



---

MARION DONHOFF WORKING PAPER 2019/20

Adaptation of European sustainable tourism experience for  
Lower Amudarya Biosphere Reserve in Uzbekistan

Development of audio guide and handout materials

Dinara Adilova

January 2020

## Imprint

Succow Foundation  
partner in the Greifswald Mire Centre  
Ellernholzstrasse 1/3  
D-17489 Greifswald  
Germany

info@succow-stiftung.de  
<http://www.succow-stiftung.de>  
<http://www.greifswaldmoor.de>

Cite as: Adilova, D., 2020, Adaptation of European sustainable tourism experience for Lower Amudarya Biosphere Reserve in Uzbekistan. Development of audio guide and handout materials. Marion Dönhoff Fellowship Working Paper, Michael Succow Foundation partner in the Greifswald mire Centre (self-published URL: [https://www.succow-stiftung.de/fileadmin/Ablage/Projekte/Forschung\\_Weiterbildung/Dinara\\_Adilova\\_paper\\_MD.pdf](https://www.succow-stiftung.de/fileadmin/Ablage/Projekte/Forschung_Weiterbildung/Dinara_Adilova_paper_MD.pdf)),

"Disclaimer: This work had been carried out within a fellowship programme funded by Marion Dönhoff Foundation, implemented and supervised by Michael Succow Foundation. The authors are fully responsible for the content of this working paper. Marion Dönhoff Foundation has no liability."

## CONTENT

INTRODUCTION.....	4
METHODOLOGY .....	3
RESULTS.....	3
DEVELOPMENT OF GPS ORIENTED AUDIO GUIDE FOR LASBR .....	4
WHAT IS AUDIO GUIDE? .....	4
WHAT IS IZI.TRAVEL? .....	4
DESIGN AND DEVELOPMENT OF THE TRAIL .....	4
HOW AUDIO GUIDE WAS DONE?.....	5
DEVELOPMENT OF TOURIST MAP .....	7
DEVELOPMENT OF THE RULES FOR VISITORS .....	8
DEVELOPMENT OF GUIDE TO LASBR ECOSYSTEM.....	9
HANDOUT POCKET BROCHURE.....	9
FOOTPRINT GUIDE .....	9
OTHER RECOMMENDATIONS TO PROMOTE LASBR.....	10
SUPERVISORS .....	11
LITERATURE AND INFORMATION SOURCES.....	12
LIST OF APPENDICES.....	13
LIST OF FIGURES & ILLUSTRATIONS .....	13

## INTRODUCTION

Tugai forests are unique riparian ecosystems along the river basins, characterized by flood-plain forests with endemic and rare species, among those the endangered Bukhara Deer. Lower Amudarya State Biosphere Reserve (LASBR) in Uzbekistan is one of two protected areas that are aiming at the conservation of the unique tugai habitats. The tugai ecosystems once were widely spread across Central Asia, but they remain only in fragments today (almost 90% disappeared).

LASBR was found on the basis of Badai-Tugai Strict Nature Reserve (initially 6 462 ha) which was organised in 1971. With the establishment of the biosphere reserve in 2011, a political commitment was given to a new model of protected area management. The multi-zoned BR now covers a core zone (11 568 ha), a buffer zone (6 731 ha) and an economic zone (50 418 ha).<sup>1</sup>

This territory with its endemic species and biotope is very attractive for the tourists who pass by on the way from Bukhara/Urgench/Khiva to Nukus. The LASBR is located between destinations of touristic interest. There are the numerous historic and archaeological sites around LASBR: Janpyk-kala, Sultan-Uizdag Gaur-kala, Chilpyk, and others, that also can be included to tour.

The objective of the project is to develop audio and visual aids to attract visitors to LASBR and to make their visit environmentally and socially friendly.

