

# North Vidzeme Biosphere Reserve

## Periodic Review 2012 - 2022





## PERIODIC REVIEW FOR BIOSPHERE RESERVE

### INTRODUCTION

The UNESCO General Conference, at its 28th session, adopted Resolution 28 C/2.4 on the Statutory Framework of the World Network of Biosphere Reserves. This text defines in particular the criteria for an area to be qualified for designation as a biosphere reserve (Article 4). In addition, Article 9 foresees a periodic review every ten years, based on a report prepared by the concerned authority, on the basis of the criteria of Article 4 and forwarded to the secretariat by the State concerned. The text of the Statutory Framework is given in the third annex.

The form which follows is provided to help States to prepare their national reports in accordance with Article 9 and to update the data available to the Secretariat on the biosphere reserve concerned. This report should enable the International Coordinating Council (ICC) of the MAB Programme to review how each biosphere reserve is fulfilling the criteria of Article 4 of the Statutory Framework and in particular the three functions. It should be noted that it is requested, in the last part of the form (Criteria and Progress Made), to indicate how the biosphere reserve fulfills each of these criteria.

The information presented on this periodic review will be used in a number of ways by UNESCO:

- (a) for examination of the biosphere reserve by the International Advisory Committee for Biosphere Reserves and by the Bureau of the MAB International Coordinating Council;
- (b) for use in a world-wide accessible information system, notably for the UNESCO-MABnet and publications, facilitating communication and interaction amongst persons interested in biosphere reserves throughout the world.

Kindly indicate if any part of this report should remain confidential.

The form consists of three parts:

- Part one is a summary highlighting the main changes in the biosphere reserve during the reporting period.
- Part two is more descriptive and detailed, referring to the human, physical and biological characteristics as well as to the institutional aspects.
- Part three consists of two Annexes (A): the first Annex (A.1) will be used to update the directory of biosphere reserves on the MABnet. The second annex will be used to provide promotion and communication materials of the biosphere reserve (A.2).

The third annex comprises the Statutory Framework for the World Network of Biosphere Reserves.

Please provide as many quantitative data as possible as well as supporting documentation to complete the information provided, especially:

- Map(s) clearly showing the zonation (see in particular 2.3.1);
- The legal texts for the different zones.

The form should be completed in English, French or Spanish. Two copies should be sent to the Secretariat, as follows:

1. The original hard copy, with the original signatures, letters of endorsement, zonation map and supporting documents. This should be sent to the Secretariat through the Official UNESCO channels, i.e. via the National Commission for UNESCO and/or the Permanent Delegation to

UNESCO.

2. An electronic version (on diskette, CD, etc.) of the periodic review form and of maps (especially the zonation map). This can be sent directly to the MAB Secretariat:

UNESCO

Division of Ecological and Earth Sciences

7, Place de Fontenoy

F-75732 Paris 07 SP, France

Tel: +33 (0)1 45 68 40 67

Fax: +33 (0)1 45 68 58 04

E-mail: [mab@unesco.org](mailto:mab@unesco.org)

[www.unesco.org/mab](http://www.unesco.org/mab)

## TABLE OF CONTENT

### PART I: SUMMARY

### PART II: PERIODIC REVIEW REPORT

1. Biosphere Reserve
2. Significant Changes in the Biosphere Reserve During the Past Ten Years
3. Ecosystem Services
4. The Conservation Function
5. The Development Function
6. The Logistic Function
7. Governance, Biosphere Reserve Management and Coordination
8. Criteria and Progress made
9. Supporting Documents
10. Addresses

#### Annexes

Annex I: MABnet Directory of the Biosphere Reserves

Annex II: Promotion and Communication Materials

Annex III: Statutory Framework of the World Network of Biosphere Reserves

## PART I: SUMMARY

- a) **Name of the biosphere reserve:** North Vidzeme Biosphere Reserve
- b) **Country:** Latvia
- c) **Year of designation:** 1997
- d) **Year(s) of periodic review(s):** 1997 - 2012
- e) **Previous recommendation(s) made by the International Co-ordinating Council (MAB-ICC), if applicable:**
- To provide sufficient staff for the North Vidzeme Biosphere Reserve governance;
  - To provide financial resources for the North Vidzeme Biosphere Reserve.
- f) **What follow-up actions are completed and if not completed/initiated, please provide justifications.**
- In June 2014, the Nature Conservation Agency requested the Ministry of Environmental Protection and Regional Development to create the Management unit of the NVBR. The position of the coordinator of the NVBR was established in 2015;
  - The Nature Conservation Agency has a unified budget for all the administrative structures.
- g) **Update on the implementation of measures to achieve the objectives of the biosphere reserve.**

Since the North Vidzeme Biosphere Reserve was designated as a biosphere reserve, we have been working to fulfil our Biosphere Reserves aims to:

- 1) Ensure the preservation of the landscape and biodiversity - a management plan for Vidzeme Rocky Seashore has been developed.
- 2) Balance on natural, social, and economic development - Nature-friendly farming continues on the farms that participated in the small grants program, and discussions on the possibility of establishing a wind farm in the coastal and maritime area are ongoing.
- 3) Ensure the circulation of information about environmental research and environmental education - Nature Education Centre has been established, classes are being held, and methodological materials and training program's have been developed.

- 4) Promote public awareness of the territory's environmental protection and sustainable development issues - educational activities on various topics are held, and we cooperate with local authorities and NGOs.
- 5) Restoration of degraded ecosystems - restoration works have been carried out in the Randu meadows - reed cutting and grazing, rivers Vitrupe, Salaca, and Seda - river clean-ups (removal of fallen trees and plants), nature reserve Karateri - the restoration of the sand toad habitat.
- 6) Promote the preservation of cultural values - a revival of manors (sustainable tourism), use of manor parks for tourism and events, and popularization of Vidzeme Livs.

**h) Briefly describe the process by which the current periodic review has been conducted:**

The periodic review was initiated in winter 2022 and involved workshops, meetings, surveys, and interviews with stakeholders from the North Vidzeme Biosphere Reserve and staff of Nature Conservation Agency of Latvia and member of UNESCO Chair on Biosphere and Man, Vidzeme University of Applied Sciences.

The review was written partly by Linda Kauliņa, the Nature Conservation Agency and by Agita Līviņa, Andris Klepers, Iveta Druva-Druvaskalne, Vidzeme University of Applied Sciences. The section on tourism accommodation in the NVBR was elaborated by the tourism student L.Višņevska and incorporated parts from the reports prepared by Anda Mežgaile, a PhD student and Deputy Head of UNESCO Chair on Biosphere and Man, Vidzeme University of Applied Sciences. English language editor – Līga Cvetkova.

**i) Area and spatial configuration:**

	Previous report (nomination form or periodic review) and date	Proposed changes (if any)
Area of terrestrial Core Area(s)	12 532 ha	23 722 ha
Area of terrestrial Buffer Zone(s)	208 667 ha	175 086 ha
Area of terrestrial Transition Area(s)	254 315 ha	258 912 ha
Area of marine Core Area(s)	Not defined	10 ha
Area of marine Buffer Zone(s)	1814 ha	17 780 ha
Size of marine Transition Area(s)	15 992 ha	0,16 ha

**j) Human population of the biosphere reserve:**

	Previous report (2012)	At present (2022)
Core Area(s) (permanent and seasonally)	60	55
Buffer Zone(s) (permanent and seasonally)	Precise data are not available due to the fact that borders of the NVBR do not follow administrative borders having precise statistics	Rather decrease due to the economical migration outside the NVBR
Transition Area(s) (permanent and seasonally)	All together 69545 inhabitants are recorded in the NVBR in 2012. Transition area embraces 53% of the whole NVBR.	60967

**k) Budget (main sources of funds, special capital funds) and international, regional or national relevant projects/initiatives carried out or planned.**

Budget in the previous report (nomination form or periodic review) and date	Changes in the budget (if any)
Since 2009 there are no exact amount of funds devoted for the single Regional Administration	The salaries of the NVBR coordinator and the head of Nature Education Centre of NVBR are included in the Vidzeme Regional Administration budget.

**l) International, regional, multilateral or bilateral framework of cooperation. Describe, where applicable, the contribution of the biosphere reserve to achieve objectives and developing mechanisms that contribute to the implementation of international or regional bilateral or multilateral agreements, conventions, etc.**

The NVBR has promoted cooperation and knowledge transfer among Biosphere Reserves, with particular emphasis on joint actions in the field of nature and landscape conservation, through participation in different Thematic Networks and bilateral partnerships. We take part in :

- National Committee of the Man and the Biosphere Programme (MaB National Committee);
- National UNESCO Biosphere Reserves Network;
- European Biosphere Reserves Network (EuroMAB);
- Nordic Network of Biospheres Reserves (NordMaB);
- World Network of Island and Coastal Biosphere Reserves - WNICBR;
- Network Biosphere for Baltic

Also, the Biosphere Reserves contributes to the implementation and reports related to international conventions and agreements and European Framework Directives such as the Ramsar Convention, CITES, Convention on Biological Diversity, Birds and Habitat Directives, and others.



## PART II: PERIODIC REVIEW REPORT

### 1. BIOSPHERE RESERVE

**1.1 Year designated:** 1997

**1.2 Year of first periodic review and of any following periodic review(s) (when appropriate):**

1997 – 2012

**1.3 Follow-up actions taken in response to each recommendation from the previous periodic review(s) (if applicable), and if not completed/initiated, please provide justifications.**

<b>Recommendation</b>	<b>Completed</b>	<b>Partly completed</b>	<b>Not completed</b>
To provide sufficient staff for the North Vidzeme Biosphere Reserve governance	<b>X</b>		
To provide financial resources for the North Vidzeme Biosphere Reserve		<b>X</b>	

In June 2014, the Nature Conservation Agency requested the Ministry of Environmental Protection and Regional Development to create the Management unit of the NVBR. The position of the coordinator of the NVBR was established in 2015.

The Nature Conservation Agency has a unified budget for all the administrative structures. It would be desirable to increase financial resources for the management of the NVBR.

**1.4 Other observations or comments on the above.**

The Nature Conservation Agency is allocating additional financial resources and staff via projects, for example, the European Union initiative LIFE and the European Union Interreg programme.

