Brief information about the project

Name of the project	AP09260144 “Rational Use of Natural Tourist-Recreational Resources of The Republic of Kazakhstan Based on Recreational Capacity Assessment and Anthropogenic Impact Minimization” (0121PK00303)
Relevance	It is determined by the need to develop scientifically based approaches to managing tourist flows, assessing recreational capacity and minimizing the anthropogenic impact on the natural complexes of Kazakhstan to ensure the sustainable development of the tourism industry. The COVID-19 pandemic, despite the negative impact on world tourism, has shown a tendency to increase interest in domestic tourism in Kazakhstan, which makes it important to develop new tourist destinations on the principles of sustainability and environmental management.
Purpose	The goal of this research project is to develop a mechanism for regulating recreational impact by state and local authorities for the sustainable development of territories based on the rational use of natural tourism and recreational resources of Kazakhstan, taking into account recreational capacity and reducing negative anthropogenic impact.
Objectives	The objectives of the project include a systematic analysis of modern world and domestic research on the assessment of tourist and recreational capacity and methods of rational use of natural tourist and recreational sites; development of an improved methodology for the conditions of Kazakhstan; identification of natural tourist and recreational sites of the Republic of Kazakhstan and analysis of their attractiveness; collection and processing of data to calculate tourist and recreational capacity and permissible anthropogenic load; verification of numerical results; visualization of the results obtained; development of scenarios for the development of tourist facilities; development of mechanisms for regulating recreational impacts by state and local authorities for effective environmental management, taking into account the economic and social conditions of the territory.
Expected and achieved results	A systematic analysis of modern studies devoted to the assessment of tourist and recreational capacity and methods of rational use of natural tourist and recreational facilities both on a global scale and in the CIS countries was carried out. The historical and chronological aspects of the development of the conceptual and terminological apparatus related to the topic are considered, and a comparative analysis of various approaches to assessing tourist and recreational capacity is presented. During the research process, key trends and principles of sustainable tourism development were identified, and a definition of natural and recreational tourism objects was proposed. The results of the analysis provide valuable information for the further development of the methodological base in this area and contribute to increasing the efficiency of management of tourism and recreational resources. An integrated methodology has been created to assess the tourism and recreational capacity and potential of individual territories of Kazakhstan. The methodology includes the calculation of coefficients that reflect the specifics of the region and provides sound recommendations for assessing natural objects, taking into account various methods and approaches, including scoring and visual assessment, analysis of overtourism and the use of fuzzy logic models. Particular attention is paid to cognitive modeling of the structural components of the tourist complex, which made it possible to identify a new way of constructing graph models, different from widely used platforms. This approach is demonstrated by the

	example of assessing the residual and optimal recreational capacity for specially protected areas, ensuring the safety and sustainability of tourism activities. In addition to this, the results section contains a comparative analysis of existing assessment methods and offers a methodological basis for further improvement and testing of the developed methodology in Kazakhstan. An analysis of natural tourist and recreational sites of the Republic of Kazakhstan was carried out, promising directions for the development of tourism were identified, and their attractiveness was assessed. The work was based on extensive sociological research using the questionnaire survey method, which allows us to form a holistic picture of the current state and development potential of the industry. Interactive cartographic materials based on GIS technologies have been developed to graphically represent the distribution of anthropogenic load and identify areas with a tense ecological situation based on the results of an assessment of tourist and recreational capacity. And a master plan has been developed, reflecting the stages and specific measures to reduce the negative anthropogenic impact on tourism and recreation facilities, aimed at the successful and dynamic development of tourism. Positive experience can be extrapolated to other tourist and recreational areas/objects with similar conditions
Research team members with their identifiers (Scopus Author ID, Researcher ID, ORCID, if available) and links to relevant profiles	**1. Zhanna Medeuovna ASSIPOVA** *(Research Project Supervisor).* Scopus Author ID: 56124528100 (https://www.scopus.com/authid/detail.uri?authorId=56124528100). Web of Science ResearcherID: ABF-8258-2021 (https://www.webofscience.com/wos/author/record/2436527). ORCID ID: 0000-0003-1260-4867 (https://orcid.org/0000-0003-1260-4867). **2. Yeldar NURULY** *(Responsible Project Executor, Research Fellow).* Scopus Author ID: 57198426770 (https://www.scopus.com/authid/detail.uri?authorId=57198426770). Web of Science ResearcherID: V-7078-2017 (https://www.webofscience.com/wos/author/record/464742). ORCID ID: 0000-0002-9321-2285 (https://orcid.org/0000-0002-9321-2285). **3. Aliya Sagyndykovna AKTYMBAYEVA** *(Leading Research Fellow).* Scopus Author ID: 55916649100 (https://www.scopus.com/authid/detail.uri?authorId=55916649100). Web of Science ResearcherID: N-9777-2014 (https://www.webofscience.com/wos/author/record/1291294). ORCID ID: 0000-0003-1269-4356 (https://orcid.org/0000-0003-1269-4356). **4. Lyudmila Mikhailovna PAVLICHENKO** *(Leading Research Fellow).* Scopus Author ID: 55367910300 (https://www.scopus.com/authid/detail.uri?authorId=55367910300). ORCID ID: 0000-0002-2650-806X (https://orcid.org/0000-0002-2650-806X). **5. Aliya Gazizjanovna TANKIBAYEVA** (*Senior Research Fellow*). Scopus Author ID: 57205715860 (https://www.scopus.com/authid/detail.uri?authorId=57205715860). Web of Science ResearcherID: AFI-1276-2022 (https://www.webofscience.com/wos/author/record/3670322).