## METHODOLOGY

Comparative analysis of different protected areas has been made:

- Bandelier National Monument (Los Alamos, New Mexico, USA)
- Santa Fe National Forest (New Mexico, USA)
- Bosque School (Albuquerque, New Mexico, USA)
- Chincoteague National Wildlife Refuge (Virginia, USA)
- Ecocenter “Jeyran” (Bukhara region, Uzbekistan)

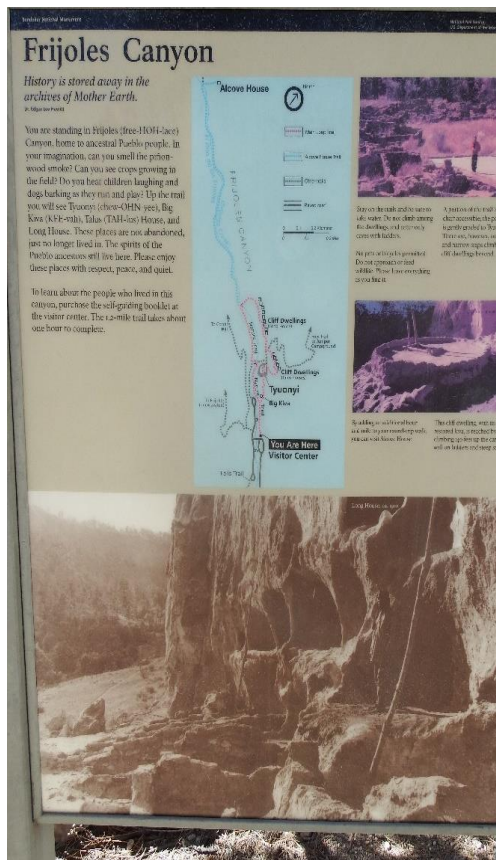
Besides the author assessed the current capacity of LASBR and adapted the communication approaches to the local condition.

## RESULTS

In all these PAs there was a special person who can make an excursion by a certain track demonstrating all features of the local nature. At Bosque School there were given a handout guide to the local ecosystem to determine species without assistance.

---

<sup>1</sup> “Communication strategy for the conservation of tugai habitats at the Amudarya river basin, Uzbekistan”. Prepared by Judith Kloiber, Elena Kan, Jens Wunderlich. Michael Succow Foundation for the Protection of Nature. Eberswalde, November 2015



Info board with tracks at Bandelier National Monument



Info board about animals at Bandelier National Monument

That was very comfortable to local guides in USA PAs that almost all visitors understand their native language – English. At the Ecocenter “Jeyran” the guide could conduct a tour in English and Russian. But unfortunately, this is a rare case. What to do if there is no special guide stuff who can speak fluently several languages? Here audio guide can be very useful. Especially if this audio guide uses

a popular platform with more than 1 million downloads.

## DEVELOPMENT OF GPS ORIENTED AUDIO GUIDE FOR LASBR

### What is audio guide?

Audio guide is developed in order to attract more visitors to LASBR and to make their excursions independent from human resources of bioserve. Tourists of course will have excursions accompanied by ranger, but this ranger cannot be a professional guide that know foreign languages. All information will be given by personal audio guide from mobile devices of tourists. All what tourists need:

1. Download and install free izi.TRAVEL application on smartphone or tablet.
2. Download audio files for the selected tour beforehand (because 3G Internet doesn't work properly in LASBR).
3. Take smartphone or tablet to LASBR.
4. Put headphones on.
5. Turn on GPS tracking on the device, start izi.TRAVEL application and begin the tour.

### What is izi.TRAVEL?

izi.TRAVEL (<https://www.izi.travel/>) is a free storytelling app to discover cities, museums and tourist attractions through audio guided stories. With more than 10 000 audio guides, including city and museum tours, izi.TRAVEL has become the leading storytelling platform. This is multilingual app that shows to users the available tours around them in over 350 destinations around the globe.