**1.5 Describe in detail the process by which the current periodic review has been conducted:**

**1.5.1 Which stakeholders were involved?**

The main engagement of stakeholders has been through various partnerships:

<b>Larger framework of stakeholders</b>	<b>Organisation</b>	<b>Sector</b>
<b>Central Government</b>	Nature Conservation Agency	Nature conservation and protection
<b>The Consultative Board of the North Vidzeme Biosphere Reserve</b>	UNESCO Committee of Latvia	Public: education, science, culture

	National Heritage Board of Latvia	Cultural heritage
	The State Forest stock company	Forestry and forestry management
	Local municipalities: Limbaži Municipality, Valka Municipality and Valmiera Municipality	Municipal institutions
	Vidzeme University of Applied Sciences	Higher education and research institution in the area
	Non-governmental organisation "North Vidzeme Biosphere Reserve Support Association"	Non-governmental organisation: involvement of local communities, environment awareness
	Non-governmental organisation "Ziemeļvidzeme Geopark"	Non-governmental organisation: geology, environment awareness, public events
	State forest stock company "Latvijas valsts meži"	Forestry
	State Forest Service	Forestry management
<b>Public libraries</b>	56 public libraries: Limbažu, Katvaru, Pociema, Lādes, Stienes, Lādezera, Ārciema, Pāles, Skultes, Straumes, Bīriņu, Vilzēnu, Puikules, Salacgrīvas, Svētciema, Korģenes, Ainažu, Liepupes, Tūjas, Umurgas, Viļķenes, Vitrupes, Alojās, Ungurpils (SALA), Staiceles, Braslavas, Valka central, Valka parish, Ērgemes, Ērgemes subdivision, Kārķu, Strenču, Jērcēnu, Sedas, Ipiķu, Jeru, Lodes, Rūjienas, Vilpulkas, Ķoņu, Naukšēnu, Mazsalacas, Ramatas, Sēļu, Skaņakalnes, Burtnieku, Ēveles, Matīšu, Rencēnu 1, Rencēnu 2, Vecates, Bērzaines, Dikļu, Kocēnu, Zilākalna, Valmieras. ----- Library of North Vidzeme Primary School and Library of Vidzeme University of Applied Sciences	Education and communication
<b>Education and research institutions</b>	Research institutions in the country, North Vidzeme Biosphere Reserve Nature Centre	Education and research
<b>Small business</b>	The former beneficiaries of UNDP small grant programme	Business

Vidzeme Regional Administration of the Nature Conservation Agency organizes and provides agenda for meetings, minutes, reports etc. for the last ten years.

The current review was written partly by Linda Kauliņa, the Nature Conservation Agency and by Agita Līviņa, Andris Klepers, Iveta Druva-Druvaskalne, Vidzeme University of Applied Sciences. The section on tourism accommodation in the NVBR was elaborated by the tourism student L. Višņevska and incorporated parts from the reports prepared by Anda Mežgaile, a PhD student and Deputy Head of UNESCO Chair on Biosphere and Man, Vidzeme University of Applied Sciences. English language editor – Līga Cvetkova.

### **1.5.2 What methodology was used to involve stakeholders in the process (e.g., workshops, meetings, consultation with experts).**

The process of the periodic review included:

- ✓ Analysis of the previous report and received recommendation of the UNESCO programme Man and Biosphere
- ✓ Analysis of the statistical data to provide an overview of the changes (social, economic and nature-related)
- ✓ On-line survey for the research institutions in the country to explore the nature and the number of different research activities carried out in the NVBR
- ✓ Workshop with stakeholders
- ✓ Meetings with stakeholders
- ✓ Meetings, discussions within the Nature Conservation Agency
- ✓ Interviews and telephone interviews with stakeholders
- ✓ Site visits to meet entrepreneurs
- ✓ Meetings and discussions with NGO's
- ✓ Meetings with meeting with municipal employees
- ✓ Meetings with former NVBR employees.

### **1.5.3 How many meetings, workshops, etc. occurred throughout the process of conducting this review?**

- ✓ Workshops and meetings with stakeholders
  - 25th annual celebration event (9 December 2022) with active involvement of participants to assess the activities in the last 10 years as well as the future vision of the NVBR, main partners (around 50 participants)
  - The annual meeting of the Consultative Board of the North Vidzeme Biosphere Reserve (14 June 2022)
  - Interview with Head of Vidzeme Planning Region Guna Kalniņa-Priede (25 February 2023)
  - Internal meeting (14 March 2023) with the director of the NCA Vidzeme Regional Administration, coordinator of the NVBR and UNESCO Chair on Biosphere and Man, Vidzeme University of Applied Sciences
  - On-line interview with the former coordinator of the NVBR A.Krūmiņa (16 March 2023)
- ✓ Digital survey of the research institutions about the performed research in the NVBR (January, 2023)
- ✓ Review of policy planning documents and reports
- ✓ Press releases and social media posts to promote engagement of participation for drafting the Periodic Review
- ✓ Repeated survey for the local population in April 2018 with the main aim to compare the findings with the previous survey in 2007. 814 responses from locals were received. The goal of the survey was to identify the understanding of sustainable development (live and life).
- ✓ 7 written interviews (entrepreneurs and leaders of local action groups, tourism sector) in 2021
- ✓ Three focus group discussions with entrepreneurs and organisations in the field of cultural and creative tourism, accommodation and nature tourism in Limbaži Municipality (27 February, 6 March, 13 March 2023), 65 participants

- ✓ Communication with Valmiera Municipality, Department of Resources on the performed research on Lake Burtnieks (February 2023).

#### **1.5.4 Were they well attended, with full and balanced representation?**

**(Describe participation and stakeholders).**

Most of the stakeholder engagement activities were well attended. The people addressed were very responsive for discussion and engagement in activities. In one of our working sessions, an interactive tool menti.com was used to get the views and thoughts about the NVBR. Individual participants of the session, the elderly, did not participate, but they had the opportunity to express their views in writing.

See also answer 1.5.3.

## **2. SIGNIFICANT CHANGES IN THE BIOSPHERE RESERVE DURING THE PAST TEN YEARS:**

**2.1 Brief summary overview: Narrative account of important changes in the local economy, landscapes or habitat use, and other related issues. Note important changes in the institutional arrangements for governance of the biosphere reserve area, and changes (if any) in the coordinating arrangements (including the biosphere reserve organization/coordinator/manager) that provide direction for the biosphere reserve. Identify the role of biosphere reserve organization/coordinator/manager in initiating or responding to these changes.**

**Economy:** the socio-economic development model of the NVBR has remained the same over the past decade, with agriculture mainly based on dairy and meat production remaining prevalent. The fisheries industry has a small part of the economy, particularly in terms of the jobs it generates, in the Biosphere Reserve. Still, the forestry sector occupies a considerable role.

**Demographics:** the resident population on NVBR has decreased by about 9000 people in the past decade.

**Landscape:** in our biosphere reserve we don't have any significant changes during the last 10 years.

**Biodiversity:** A system for measuring the value of our nature - a Nature Census - was introduced to collect detailed and complete information about Latvia's, including NVBR natural capital, to manage those resources and plan economic activity accordingly and effectively. Regarding to the project, natural capital includes natural landscapes with grasslands, forests, swamps, coastal areas and sand dunes, rivers, lakes, exposed rock formations, and the diversity of species living in these habitats. The function of the Nature Census project is to determine the amount and distribution of the various kinds of natural capital in Latvia. Right now, project team is analysing the obtained data.

Since 2015 NCA established North Vidzeme Biosphere Reserves coordinator position.

## **2.2 Updated background information about the biosphere reserve.**

North Vidzeme Biosphere Reserve is the only biosphere in Latvia. NVBR embraces Salaca River basin. It includes the Salaca River and Lake Burtnieks along with their tributaries, as well as a marine area to a depth of 10 m covering 457,600 hectares of land and 16,750 hectares of sea, ~ about 6% of all area of Latvia. It is home to 2.6% of the population of Latvia (49 644 inhabitants on July 1, 2022).

The NVBR establish in 1997 and already, on December 15, 1997, was recognized as a protected territory of international importance in the framework of the UNESCO program. It includes not only objects of nature, but also man as one of the elements - internationally significant nature and landscape values are preserved, ensuring sustainable social and economic development. The conservation aim of the territory is to protect natural values and landscapes of international significance, promoting sustainable economic and social development. The area includes 24 nature reserves, one nature park, and two protected Natura 2000 marine areas.

The NVBR represents two natural regions of Latvia – the Coastal Lowland and the Middle Latvia Lowland. The highest elevation in the Reserve is 127 m above sea level. The present landscape, formed at the end of the last glacial period approximately 10,000 years ago, is characterized by forests, moraines, drumlins, kettle lakes, rivers, wetlands, raised bogs, semi-natural grasslands, coastal meadows, and agricultural lands. Forests cover more than 45% of the biosphere reserve, while wetlands and inland waters cover approximately 10%. There are 63 lakes of greater than

three ha in size within the Reserve. Of 63 biotopes found in Latvia that are important at the European Union level, 37 are represented in the NVBR, as well of 61 EU Bird Directive species nesting in Latvia, 48 do so in the NVBR. The NVBR abuts Latvia's border with Estonia, sharing important wetland areas with neighbouring Estonian districts.

**2.2.1 Updated coordinates (if applicable). If any changes in the biosphere reserve's standard geographical coordinates, please provide them here (all projected under WGS 84):**

Cardinal points:	Latitude	Longitude
Most central point:	57.74494	25.020202
Northernmost point:	58.085569	25.199429
Southernmost point:	57.373888	24.494318
Westernmost point:	57.826415	24.20971
Easternmost point:	57.838644	26.058858

**2.2.2 If necessary, provide an updated map on a topographic layer of the precise location and delimitation of the three zones of the biosphere reserve Map(s) shall be provided in both paper and electronic copies. Shape files (also in WGS 84 projection system) used to produce the map must also be attached to the electronic copy of the form.**

If applicable, also provide a link to access this map on the internet (e.g. Google map, website).

