# Final Evaluation Report

We ask all grant recipients to complete a project evaluation that helps us to gauge the success of your project. This must be sent in **MS Word and not PDF format**. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

**Please DO NOT fill in and submit this form until the project has been completed.**

Complete the form in English. Note that the information may be edited before posting on our website.

Please email this report to jane@rufford.org.

| Your Details | |
|---|---|
| **Full Name** | Fatih Polat |
| **Project Title** | First Habitat Restoration Of The Nile Softshell Turtle in Antalya, Turkey |
| **Application ID** | 46147-2 |
| **Date of this Report** | 29.10.2025 |

**1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.**

The primary objective of our project was to conduct habitat restoration within the existing nesting area of the Nile Softshell Turtle (Trionyx triunguis) along the Ilıca Stream in Antalya Province, in order to protect the species' breeding grounds and increase nest numbers. In addition, the project aimed to raise awareness among the local community and fishermen through a communication network, and to integrate the collected scientific data into conservation planning.

| Objective | Not achieved | Partially achieved | Fully achieved | Comments |
|---|---|---|---|---|
| Habitat Restoration | | | X | In areas with high nesting activity along the Ilıca Stream, water flow rates were measured, sand stabilization was implemented, and the area was fenced to minimize human impact. This initiative represents the first habitat restoration effort for the species in Turkey. Following the restoration, the natural structure of the area was preserved, and the sand composition and vegetation were arranged to support the turtles' nesting behavior.<br><br>The restoration activities were planned and implemented based on consultations with the State Hydraulic Works (DSİ), assessments by our hydrogeology expert, and technical input from government engineers responsible for river management and flood control. Accordingly, all interventions were designed in a way that does not interfere with the natural flow of water and will not increase flood risk or be damaged by high tides or flooding events. These measures were specifically aimed at protecting the nesting area while ensuring that the restored habitat remains stable, resilient, and sustainable in the long term. |
| Increase in Nest Numbers | | | X | Post-restoration observations indicated a rise in new nesting attempts and turtle activity within the area. This demonstrates that the habitat |

<table>
<tr>
<td></td><td></td><td></td><td></td>
<td>modifications positively influenced the species' reproductive preferences. Compared to previous years, a noticeable increase in detected nests was recorded.<br><br>
<table>
<tr><th colspan="5">Ilıca Stream Nesting Success Status</th></tr>
<tr><th>Years</th><th>Number of Nests</th><th>Number of Eggs</th><th>Number of Hatchlings</th><th>Hatching Success (%)</th></tr>
<tr><td>2024</td><td>16</td><td>682</td><td>145</td><td>21</td></tr>
<tr><td>2025</td><td>32</td><td>1232</td><td>459</td><td>37.3</td></tr>
</table>
<br>This table clearly demonstrates that the conservation, monitoring, and site management measures implemented at Ilıca Stream are ecologically effective.<br>The 2025 data in particular show that the area is no longer only being used by more nesting females, but has also become a significantly more successful breeding habitat.<br><br>Such an increase is one of the strongest indicators that a beach or stream mouth is recovering through restoration and active conservation efforts.</td>
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<tr>
<td>Awareness and Outreach Activities</td><td></td><td></td><td>X</td>
<td>Three informational signs were installed at different distances and locations around the nesting area, and an additional warning sign indicating that the area is a turtle nesting site was placed on the fencing. Brochures and posters were distributed, and educational meetings were held with local communities and fishermen. Three separate education and awareness activities were planned and implemented. Before the field work began, local shop owners were informed; this was followed by short training sessions for nearby law enforcement officers and the management and staff of two hotels, together with representatives from the Ministry. Finally, direct outreach was</td>
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| | | | | |
|---|---|---|---|---|
| | | | | carried out with recreational fishers operating near the nesting area. In total, approximately 700 people were reached through these activities, and 15 fishers were engaged in one-to-one discussions where the importance of the site and protection strategies were explained in detail. Although these awareness efforts helped to reduce the intensive feeding of turtles by tourists to some extent, it was not possible to eliminate this behaviour entirely.<br><br>These efforts significantly increased awareness regarding the conservation of the species. Local stakeholders have voluntarily contributed to the protection of the restored area. Local stakeholders will actively support the protection of the restored area through cooperation with law enforcement, fishers, hotel operators, and local authorities. The fencing of the site and the installation of informative signage will help reduce human pressure, while regular site checks and the involvement of local actors will ensure continuous protection. In addition, raising awareness among local users about the ecological importance of the area will strengthen voluntary stewardship and long-term ownership, thereby enhancing the sustainability and success of the restoration. |
| Scientific Data Collection and Disseminatio n | | X | | The data obtained are being compared with those collected last year to prepare a manuscript for the scientific literature. This will be evaluated as soon as possible and submitted for publication. The results have been shared with relevant institutions and organizations, and reports have been prepared to guide conservation measures in the coming years. |