This audio guide will be useful to single globetrotters, nature lovers, students, children from schools, groups of tourists as well as families.

izi.TRAVEL application has a multilingual interface and integrated maps. In addition to that, the app also works offline, allowing users to enjoy a full exploring experience without any additional roaming cost or without Internet connection.

### Design and development of the trail

To develop trail there were made two trips to LASBR:

- December 2018, 1st trip to LASBR — learning the territory
- September 2019, 2nd trip to LASBR — recording the routes

LASBR rangers showed the standard route that they use for visitors. It is the shortest one and the most visual for the first visit. The route was recorded with Locus Map mobile application.

Route length: 11 km (from visit center to Amudarya river and back)

Estimated route duration: 4-5 hours

Route seasonality: March – November

#### **Description:**

During this guided tour, the visitors will meet the wildlife and flora of the tugai (riparian) forests near the Amudarya river which represent unique ecosystem in Central Asia.

The route starts from the visit centre of the Lower Amudarya State Biosphere Reserve and leads through the desert, desert-tugai, tugai and coastal natural complexes to the Amu Darya river.

The path follows through tugai forest where you can meet Bukhara deer included into the Red Book. Deer can be also found in the aviaries.

Near the Amudarya you can relax and have a snack on the trestle bed (topchan). The river attracts a variety of animals, this is where wild boars and jungle cats come to feed and you can find their footprints on the shore. In the evening and early morning hours Bukhara deers come out of the tugai forest. On your track you can easily find footprints of red fox, badger, tolai hare and jackal.

During the tour you will be able to hear and see a lot of birds that inhabit this territory permanently or stay here for nesting. In the biological reserve they find rest and a rich forage base.

This tour will be interesting for children of any age as well as the specialists: biologists, zoologists, bird watchers and photographers.

#### **Recommendations:**

It is recommended to wear comfortable clothes and shoes. During the route there will be some opened areas with no shadow, make sure you are protected from the sun. Don't forget to take with you a long -sleeved shirt, a cap and a sunscreen.

The route is not complicated and does not require special trainings but it is not recommended for persons who need constant medical supervision. We advise to start your route at sunrise – the most active time for birds and animals. Take some snacks, so you can have breakfast on the river bank before heading back.

Due to the duration of the route it is recommended to place biotoilettes on the trail, at least one near the Amudarya river.

#### ***How audio guide was done?***

izi.TRAVEL has its own CMS (control management system) where user can easily create a multimedia tour, combining the audio files with images, videos, texts and even quizzes: <https://cms.izi.travel/>

At first texts were prepared that after were recorded to mp3 files. Texts were checked by the expert Mariya Gritsina.

Pictures of animals, birds, that are living in LASBR were collected from different photographers. Some pictures are from camera traps. The same were done with pictures of plants and landscape. The pictures were provided by Ernest Kurtveliev, Bakhtiyor Mardonov, Natalia Marmazinskaya, Mariya Gritsina, Anna Ten, Timur Abduraupov, Maksim Mitropolskiy.

Audio guide has also sounds of nature: howls of the jackals, call of male Bactrian deer, birds' calls. They were provided by I. Volodin from Moscow State University. Some files were downloaded from DiBird.com.

There were selected the best points on the route to tell the information to visitors. The problem that there is no guarantee to see some animals, for example badger. So, the points with information about these animals were added among other points, and there were added pictures of their footprints to guide.