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List of publications with links to them	*1)* Aktymbayeva, A., Nuruly, Y., Artemyev, A., Kaliyeva, A., Sapiyeva, A., Assipova, Z. Balancing Nature and Visitors for Sustainable Development: Assessing the Tourism Carrying Capacities of Katon-Karagay National Park, Kazakhstan // *Sustainability*. – 2023. – No. 15(22). – 15989. https://doi.org/10.3390/su152215989 *(Web of Science: Q2-Q3 (SCIE, SSCI), Journal Impact Factor 2022=3.9; Scopus: 87-58 percentiles, CiteScore 2022=5.8, SJR 2022=0.664).* 2) Koshim A., Sergeyeva A., Kakimzhanov Y., Aktymbayeva A., Sakypbek M., Sapiyeva A. Sustainable Development of Ecotourism in "Altynemel" National Park, Kazakhstan: Assessment through the Perception of Residents // *Sustainability*. – 2023. – No. 15(11). – 8496. – URL: https://doi.org/10.3390/su15118496 *(Web of Science: Q2-Q3 (SCIE, SSCI), Journal Impact Factor 2022=3.9; Scopus: 87-58 percentiles, CiteScore 2022=5.8, SJR 2022=0.664).* 3) Assipova, Z., Pazylkhaiyr, B., Karatayev, D. Best Examples of Tourism Environmental Management at the Destinations: Integrative Literature Review // *Economic Series of the Bulletin of L.N. Gumilyov Eurasian National University*. – 2022. – No. 141(4). – P. 258-271. – URL: https://doi.org/10.32523/2789-4320-2022-4-258-271 (CQASHE). 4) Pazylkhaiyr B., Assipova Zh.M., Bertocchi D. Development of Tourism Environmental Management in Kazakhstan Based on Successful International Experience // *Bulletin of the Karaganda University. Economy Series.* – 2023. – No. 2(110). – P. 79-89. – URL: https://doi.org/10.31489/2023Ec2/79-89 (CQASHE).

	5) Pazylkhaiyr B.M., Assipova Zh.M., Aktymbayeva A.S. Research in Eco-Tourism in Kazakhstan as A Successful Mechanism in the Development of Environmental Tourism Management // *Central Asian Economic Review*. – 2023. – No. 1(148). – P. 83-97. – URL: https://doi.org/10.52821/2789-4401-2023-1-83-97 (CQASHE). 6) Sakypbek M.A., Assipova Z.M., Kaliyeva A.B., Aktymbayeva A.S. Bureaucracy and problems of coordination in public-private travel partnerships // *Journal of Geography and Environmental Management.* – 2023. – No. 3(70). – P. 124-136. (in Kaz.). URL: https://doi.org/10.26577/JGEM.2023.v70.i3.10 (CQASHE). 7) Tankibayeva A., Aktymbayeva A., Assipova Z., Nuruly Y. Adaptive Management of Tourism Carrying Capacity in Nature-Based Sites: Operationalizing Adaptivity Dimensions // *International Tourism Congress ITC2022 "Tourism – Going Back / Forward to Sustainability",* November (16) 17-19, 2022 / Łódź, Poland. – 151-152 pp. – URL: https://spot-erasmus.eu/wp-content/uploads/2022/11/ITC2022_BookOfAbstracts_V1.pdf (report). 8) Assipova Z.M., Nuruly Y. The Evolution of Community-Based Tourism Development in Kazakhstan: A Case Study of Saty Village // *Royal Geographical Society (with IBG) Annual International Conference 2022*, Newcastle upon Tyne, UK – Newcastle University. – URL: https://virtual.oxfordabstracts.com/#/event/2788/submission/1458 (report). 9) Abdigul S.A., Nuruly Y. Assessment of the Tourist and Recreational Potential of the Imantau-Shalkar Resort Region // *Materials of the International Scientific Conference of Students and Young Scientists "Farabi alemi".* – Almaty, Kazakhstan, April 6-8, 2023. – Almaty: Qazaq University, 2023. – P. 254-255. – (in Kaz.). – URL: https://pps.kaznu.kz/ru/Main/FileShow2/218330/109/3/18236/2023// (report). 10) Akanov M.D., Nuruly Y. Navigating Challenges in Developing Water Tourism in Kazakhstan: An Analytical Review // *Materials of the International Scientific Conference of Students and Young Scientists "Farabi alemi".* – Almaty, Kazakhstan, April 6-8, 2023. – Almaty: Qazaq University, 2023. – P. 256-257. – URL: https://pps.kaznu.kz/ru/Main/FileShow2/218331/109/3/18236/2023// (report). 11) Adilova A.A., Nuruly Y. Astro-tourism: Opportunities for Development and Organization in Mangistau Region // *Materials of the International Scientific Conference of Students and Young Scientists "Farabi alemi".* – Almaty, Kazakhstan, April 6-8, 2023. – Almaty: Qazaq University, 2023. – P. 257-258. – (in Kaz.). – URL: https://pps.kaznu.kz/ru/Main/FileShow2/218332/109/3/18236/2023// (report). 12) Aitzhan G.A., Nuruly Y. The Importance and Role of Quasi-Public Companies in Tourism Industry Development // *Materials of the International Scientific Conference of Students and Young Scientists "Farabi alemi".* – Almaty, Kazakhstan, April 6-8, 2023. – Almaty: Qazaq University, 2023. – P. 258-259. – URL: https://pps.kaznu.kz/ru/Main/FileShow2/218333/109/3/18236/2023// (report).

