants, 10 are winter migrants and 3 are transit migrants.

A scale was used to assess the distance of birds in the area. 0-100 m, 100-200 m, 200-300 m scales were used to determine the level of risk of a bird flight. According to this, 0-100 m was evaluated as the most dangerous flight. Most of the passerine sightings were in close proximity but their altitude were so low for the blades of the turbines. Among the soaring birds, 7 raptor species were detected, no stork species was seen. In 19 cases out of 200, the soaring birds were observed too close to the turbines (in 0-100 m). However, no collisions, no dead birds, no injured birds or no soaring migration were observed during the spring migration.

As it was done for spring migration, autumn migration was also monitored. In autumn migration, 40 bird species were recorded. Of these, 77 % were passerines, 12 % were raptors, 3 % were waterfowls and 8 % were other bird groups. Similarly, no soaring migration was observed during autumn migration. No collision and no dead or injured birds was found in autumn migration.

In addition, the project area's wildlife was also monitored both in spring and autumn. In autumn, 5 amphibian species, 19 reptile species and 22 mammal species were detected. 8 of these species were from chiroptera and 7 were from rodentia. For bats, this number corresponds to 27 % of all bat species in Turkey. 4 of these bat species are in redlist categories. Therefore, special attention will be given to these species. Until now, no dead bats were found in the project area.

2- Çeşme WEI

This WEI is an example of projects under construction. It includes 6 turbines, located almost in the same habitat with the above project. In the monitoring studies, the same monitoring method was used and the same variables were recorded. The spring monitoring was conducted between 31 January – 31 May. During the spring migration, 44 bird species were recorded and the most abundant species was yellow legged gull with 1969 individuals. The succeeding two species are little egret and grey heron respectively. Every migrating groups are counted as one migration activity and according to this, totally 248 migration activities were observed. Among these, yellow legged gull is the prominent group with 32 passings. Short-toed eagle followed it with 11 times and eurasion sparrowhawk was the third with 10 times. When we look at their altitude of migration, short-toed eagles were at 290 m, long-legged buzzards were at 250 m, common buzzards were at 220 m. Sparrowhawks, marsh harriers and kestrels were at 130 m on average, but they were very few in number and no collisions are likely to occur. Other large birds like little egrets, cormorants and grey herons were so low in altitude that they also don't possess collision risk. Besides, the birds' distance to turbines was also differing. The closest species were bee-eaters and swallows, but as it is true for all of the small birds, there is no collision risk for them.

These are the two examples of monitoring studies conducted in Çeşme peninsula. As it is shown, no detrimental effect on wildlife and biodiversity existed. Turkish government is ready to cooperate and give further information about the WEIs in the region in case it is requested.