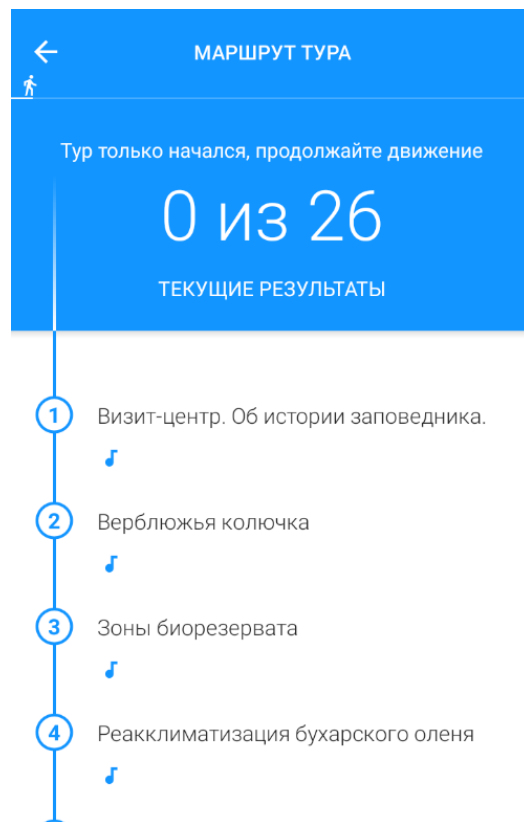
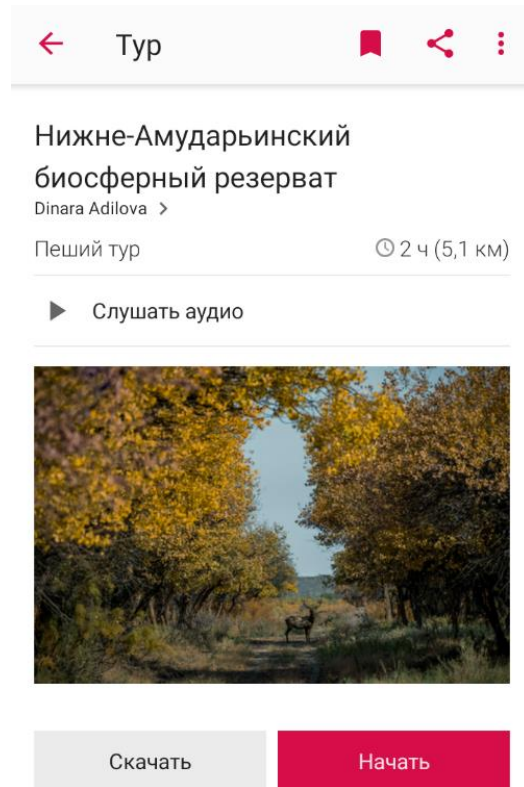


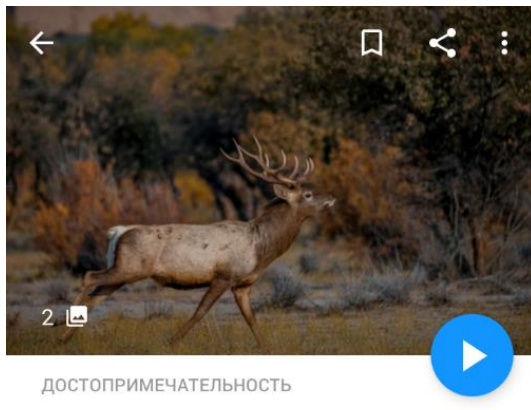
Then all information was uploaded to CMS and published.

The audio guide name is “Нижне-Амударьинский биосферный резерват” and the link to it is: <https://izi.travel/ru/browse/e7940625-cc5e-406a-935a-2034fee27bc9>

The audio guide can be found as a tour in Uzbekistan and by keywords at the moment in Russian: «Узбекистан», «резерват», «тугай» and so on.

There is a special QR code that is generated with a link to the audio guide of LASBR:





### Гон и размножение бухарских оленей

В конце августа – начале сентября у оленей наступает период размножения. Его называют гоном. К началу гона самцы имеют не только мощные твёрдые рога, но и сильно увеличенные в размерах мышцы шеи, что необходимо для турнирных боев.

