Article

Assessing ecosystem sustainability and green finance-based ecotourism opportunities in Akhar-Bakhar National Park

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Abstract

New ways of planning and managing protected areas are becoming more important, with an integrated approach of ecosystem management, visitor management, and sustainable financing. This study aims to evaluate ecosystem sustainability and ecotourism potential in green finance in the new Akhar-Bakhar National Park, Azerbaijan, situated in semi-arid mountain ecosystem of Alazan/Ganykh River Valley. Six coded observation points were employed, GPS-based mapping, photographic documentation, landscape and vegetation observations, visible biodiversity indicators, anthropogenic pressure assessment and a scoring matrix (1-5) for ecotourism suitability was used to assess the situation in the field. It has been concluded that Torpaggala, the Alazan/Ganykh River viewpoints and the core visitor area are high potential places for controlled ecotourism, environmental education, birdwatching and landscape photography. By contrast, the Qaramesha-direction areas include sensitive geologic formations, animal tracks, mineral surfaces and potential wildlife corridors and therefore, should be restricted to guided scientific research and conservation monitoring. The results indicate that there is potential for the use of green finance for low impact infrastructure such as safety signs, observation platforms, route marking, visitor information boards and guide services. This research proposes a preliminary field-based framework to connect the ecosystem sustainability, the planning of ecotourism, and the need for green finance in Akhar-Bakhar National Park.

Keywords: Akhar-Bakhar National Park; ecosystem sustainability; green finance; ecotourism; protected areas; field observation; visitor route planning; Alazan/Ganykh River Valley; Azerbaijan.

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1. Introduction

Protected areas are now more and more expected to serve a set of multiple functions other than biodiversity conservation. They are expected to provide benefits to nature-based tourism, environmental education, local economies, and long-term ecosystem monitoring in addition to their role in protecting species, habitats and ecological processes [1,2]. This multifunctional role is significant in young protected areas in particular, where initial planning choices can have a serious impact on visitor management and conservation zoning and/or investment priorities. In these kinds of places, field-based assessment can offer pragmatic baseline data that can be used to pinpoint zones suitable for public access to ecotourism, zones for restricted use and

infrastructure requirements that are economically viable and can be funded in sustainable ways.

Ecotourism is one of the key elements for generating socio-economic values compatible to the conservation from protected areas. Eco-tourism, well planned, can serve as a motivation for conservation, raise awareness in the public, benefit the local community and contribute to the diversification of regional economies [3,4]. Uncontrolled visitor access can also contribute to the trampling, waste generation, disturbance of wildlife and informal expansion of trails and safety risks which can place undue pressure on fragile habitats. Therefore, in the planning of ecotourism in protected areas, it should be based on information of landscape sensitivity, accessibility, biodiversity indicators and anthropogenic pressure and visitor safety, all based on spatial information [5]. Route classification, observation platforms, warning signs, guide services and visitor information boards can minimize the negative impacts and enhance the quality of the visitor experience.

Green finance is a relevant term to connect conservation requirements with concrete investment options. Green finance can be used in protected areas to implement low impact infrastructure, habitat restoration, ecological monitoring, visitor management systems, NBTS and for green jobs, oriented towards the community [6,7]. It is particularly pertinent to newly protected areas where there may be limited infrastructure, and where funding is required to balance conservation with public use. In this sense, green finance-based ecotourism is not an invitation for mass tourism development but for a certain type of green and low impact investments that can help preserve the integrity of ecosystem and provide controlled opportunities for education, recreation and local involvement.

Akhar-Bakhar National Park is one of the newest parks in Azerbaijan. Since its formation in 2025, it occupies 23,901.99 ha in the Gakh, Samukh and Yevlakh districts [8]. The park features semi-arid mountain landscapes, river valley ecosystems, tugay-type vegetation along the Alazan/Ganykh River, and distinct and prominent geological formations. All these characteristics allow for ecotourism, birdwatching, landscape photography and scientific field research. Meanwhile, the occurrence of sensitive fauna habitat, animal tracks, mineral surfaces and erosion shaped landforms suggest the importance of a careful zoning and access regulations. The park thus offers a relevant case study to explore the combined assessment of ecosystem sustainability, ecotourism route planning, and green finance needs at an early stage in the protected area development process.

Although Akhar-Bakhar National Park has great ecological and tourism value, the scientific information on the field is limited and the needs of visitor oriented observation points, restricted research areas and green finance related infrastructure. This study attempts to fill this gap by evaluating the six coded field observation points using GPS-based mapping, photographic documentation, landscape and vegetation observation, visible biodiversity indicators, anthropogenic pressure scoring and ecotourism suitability assessment. The objective of the study is to assess the sustainability of the Akhar-Bakhar National Park ecosystem and the possibility of green finance-based ecotourism in the area and to suggest viable proposals for the future development of the routes, management of visitors and conservation investment.