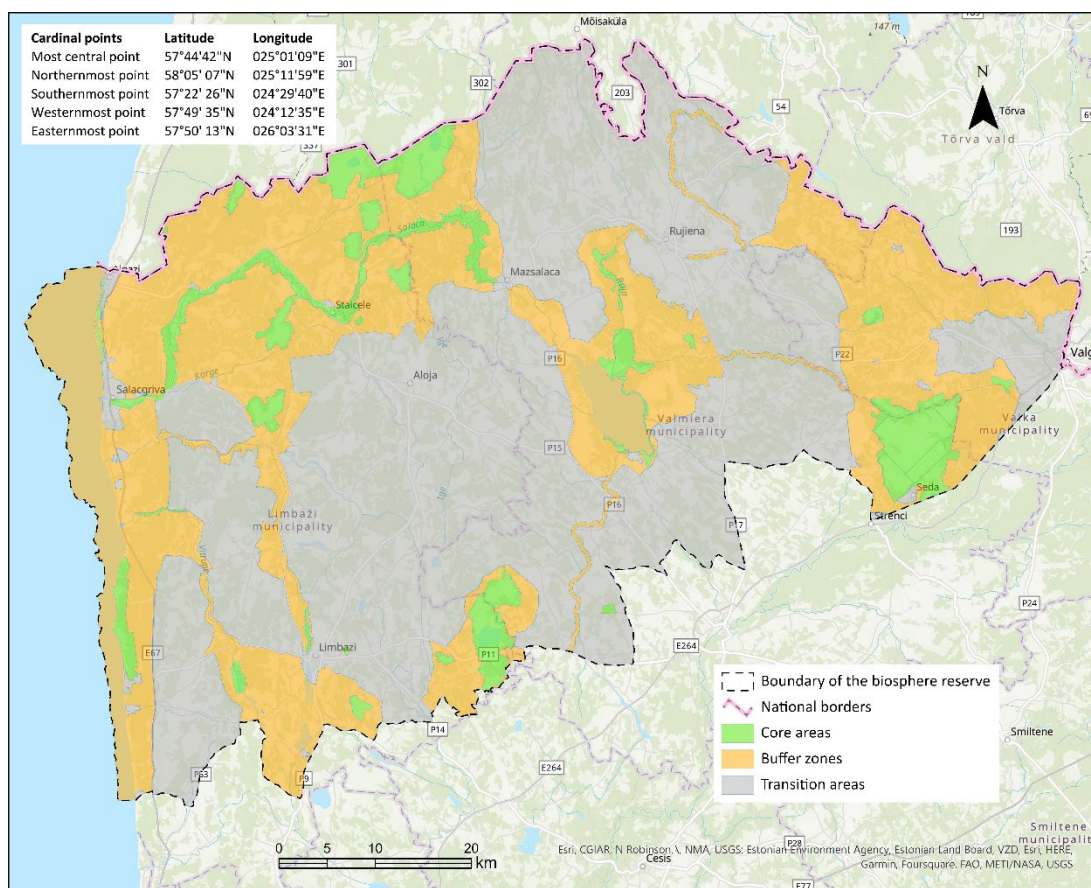


Fig 1. NVBR zonation map

Source: Nature Conservation Agency Republic of Latvia, 2023

### 2.2.3 Changes in the human population of the biosphere reserve

The human population changes in the NVBR from 2007 to 2022 indicate the shrinking of the population. The Table 1 shows the data, including the area of all three administrative units (local municipalities). There are differences between the administrative borders of the municipalities and the NVBR border.

Population: in January 2023 the NVBR territory was populated by 60967 residents (according to the Central Statistical Bureau of Latvia (further - LRCSP) 2023 data), which is about 2.3 % of the total population of Latvia. The table indicates a slump trend of population decrease. The human population in rural areas has decreased due to the impact of the global financial crisis and the migration abroad and to the bigger economical centres outside the NVBR, as well as in last two years due to the COVID-19 pandemic.

Table 1. Population changes in the NVBR 2007-2022

Administrative unit	2007	2012	2017	2022	Natural population growth in 10 years
<b>Aloja Municipality</b>	6107	5273	4785	4436	-837
<b>Burtnieki Municipality</b>	8903	8224	7977	7365	-859
<b>Kocēni Municipality</b>	6815	6310	5980	5747	-563
<b>Limbaži Municipality</b>	19298	17725	16571	16696	-1029
<b>Mazsalaca Municipality</b>	3941	3461	3030	2805	-656
<b>Naukšēni Municipality</b>	2202	1966	1770	1643	-323
<b>Rūjiena Municipality</b>	6163	5516	5056	4742	-774
<b>Salacgrīva Municipality</b>	9334	8280	7574	7141	-1139
<b>Strenči Municipality</b>	4251	3708	3077	2847	-861
<b>Valka Municipality</b>	10390	9082	8049	7545	-1537
<b>Total</b>	77404	69545	63869	60967	<b>-8578</b>

Source: Central Statistical Bureau, 2023

Population density differs according to the town and settlement location. There are more than 70 densely populated areas according to Latvian definition (at least 50 permanent residents or working people in a concentrated area). Based on the population census data (generalised on 1x1km), there were 50151 permanent residents in the NVBR in 2021, a bit less than in 2019 (50429). There is a process of population concentration around regional centres (especially Valmiera vicinity at the NVBR southern border), but the peripheral rural areas are emptying (see Fig 2.).

The difference in the number of inhabitants between all the three municipalities and the NVBR territory along its borders is 10,816 (since the area of the NVBR is not identical to the territory of the three municipalities). In all the descriptions of statistical data, the statistics are provided for all the three municipalities as a whole, not within the borders of the NVBR, which means that there are 10,000 more inhabitants in the statistical descriptions.

## Population density in North Vidzeme Biosphere Reserve

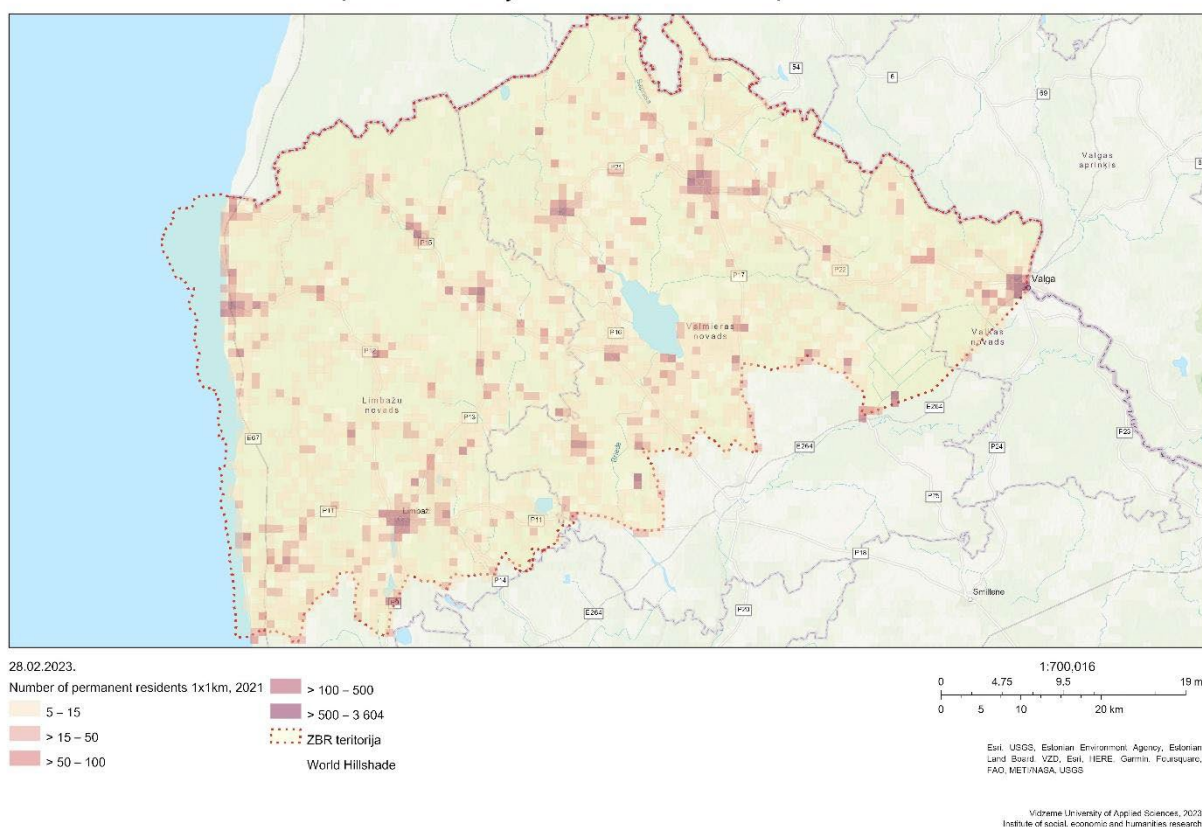


Fig 2. Population density in the NVBR

Source: Based on data from the Central Statistical Bureau, 2023

Notably, the age group 0-17 declined in 8 out of 10 local municipalities between 2012 and 2022. In other age groups the population decreased in all areas. On the whole, the most significant reduction of the population affects the working age groups, namely from 18 to 65, there is a total decrease of 6021 persons in ten years. Since 2020, due to the COVID-19 pandemic the largest increase of mortality is in the age groups 60+ (see Table 2).

Table 2. Changes in population by age groups

Administrative unit	0-17 years		18-65		65+	
	2012	2022	2012	2022	2012	2022
<b>Aloja Municipality</b>	756	642	3237	2749	1280	1045
<b>Burtnieki Municipality</b>	1094	<b>1255</b>	5472	4708	1658	1402
<b>Kocēni Municipality</b>	913	<b>958</b>	4062	3587	1335	1202
<b>Limbaži Municipality</b>	2481	2459	11092	10373	4152	3864
<b>Mazsalaca Municipality</b>	456	406	2065	1697	940	702
<b>Naukšēni Municipality</b>	289	235	1261	1083	416	325
<b>Rūjiena Municipality</b>	724	648	3425	2838	1367	1256
<b>Salacgrīva Municipality</b>	1080	842	5234	4502	1966	1797
<b>Strenči Municipality</b>	474	384	2195	1625	1039	838
<b>Valka Municipality</b>	1169	1112	5534	4394	2379	2039
<b>In total</b>	9436	8941	43577	37556	16532	14470



## 2.2.4 Update on conservation function, including main changes since last report.

(Note briefly here and refer to 4 below).

There have been no major changes in the extent of habitats and ecosystems within the NVBR since last report (2012). Many projects have been implemented and are still on-going contributing to improving biodiversity and taking care of nature conservation, restoration and planning.

The elaboration of a unified nature management plan for the **specially protected marine Natura 2000 areas** has been initiated by the project LIFE19 NAT/LV/000973 REEF "Research of marine protected habitats in EEZ and determination of the necessary conservation status in Latvia" [https://reef.daba.gov.lv/public/eng/about\\_the\\_project/](https://reef.daba.gov.lv/public/eng/about_the_project/). Among the other seven territories, they also include two from the NVBR, and this is for the first time when a comprehensive nature management plan is carried out for several territories simultaneously. Both of the mentioned protected marine areas were created in 2010, and until recent more detailed protection and nature conservation measures were not foreseen.

The research and report (2020) on "**Assessing coastal visitor flow, public infrastructure and environmental pressures**" has been carried out by Nocticus Ltd. The assessment touches on issues of visits and accessibility of Baltic Sea coast including the whole coastal part of the NVBR; beach visitor pressure on coastal vegetation; evaluation of coastal public infrastructure and marine litter problems (see Fig 3.). Eventually actions to overcome main challenges are proposed. The main conclusion: even though there is a need for new infrastructure development in intensively visited places with large anthropogenic pressure to the vegetation, there is even a bigger need in filling the gaps in the existing infrastructure elements and in improvement of the maintenance.



Fig 3. Visitation flow in coastal area.