В сумерках и перед рассветом самцы

### Some screenshots from mobile phone of izi.TRAVEL application with audio guide

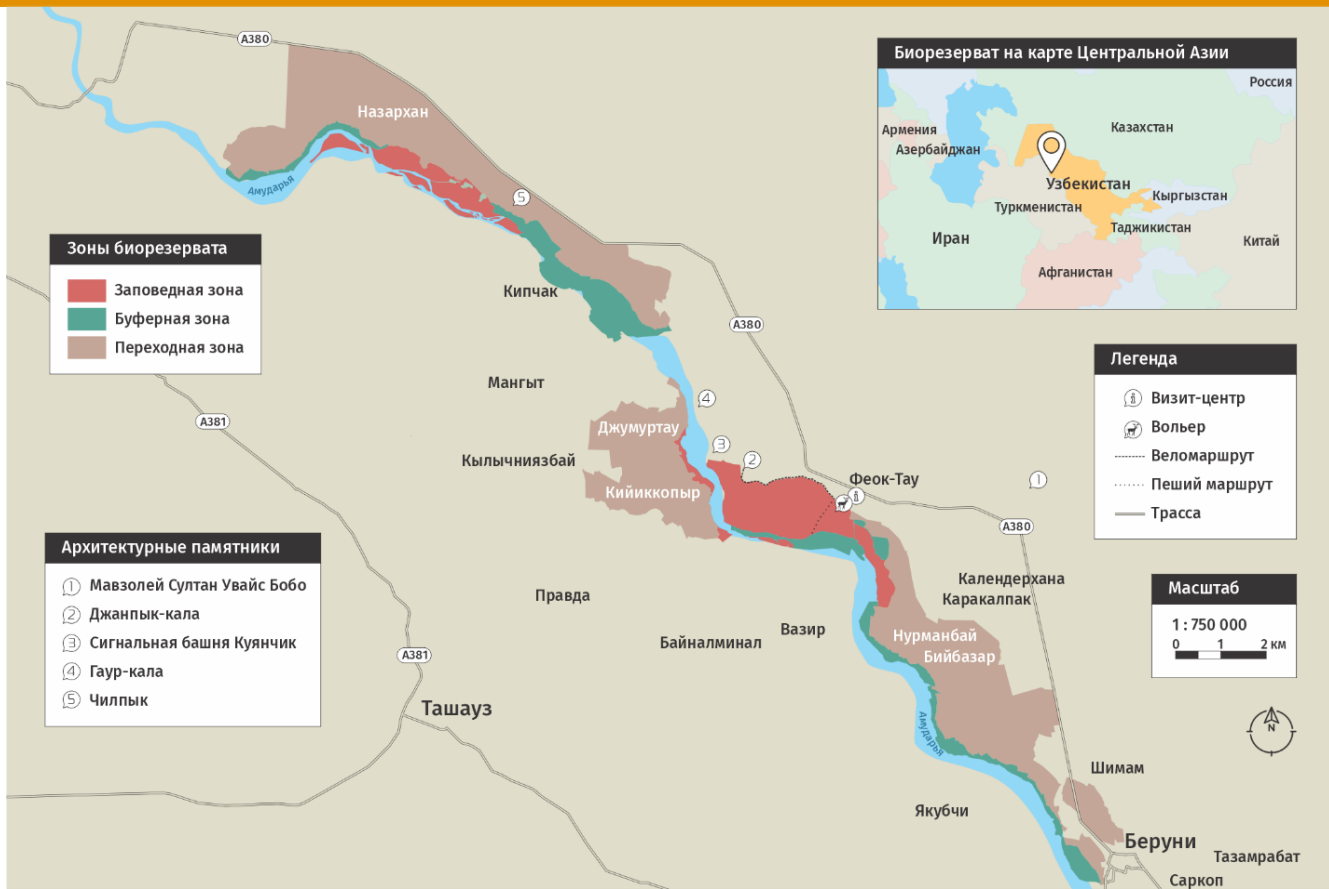
It is recommended:

- to translate audio guide to Uzbek, Karakalpak, English, German, Spanish and other languages to attract visitors of other language groups.
- to put QR-code and link (<https://izi.travel/ru/browse/e7940625-cc5e-406a-935a-2034fee27bc9>) to the official web site of LASBR – tugai.uz.
- to provide tour operators that there is an audio guide, and their tourists need only a car to have an excursion there.