2. Materials and Methods

3.1. To choose a study area and an observation design.

The study was carried out in Akhar-Bakhar National Park, Azerbaijan, a new protected area, which includes semi-arid mountain slopes, river valley landscapes, tugay-type vegetation along the Alazan (Ganykh) River, open steppe-like areas and rocky geological formations. During the field assessment six coded observation points

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namely AB-01, AB-02, AB-03, AB-04, AB-05 and AB-06 located in the Gakh sector of the national park were observed. The following points were chosen to reflect a range of landscape attributes and features, level of accessibility, and opportunities for visitor use and sensitivity of ecological features.

The observation points were divided into two functional groups. AB-01, AB-02, AB-03 and AB-06 were identified as visitor-oriented observation points due to their accessibility, landscape visibility and suitability for controlled ecotourism, environmental education, birdwatching, and landscape photography. AB-04 and AB-05 in the Qaramesha direction were identified as restricted scientific access points as they contain sensitive fauna indicators, animal tracks and geological formations and possible wildlife corridors.

2.2. Investigative surveys and documentation of field images.

Observational approach in the field was used. Observation code, site name, date and time, GPS latitude and longitude, distance from the core visitor area, azimuth, compass direction, type of route, type of landscape, weather condition, visible biodiversity indicators, characteristics of the vegetation, anthropogenic influence, attractiveness of landscape, value for biodiversity observation, suitability for ecotourism, overall potential and green finance need and recommended activity were recorded at each observation point.

Field signs were direct or indirect observations of birds, animal tracks, sound-based observations, nests or possible shelter signs, all of which were visible biodiversity indicators. During the study no animals were captured, handled, marked or disturbed. Visual assessment of vegetation was carried out at the general vegetation formations level, semi-arid plants, tugay vegetation, grass cover, shrub vegetation and wooded areas. Because the study was designed as an initial field based route and sustainability assessment, species level botanical identification was not done.

Field observations were complemented by photographic documentation to illustrate, visually, the landscape characteristics and vegetation; visitor infrastructures, animal tracks and anthropogenic influences; and geological features. A coded photographic panel was used to represent each observation point. The 24 coded field images were taken following the photographic codes AB-01-F01 until AB-06-F04. The field observation table and the coded photographic panels were published as an open data set: Zenodo: Mammadov, U. (2026). Field observation dataset and coded photographic panels in ecotourism potential and ecosystem sustainability in Akhar-Bakhar National Park, Azerbaijan (v1.0) [Data set]. Green Economy and Optimization Research Lab. https://doi.org/10.5281/zenodo.20767403.

2.3. Mapping and spatial visualization with GIS

The field observation points were plotted using QGIS software to show their spatial distribution. The boundary of Akhar-Bakhar National Park was displayed using its official KMZ boundary file which was received from the national park administration. The points of observation were summed based on their GPS locations. Visitor-oriented observation points were marked with green, and with red the observation points recommended for restricted scientific access (so-called Qaramesha-direction points). The final map was exported and as the main spatial figure of the study.

2.4. Score matrix and green finance assessment.

The six observation points were compared in a simple 1–5 point scoring matrix. Four main criteria were considered: anthropogenic pressure, landscape attractiveness, biodiversity observation value and ecotourism suitability. A lower score was given for anthropogenic pressure as lower human impact was observed, and a higher score was

given as stronger human influence was seen. In the remaining criteria, the higher the score, the more valuable or suitable.

The overall potential score was obtained by merging landscape attractiveness, the biodiversity observation value and the ecotourism suitability, as a descriptive field-based indicator. This score is not meant to be a statistical generalization for the whole national park, but rather to compare the six observation points and to inform initial route planning and management recommendations.

Potential green finance needs were qualitatively determined on the basis of gaps observed in the infrastructure, safety needs and conservation-sensitive visitor management needs. The assessment took account of the possible need for low impact investments like safety signage, observation platforms, route marking, visitor information boards, guide services or access restrictions through management, at each of the observation points. These needs were considered as potential areas where green finance mechanisms could contribute to ecosystem sustainability as well as sustainable development of controlled ecotourism.

3. Results

3.1. Location of field observation points in space

The plan of the six field observation points is illustrated in figure 1. The points were in the official area of Akhar-Bakhar National Park and in different functional areas of the observed field sector including a panoramic historical-landscape point, river valley viewpoints and core visitor area and Qaramesha-direction research points. The distribution of points on the map suggests that the locations oriented towards visitors are primarily situated in and around the core area and the Alazan/Ganykh River panoramic points, whereas the Qaramesha-direction points are further away from the visitor core, and their access needs to be more regulated.