<https://land-sea.eu/wp-content/uploads/2020/07/LSA-Coast-Visits-Summary-2020.pdf>

[http://petijumi.mk.gov.lv/sites/default/files/file/1\\_zinojums\\_Piekrastes\\_pētījums2020.pdf](http://petijumi.mk.gov.lv/sites/default/files/file/1_zinojums_Piekrastes_pētījums2020.pdf)

<https://land-sea.eu/coastal-visitor-flow/>

Interactive map:

<https://varam.maps.arcgis.com/apps/webappviewer/index.html?id=0a7bab7ca0e549eda75786ea06ce4867>

An in-depth analysis has been carried out in the **NVBR Coastal tourism development plan 2012 – 2018** (elaborated in 2011 by the Latvian Fund for Nature)

[https://www.salacgriva.lv/files/news/10370/zbr\\_turisma\\_attistibas\\_plans.pdf](https://www.salacgriva.lv/files/news/10370/zbr_turisma_attistibas_plans.pdf)

and long-term thematic planning for the development of the public infrastructure of the Baltic Sea coast of Latvia

<https://likumi.lv/ta/id/286733-par-valsts-ilgtermina-tematisko-planojumu-baltijas-juras-piekraustes-publiskas-infrastrukturas-attistibai>, carefully planning and designing the public infrastructure needs for micro-mobility and public access of the Baltic coast.

The Ministry of Culture has carried out the implementation of the 5.5.1.Special Objective in cooperation with the Ministry of Environmental Protection and Regional Development: “Preserve, protect and develop significant culture and natural heritage and promote the services related thereto”. That has provided a significant contribution to the conservation of culture heritage and landscapes.

In 2020 – 2022 the National Research Programme “Sustainable Development of the Territory and Rational Use of Land Resources” was implemented, and one of the tasks included the identification of landscapes of national significance (National Landscapes). Two National Landscapes are located in the territory of the NVBR: Lake Burtnieks and Salaca Valley, and one National Landscape and coastal area of the NVBR is included in the National Landscape “Sea and Livonian Coast”. There is no specific protection status for National Landscapes yet.

In 2022 the Development Programme of Vidzeme Planning Region was approved including the entire area of the NVBR. Four main goals have been set for the next six years (until 2027):

- ✓ Conservation and intelligent management of natural ecosystems and resources
- ✓ Improve people's quality of life
- ✓ Promote economic development and growth by transforming business models
- ✓ Promote cooperation and strong organisations.

### **2.2.5 Update on the development function, including main changes since last report. (Note briefly here and refer to 5 below).**

The Table 3 shows the employment situation by local municipalities according to the experimental statistics after the administrative territorial reform. Describing the employment characteristics, employees have the highest share: in Limbaži Municipality 86%, in Valka Municipality 84.4% and in Valmiera Municipality 88.1%. Employers' share in the employment structure is low: in Limbaži Municipality 3.38%, in Valka Municipality 2.65% and in Valmiera Municipality 3.19%. Self-employed are between 8.8% to 10.59% in Limbaži Municipality.

Table 3. Employment characteristics in the NVBR by municipalities.

Source: [https://data.stat.gov.lv/pxweb/en/OSP\\_PUB/START\\_\\_EMP\\_\\_NB\\_\\_NBLA/EKA031/](https://data.stat.gov.lv/pxweb/en/OSP_PUB/START__EMP__NB__NBLA/EKA031/)

		<b>2021</b>		
		<b>Total</b>	<b>Males</b>	<b>Females</b>
<b>Latvia</b>	<b>Employed</b>	877052	416450	460602
	<b>Employees</b>	760331	352493	407838
	<b>Employers</b>	35015	22262	12753
	<b>Self-employed</b>	81706	41695	40011
<b>Limbaži municipality</b>	<b>Employed</b>	<b>13016</b>	6480	6536
	<b>Employees</b>	11197	5433	5764
	<b>Employers</b>	440	292	148

	<b>Self-employed</b>	1379	755	624
<b>Valka municipality</b>	<b>Employed</b>	<b>3096</b>	1397	1699
	<b>Employees</b>	2738	1244	1494
	<b>Employers</b>	82	47	35
	<b>Self-employed</b>	276	106	170
<b>Valmiera municipality</b>	<b>Employed</b>	<b>23570</b>	11068	12502
	<b>Employees</b>	20743	9578	11165
	<b>Employers</b>	753	500	253
	<b>Self-employed</b>	2074	990	1084

**Number of active companies registered in the official register Lursoft 2023 broken down into activity types.** An active company is a company that has been registered before 2023 and has continued operations in 2023, and is also regarded as an active company during 2023.

The largest number of enterprises in the NVBR area are registered as mixed farming – in total there are 1765 enterprises; the second largest sector by number of companies is logging with 226 enterprises; Also, silviculture and other forestry activities – 78 enterprises. The third sector is construction of residential and non-residential buildings with 193 enterprises.

Growing of cereals (except rice), leguminous crop and oil seeds is in 165 enterprises.

Fishing in the sea is only in Limbaži Municipality with 33 enterprises.

Divided by activity, the companies with the biggest annual turnover in 2021 in Valka and Valmiera municipalities were in mixed farming; in Limbaži Municipality – sawmilling and planing of wood. By turnover logging is the second largest industry in Valmiera Municipality and third in Limbaži Municipality. Construction of residential and non-residential buildings is the second in Limbaži Municipality and the third in Valmiera Municipality.

Sectors where companies have had both the highest turnover and positive growth in 2022 compared to 2021 in Valka Municipality: sawmilling and planing of wood (+47.8%), construction of roads and motorways (+36.37%), manufacture of plastic plates, sheets, tubes and profiles (+12.11%); in Valmiera Municipality: support activities for crop production (+54.81%), logging (+97.4%); and in Limbaži Municipality: logging (85.56%), sawmilling and planing of wood (+52.34%), construction of roads and motorways (7.09%).

Overview of new company registration trend:

Municipality	2019	2022
Limbaži Municipality	101	87
Valka Municipality	23	29
Valmiera Municipality	205	187

Source: Lursoft, 2023

In the NVBR, there are two operating ports – Salacgrīva port (includes also Salacgrīva yacht port) and Kuiviži port. Salacgrīva port is located at the mouth of the River Salaca into the Gulf of Riga and 100 km from Riga (capital city of Latvia) and 13 km from the border of Latvia and Estonia. One of the biggest fish processing businesses in Latvia – joint stock company “Brīvais Vilnis” operates in Salacgrīva port. The company processes fish from the Baltic Sea as well as ocean fish. JSC “Brīvais Vilnis” was the fifth largest enterprise by turnover in Limbaži Municipality in 2021.

Kuiviži port is located by the North East side of the Gulf of Riga by Krišupīte river mouth, 3 km up North from Salacgrīva and 7 km from Estonian border. Kuiviži port is used for fishery, fish processing, yachts, tourism, as well as private property management. Fishermen use Kuiviži port for their commercial activities. Ltd. “Kuivižu osta” has developed a leisure and yacht complex Ltd. “Kapteņu osta” which includes a hotel, campsite and a restaurant (<https://salacgrivaport.lv/en/>).

During this period, a decision has been made to build a new railway line Rail Baltica that will pass through the area. Stations are planned in Tūja (Skulte) and Salacgrīva. The decision-making process has been slow with public hearing meetings looking for the best choice of the route. The tourism and leisure industry has primarily developed around the beaches of the Gulf of Riga, in the Salaca River valley, near Lake Burtnieks and Lake Limbažu Lielzers, and in the Nature Park “Skaņais kalns”. As well as that, different kind of attractions are significant for visitors: museums and creative workshops, excursions in farms and adventure activities.

## **2.2.6 Update on logistic support function, including main changes since last report.**

**(Note briefly here and refer to 6 below).**

Research and monitoring activities have been ongoing and regular. The main institutions involved are the NCA, Vidzeme University of Applied Sciences (UNESCO Chair on Biosphere and Man), the Latvian Fund for Nature, the public monitoring platform *Dabas dati*, Latvian Institute of Aquatic Ecology, University of Latvia, incl. Institute of Livonian, Daugavpils University.

Vidzeme University of Applied Sciences has good connections with the NCA, municipalities, tourism enterprises, schools, and there have been several student projects, including an annual thesis, bachelor and master thesis and ongoing PhD research on travel patterns and habits, tourism offer and demand. For example, A.Mežgaile bachelor thesis (2018) “Evaluation of Sustainable Development Profile Indicators of the North Vidzeme Biosphere Reserve” was developed to actualize the significance of the only biosphere reserve in Latvia from four points of view: environmental, social, economic and institutional environment, repeating the research on Sustainable Development Profile indicators of the North Vidzeme Biosphere Reserve (NVBR) (done in 2009 by ViA lecturers and scientists) and using indicators developed therein. The outcome of the research in 2017 - the sustainable development profile of the NVBR was assessed as weak. A positive tendency was observed in the assessment of the natural environment, but a negative tendency was observed in the assessment of the social environment, which was mainly characterized by the demographic data. Improvements and changes are needed in the economic and institutional environment. The basis for sustainable development is a good management system, but in 2017 the management of the reserve was carried out by only one of the employees of the Nature Conservation Agency, which was not enough for such a territory (the NVBR occupies 7.3% of Latvia’s territory). The results were presented at the conference celebrating the 20<sup>th</sup> anniversary of the NVBR in 2017 (30 November - 1 December 2017) which took place at Vidzeme University of Applied Sciences.

In 2018 ViA students did the other part of the research - the survey of the NVBR local inhabitants. The survey had 3 main parts: 1) 38 statements about four points of view: environmental, social, economic and institutional environment; 2) questions about long-term oriented development and living, about infrastructure assessment, and knowledge about the NVBR; 3) information about the respondents. 814 valid responses led to the main conclusions - locals are poorly informed about the NVBR, and the role of NVBR needs to be reconsidered.

Since 2019, the coordinator of the NVBR has directly focused on communication issues with locals and local municipalities. There have been many improvements during the last five years, of course, the COVID-19 pandemic had influence on public activities and events, but since 2022 the NCA and the coordinator has been working in the new normal conditions.

The establishment of the UNESCO Chair on Biosphere and Man (ViA) in 2019 was essential as the activities of the chair have been primarily directed towards the development and research of the biosphere reserve. Since October 2020, the UNESCO Chair has been developing a monthly newsletter that is disseminated to more than 100 recipients by e-mails and through social media accounts by the Chair, the NCA, and the UNESCO National Committee. The newsletter is available here: <https://www.hespi.lv/lv/unesco-zinas>

The NCA maintains an active Facebook page for the NVBR.

### **2.2.7 Update on governance management and coordination, including changes since last report (if any) in hierarchy of administrative divisions, coordination structure.**

**(Note briefly here and refer to 7 below).**

The NCA is the main body responsible for the NVBR governance and coordination. There is a coordinator position at Vidzeme Regional Administration of the NCA. There have been changes of the direct supervisor for the coordinator. At the beginning, the direct supervisor was the head of Gauja National Park Nature Centre, now the head of North Vidzeme Biosphere Reserve Nature Centre is the direct supervisor for the coordinator (since 1 January, 2023). The director of Vidzeme Regional Administration provides crucial support for the coordinator. There is no other similar employee in the entire NCA structure. The coordinator therefore appreciates the day-to-day cooperation with the staff of the UNESCO Chair at ViA. In the NCA, nature experts, inspectors, the communication unit are working for all the protected areas, including the NVBR.