	13) Zhaksybay P.M., Nuruly Y. The Potential of Developing New Specialized Types of "Dark" Tourism in Kazakhstan (On the Example of "Disaster Tourism") // *Materials of the International Scientific Conference of Students and Young Scientists "Farabi alemi".* – Almaty, Kazakhstan, April 6-8, 2023. – Almaty: Qazaq University, 2023. – P. 253-254. – (in Kaz.). – URL: https://pps.kaznu.kz/ru/Main/FileShow2/218329/109/3/18236/2023// (report).
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	15) Joldasbekova M.M., Sapiyeva A.Zh. Virtual 3D-Reconstruction of Historical and Cultural Monuments (As an Example of the Talkhiz Town Objects) // *Materials of the International Scientific Conference of Students and Young Scientists "Farabi alemi".* – Almaty, Kazakhstan, April 6-8, 2023. – Almaty: Qazaq University, 2023. – P. 277. – (in Kaz.). (report).

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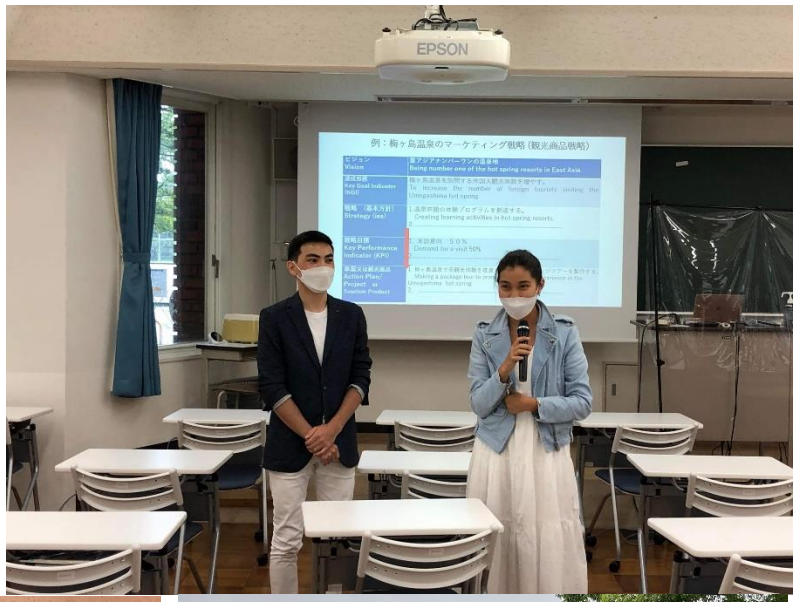
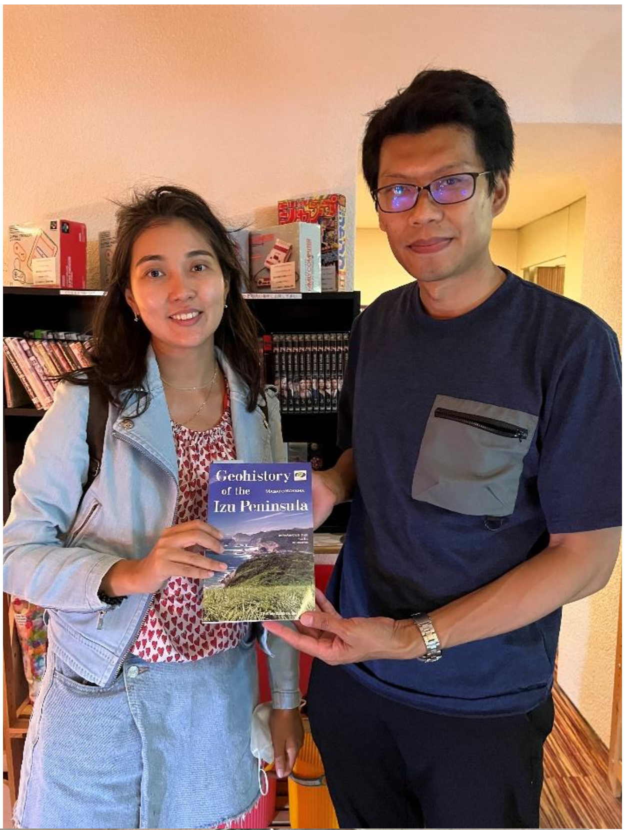
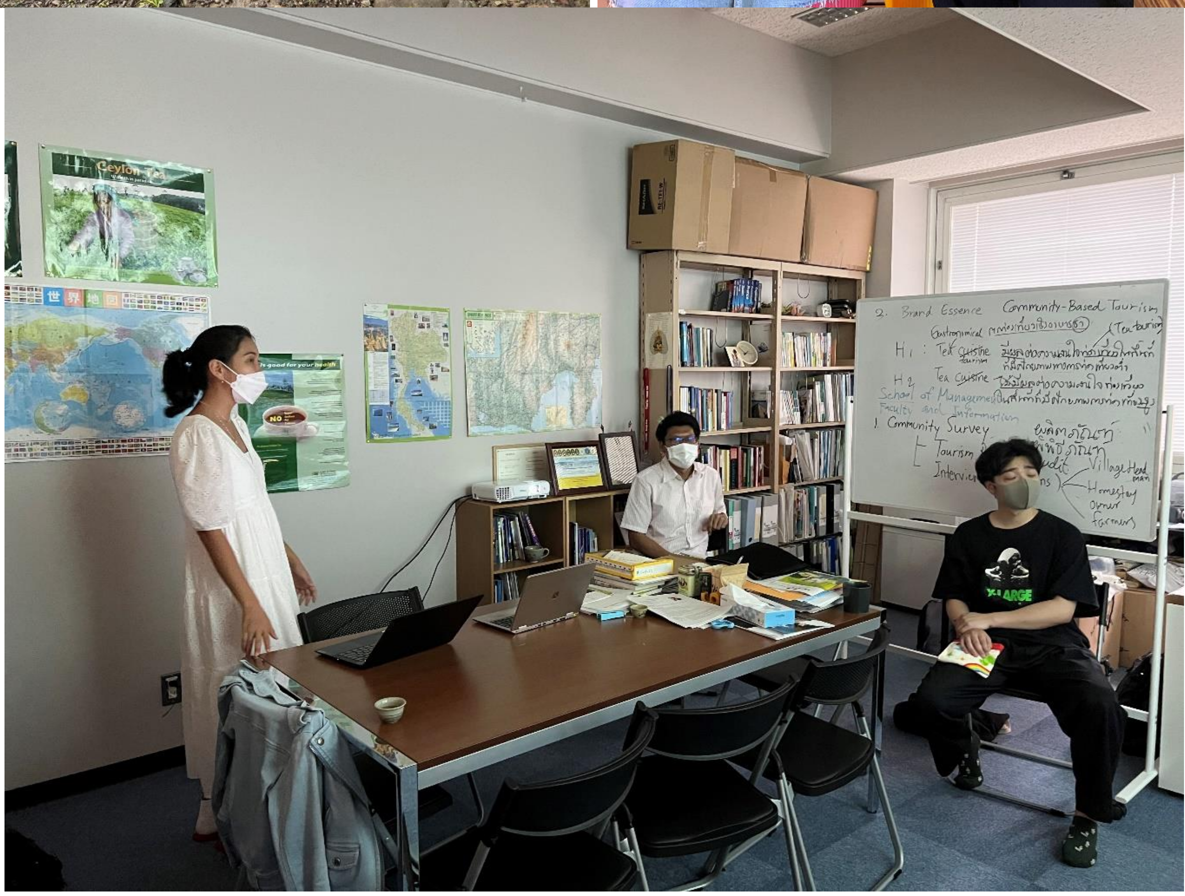
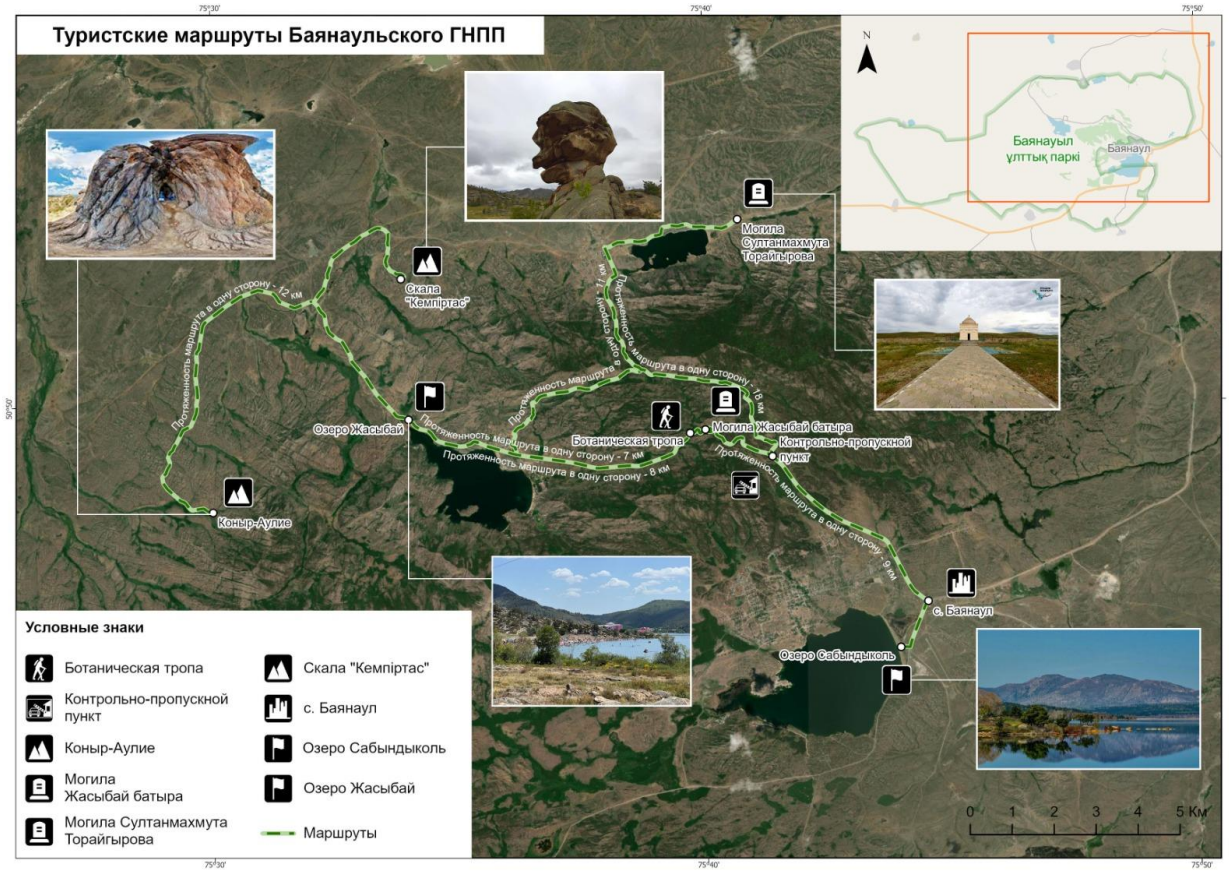
紅茶体験工房