The core visitor area, AB-03 was the basis for assessment of distance and direction. AB-02 was the closest to core area (0.18 km to the north) and AB-06 was the closest to the north (0.90 km). The Torpaggala point (AB-01) is at a distance of about 1.10 km from the core area in north-eastern direction. AB-04 and AB-05 were in the Qaramesha direction, 2.47 km and 1.51 km from the core area, respectively. Both of these were designated as restricted scientific access points, because of the presence of animal tracks, sensitive geological formations and potential wildlife movement corridors.

Figure 1. Official boundary of Akhar-Bakhar National Park and spatial distribution of field observation points.

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Green markers represent visitor-oriented observation points, while red markers represent Qaramesha-direction points recommended for restricted scientific access. The map was prepared in QGIS using the official KMZ boundary file provided by the national park administration. Base map: OpenStreetMap.

3.2. Field observation points and spatial characteristics

Table 1 shows the main spatial and functional data of the six observation points. The results indicate that the selected points vary in distance from the core visitor area, landscape type, accessibility and recommended management use. This variability is significant in the future planning of ecotourism in this area, for it offers both ecologically sensitive sites, where access is restricted, and sites suitable for visitors.

AB-01, AB-02, AB-03 and AB-06 were scored as appropriate for controlled activities for visitors. These are suitable sites for nature walks, landscape photography, environmental education and bird watching (where there is controlled movement of visitors by signs and information). By contrast, AB-04 and AB-05 were considered appropriate primarily for scientific research, specialist access and monitoring. They are far more appropriate for ecotourism, due to their ecological sensitivity and away from the core visitor area.

Table 1. Field observation points, spatial characteristics in Akhar-Bakhar National Park.

Code	Site name	Coordinates	Distance from core area km	Direction	Landscape type	Recommended use
AB-01	Torpaggala	41.106042, 46.667520	1.10	NE	Rocky slope and panoramic area	Controlled ecotourism route
AB-02	Alazan River viewpoint 1	41.103417, 46.655806	0.18	N	River valley	Visitor-oriented viewpoint
AB-03	Core visitor area	41.101852, 46.655579	0.00	Centre	Open visitor area	Visitor orientation and route hub
AB-04	Qaramesha direction 1	41.122871, 46.665073	2.47	NNE	Mountainous and rocky area	Restricted scientific research access
AB-05	Qaramesha direction 2	41.115074, 46.659523	1.51	NNE	Mountainous fauna corridor	Restricted scientific research access
AB-06	Alazan River viewpoint 2	41.109940, 46.656021	0.90	N	River valley viewpoint	Visitor-oriented viewpoint

3.3. Visitor-oriented ecotourism points

One of the best visitor sites in the surveyed area was AB-01, Torpaggala. It takes about 40 minutes to walk to the site from the core area, and a brief climb with the existing steps set up by national park. From the upper part of Torpaggala, visitors have a broad overview of the national park landscape. The field photos reveal rocky slopes, semi-arid vegetation and open mountain-steppe landscapes and erosion shaped landforms. En route there were other indirect indications of wildlife such as tracks believed to be that of the wild boar, bear and other mammals. These features make AB-01 an appropriate site for a controlled panoramic hiking route, as well as for nature interpretation and for landscape photography. Safety signs and route marking are recommended, however, due to steep sections encountered during the ascent a small interpretation panel is also suggested.

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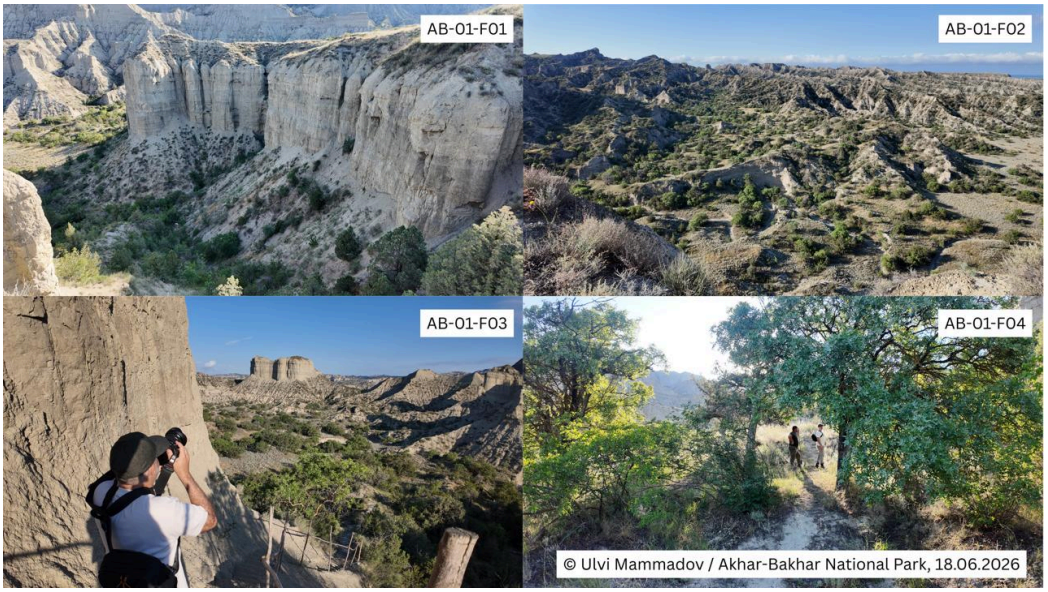

Figure 2. Coded photographic panel of AB-01 Torpaggala.