The most significant change in the administrative divisions was the administrative-territorial reform in Latvia in 2021. After to the administrative reform, the number of local municipalities decreased from ten to three (see Table 4). The administrative-territorial reform also resulted in changes of the planning region. In the previous period, the NVBR area was divided between Riga Planning Region and Vidzeme Planning Region. Now, all the area of the NVBR is included in Vidzeme Planning Region. Vidzeme Planning Region has a new challenge to work with the coastal area and small harbours. From the administrative point of view, the development planning in one region is more transparent.

Table 4 shows the change of local municipalities.

<b>Local municipalities until June 2021</b>	<b>Local municipalities after June 2021</b>
Aloja Municipality Salacgrīva Municipality Limbaži Municipality	Limbaži Municipality
Burtnieki Municipality Kocēni Municipality Mazsalaca Municipality Naukšēni Municipality Rūjiena Municipality Strenči Municipality	Valmiera Municipality
Valka Municipality	Valka Municipality

In the NVBR, four rural action partnerships (RAP) have been established and are actively applying for project funding for different actions initiated by locals: rural partnership “Jūrkante”, rural partnership “No Salacas līdz Rūjai”, rural partnership “Ziemeļgauja”, rural partnership “Brasla”.

Rural development programmes are not directly related to nature conservation, but partly cover it. Nature conservation is not a priority for all RAPs, but they make an important contribution to the rural environment and to the preservation and promotion of natural and cultural heritage (for example, land improvement and environmental development projects - creation of recreation places in Skaņaiskalns Nature Park, preservation and popularization of Vidzeme coastal fishing traditions and intangible cultural heritage, creation of the Live Museum of Lake Burtnieks).

### **2.3 The authority/authorities in charge of coordinating/managing the biosphere reserve:**

**(Comment on the following topics as much as is relevant).**

The NCA is the main body responsible for the NVBR governance and coordination. There is a coordinator position in Vidzeme Regional Administration of the NCA. (See also 2.2.7.)

In 2009, the association "North Vidzeme Geopark" was founded with the aim to establish and develop the North Vidzeme Geopark as defined by the UNESCO Geoparks Programme in order to preserve the geological heritage of the area, to use it for comprehensive human education and development of the area, to promote the conservation of landscape and cultural values, as well as natural diversity. The UNESCO Geoparks are territories presenting a unique geological heritage of international value. They are places where a thoughtful visitor can meet, experience and touch the "Memory of the Earth", the 4,5 billion years of history of our living planet. Since the establishment of the geopark, various initiatives have been carried out to study, promote and draw attention to the geological heritage of Northern Vidzeme.

### **2.3.1 Updates to cooperation/management policy/plan, including vision statement, goals and objectives, either current or for the next 5-10 years**

The Action Plan for the NVBR 2019-2025 was outlined and confirmed by the Nature Conservation Agency, the director of Vidzeme region and by the chairman of the NVBR Consultative Board on 7 February 2019. The Action Plan was elaborated on the basis of Lima declaration and UNESCO programme Man and Biosphere strategy 2015-2025.

**The wider vision of the NVBR** is to be an area for promoting sustainable development and innovations.

**The NVBR Action Plan includes five main key activities:**

- 1) Sustainable resource management and use;
- 2) Development of sustainable local products and resources;
- 3) Local historical cultural heritage is conserved and marketed, raised awareness;
- 4) Engagement of the local society in development of the NVBR;
- 5) Governance of the NVBR and cooperation of stakeholders.

In 2024 the elaboration of a new strategic development document for the NVBR is planned to start.

**The vision of the NVBR in 2047 included** the following keywords (without editing) that were identified in the workshop in December 2022):

- ✓ an innovation area foreseen in the mandate of the NVBR, Existing! May it be there and exist with natural diversity and educated people in it, more educated people, access to nature for all, friendly relationships between nature and man, a place where there is a human and biosphere in interaction, a recognisable brand and an attractive tourist destination in Europe with outstanding natural values, every person is proud to live in the NVBR territory, active international cooperation, we are known in the Baltic states and Nordic countries, with their own administration, let's have something to tell people about the NVBR, Educated, Supervised, makes you feel knowledgeable people are there, large and supportive team, supported at national level, with support of local municipalities, diverse, educational, inspirational, residents and nature coexist respectfully, thriving, beautiful nature around and a happy person in the middle, understanding cooperation between citizens, entrepreneurs and natural values, even more internationally recognisable, preserving the traditions and values of local communities;
- ✓ natural grasslands, dunes are still there, the same level of biodiversity, animals and flora, clean rivers and lakes, nature values to view, active people and diverse nature, clean and safe, clean sea, tourism "Mecca" for nature friends;

- ✓ populated by people, full of life, active, SMEs develop in an environmentally friendly way, enterprises are using the NVBR brand with pride, home producers living here would put the NVBR symbol as a brand sign that the product comes from a special territory of Latvia, real cooperation at municipal level based on green and sustainable economy, residents (large families) who understand and appreciate natural treasures while being able to use them in their business activities (without harming them), more and smaller businesses; Rail Baltica (railway) has a positive contribution to the development of the territory.

**2.3.2 Budget and staff support, including approximate average annual amounts (or range from year-to-year); main sources of funds (including financial partnerships established (private/public), innovative financial schemes); special capital funds (if applicable); number of full and/or part-time staff; in-kind contribution of staff; volunteer contributions of time or other support.**

The NCA has a unified budget for the whole institution, and there is not separate financial account for the NVBR.

In 2012 there was one part-time staff member in the NCA to fulfil the tasks for the NVBR, since 2015 one full-time coordinator of the NVBR is employed at the NCA.

Support from the three local municipalities has been varied. The municipality of Valmiera has invested more resources in the research activities and management of Lake Burtnieks. Rural local partnerships are giving access to the LEADER funding under the Rural Development Programme.

During the reporting period, more than approximately 300 000 EUR were directly accumulated for the NVBR territory. The NCA attracts funds through different national and international projects both as project leaders or partners.

In 2012 the Nature Education Centre “Ziemeļvidzeme” was established in Salacgrīva with the support of the Estonia-Latvia-Russia cross border cooperation Programme within European Neighbourhood and Partnership instrument 2007-2013, the project „Promoting nature education as efficient means of awareness raising”. From 2012 to 2014 the head of the nature education centre was financed by the project. Since 2015 the position of the head of the nature education centre is financed from the NCA basic budget. In 2023 the title of the nature education centre was changed to North Vidzeme Biosphere Reserve Nature Centre. Since 15 January 2023 the NVBR coordinator position is included in this Centre.

In 2018-2019 the NGO “North Vidzeme Biosphere Reserve Support Association” carried out a NORDPLUS programme funded project “Project Adult Education in Biosphere Reserves - Nordic Learning Network” that provided opportunity to meet and visit Biosphere Reserves in the Sweden and Estonia.

Since 2021 ViA has been allocating the payment for 8 hours of work per month to prepare the UNESCO newsletter on Biosphere and Man. ViA is financing this workload from the research budget.

A.Mezgaile (young researcher at the UNESCO Chair Biosphere and Man, ViA) applied for and received a fellowship for university graduates from Central and Eastern Europe from the German Federal Environmental Foundation for a six-month internship in Germany, the Institute of Biosphere Reserves of Eberswalde University of Sustainable Development (in 2021, the amount of funding 8100 EUR). She also received support within Alumni Small Grant programme from the German Federal Environmental Foundation (in 2022) to carry out research – the assessment on how the implemented small scale grant programme for entrepreneurs in the NVBR (10 years ago) which was supported by UNDP Global Environmental Facility (GEF) project "Biodiversity Protection in the NVBR" is still operating.

In 2022, the UNESCO Chair Biosphere and Man at ViA hosted a group of students and instructors from Germany and guided them in field trips in the NVBR.

A. Mezgaile received the UNESCO Young Scientist Research Award 2022 (5000 US\$) for carrying out a research study entitled “Economic assessment of cultural ecosystem services in biosphere reserves. Case: NVBR, Latvia” (implemented during 2022 – 2023).

### **2.3.3 Communications strategy for the biosphere reserve including different approaches and tools geared towards the community and/or towards soliciting outside support.**

**The Operational strategy 2021 - 2023 of the Nature Conservation Agency** includes a chapter on communication. Under the operation direction “Promoting the understanding of nature in society”, one of three priorities is customer-centred two-way communication with audiences. The main tasks to achieve the priority are:

- ✓ Implement proactive media relations by ensuring active communication on the Nature Conservation Agency, its functions and initiatives, nature conservation issues;
- ✓ Develop clear principles for communication by the Nature Conservation Agency with external audiences;
- ✓ Develop the social media strategy of the Nature Conservation Agency;
- ✓ Providing customer-centred communication on the Internet;
- ✓ Promote public engagement in nature conservation activities;
- ✓ Launch outreach campaigns for wider public outreach;
- ✓ Increase the number of volunteers involved in the “doing good for nature” initiative.

At the moment, the Nature Conservation Agency is elaborating a new operational strategy. The new strategy will also include a chapter on communication.

The Visual Identity Handbook of the NVBR is still valid and is practically applied in communication.

**The Nature Education Development Concept 2018 – 2028** includes methods of nature awareness and a plan of differentiating nature education centres in Latvia.

The mentioned and applied methods for nature awareness are:

- ✓ content of different complexity for audiences with different range of knowledge and interests;
- ✓ surprising facts in simple reflection;
- ✓ visualisation - fewer texts in primary contact with the visitor, more images, diagrams, holograms, etc.;
- ✓ modern information technologies in information representation;
- ✓ experimentation and research – practical possibilities of operation.

The regional-scope North Vidzeme Biosphere Reserve Nature Centre is located and operating in the NVBR, Salacgrīva. The specialisations of the centre are:

- ✓ Zoning of the NVBR, opportunities for economic activities, tasks and functions of the NVBR
- ✓ Flora and fauna in the Baltic Sea. Dunes and coastal area.
- ✓ Salmons, rivers of salmon, lampreys
- ✓ Climate change, adaptation and smart housekeeping to mitigate them.

The UNESCO Chair on Biosphere and Man at Vidzeme University of Applied Sciences provides regular communication through a monthly newsletter. In strengthening cooperation and communication, an important step was the involvement of a bright and enthusiastic young student (formerly bachelor, master, now PhD) A.Mežgaile, who lives in the biosphere reserve herself, into the work of the Chair. She started creating the content of the chair's monthly newsletter in collaboration with stakeholders (in 2020). Including a young student in the chair's team ensured participation in an international youth network (Youth Forum in Italy in 2017 - M.Markote, and in China in 2019- A.Mežgaile), making it possible to apply the experience and knowledge from the international events in the NVBR. Work in the regional group EuroMAB



Youth is continuing through regular video meetings and other forms of information exchange. The UNESCO Chair on Biosphere and Man, in close cooperation with the NCA, is contributing and participating in the international networks, for example:

- ✓ In 2019, the UNESCO Chair was represented at the EUROPARC annual conference (Jurmala, Latvia) with the report "What are the needs and motivation of future consumers regarding sustainable tourism experience in protected areas?".
- ✓ Participation (A.Livina) in the delegation of Latvia and (A.Mežgaile ) on behalf of the Youth MAB network in the UNESCO World Conference on Education for Sustainable Development. Learn for our planet. Act for sustainability (17-19 May 2021, online.).