## DEVELOPMENT OF TOURIST MAP

Having examined tourist maps of various nature reserves were developed friendly looking handout map with trails and key objects including sightseeing objects near LASBR.





Zonation map of LASBR



Route map

## DEVELOPMENT OF THE RULES FOR VISITORS

Having examined the rules of conduct in various nature reserves in Europe, Code of Conduct and General regulations was compiled for LASBR.

### Lower Amudarya State Biosphere Reserve Code of Conduct

It is prohibited:

1. To leave any trash on the ground
2. To collect and take any “souvenirs” or specimens from the wild, including but not limited to seeds and fruits, plants, roots, mushrooms, minerals, animal skulls, horns and other specimens from the wild
3. To damage grass cover, cut or break branches, even if they are dead
4. To take pictures of nests, egg clutches, burrows, as well as to approach them for observation
5. To make loud and disturbing noise
6. To hunt, scare and catch the animals including fish and insects
7. To clear river beds and perform other actions that may change the hydro regimen of water bodies
8. To smoke in tugai forest or make a fire

9. To cut or inscribe on trees or stones
10. To camp or to halt, stay for a night
11. To damage information signs, materials and other equipment.
12. To leave designated walking trails
13. To bring and apply chemicals that may affect the wildlife
14. To take pets with you

### General regulations

During your visit to the biosphere reserve, please read our Code of conduct and comply with the simple rules that will help to protect the natural environment. Following these regulations will help you to discover a different world and experience unforgettable emotions.

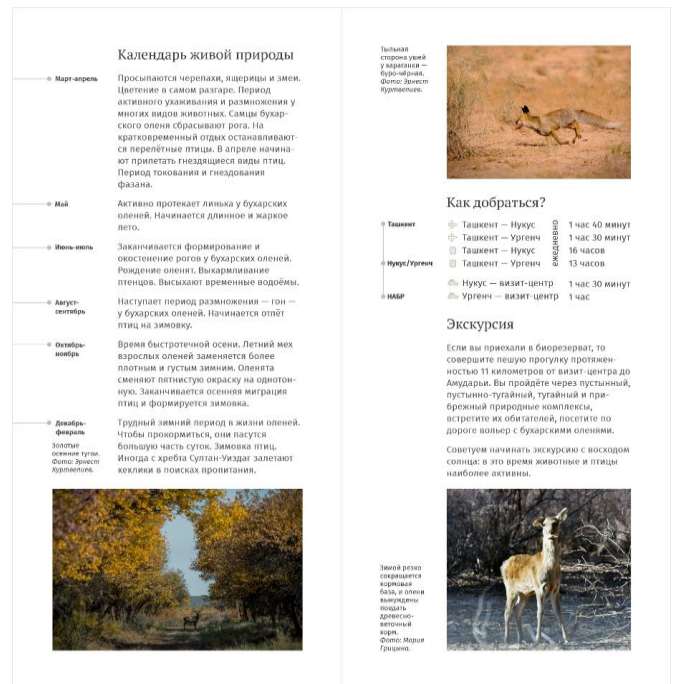
- Within the territory of the reserve visitors shall move only with the organized groups guided by the authorized representative.
- Do not stray from the designated routes.
- Be sure to pick up all your waste and take it with you. Do not leave any trash within the territory of the biosphere reserve. Please carry a waste bag with you at all times.
- Do not pick flowers, do not cut trees, do not damage the bark! It is also prohibited to pick up any herbs, fruits, mushrooms and plants on the territory of the biosphere reserve. Let the plants please you and our future guests as well. As well as the animals whose life is dependent on these plants.
- Please keep it quite: do not scare animals and birds. A frightened bird may abandon its nest and the animal might become aggressive. Keep your distance from wildlife, do not disturb it.
- Do not throw anything and do not pour out into natural reservoirs, do not damage the life of its inhabitants.
- Leave nothing but footprints, take nothing but photographs. Remember that you, the visitor, are responsible for your safety and for the safety of the animals, too. If you see an animal, you can take a photo but do not chase it.
- Do not listen to music, listen to the sound of the nature and let the others enjoy it as well: birds signing, leaves rustling, river murmuring sounds.