AB-02, the first Alazan/Ganykh River viewpoint, was situated very close to the core visitor area, and offered high accessibility for short term visitors. The site has a clear view of the valley of the Alazan/Ganykh river, riverine vegetation and transboundary landscape to Georgia. The presence of existing seating infrastructure enhances its recreational use and makes it appropriate for families, short educational use and birdwatching. The field photographs show river valley vegetation, open landscape and an attractive vista point. However, when movement is unrestricted near the riverbank it can pose safety concerns. So it would be beneficial to have a viewing boundary clearly marked, warning signs and a small viewing platform for increased safety for visitors and environmental management.

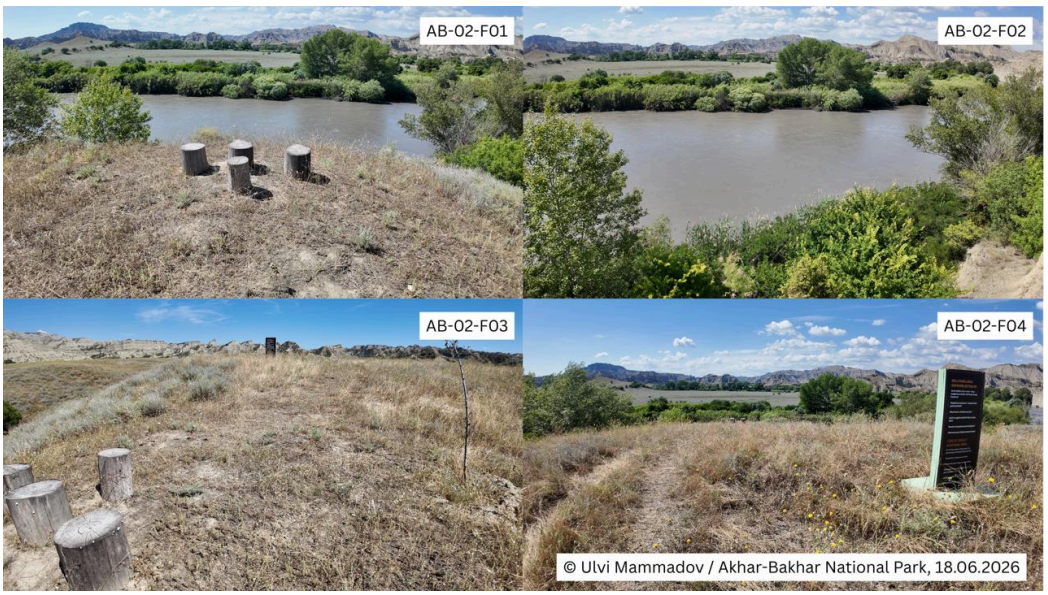

Figure 3. Coded photographic panel of AB-02 Alazan/Ganykh river viewpoint 1.

AB-03 is the main orientation and management point for ecotourism activities. Field photographs indicate a gazebo, seating area, hand washing facility, sanitary facilities, information boards, park posters, national flag and map. All of these elements show that

AB-03 is already well equipped with the basic structure needed to host visitors, run environmental education sessions in brief, and provide the visitors with various categories of routes. For visitor registration, guide co-ordination, route briefing and environmental interpretation. The findings indicate that AB-03 should be the main access entry point for both numbers of visitors and restricted access routes.