At the national level, the TV broadcast was made on the topic "Youth - the future of specially protected natural areas" together with Anda Andrušaitė (NCA) and Anda Mežgaile (UNESCO Chair) (April 2021)

The Central Baltic Interreg project "Lakesperience" was implemented to gain experience in sustainable tourism in Specially Protected Nature Areas and develop a common offer. Within this project, several tourism entrepreneurs and municipality specialists from the Burtnieks Lake area went on an experience exchange trip to Germany. The Lakesperience project (2018-2020) aims to connect the lakes Pyhäjärvi and Näsijärvi in Tampere Finland, lakes Åsunden, Järnlunden and Stora Rängen in south of Linköping, Sweden, lake Peipsi in Estonia and lake Burtnieks in Latvia as a joint tourist attraction. The project provides opportunities for lake tourism companies to develop their services especially for the German market. Above all, a joint Nordic-Baltic Lake Trails – marketing message will be created during the project for marketing the lake areas and related tourism products for German tourists.

<https://hankkeet.ekokumppanit.fi/lakesperience/>

### **2.3.4 Strategies for fostering networks of cooperation in the biosphere reserve that serve as connections (“bridging”) among diverse groups in different sectors of the community (e.g. groups devoted to agricultural issues, local economic development, tourism, conservation of ecosystems, research and monitoring).**

The governance of the Consultative Board ensures that there is representation from across interest groups within the biosphere reserve as part of the main supervisor body. The annual Consultative Board meetings enable these groups to discuss local issues and form collaborative plans. The strategy of the NVBR is confirmed by the Consultative Board.

Several meetings and surveys have been organised, often initiated by specific projects or local municipalities.

During the elaboration process of Rocky Seashore of Vidzeme nature management plan, the NCA inspector K.Pudova organised an informal study trip for land owners to get experience on the management of forest grasslands in Latvia.

In 2018 - 2019 the NGO “North Vidzeme Biosphere Reserve Support Association” implemented a project where a small team of the NVBR activists had an opportunity for mobility visits in Sweden and Estonia (photos are available at <https://hak.edu.ee/en/node/222>).

The developed **public monitoring programme Eco Watch** (2016) is transferred to on-line nature monitoring platform in <https://dabasdati.lv/en/>. Everyone can report nature data via the on-line platform.

The Nature Conservation Agency is organising Green afternoons (discussions) in local libraries, for example, in March 2017 in Korģenes library the theme for the Green afternoon was “Water resources, their role in human life and nature”. Since 2012 Children's Green jury has been organized in Salacgrīva Library, Children Department.

#### **Overview of Green Afternoons**

**2014** - 2 events and 42 participants;

**2015** – 3 events, 37 participants;

**2016** – 5 events, 101 participants;

**2017** – 6 events, 110 participants;  
**2018** – 2 events, 36 participants;  
**2019** – 6 events, 84 participants;  
**2020** – 1 event, 21 participants;  
**2021** – 1 event (on-line due to the COVID-19 pandemic), 31 participants;  
**2022** – 2 events 15 participants;

Unofficially, **the Movement of Junior Rangers** in the Biosphere Reserve dates back to 2009, but it was officially set up in 2017. Initially, the new rangers averaged 15-20 participants, currently averaging 26. Junior rangers of the NVBR, unfortunately, have not taken part in international events/camps yet, there were plans in 2020 to send some representatives from the NVBR to take part in the camp, but it was not possible due to the COVID-19 pandemic.

### **2.3.5 Particular vision and approaches adopted for addressing the socio- cultural context and role of the biosphere reserve (e.g. promotion of local heritage resources, history, cultural and cross-cultural learning opportunities; cooperation with local population; reaching out to recent immigrant groups, indigenous people etc.)**

In 2006, the Vidzeme Planning Region launched the Vidzeme Region Culture Programme for the first time. The aim of the programme is to promote balanced development of creativity in all cultural and artistic sectors and the preservation of cultural heritage, and a large part of the projects implemented have been from the NVBR. The Vidzeme Planning Region implemented the programme until 2023 in cooperation with the State Culture Capital Foundation and JSC "Latvia's State Forests", giving the opportunity to apply for funding for the implementation of cultural projects. Due to changes in the priorities of the main financial sources, the implementation of this programme was discontinued in 2023.

NGOs, entrepreneurs, and communities submitted project proposals for cultural activities. Inhabitants voted for the submitted proposals for cultural projects. This was a way of engagement of locals in the selection process of cultural activities funded by public funds.

During the review period, changes have been made at the national level about cultural heritage –the State Cultural Inspection has changed into the National Heritage Management Board. In addition, a new category of cultural monuments has been introduced - cultural monuments of regional significance. For example, the status of some monuments has changed from national significance to the regional level: Ikšķīlu Sacred Linden - cult place, Vainižu Castle Hill, Ungurpils Medieval Castle, etc. An opposite example from the local level to the regional level: Residential building (Burgomaster Rota's house) in Limbaži, house of the lords of Nabe Manor, Staicele Paper Factory with historical residential buildings, etc.

After implementing the licenced recreational angling in Lake Burtnieks, fish catches were reduced in the local regulation despite the limit allowed by the national legislation (for ~40%). Based on Lake Burtnieks benchmark experience, changes in the national legislation are in progress.

In 2020 there was a national level conference organised at Lake Burtnieks to discuss the future of interior water fishing and recreational angling

<https://www.valmieraszinas.lv/ar-2022-gadu-partrauks-rupniecisko-zveju-burtnieku-ezera/>

After the in-depth analysis of the socio-economic impact from both activities, the main conclusion was drawn to develop fishing catches towards the protected geographical indications (PGI) identifying Zander (pikeperch) of Lake Burtnieks as a quality-product with higher reputation highlighting its geographical origin (recognition is in progress). That again has been a benchmark for other lakes in Latvia to manage resources with lower turnover raising the value, strengthening tradition and identity.

### 2.3.6 Use of traditional and local knowledge in the management of the biosphere reserve.

The traditional and local knowledge on management practices is implemented through different events and activities organised by the Nature Conservation Agency (Vidzeme territorial unit and North Vidzeme Biosphere Reserve Nature Centre) such as Green discussions in rural areas or ecoschools, the Junior ranger network. Locals are invited to participate, lead and share their knowledge and competences.

Non-governmental organisations are active to keep the traditions for next generations. For example, Vidzeme Livonian Cultural Space is initiated by local people. Now Vidzeme region is proud of national recognition. The activists have created a Facebook account Vidzeme Livonian Culture Space (Vidzemes lībiskā kultūrtelpa) <https://www.facebook.com/metsepole> with almost 200 followers. In order to motivate the regions historically inhabited by the Livonians to study and highlight their Livonian roots, to discover and display Livonian elements in their region's landscape, events, and everyday life, the University of Latvia Livonian Institute in cooperation with the Latvian National Commission for UNESCO and the Latvian National Centre for Culture has declared 2023 to be the Year of Livonian Heritage (<https://libiesugads.lv/?en>) that starts with Livonian Heritage Day on 26 March 2023. It will be celebrated for the first time in the regions historically inhabited by the Livonians.

In 2023 the Livonian Cultural Space of Vidzeme, in cooperation with the Salacgrīva Museum and the State Cultural Capital Fund, will create a jewellery set of Livonian turtle brooches. The original jewellery set is kept in the museum. This is a good example of how cultural values and heritage can be brought to life.

In 2021, a PhD student, local inhabitant (in 2021) conducted experimental research in the NVBR on the value of inspirational services provided by the North Vidzeme Biosphere Reserve in Latvia through books. Strong inspiration from the North Vidzeme Biosphere Reserve area and history were found in 2020 books. Based on the average price of the books and the estimated number of persons who have read these books (data from 4 regional library electronic catalogues), the total value of the inspirational service provided by the North Vidzeme Biosphere Reserve was estimated at 1,3 million/€ in the past 17 years, leading to the annual value of 78 374 120 €/year and the unit value of 164 €/ha/year with the area of 475 514 ha.

In 2017, the first tourism map of the NVBR territory was produced by the Jāņa Sēta Map Publishers in cooperation with the NCA.

### 2.3.7 Community cultural development initiatives. Programmes and actions to promote community language, and, both tangible and intangible cultural heritage. Are spiritual and cultural values and customary practices promoted and transmitted?

In 2022 Vidzeme University of Applied Sciences carried out a survey about eco-system service usage in specially protected areas (>1000 respondents) and the Salaca River Valley of the NVBR among them (with 135 respondents). The local residents of the Salaca River Valley admitted that they were benefiting from nature resources and appreciated that. Supply ecosystem services related to different goods (mushrooms, berries, fish etc.) harvested from nature are popular: 28,9 % are involved into these activities on daily basis and 42,2% relate these activities with weekends. Mushrooming is the most popular activity, however there is a big decline of trends in younger age groups where these activities are practised much less. Cultural eco-system services are consumed even more: 63,7% on a daily basis and 28,2% in weekends. Outdoor recreational opportunities are clearly one of quality life assets of living in rural areas of the NVBR and that has been used by the locals. 55,6% of the locals in the Salaca River Valley are involved daily in physical activities outdoors and other 37% on weekends. Partly these are complimentary activities not costing so much. Interaction with nature on a larger scale than with other community members or the consumption of culture is typical for the region.

### 2.3.8 Specify the number of spoken and written languages (including ethnic, minority and endangered languages) in the biosphere reserve. Has there been a change in the number of

## **spoken and written languages? Has there been a revitalization programme for endangered languages?**

Latvian is the official language of Latvia. The population speaks Latvian, English, Russian, German and a couple of people speak Livonian in the NVBR.

In 2018 the first research institution - The Livonian Institute of the University of Latvia was established, the aim of which is modern and comprehensive research of Latvia's second indigenous nation and one of the foundational elements of the modern Latvian language and culture – Livonian – and their heritage. The Livonian Institute actively co-operates with Livonian and other public organisations, local governments, state institutions and entrepreneurs.

The Latvian National Intangible Cultural Heritage List includes a new value – Livonian Cultural Space of Vidzeme since Autumn 2022. This list is inspired by the UNESCO initiative and was created in Latvia in 2017. The Livonian Cultural Space of Vidzeme (the applicant is the association “SMAILES”), which includes Limbaži Municipality and Lēdurga of Siguldas Municipality – the historical Livonian-populated territory of Metsepoli. Its most characteristic values in Community insights are daily communication in Livonian dialect of Vidzeme, exploring Vidzeme Livonian families, preserving cultural space range folklore, inherited craft skills and traditional knowledge. The Livonian Cultural Space of Vidzeme is characterised by such manifestations of intangible cultural heritage as annual marking, type of farming, in which a close connection with nature, work and domestic traditions, as well as artistic features and expressions in poetry, visual and applied art have remained (<http://www.livones.net/lv>) More information: <https://nematerialakultura.lv/en/Elementi/vidzemes-libiska-kulturtelpa/>

A PhD thesis is in progress by Lolita Ozoliņa (doctoral student of the Latvian Academy of Culture, semiotics researcher) on the role of local communities in the construction and representation of place identity through the tools of place branding. The analysis of the Livonian identity narratives is included, more awareness to their recognition is shared.