EPSON
例：綿ヶ島温泉のマーケティング戦略（観光商品戦略）


Facts about Kazakhstan
Republic of Kazakhstan
Capital: Nur-Sultan
Population 18 million
Area 2.7 million sq.km (1 million sq. miles)
Major languages Kazakh, Russian
Major religions Islam, Christianity
Life expectancy 68 years (men), 77 years (women) (UN)
Currency Tenge


Geohistory of the Izu Peninsula


Ceylon
世界地図
Brand Essence
Community-Based Tourism
Community Survey


Туристские маршруты Баянаульского ГНПП
Баянауыл ұлттық паркі
Баянаул
Могила Султанмахмута Торайгырова
Скала "Кемпіртас"
Протяженность маршрута в одну сторону - 12 км
Протяженность маршрута в одну сторону - 18 км
Протяженность маршрута
Озеро Жасыбай
Протяженность маршрута в одну сторону - 7 км
Ботаническая тропа
Могила Жасыбай батыра
Контрольно-пропускной пункт
Протяженность маршрута в одну сторону - 8 км
Протяженность маршрута в одну сторону - 9 км
Коныр-Аулие
с. Баянаул
Озеро Сабындыколь
Условные знаки
Ботаническая тропа
Скала "Кемпіртас"
Контрольно-пропускной пункт
с. Баянаул
Коныр-Аулие
Озеро Сабындыколь
Могила Жасыбай батыра
Озеро Жасыбай
Могила Султанмахмута Торайгырова
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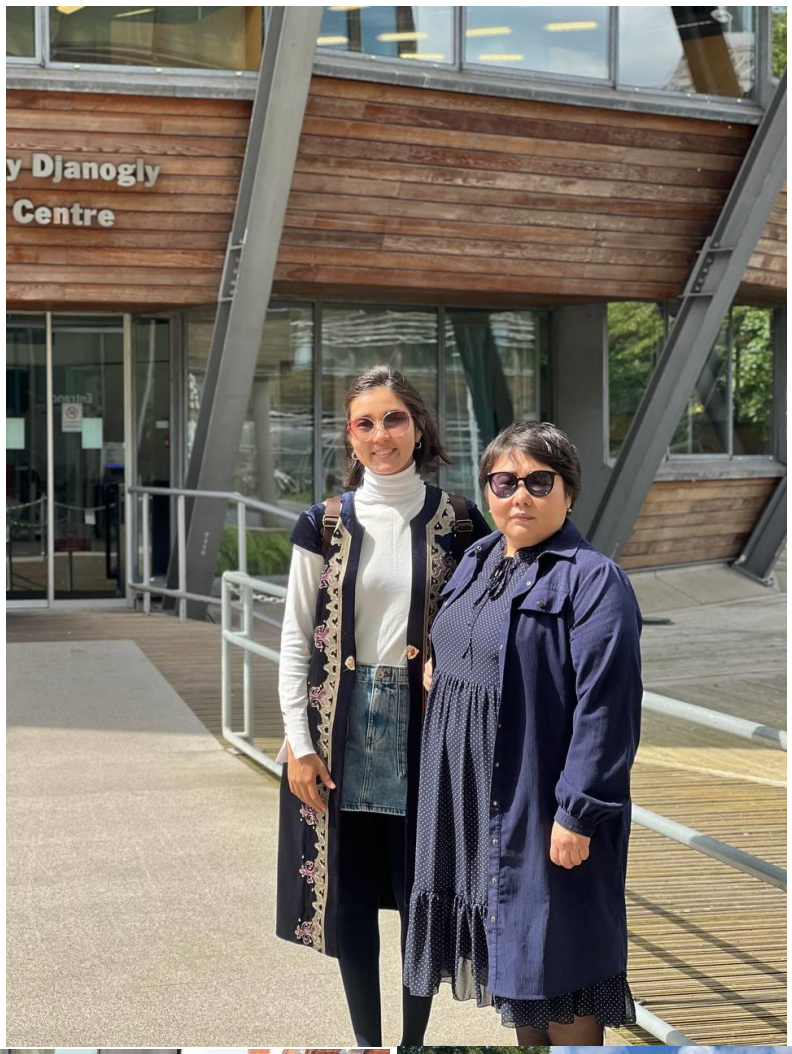
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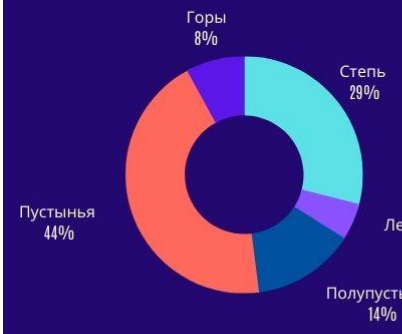
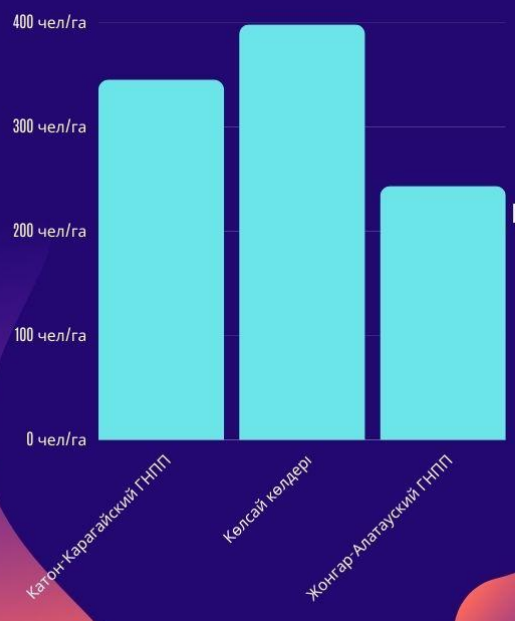
2023

Нормы рекреационной нагрузки

На территории Казахстана расположены четыре природные зоны: лесостепь, степь, полупустыни и пустыни.

