

Supplementary Materials

Conceptual Model Questionnaire for Potential Ecotourism Prioritization:

This Questionnaire was designed for pairwise comparison of criteria according to the weighting principles of AHP hierarchical analysis method in order to prioritize areas with high ecotourism potential across the Chaharmahal and Bakhtiari province.

| General Information of Experts | |
|--------------------------------|------------|
| First & Surname: | Job Title: |
| Degree of Education: | Specialty: |
| Place of service: | Date: |

Study area: The Chaharmahal and Bakhtiari province with an approximate area of 16,000 km² and an average height of 2153 m is among the mountainous regions of the central plateau of Iran. This province has many tourist attractions such as waterfalls, wetlands and caves that have been able to attract a large number of tourists.

Prioritizing the potential zones for ecotourism: Ecotourism is a subgroup of the tourism industry, which emphasizes on the maintenance and enlargement of natural systems through tourism. To identify the priority areas for ecotourism development, appropriate criteria and sub-criteria were used. In the present study, we utilized two main groups of ecological and physical criteria (Fig. 1).

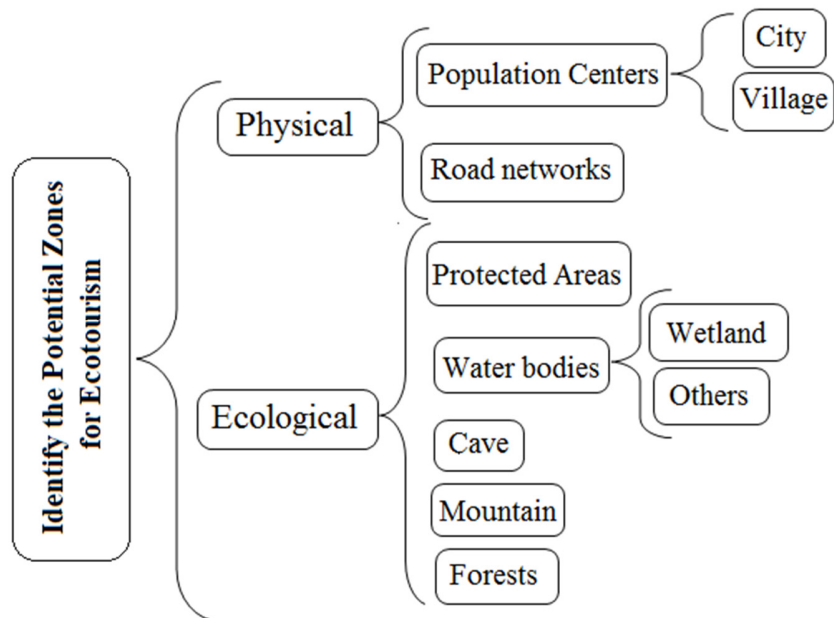


Figure S1. Selected criteria and sub-criteria for identifying the potential zones for ecotourism development

Weighting the criteria and sub-criteria according to the AHP method: Pairwise comparisons were made between the criterion and sub-criterion. Then, matrices are created and experts assigned weights to each criterion and sub-criterion according to their relative importance in relation to the purpose of the study.

Weighting scales: The scales used to make comparisons were shown in the following table:

Table S1. Scale of the relative importance (Saaty, 1980)

| Definition | Intensity importance |
|----------------------|----------------------|
| Equally important | 1 |
| Extremely less imp. | 2 |
| Strongly less imp. | 3 |
| Less important | 4 |
| Moderately less imp. | 5 |
| Moderately important | 6 |
| Strong important | 7 |
| Very strong imp. | 8 |
| Extremely important | 9 |

The following table is an example of a pairwise comparison matrix:

Table S2. Matrix of pairwise comparisons of criteria

| Criteria | A | B | C |
|----------|---|---|---|
| A | 1 | | |
| B | 2 | 1 | |
| C | 6 | 5 | 1 |

The number one in the first row and column means that the importance of criterion A is indifferent to itself. The number five in the third row and the second column indicates the importance of criterion C compared to criterion B. The number six in the third row and the first column indicates the high importance of criterion C compared to criterion A.

In the following tables, the effective criteria and sub-criteria in the process of identifying the areas with high ecotourism potential across the Chaharmahal and Bakhtiari province are given in the matrix of pairwise comparisons. Please enter your expert opinion on the importance of metrics with appropriate numbers.

Thank you very much for your cooperation and assistance.

Table S3. Pairwise comparison of physical and ecological criteria

| Criteria | Physical | Ecological |
|-----------------|-----------------|-------------------|
| Physical | 1 | |
| Ecological | | 1 |

Table S4. Pairwise comparison of sub-criteria of physical criteria

| Physical Criteria | Road networks | Population centers |
|--------------------------|----------------------|---------------------------|
| Road networks | 1 | |
| Population centers | | 1 |

Table S5. Pairwise comparison of population centers' sub-criteria

| Population centers | City | Village |
|---------------------------|-------------|----------------|
| City | 1 | |
| Village | | 1 |

Table S6. Pairwise comparison of the ecological sub-criteria

| Ecological Criteria | Wetland | Water bodies | Cave | Mountain | Forest | Protected Area |
|----------------------------|----------------|---------------------|-------------|-----------------|---------------|-----------------------|
| Wetland | 1 | | | | | |
| Water bodies | | 1 | | | | |
| Cave | | | 1 | | | |
| Mountain | | | | 1 | | |
| Forest | | | | | 1 | |
| Protected Area | | | | | | 1 |