**2. Describe the three most important outcomes of your project.**

**a) Successful completion of the first habitat restoration for the Nile Softshell Turtle in Turkey.** Within the scope of the project, habitat restoration was carried out in the existing nesting areas around Ilıca Creek to protect and enhance the species' living environment. Sand stabilization was implemented, the area was fenced, and informative signs were placed. This work represents the first habitat

restoration for *Trionyx triunguis* in Turkey and serves as an example for similar conservation efforts to be conducted in the future.

b) **Increase in nest numbers and improvement in habitat use**. Monitoring conducted after the restoration revealed an increase in nesting attempts compared to previous years. This increase indicates that the habitat modifications positively influenced the species' reproductive success and site selection. Furthermore, based on sand structure and water level measurements, the physical conditions of the area have become more suitable for the species' natural nesting requirements.

c) **Strengthening local awareness and collaboration.** During the project, the communication network with local fishermen, business owners, and residents was strengthened, and awareness-raising activities on species conservation were conducted. Through brochures, posters, and educational meetings, the local community actively participated in the conservation of the Nile Softshell Turtle. In addition, collaboration with the local units of the General Directorate of State Hydraulic Works (DSİ) and the Ministry of Environment, Urbanization and Climate Change was established, fostering institutional-level conservation awareness.

**3. Explain any unforeseen difficulties that arose during the project and how these were tackled.**

During the project implementation, some unforeseen site-specific challenges were encountered. The first of these was the accumulation of waste and litter around the nesting area. Due to a shopping mall (AVM) located adjacent to the nesting site, some local vendors were disposing of cardboard, plastic, broken cabinet parts, and other waste materials in the area. This situation not only disrupted the natural structure of the habitat but also caused debris to be carried into the creek by wind. Prior to the nesting season, the project team conducted a comprehensive cleanup to remove all waste from the site and, in collaboration with the local municipality, ensured the placement of garbage containers. Furthermore, by fencing the area, this issue was completely resolved, and the nesting site was protected from external disturbances.

Another significant challenge arose from initial resistance by some local fishermen to the fencing efforts intended to protect the nesting area. Fishermen were concerned that the fences would restrict their access to fishing spots. This issue was resolved through direct consultations with the fishermen, taking their concerns into account, and identifying alternative fishing points away from the nesting area. As a result, the nesting site was successfully protected, while maintaining a cooperative relationship with the local community.

Additionally, during the season, uninformed visits by foreign tourists occasionally disrupted monitoring activities. Visitors often approached the nesting areas without realizing the sensitivity of the habitat due to lack of awareness. This challenge was

mitigated by the project team through the preparation of informative posters, placement of warning signs, and direct awareness-raising activities.
Despite all these challenges, the project team successfully addressed the issues by leveraging their field experience, strong communication with local stakeholders, and flexible planning approach, completing all planned activities as intended.

**4. Describe the involvement of local communities and how they have benefitted from the project.**

During the project, active participation of local communities was ensured, and the local population was recognized as a key stakeholder for the sustainability of the work. Residents, fishermen, business owners, and mall operators around Ilıca Creek were involved in the project either directly or indirectly.

At the beginning of the project, meetings were held with local residents and fishermen to explain in detail the importance of the species, the sensitivity of the nesting areas, and the objectives of the habitat restoration. These informational sessions increased awareness among local communities and strengthened support for project activities. Although fishermen initially had concerns about the fencing of the project area, the communication and collaboration approach of the project team ensured positive progress. An alternative fishing spot was designated away from the nesting area, allowing fishing activities to continue while ensuring the safety of the nesting sites.