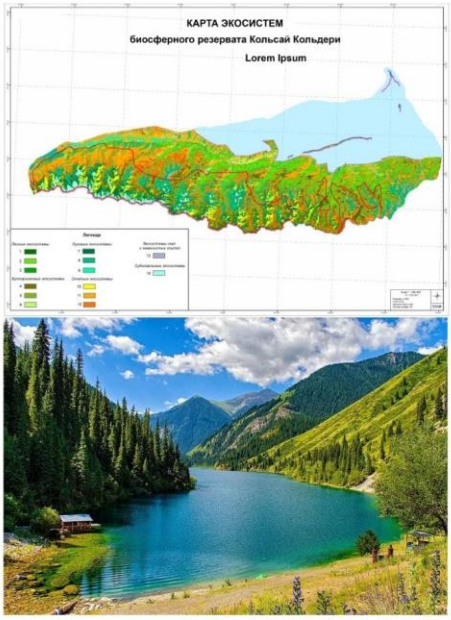


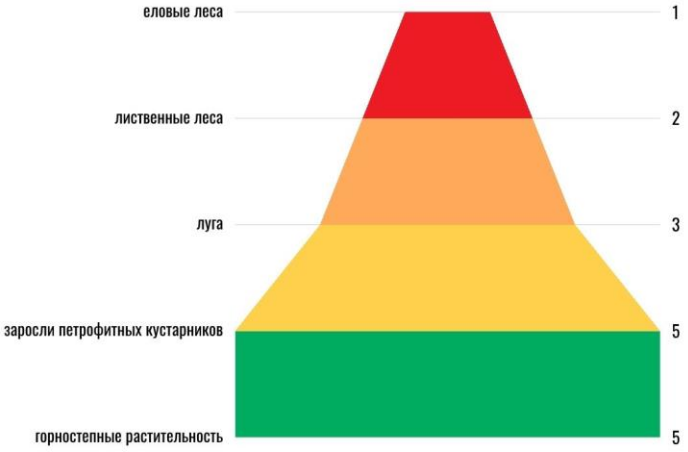
В пустынной зоне допустимая нагрузка составляет до 5 человек на гектар, в степной зоне - до 20 человек на гектар, а в лесной зоне - до 50 человек на гектар. Эти нормы необходимы для сохранения природы и обеспечения комфортного отдыха туристов и местных жителей.



ДОПУСТИМАЯ РЕКРЕАЦИОННАЯ НАГРУЗКА, ЧЕЛ/ГА (ЗА СЕЗОН)

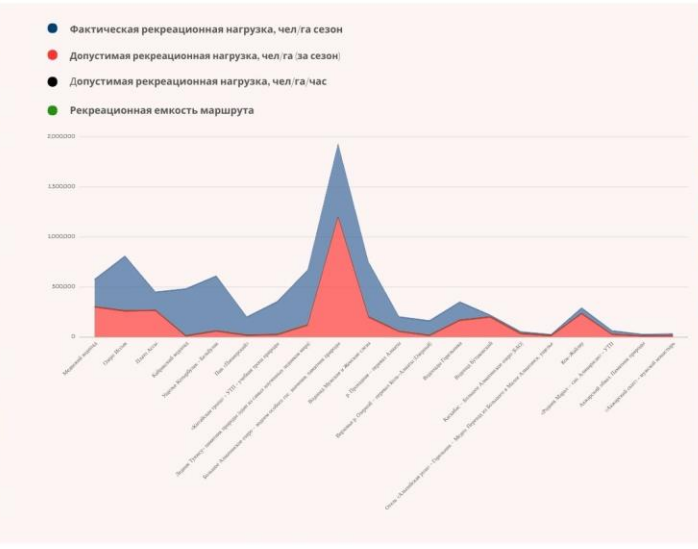
КОЛЬСАЙСКИЙ ГНПП





Норма нагрузки для лесных ландшафтов, чел/га в час

ДОПУСТИМАЯ РЕКРЕАЦИОННАЯ НАГРУЗКА ТУРМАРШРУТОВ ИЛЕ АЛАТАУСКОГО ГНПП



Фактическая рекреационная нагрузка, чел/га сезон

Рекреационная емкость маршрута, чел/га

ЖОНГАР-АЛАТАУСКИЙ ГНПП

РЕКРЕАЦИОННАЯ НАГРУЗКА ПО ПАСПОРТУ, ЧЕЛ/ГА

Допустимая рекреационная нагрузка, чел/га/час

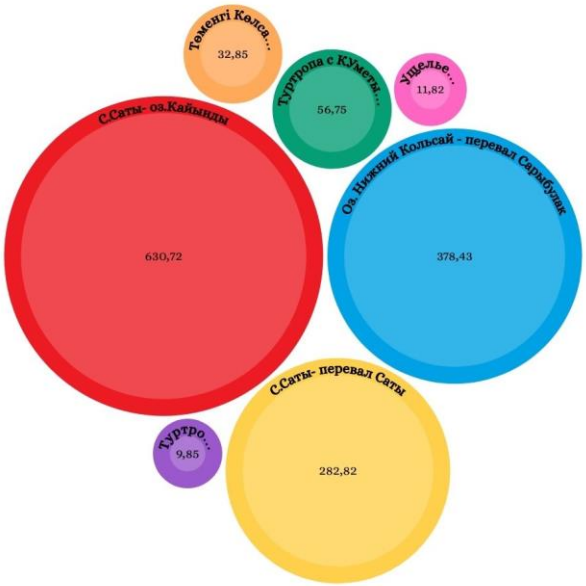
Допустимая рекреационная нагрузка, чел/га (за сезон)

ЖОНГАР-АЛАТАУСКИЙ ГНПП

РЕКРЕАЦИОННАЯ НАГРУЗКА ПО ПАСПОРТУ, ЧЕЛ/ГА

Усиление антропогенного воздействия в рекреационных зонах, особенно в городах, усугубляет экологические и социально-экономические проблемы. Для регулирования использования этих территорий рекомендуется проводить экологический аудит.