The documentation of Rock inscriptions and petroglyphs with 3D technologies: laser scanning and photogrammetry – a case study of sandstone outcrops and caves in the biosphere reserve: Skaņais kalns (Resounding Hill) and the Livs' Sacrificial Caves was done by a group of Vidzeme University of Applied Sciences researchers (2019-2020).

### **2.3.9 Management effectiveness. Obstacles encountered in the management/coordination of the biosphere reserve or challenges to its effective functioning.**

The management is rather fragmented. After 2009, when the management of the biosphere reserve was carried out by the autonomous administration (as a state institution under the supervision of the Ministry of Environmental Protection and Regional Development, which operates in accordance with regulations approved by the Cabinet of Ministers), amendments to the law "On the Northern Vidzeme Biosphere Reserve" Article 6 were applied that the management of the biosphere reserve is carried out by a direct management body under the authority of the Minister of the Environment - the Nature Conservation Agency. [https://www.saeima.lv/Likumdosana/9S\\_DK/lasa-dd=LP1150\\_2-1.htm](https://www.saeima.lv/Likumdosana/9S_DK/lasa-dd=LP1150_2-1.htm)

Organisational memory has been influenced by the administrative territorial reform of local municipalities (2008 and 2021) and has led to changes in the boundaries of planning regions. Management effectiveness could be assessed only as satisfactory as part of the comprehensive activities carried out before have decreased. The main obstacles are related to the capacity of management and the power of coordination of all stakeholders.

## **2.4 Comment on the following matters of special interest in regard to this biosphere reserve:**

**(Refer to other sections below where appropriate).**

### **2.4.1 Is the biosphere reserve addressed specifically in any local, regional or/and national development plan? If so, what plan(s)? Briefly describe such plans that have been completed or revised in the past 10 years.**

In the long-term state-level document “**Latvia's Sustainable Development Strategy 2030**” (elaborated in 2010 and is valid), the NVBR is included in the future spatial structure of the country specifically as a territory with high concentration of nature, culture and landscape values. [https://www.pkc.gov.lv/sites/default/files/inline-files/Latvija\\_2030\\_7.pdf](https://www.pkc.gov.lv/sites/default/files/inline-files/Latvija_2030_7.pdf)

The NVBR is addressed in also Vidzeme Planning Region (as NUTS 3 regional unit: Statistical regions) **Sustainable Development Strategy 2030** highlighting its nature and culture heritage, landscape values.

[http://jauna.vidzeme.lv/upload/VIDZEMES\\_PLANOSANAS\\_REGIONA\\_ILGTSPEJIGAS\\_ATTISTIBAS\\_STRATEGIJA.pdf](http://jauna.vidzeme.lv/upload/VIDZEMES_PLANOSANAS_REGIONA_ILGTSPEJIGAS_ATTISTIBAS_STRATEGIJA.pdf)

Nine development areas are outlined in the above-mentioned document: 1) agricultural development; 2) landscape quality; 3) conservation of biological diversity; 4) industrial development in cities and their vicinities; 5) support for the management of the Salaca River and Burtnieki Lake Development Association; 6) tourism development; 7) the accessibility of the Baltic Sea Coast for the Northern Latvia region in cooperation with the Riga Planning Region; 8) the Salaca River basin management and tourism development in cooperation with the Riga Planning Region; 9) development of the South-North transit corridor with Estonia in cooperation with the Riga Planning Region.

After the administrative territorial reform (implemented in 2021) there is one planning region (Vidzeme Planning Region) and three municipalities (Limbaži, Valmiera & Valka) related to the area of the NVBR instead of 43 municipalities back in 2008 and 10 municipalities until 2021. The activities of the previous municipalities have been successively taken into account in the long-term planning documents of these three municipalities. The development of the updated territorial plans has been started in all the three municipalities and they are expected to be completed by 2025.

There are other documents where the NVBR has been included in the thematic development plans of mobility, tourism, river basin area management plans, etc.

### **2.4.2 Outcomes of management/cooperation plans of government agencies and other organizations in the biosphere reserve.**

There are particular activities that have produced concrete results: investments in public culture heritage increasing its value and accessibility, certain habitat restoration activities or species protection initiatives. One activity to mention implemented in Valmiera Municipality in 2022 was the small funding available for landscape quality restoration for general public. There were a lot of applications from residents with the final event organised including knowledge sharing from landscape and culture heritage and identity experts. Infrastructure and public facilities' implementation and maintenance works have been introduced to minimize the negative anthropogenic impact, raise accessibility and promote sustainable tourism.

The NVBR coordinator has a successful bilateral cooperation over several years with Valka Municipality Kārķu and Ērgemes parishes. The activities and events of these parishes are in the context of a deep understanding of the biosphere reserve concept, for example, when arranging an event in nature for hikers, there is a meeting with a local craftsman after the hike. The

representatives of the parishes have developed specific offers for the Traveller Days in the NVBR. The representatives of the NCA take part in their events such as Forest Days in Kārķi.

The NVBR coordinator has good cooperation with tourism specialists in most local councils. The effectiveness of the cooperation depends very much on the person's interest. The former coordinator (2018-2020) highlighted successful and strong cooperation with Zilaiskalns Tower for making a cross-country skiing track (snowmobile from the NCA) and an information label, information and communication provided by the municipality. A close and inspiring cooperation has been established also with Staicele Tourism Information Centre and Senior Cycling group, as well as experience exchange with Rūjiena Municipality via the EU Interreg project on Green Open Classes development.

#### **2.4.3 Continued involvement of local people in the work of the biosphere reserve. Which communities, groups, etc. How are they involved?**

In the past years, around 130 residents of NVBR have taken part in the public monitoring program “Eco Watch” which aims to increase public involvement in environmental and nature protection, providing long-term monitoring data to help interpret environmental trends within the territory. NVBR has been cooperating with local NGOs such as “NVBR Support Fund”, “Ziemeļvidzemes ģeoparks”, “Svētciema attīstības biedrība”, “No Salacas līdz Rūjai”, “Mežābele”, “Salackrasti” etc. The main aim of these cooperations is to involve local NGOs in the decision-making processes of biospheres reserve territory management. They take part in the public monitoring program “Eco Watch”. Also, NGOs support and participate in activities and educational events organized by NVBR Nature Centre or hold activities/ events such as clean-ups for rapids for rivers and educational camps by themselves. For example, NGO “NVBR Support Fund” was most active in its activities for the 20th anniversary of the NVBR in 2017-2018, when an NGO activist lived locally in the biosphere reserve area.

Since 2017 NVBR has taken part in The EUROPARC Junior Ranger Program. In the Biosphere Reserve are four active Junior Rangers groups, with an average of 15 - 20 members since joining the movement.

It's worth mentioning that the head of NVBR Nature Education Centre, as well as the NVBR coordinator, engage with the locals at the nature education classes and activities and nature education-based events such as “Reed Festival”, “Meadow Day”, “Moss Day” etc. They also participate in the events organized by local Tourism information centres, libraries, Houses of Culture, and local entrepreneurs. In addition, several meetings have been held with local communities to inform them about NVBR, its directions of action, future plans, and work that has been done previously. Community residents also are involved in the development of essential documents.

The NCA and NVBR team use social media to contact and inform people and seek views on various situations. Also, NVBR Nature Education Centre have a great cooperation with local newspapers and communication departments of local municipalities.

#### **2.4.4 Women's roles. Do women participate in community organizations and decision-making processes? Are their interests and needs given equal consideration within the biosphere reserve? What incentives or programmes are in place to encourage their representation and participation? (e.g. was a “gender impact assessment” carried out?) Are there any studies that examine a) whether men and women have different access to and control over sources of income and b) which sources of income do women control? If so, provide reference of these studies and/or a paper copy in an annex.**

The Consultative Board of the North Vidzeme Biosphere Reserve consists of 14 members since 2022. The chairperson is male, in the board there are 6 women and 8 men.

The NGO “NVBR support Fund” is led by a woman (L.Taube).

The coordinator of the NVBR has been a woman since the establishment of the position. There have been changes in this position three times during the reporting period (L.Taube, A.Krūmiņa

and L.Kauliņa). In the addition, head of the North Vidzeme Biosphere Reserve Nature Centre is a woman (I.Soma).

The UNESCO Chair on Biosphere and Man is led by a woman (A.Līviņa), her deputy is a woman (A.Mežgaile).

Women are actively involved in creativity actions because women are in charge of the public libraries, teachers are mainly women and also rural partnerships are led by women.

Mayors of all the three administrative territories are men (Limbaži Municipality -D.Straubergs, Valmiera Municipality – J.Baiks and Valka Municipality – V.A.Krauklis). Vidzeme Regional Administration of the NCA is led by man (R.Auziņš).

Studies on gender, inclusion issues on local livelihoods and economy have not been carried out in the NVBR.

ViA elaborated the Gender Equality Plan 2021-2025 in 2021.

#### **2.4.5 Are there any changes in the main protection regime of the core area(s) and of the buffer zone(s)?**

The main protection regime of the core area(s) and of the buffer zone(s) remain the same.

#### **2.4.6. What research and monitoring activities have been undertaken in the biosphere reserve by local universities, government agencies, stakeholders and/or linked with national and international programs?**

Since 2021, a digital platform for monitoring the development of tourism has been created, which is regularly maintained by Vidzeme University of Applied Sciences, Institute of Social, Economic and Humanities Research. It includes about 40 indicators to be monitored (based on ETIS toolkit:

[https://single-market-economy.ec.europa.eu/sectors/tourism/offer/sustainable/indicators\\_en](https://single-market-economy.ec.europa.eu/sectors/tourism/offer/sustainable/indicators_en)).

That is implemented as a permanent programme contributing to the sustainable development of the region by the university researchers. Besides that, it has another cooperation area: coordinating data flow from automatic visitor counters. The Nature Conservation Agency, municipalities and the university has their own visitor counters. Joint methodology has been elaborated to obtain and analyse data from them jointly on the tourism monitoring platform to get a comprehensive overview.

A nature species (rare and common) data management platform was established in 2008 (DabasDati.lv) by the Latvian Fund for Nature and the Latvian Ornithological Society to involve volunteers to contribute with their observations publicly in a structured way. The platform is the largest initiative of volunteers (several thousand of active members) that are contributing with nature data on a daily basis. Rare species data are transferred in an automatized way to the nature data basis (Ozols) of the Nature Conservation Agency.