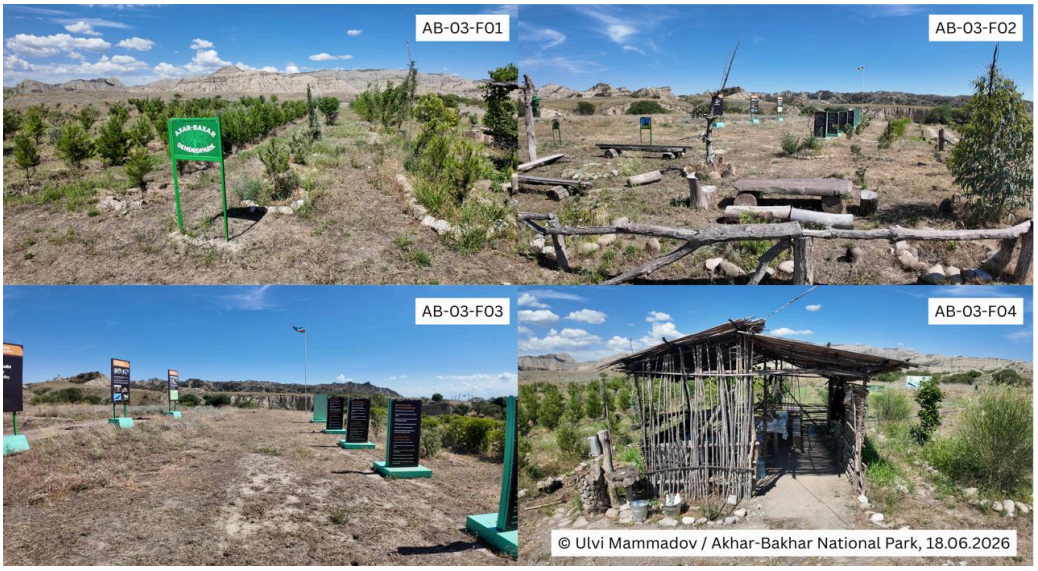

Figure 4. Coded photographic panel of AB-03 core visitor area.

The second Alazan/Ganykh River viewpoint (AB-06) was also found to be a high value landscape and interpretation point. The site provides visual access to the river valley, river islands, and to the surrounding slopes of semi-arid type and tugay type vegetation. It can be used for birdwatching, landscape photography and environmental education. Field observations were however, that some areas within the viewpoint may be unsafe if visitors are not given guidance when approaching the river edge or where areas are unstable. Therefore, it is important to develop AB-06 as a low impact viewpoint with safety barriers or natural boundary markers, warning signs and a brief information panel on the river ecosystem.

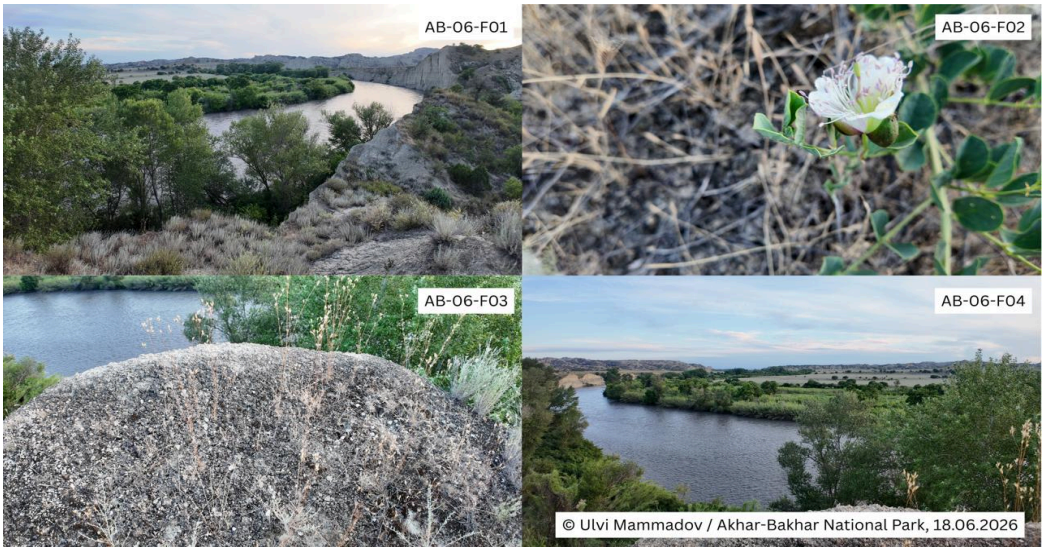

Figure 5. Coded photographic panel of AB-06 Alazan/Ganykh River viewpoint 2.

3.4. Limited scientific access opportunities in the Qaramesha direction

AB-04 and AB-05 were clearly not a visitor oriented point. The walking time, physical exertion and guided access are longer on these sites, located in the Qaramesha direction. Geological and geomorphological characteristics of AB-04 included large angular rock fragments, erosion shaped forms, narrow valley conditions and mineral/salt-like deposits on rock surfaces. These mineral surfaces can serve as natural sources of wildlife. Shrub and tree vegetation and semi-arid plant communities and habitats are also present that could be providing for wildlife movement. For these reasons, AB-04 is a site of scientific interest for the geology, geomorphology, hydrology, soil science, botany and zoology, mammal ecology, ornithology and conservation biology. It is not recommended, however, for mass ecotourism.