Рекреационная емкость маршрута, чел/га



КОЛЬСАЙСКИЙ ГНПП

Рекреационная емкость маршрута, чел/га

При этом общая площадь земельного участка, попадающая под антропогенную нагрузку:
турмаршруты (туристы), автодороги и т.д., составляет **851,68 га**, из них, непосредственно под застройкой **216, 76 га,**
озеленение – **45,32 га:**

– Площадь застройки объектов сервиса (основных зданий и сооружений) – 0,64 га;
– Площадь покрытий - 11,84 га
– Площадь различных трасс – 158,5 га
– Площадь инфраструктуры (гостевые дома и т.д.) – 25,78 га
– Площадь лечебниц – 20 га
– Площадь озеленения (покрытая лесом площадь) – 216 181 га

Площадь всего ГНПП – 643 744 га. Из них:
Лесные угодья – 267 202 га. Не лесные угодья – 376 275 га в том числе: воды – 4 182 га; болота – 4 440 га; ледники – 1 503 га.

КОЛЬСАЙСКИЙ ГНПП

Расчетная допустимая рекреационная нагрузка, чел/га (за сезон))

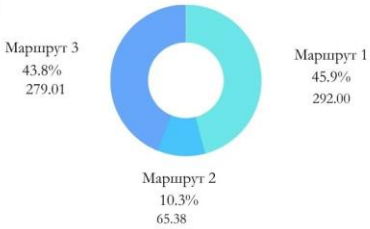
Допустимая рекреационная нагрузка, чел/га/час

Допустимая рекреационная нагрузка, чел/га (за сезон)

ГНПП Алтын-Эмель

Фактическая рекреационная нагрузка чел\га сезон

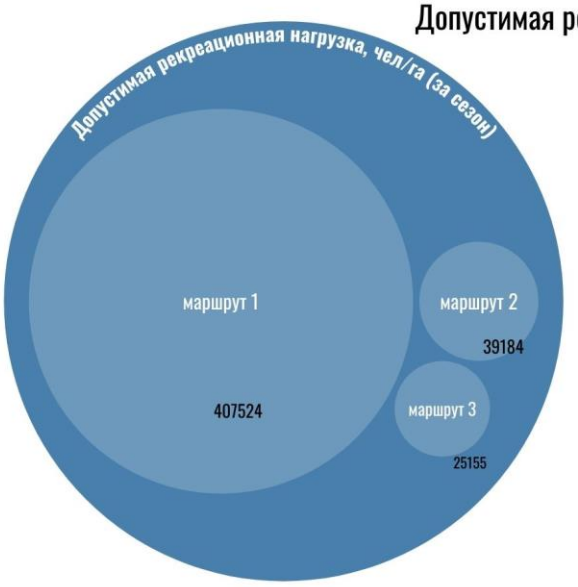
Рекомендуется проводить мониторинговые наблюдения с сезонной периодичностью. Приоритетная задача заповедников и национальных парков заключается в сохранении природных комплексов, минимизации любых антропогенных нагрузок. Поэтому посещение ООПТ регламентируется специально оборудованными маршрутами - экотропами, где должен вестись рекреационный мониторинг.

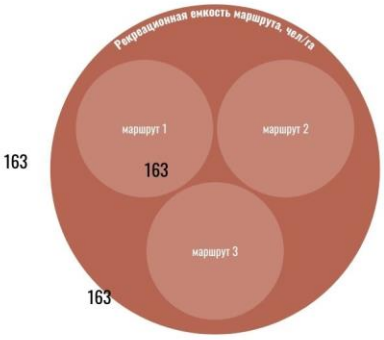


ГНПП «Алтын-Эмель»

Допустимая рекреационная нагрузка, чел/га (за сезон, максимум)

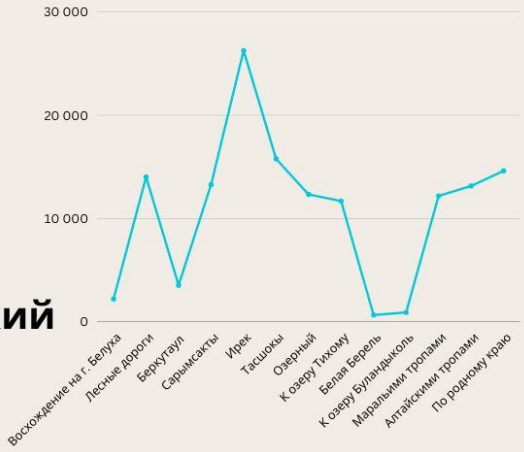
Основной метод проведения мониторинговых исследований, связанных с воздействием рекреантов, – периодические наблюдения на ключевых участках. Таковыми могут быть пробная и/или контрольная площадь, профиль, стоянка туристов, экскурсионный маршрут и т.п. Причем проводить наблюдения следует не реже трех раз в сезон: до начала эксплуатации, в период пиковых значений нагрузки и после окончания сезона.