Keep noise to a minimum and you will be able to hear even more.

## DEVELOPMENT OF GUIDE TO LASBR ECOSYSTEM

### Handout pocket brochure

For distribution of information were developed 8-page pocket brochure with brief information about LASBR.



Cover page and a spread of the brochure

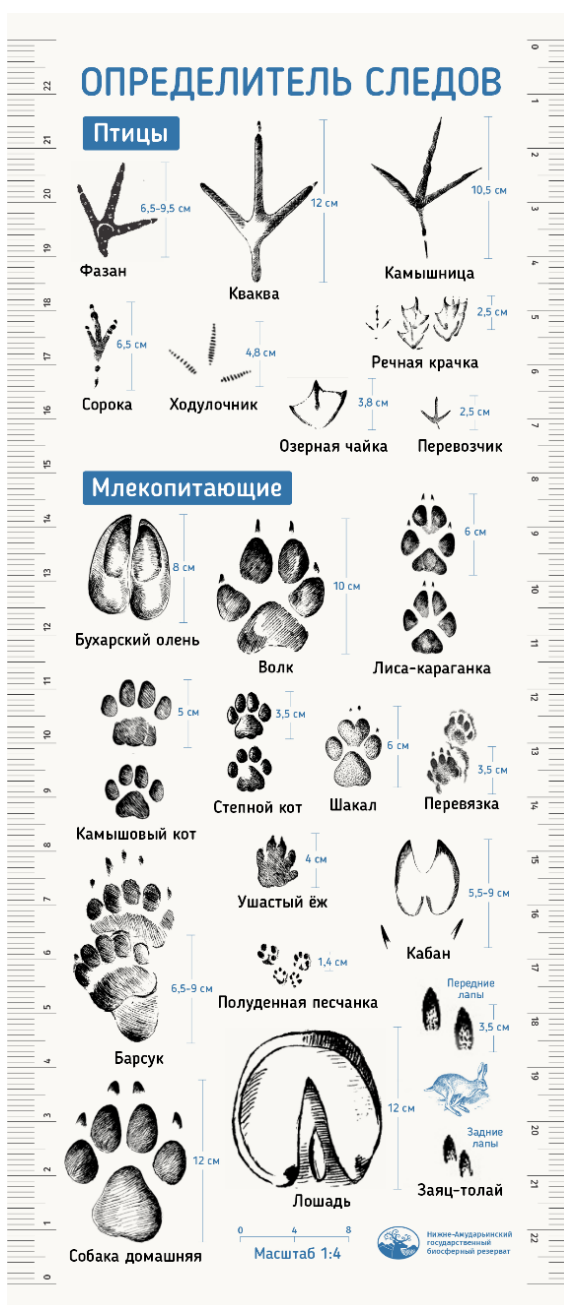
Content:

1. General information
2. Zones of bioserve
3. Climate
4. Amudarya
5. What is tugai
6. Fauna of tugai forest
7. Flora of tugai forest
8. Wildlife calendar
9. How to reach
10. Excursion

It also has maps with location of LASBR relative to Central Asia, with zonation and tourist routs. Pdf file of the brochure is applied to the report. It is recommended to translate the brochure to different languages.

### Footprint guide

According to list of most frequently mammals and birds of LASBR were made a field footprint guide. It should be printed full-scale as it has ruler by the sides and laminated. It is recommended to translate the brochure to different languages.