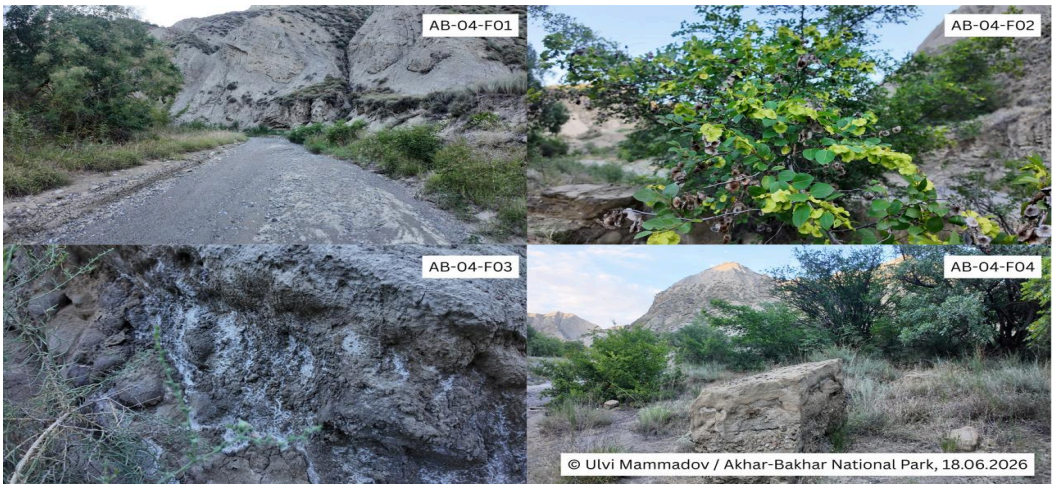

Figure 6. Coded photographic panel of AB-04 Qaramesha direction 1.

AB-05 was also a restricted scientific access point. The field photographs indicated the presence of tracks of animals, soft ground surfaces, rocky slopes, possible burrow or shelter and some sediment or rock movement due to flood water or seasonal runoff. These features indicate that it could be a wildlife movement corridor, feeding area or shelter zone. Possible fauna species that may occur in such habitats could be wild boar, bear, fox, badger, jackal, lynx and other medium to large mammals which are known to occur in similar protected areas. These areas are especially sensitive to wildlife disturbance, which is why it is important that AB-05 is not opened up to the general public. This point would best be used for guided scientific monitoring, camera-trap studies, track surveys and limited zoological or geological observations.

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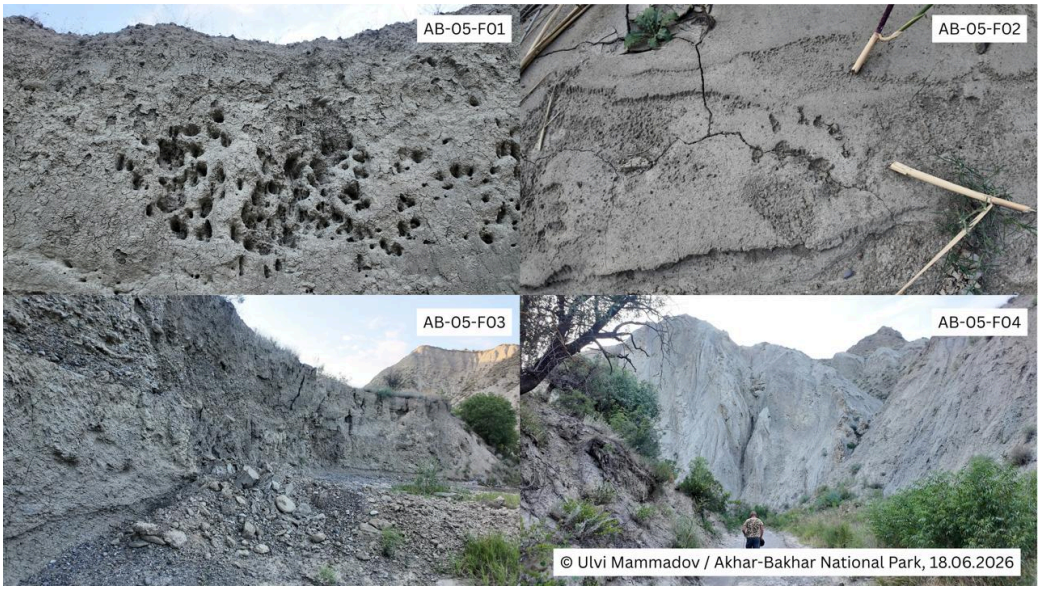

Figure 7. Coded photographic panel of AB-05 Qaramesha direction 2.

3.5. Suitability for ecotourism, anthropogenic pressure & need of green finance.

Table 2 summarizes the results of the scoring. The overall potential scores were between 4 and 5 with all six points having important value for either ecotourism or scientific monitoring. The meaning of the scores, however, varies from point type to type. Three sites, AB-01, AB-02 and AB-06 were found to have high potential for visitors due to landscape, accessibility and suitability for nature-based activities. AB-03 was high management value as it serves as a visitor orientation and route coordination point. The overall potential scores of AB-04 and AB-05 are the highest scores but these should be taken as scientific and conservation potential and not as tourism suitability for the public.