During one-to-one meetings with fishers we discussed the idea of alternative income sources. In particular, during meetings with 15 fishers operating around the nesting area, it was explained that protecting turtles could create long-term alternative income opportunities such as ecotourism, guiding, nature-based activities and sustainable fishing. It was also stated that starting next year, fishers would have the opportunity under our supervision to show turtle individuals to tourists or allow visitors to observe nesting activities from a distance, helping to raise awareness about the species. These activities will be carried out under the supervision of the Ministry and were presented as a way to both contribute to conservation and provide an additional source of income for fishers, which was positively received.

Local business owners and mall operators were also included in environmental cleanup and waste management activities carried out under the project. The placement of trash containers and warning signs around the area increased environmental awareness among business owners and significantly reduced the disposal of waste in the nesting area.

Additionally, awareness-raising events were organized throughout the project for both local residents and tourists, highlighting the ecological importance of the

species and the necessity of its conservation. As a result of these activities, the local community became not only observers but active participants in the conservation process.

**5. Are there any plans to continue this work?**

Following the completion of the project, various plans have been developed to ensure the continuation of the work based on the obtained results. Regular monitoring activities are planned to assess the long-term effects of the habitat restoration carried out in the project area. Before each nesting season, the physical conditions of the area—including sand structure, water level, vegetation cover, and waste status—will continue to be evaluated.

In addition, a new study is planned to identify potential additional nesting areas around Ilıca Creek that the species may use. These efforts aim both to assess the effectiveness of the existing area and to determine alternative sites for the long-term conservation of the species.

Maintaining strong communication with local residents and fishermen remains a key part of the plan. At least one awareness-raising and environmental education event is intended to be organized annually in the region.

Moreover, the data obtained from the project will serve as a foundation for future conservation projects, such as water quality monitoring and research on the species' feeding behavior. In the long term, this work aims to establish a sustainable model for monitoring and protecting the habitats of the Nile Softshell Turtle (Trionyx triunguis) in Antalya.

**6. How do you plan to share the results of your work with others?**

The dissemination of the project results has been planned in a multifaceted manner, both scientifically and socially. Firstly, nesting data, habitat conditions, and the effectiveness of restoration obtained during the field studies will be statistically analyzed, and these findings will be published as articles in national and international scientific journals. This will ensure that the data generated by the project contributes to the academic literature.

In addition, the project results will be shared with local stakeholders and relevant institutions. Project reports, along with summaries supported by visuals, will be presented to the Ministry of Environment, Urbanization and Climate Change, the General Directorate of State Hydraulic Works (DSİ), and local authorities. This will enable decision-makers and implementers to take the necessary measures for the protection of the species.

Furthermore, the results obtained from the project will serve as a resource and model for future conservation projects and educational activities, providing an example for similar habitat restoration efforts in other regions.

**7. Looking ahead, what do you feel are the important next steps?**

After the completion of the project, key steps have been identified to ensure the long-term conservation of the species and the sustainability of habitat restoration:

1. Long-term monitoring and evaluation: Nesting activities, hatching success rates, and habitat conditions within the restoration area will be regularly monitored. These observations will provide a basis for assessing the effectiveness of restoration efforts and planning any necessary interventions.
2. Identification of new potential nesting sites: In addition to the existing area, additional sites where the species can safely nest will be identified and restoration plans developed. This will support population expansion and help maintain genetic diversity.
3. Strengthening local community and stakeholder engagement: Collaboration with fishermen, local businesses, and residents will continue, and educational and awareness activities will be conducted to enhance community ownership and participation.
4. Data sharing and scientific contribution: All data collected during the project will be analyzed and shared through national and international publications. This will provide a foundation for future research and conservation initiatives.
5. Dissemination of a sustainable conservation model: The conservation and restoration approach developed through the Ilıca Deresi project will serve as a model for similar habitat restoration projects and its applicability in other regions will be explored.

Efforts to prevent tourists from feeding the turtles will be an important part of our future plans. As seen in some of the photos below, there is particularly intense feeding activity from the bridge over the Acısu between the two hotels, which represents a serious threat to the species. Feeding by humans not only disrupts the turtles' natural behaviour but also leads to a carbohydrate-heavy diet, which can negatively affect egg structure and cause problems in egg formation and reproductive success. Therefore, documenting and scientifically demonstrating the impacts of this feeding pressure will be a key component of our future work, both for conservation purposes and for developing effective management and enforcement mechanisms. In this context, the installation of informative signage, collaboration with hotels and guides, and continued Ministry supervision will be used to reduce and prevent this harmful behaviour.