## OTHER RECOMMENDATIONS TO PROMOTE LASBR

- Sell of souvenir chocolate or, due to high temperature, gozinaki<sup>2</sup> with special cover devoted to Red Data Book of Uzbekistan.



Planned design of cover.

- Sell of postcards dedicated to LASBR and placement of post box and providing opportunities to send postcards from visit center of LASBR



- Creation of LASBR accounts in popular social networks (Facebook, Instagram, YouTube) and publishing actual information with nature events including with pictures from camera traps. Also, publishing information about LASBR in Trip adviser as most popular tourist information platform.
- Distribution of LASBR booklets among tourist agencies and hotels.

<sup>2</sup> <https://en.wikipedia.org/wiki/Gozinaki>

## SUPERVISORS

### **Germany:**

- Judith Kloiber, Trans NATOUR
- Jens Wunderlich, Michael Succow Foundation
- Rustam Murzakhanov, Michael Succow Foundation

### **Uzbekistan:**

- Dr. Natalia Marmazinskaya
- Maria Gritsina, Institute of Zoology



## List of literature & references

### LITERATURE

1. Заповедники СССР. Заповедники Средней Азии и Казахстана. 1990
2. Заповедники Средней Азии и Казахстана. 2006
3. Лим В. П., Мармазинская Н. В. Бухарский олень в Узбекистане — Ташкент: 2007
4. Мармазинская Н. В. Методическое руководство для работ по воспроизводству и расселению бухарского оленя в местах естественного обитания. 2012
5. Дикорастущие полезные растения СССР. И. А. Губанов, И. Л. Крылова, В. Л. Тихонова <https://books.google.co.uz/books?id=1Uv6AgAAQBAJ>
6. <https://wildfauna.ru>
7. Акимушкин И. И. Проблемы этологии.
8. <https://mirchudes.net>
9. <http://osledah.ru>
10. <https://animalreader.ru/>
11. <https://articlekz.com/article/12722>
12. <https://dibird.com/ru/>
13. <http://www.egir.ru/>
14. <http://kungrad.com/>
15. Отчёт по доработке плана управления и разработке стандартных протоколов по деятельности сотрудников вновь созданного биосферного резервата. Атамуратов Орынбай. 2013
16. Communication strategy for the conservation of tugai habitats at the Amudarya river basin. Judith Kloiber, Elena Kan, Jens Wunderlich. 2015
17. Отчет по оценке условий создания и функционирования системы устойчивого туризма в деятельности Нижне-Амударьинского государственного биосферного резервата. Данилов Сергей. 2013
18. Отчет по инвентаризации объектов культурного и исторического наследия, находящихся на территории Нижне-Амударьинского государственного биосферного резервата. Доспанов Октябрь. 2013



## List of appendices

1. Handout pocket brochure:  
brochure\_ru.pdf
2. Handout pocket footprint guide:  
footprint\_guide\_ru.pdf
3. Texts of audio records:  
audio\_guide\_texts.pdf

## List of figures & illustrations

### PHOTOS

**Photo 1.** Info board with tracks at Bandelier National Monument

3

**Photo 2.** Info board about animals at Bandelier National Monument

4

**Photo 3.**

5

**Photo 4.** Some screenshots from mobile phone of izi.TRAVEL application with audio guide

6

**Photo 5.** Some screenshots from mobile phone of izi.TRAVEL application with audio guide

6

**Photo 6.** Some screenshots from mobile phone of izi.TRAVEL application with audio guide

6

**Photo 7.** Some screenshots from mobile phone of izi.TRAVEL application with audio guide

6

**Photo 8.** Zonation map of LASBR

7

**Photo 9.** Route map

8

**Photo 10.** Cover page and a spread of the brochure

9

*Photo 11.* Footprint guide

10

**Photo 12.** Planned design of cover.

10

**Photo 13.**

10