The anthropogenic pressure was generally low at most of the observation points. The core visitor area had the highest anthropogenic influence due to the presence of infrastructure, whereas anthropogenic pressure was lower in the Qaramesha-direction points. The general approach should be differentiated management; areas which are sensitive internally need restricted access whereas areas for visitors are concentrated around the core and the designated viewpoints.

Table 2. Compatibility of ecotourism, anthropogenic pressure and needs of green finance of the observation points.

Code	Anthropogenic pressure 1–5	Overall potential score	Green finance need	Management recommendation
AB-01	2	4.33	Safety signs	Controlled panoramic hiking route
AB-02	2	4.33	Observation platform	Visitor viewpoint and birdwatching point
AB-03	3	4.00	Ecotourism route support	Visitor orientation and environmental education hub
AB-04	1	5.00	No public infrastructure recommended	Restricted scientific research and monitoring
AB-05	1	5.00	No public infrastructure recommended	Restricted scientific research and wildlife monitoring

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AB-06	1	4.33	Observation platform and warning signs	Controlled viewpoint and environmental education point

The identified green finance needs in the field were primarily associated with low impact tourism management, and not large-scale tourism infrastructure. Visitor-oriented needs are, in particular, safety signs, demarcation of viewing areas, small viewing platforms, information boards on routes and guide services and ecological interpretation panels. With the Qaramesha-direction points, the main recommendation is not infrastructure development, but restricted access-management, scientific monitoring and conservation control. So, in the National Park of Akhar-Bakhar green finance should focus on small, conservation compatible interventions to enhance visitor safety and education, and to reduce the disturbance of sensitive wildlife areas.

In general, the findings suggest that Akhar-Bakhar National Park is a good candidate for zonation as an ecotourism site. The core visitor area and Alazan/Ganykh River viewpoints can accommodate short, controlled and educational ecotourism operations and Torpaggala can serve as a panorama hiking route. The Qaramesha-direction points, however, must be considered as areas for restricted scientific access because of the ecological and geological sensitivity.

4. Discussion

Results of this field-based evaluation indicate that Akhar-Bakhar National Park is a place with a lot of potential for the development of a differentiated ecotourism and conservation management model. However, not all six observation points were equally suitable for public access and the site-specific ecological sensitivity, accessibility and management purpose should be taken into account when planning the course of any future routes. This is in line with guidelines for protected area tourism, which state that visitor access, recreation infrastructure and tourism activities should be designed to meet conservation goals, considering ecological vulnerability and management capacity [9]. This kind of zoning is particularly relevant in newly established protected areas where the number of visitors may grow quickly if the access routes, the information points and the safety limits are not well defined [10].

The designation of AB-01, AB-02, AB-03 and AB-06 as visitor-oriented observation points means that the national park does already have suitable spots for providing controlled and low impact ecotourism activities. Torpaggala (AB-01) possesses good panoramic value and is suitable for development as a guided hiking and landscape interpretation route. The current steps to the viewpoint provide a low level access opportunity, although there is still a need for safety signage and direction and short ecological interpretation panels. These small scale interventions can focus visitor traffic, minimize non-traditional trails and enhance visitor safety. Such a strategy is consistent with the principles of sustainable tourism planning, which recommend that the development of infrastructure for visitors should bring not only about an increase in the number of visitors, but also directly a reduction in the ecological pressure they put on the environment [11,12].

Viewpoints along the Alazan/Ganykh River, as well as those at AB-02 and AB-06, are also significant for future plans for ecotourism. These are the points that offer visual access to the river valley, riverine vegetation, semi-arid slopes and transboundary landscape views. They are close to the visitor centre making them ideal for brief visits, environmental education, birdwatching and landscape photography. The field observations and observations, however, indicate that there is also need for safety management, particularly where visitors are likely to come near river edges or unstable sections on the viewpoint. Low impact investments, like marked viewing boundaries, warning signs and small observation platforms, should therefore be regarded priority

green finance needs. These measures can enhance the visitors experience while mitigating the risks to the visitors, and the sensitive riverbank habitats.

The main operational node of the ecotourism management for the assessed sector should be the core visitor area (AB-03). The existing infrastructure, such as information boards, resting facilities, a park map and sanitation and handwashing facilities is the foundation for structured visitor reception. This can serve as a route orientation centre, informing visitors of the areas they can access, areas they cannot, safety rules and the ecological values of the park. AB-03 can be used, from a management point of view, to help inform a route classification system which can distinguish between short visitor routes, panoramic hiking routes and restricted scientific access routes. This classification is significant because protected areas may only help to improve the local development and public awareness of the environment when the movement of visitors is managed in a way that does not conflict with conservation targets [13].