**8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?**

Yes, throughout the project, all educational and awareness materials prominently featured The Rufford Foundation logo. These materials included brochures, posters,

informational cards distributed during field trainings, and signage placed around the nesting areas.

Additionally, during fieldwork, restoration activities, and awareness events, the support of the Rufford Foundation was widely highlighted. In informational meetings with local residents, fishermen, and visitors, the foundation's contribution was emphasized. Moreover, volunteers staying at EKAD's campsite, upon seeing the foundation's support, were further encouraged to participate in the research activities.

Thus, both during fieldwork and in broader awareness initiatives, the visibility of the Rufford Foundation's support was ensured, and the foundation's contribution and role were clearly demonstrated.

**9. Provide a full list of all the members of your team and their role in the project.**

**Fatih Polat** served as the project leader, responsible for the coordination, planning, and execution of field activities. With extensive knowledge of the species and its habitat, Polat led field trainings and stakeholder meetings and played an active role in data collection, analysis, and reporting.

**Hayri Kılıç**, a chemical engineer and experienced fisherman, contributed significantly to fieldwork. He was actively involved in field data collection and monitoring activities and played a key role in communication with local fishermen.

**Mustafa Kemal Özşen**, as a geomorphologist, was responsible for restoration activities, overseeing habitat improvement, organizing nesting areas, and conducting physical assessments of the project site.

**The Ecological Research Association (EKAD)** provided logistical support for fieldwork, including accommodation, transportation, and equipment provision, and assisted with project budget management and coordination with local stakeholders.

Additionally, two other field personnel supported the team in restoration and monitoring activities, assisted in nest identification, data collection, and daily operations in the field.

**10. Any other comments?**

This project holds significant importance as the first example of habitat restoration for the Nile Softshell Turtle (Trionyx triunguis) in Turkey. The data collected throughout the project have provided a foundation for developing long-term conservation strategies for the species.

The 2025 Rufford Project, conducted along the Ilıca River, generated valuable insights into both habitat restoration and the ecological dynamics affecting the reproductive success of Trionyx triunguis. In addition to the main project objectives,

the fieldwork produced hydrological and physicochemical data that were previously unavailable for this micro-watershed. At the Memba, Restorasyon Önü, and Mansap locations, measurements of flow, temperature, pH, electrical conductivity, total dissolved solids, salinity, and dissolved oxygen were taken, revealing seasonal and site-specific variations. These data provide a crucial baseline for future monitoring and adaptive management efforts.

Various challenges encountered during fieldwork were effectively addressed. Urban wastewater discharges and human activities exerted pressure on the habitat, while waste from nearby commercial areas negatively impacted nesting sites. The project team mitigated these issues through regular clean-up operations, placement of trash containers, and fencing to protect the nesting areas. Furthermore, no accidents or injuries were reported during field activities, ensuring safety for all personnel.

The project also strengthened engagement with local communities, raised awareness of the ecological importance of the nesting areas, and implemented visitor education initiatives to regulate behavior. As a result, the project established a foundation for long-term conservation efforts and demonstrated a successful habitat restoration model integrating ecological, hydrological, and social components.
Overall, this project not only contributed to the protection of Trionyx triunguis nesting areas but also provides a model that can be applied to similar ecosystems in Turkey and the broader Mediterranean region.

During the conducted studies, it was identified that one of the most significant issues for the Nile Softshell Turtle (Trionyx triunguis) living in the Ilıca and Kömürcüler streams is tourists feeding the turtles. This behavior disrupts the turtles' natural feeding habits and leads to excessive tameness among individuals. Such conditions negatively affect the species' natural life cycle and behaviors, making it incompatible with sustainable conservation goals. Therefore, planning has been initiated to implement measures to prevent tourists from feeding the turtles.