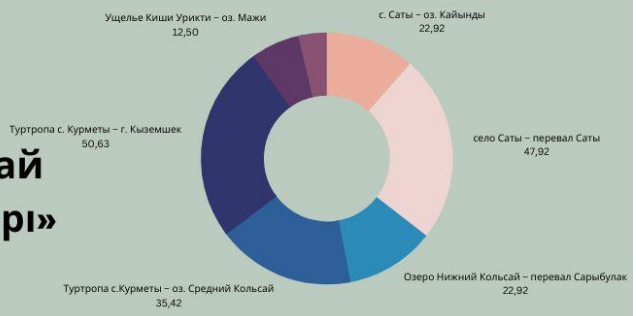


Рекреационная нагрузка в ГНПП

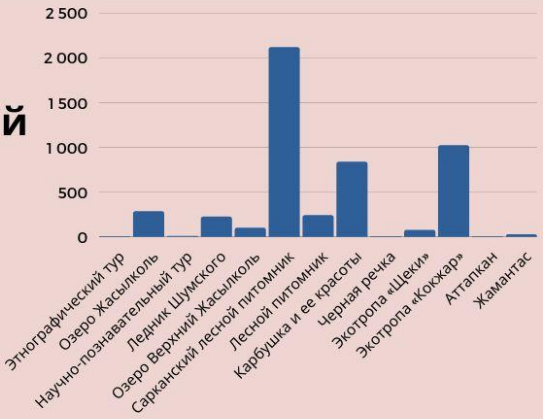
Катон-Карагайский ГНПП



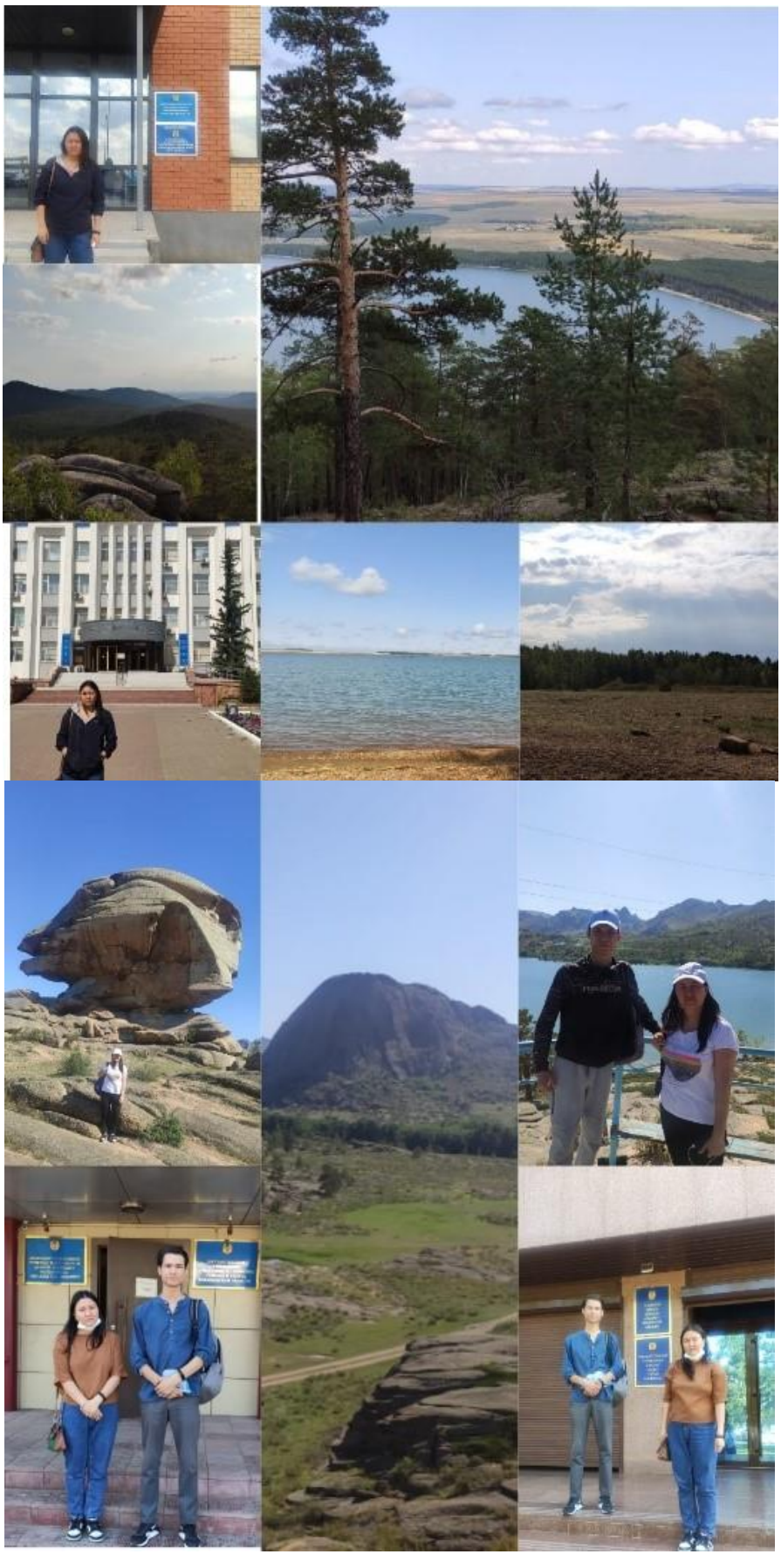
ГНПП «Көлсай көлдері»



Жонгар-Алатауский ГНПП



ГНПП «Көлсай көлдері»

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