AB-04 and AB-05 are the two points to the Qaramesha-direction that need more restrictive management. While these locations had high overall potential scores, they are predominantly scientific and ecological in value and not public-tourism. These may represent wildlife movement corridors, feeding zones or sensitive habitat areas as a result of the presence of animal tracks, possible shelter signs, rocky formations, mineral/salt-like surfaces or erosion shaped landforms. General tourism access to such areas can lead to greater disturbance of mammals and birds requiring less accessible and quieter areas. Hence, AB-04 and AB-05 should be treated as 'restricted scientific access areas', where only scientific personnel or park staff/trained guides are allowed access. Activities may include camera-trap monitoring, animal track survey, geological observation, vegetation monitoring and conservation related field research.

However the results also indicate that green finance in Akhar-Bakhar National Park should not be interpreted in the light of big tourism development. Rather the most suitable model is small scale investment which is compatible with conservation and is specific to its site. Green finance can be used for safety signs, route marking, viewing platforms, information boards to visitors, training guides, monitoring equipment, and restricted-access management systems. Increasingly, the literature on biodiversity finance and protected area investment focuses on the need to invest in low impact infrastructure and other local benefits that do not require infrastructure expansion and do not preclude conservation, and in ecological monitoring [14]. The green finance can support the park's aim to balance the protection of the ecosystem with selective use by visitors in this context.

In terms of sustainability the proposed approach sees the connection of three dimensions: ecological protection, visitor management and green economic opportunity. For the ecological protection, it is recommended to limit the use of Qaramesha-direction points. Visitor management is tackled by focussing public access on the core visitor area of Torpaggala and the Alazan/Ganykh River viewpoints. Low impact activities – guided walks, environmental education, birdwatching, photography routes and provision of local services – address green economic opportunity. This integrated approach is in line with research on nature-based tourism, where it is found that tourism may have social and economic value without contradicting nature conservation goals, if it is compatible with these goals [15].

GIS mapping, GPS-based field records and coded photographic documentation were used to strengthen the reproducibility of the study. The official boundary of Akhar-Bakhar National Park was mapped together with the six observation points, allowing the spatial relationship between visitor-oriented and restricted-access points to be assessed. In addition, the field observation table and photographic panels were deposited in Zenodo, which improves transparency and allows other researchers to reuse or extend the dataset in future research [16]. Furthermore, by depositing the field observation table and photographic panels on Zenodo, the transparency of the

deposition is promoted and it becomes possible for other researchers to reuse or extend the dataset in future research.

This study has several drawbacks. First, the assessment was made at six observation points and, so, should be seen as a preliminary field-based assessment and not as a comprehensive ecological inventory of the national park. Second, the cover of vegetation was determined at the formation level and species level botanical identification was not performed. Third, the assessment of wildlife was conducted primarily through visible signs and indirect indicators rather than systematic camera trap, transect or seasonal fauna surveys. Fourth, the scoring matrix was developed as a practical field assessment tool, and is not a statistically validated index for the whole national park. Future studies should increase the number of observation points, increase the number of surveys carried out in the same season, carry out systematic inventories of flora and fauna and connect with remote sensing or habitat suitability modelling.

But, still the study paves the way for future ecotourism planning in Akhar-Bakhar National Park based on an initial evidence-based framework. It has primarily classified observation points into "visitor access" and "scientific access" categories, with GPS coordinates, field observations, coded photographic panels, scoring and GIS mapping. This approach provides a framework for determining locations in the national park that are suitable for low impact visitor facilities and those where visitor access should be restricted for conservation purposes. As such, the results can be applied as a basis for route planning, prioritisation of green financing, and monitoring of the ecosystem sustainability in the initial years of national park development.

5. Conclusions

In this study, a preliminary field assessment on ecosystem sustainability and eco-tourism opportunities based on green finance were carried out in Akhar-Bakhar National Park. The results indicate that there are visitor-oriented areas and ecologically sensitive areas in the park. The Alazan/Ganykh River viewpoints and the core visitor area are appropriate for controlled ecotourism, environmental education, as well as for bird watching and landscape photography purposes. The Qaramesha-direction points on the contrary are recommended for restricted scientific access areas due to their wildlife indicators, geological sensitivity and potential as fauna movement corridors.

The results indicate that the future development of ecotourism in the park should be oriented towards zoning and guided access to the area, as well as low-impact construction. Use of green finance mechanisms can include support for safety signs, route marking, observation platforms and visitor information boards, guide training and ecological monitoring. Looking at the overall picture, the Akhar-Bakhar National Park holds a great potential to develop conservation-compatible ecotourism model with a focus on public access at appropriate locations and protection of sensitive areas through appropriate management.

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