**ANNEX – Financial Report**

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## Photographs

The photographs taken during the project are provided below:

**Fotoğraf 1. Before the restoration**

**Fotoğraf 2. Before the restoration**

**Fotoğraf 3. Collection of Litter in the Area Before Restoration**

**Fotoğraf 4. Collection of Litter in the Area Before Restoration**

**Fotoğraf 5. During restoration**

**Fotoğraf 6. During restoration**

**Fotoğraf 7. During restoration**

**Fotoğraf 8. During restoration**

**Fotoğraf 9. During restoration**

**Fotoğraf 10. After Restoration**

**Fotoğraf 11. After Restoration**

**Fotoğraf 12. Installation of Protective Fencing**

Fotoğraf 13. Installation of Protective Fencing

Fotoğraf 14. General View of the Restoration Area

Fotoğraf 15. General View of the Restoration Area

Fotoğraf 16. Track of an Adult Individual Coming Ashore

Fotoğraf 17. Track of an Adult Individual Coming Ashore

Fotoğraf 18. An Adult Individual Resting in the Area

**Fotoğraf 19. An Adult Individual Resting in the Area**

**Fotoğraf 20. Nest Identification and Data Collection**

**Fotoğraf 21. Nest Identification and Data Collection**

**Fotoğraf 22. Nest Identification and Data Collection**

**Fotoğraf 23. Nest Identification and Data Collection**

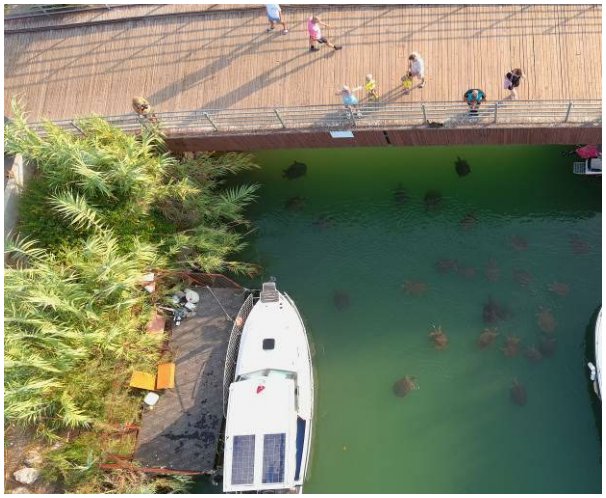
**Fotoğraf 24. Water Sampling and Analysis Conducted with a Hydrogeologist**

**Fotoğraf 25. Water Sampling and Analysis Conducted with a Hydrogeologist**

**Fotoğraf 26. Water Sampling and Analysis Conducted with a Hydrogeologist**

**Fotoğraf 27. Water Sampling and Analysis Conducted with a Hydrogeologist**

**Fotoğraf 28. Water Sampling and Analysis Conducted with a Hydrogeologist**



**Fotoğraf 29. People Feeding and the Adult Individuals Being Fed**

**Fotoğraf 30. People Feeding and the Adult Individuals Being Fed**

**Fotoğraf 31. Eggs in the Identified Nests**

**Fotoğraf 32. Eggs in the Identified Nests**

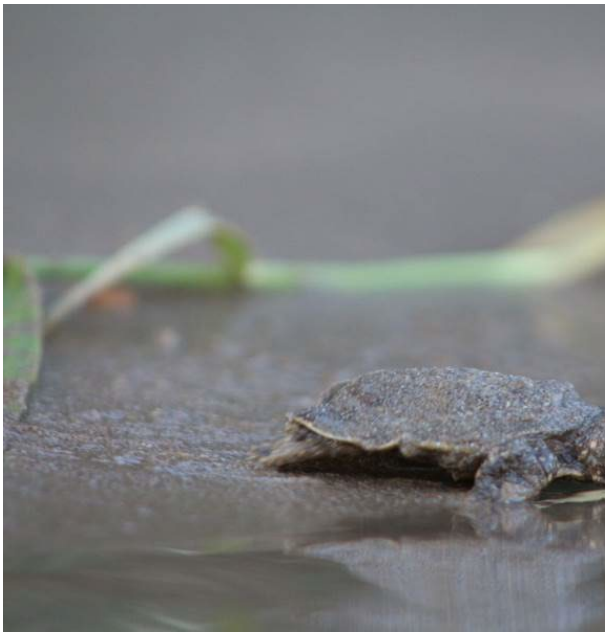

**Fotoğraf 33. Measurements of the Identified Eggs**


**Fotoğraf 34. Measurements of the Identified Eggs**

**Fotoğraf 35. Hatchlings**

**Fotoğraf 36. Hatchlings**

**Fotoğraf 37. Hatchlings**



**Fotoğraf 38. Hatchlings**