The water quality of bathing places (Blue Flag beaches or official swimming sites at public waters) are monitored by the State Health Inspectorate every swimming season (May – September). In the NVBR there were five officially monitored bathing places in 2022: Ainaži, Salacgrīva, Skulte, Tūja (all four in the coastal area) and Lake Limbaži Lielzers. In 2022, the swimming in all 5 places was allowed through all the season ([https://www.vi.gov.lv/lv/peldvietu-udens-kvalitate?utm\\_source=https%3A%2F%2Fwww.google.com%2F](https://www.vi.gov.lv/lv/peldvietu-udens-kvalitate?utm_source=https%3A%2F%2Fwww.google.com%2F)).

Valmiera Municipality had ordered research on the quality and ecosystem management modelling of Burtnieks Lake from 2006 to 2018. In total 7 research projects were conducted mainly by the Institute for Environmental Solutions. The report (2015) included conclusions that nutrient concentrations were very high in the lake and a high phytoplankton mass was in the lake, which significantly reduced the lake's suitability for recreation.

In 2021, Valmiera Municipality established a unit of Nature Resource Governance.

The University of Latvia Livonian Institute is carrying out research on the Livonian culture and heritage (since 2017).

#### **2.4.7 How have collective capacities for the overall governance of the biosphere reserve (e.g. organization of new networks of cooperation, partnerships) been strengthened?**

Continuing good cooperation between various stakeholders has strengthened the management of the biosphere reserve as a whole. Closer collaboration has been developed between all municipalities and tourism information centres in the biospheres reserves territory. For example, NVBR representatives participate in local council meetings in all municipalities by informing council members about specially protected nature areas in their region and correct management principles. During the talks, representatives of the biosphere reserve answer questions from council members and, when necessary, provide advice on topics related to nature conservation, education, protection, etc.

NCA and ViA UNESCO Chair on Biosphere and Man have established significant cooperation since ViA UNESCO Chair was created. UNESCO Chair has strengthened research on the development of the NVBR in general, as well as targeted research in the territory of the NVBR. Since October 2020, the UNESCO Chair, jointly with the NVBR coordinator, has been developing a monthly newsletter about activities in NVBR. NVBR coordinator and ViA UNESCO Chair also together planning various activities and work.

Since 2017 NVBR has taken part in The EUROPARC Junior Ranger Program.

Since the last report, NVBR has developed cooperation with other biospheres reserves. For example, NVBR is a member of the global biosphere reserve network "World Network of Islands and Coastal Biospheres Reserves". Also, NVBR is part of the "Biosphere for Baltic" network, which includes nine biosphere reserves in seven countries around the Baltic Sea.

#### **2.4.8. Please provide some additional information about the interaction between the three zones.**

The NVBR aims to achieve a balance in national and international terms in protecting natural diversity, promoting economic development, and preserving cultural values, as well as ensuring the flow of information in environmental research, monitoring, and environmental education, raising public awareness of environmental and nature protection and promoting the restoration of degraded ecosystems in the area. The reserve has 2 zones: a buffer zone/landscape protection zone, and a transition zone/neutral zone.

The buffer zone/landscape zone preserves little modified natural ecosystems and its surroundings. These include the marshland, the Salaca Valley, and the Vidzeme Rocky Seashore as core areas. The nature reserves (core areas) cover 23 722 ha and surrounding areas cover 175 086 ha. The rules for their use must align with the NVBR objectives. The rest of the territory is covered by the transition/neutral zone, which covers an area of 258 912 ha. The zoning has been incorporated into the spatial plans of the previous municipalities, which are still valid until the approval of the spatial plans of the new municipalities (around 2024).

Outside the Natura 2000 areas (where there are stricter regulations) there are no significant restrictions on the economic activity or any specific regulation. The new initiative on nationally important landscape areas could result in some specific rules for large scale industrial objects, wind or solar power stations, etc. However, the landscapes are without any status yet.

#### **2.4.9 Participation of young people. How were young people involved in the organizations and community decision-making processes? How were their interests and needs considered within the biosphere reserve? What are the incentives or programs in place to encourage their participation?**

The main aim of the North Vidzeme Biosphere Reserves Nature Education Centre is to educate children, young people, and young adults about nature and why it is essential to protect nature and its values. Visitors can learn about nature and its processes in exciting and practical ways,



for example, by using a soil probe or magnifying glass. Classes are held indoors and by going out into nature - exploring the coast, the dune forest and the shore of river Salaca, enthralling nature explorers of all ages. In addition, The head of the Nature Education Centre of the NVBR has excellent cooperation with kindergarten teachers and primary schools regarding the use of the methodology. Young people as well take part in events, talks, discussions and seminars which are organised by Nature Education Centre.

In 2022 North Vidzeme Biosphere Reserve celebrated its 25th anniversary with a vast program involving all stakeholders – from kindergartens and nursing homes to youth, entrepreneurs, and local governments. The anniversary motto was “People and nature in one place”. Throughout the year, the residents of the biosphere reserve, as well as its guests, were invited to take part in various activities and events, whose primary purpose is to get to know the uniqueness of the area, including the people who live in it and provide a better understanding of biodiversity and cultural heritage. For example, in January, our target group was kindergarteners who lives in reserves territory. We asked them to create collages of natural materials about the theme “My North Vidzeme Biosphere Reserve”, which was a wonderful way to make kids think about where they are from and what they see around them. In May, our target group was 10th grade students, we asked them to participate in an erudition game about NVBR to test them how much they know about the place they live.

As mentioned before, NVBR has taken part in The EUROPARC Junior Ranger Program. In the 2022 30 young people from Aloja, Salacgrīva, Vilķene, Strenči were involved in the Junior Rangers’ Movement. The aim of the Junior Ranger movement is to promote the interest of young people in the exploration and protection of nature, as well as the preservation of local natural and cultural-historical objects through various practical activities and non-formal education. In 2021, the camp for Junior Rangers from all over Latvia was held in the territory of the NVBR. One of the former NVBR Junior Ranger now participate in the Youth+ program.

NCA has good cooperation with the schools and universities and there have been several student projects, including an annual thesis, bachelor and master thesis and ongoing PhD research on travel patterns and habits, tourism offer and demand. For example, K. Grīnberga master thesis (2020) "Communication Challenges And Solutions of Natural And Cultural Heritage For Generation Z In The North Vidzeme Biosphere Reserve" and A.Mežgaile master thesis (2020) "A Study On Youth Behaviour Towards Nature Protected Areas. The Case of North Vidzeme Biosphere Reserve". Also, students from Latvia and other countries, such as France, are interested in doing their internships at NVBR.

Currently, the coordination of the Biosphere Reserve is the responsibility of a young woman, L.Kauliņa, who also lives in the reserve's territory. The UNESCO Chair on Biosphere and Man Deputy A.Mežgaile and NVBR coordinator are involved EuroMAB Youth network.

### 3. ECOSYSTEM SERVICES:

**3.1 If possible, provide an update in the ecosystem services provided by each ecosystem of the biosphere reserve and the beneficiaries of these services.**

**(As per previous report and with reference to the Millennium Ecosystem Assessment Framework and The**

**Economics of Ecosystems and Biodiversity (TEEB) Framework**

**(<http://millenniumassessment.org/en/Framework.html> and <http://www.teebweb.org/publications/teeb-study-reports/foundations/>)).**

An ecosystem service is any positive benefit that nature or ecosystems provide to people. The benefits can be direct or indirect—small or large. The aim of the ecosystem services is to make visible these benefits that people are often take for granted and frequently not aware of them. According to the MEA and TEEB frameworks, these services can be divided into four categories:

1. Provisioning services - characterised by the ability of humans to obtain products from ecosystems, such as food, water and resources, including wood, oil and genetic resources and medicines;
2. Regulating services - are categorised as any benefit obtained from the natural processes and functioning of ecosystems. Examples include climate regulation, flood regulation and other natural hazard regulation, pollination, water purification and more;
3. Cultural services - include non-material benefits that people can obtain from ecosystems. These include spiritual enrichment, intellectual development, recreation and aesthetic values;
4. Supporting services - are those which relate to habitat functioning themselves, and therefore influence survival.

Unfortunately, these is no descriptive study of the ecosystem services specific to the biosphere reserve has been done before.

**3.2 Specify if there are any changes regarding the indicators of ecosystem services that are being used to evaluate the three functions (conservation, development and logistic) of the biosphere reserve. If yes, which ones and give details and update.**

No previous indicators exist in the North Vidzeme Biosphere Reserve to refer to, as no comprehensive analysis of the entire Biosphere Reserve's ecosystem services has so far been carried out.

It is worth mentioning that a the Research Assistant at the UNESCO Chair "Biosphere and Man" of Vidzeme University of Applied Sciences and PhD student has become a laureate of the UNESCO Young Scientist Award for the "Man and the Biosphere" programme (2022). This award is given to young scientists conducting research in the field of biodiversity and ecosystem services.

**3.3 Update description on biodiversity involved in the provision of ecosystems services in the biosphere reserve (e.g. species or groups of species involved).**

The project "Preconditions for better biodiversity preservation and ecosystem protection in Latvia" or the "Nature Census" is held in the whole Latvia including North Vidzeme Biosphere

Reserve. The Nature Census aims to collect detailed, scientifically-grounded information about Latvia's natural resources, their quantity, diversity, distribution, and condition. In the terms of the project, natural capital includes natural landscapes with grasslands, forests, swamps, coastal areas and sand dunes, rivers, lakes, exposed rock formations, and the diversity of species living in these habitats. The function of the Nature Census project is to determine the amount and distribution of the various kinds of natural capital in Latvia. Nature Census team is still collecting data and a complete picture of biodiversity will follow after data analysis.

**3.4 Specify whether any recent/updated ecosystem services assessment has been done for the biosphere reserve since its nomination/last report. If yes, please specify and indicate if and how this is being used in the management plan.**

Ecosystem services assessment have not been done. But within Nature Census project two conservation plans for a Special Area of Conservation (SAC) were developed. In 2019 Conservation plan for nature reserve "Dūņezers" within a framework to 2019 till 2031 was created. The main conservation goal of nature reserve "Dūņezers" is to protect the narrow-mouthed whorl-snail (*Vertigo angustior*) and preserve the area as an important bat feeding site. Furthermore, in order to restore natural values and improve the state of the environment, the reduction of overgrowth of aquatic plants should be implemented, including cutting the above-water vegetation in the lake and the coast, chopping the root system, as well as deepening the lake, ensuring the flow of the lake, creating channels and cleaning the rivers Donaviņa and Svētupe. The Conservation plan of nature reserve "Vidzeme Rocky Seashore" within a framework to 2020 till 2032 was developed in 2020.

#### 4. THE CONSERVATION FUNCTION:

**[This refers to programmes that seek to protect biodiversity at landscape and site levels and/or ecological functions that provide ecosystem goods and services in the biosphere reserve. While actions to address this function might be focused on core area(s) and buffer zone(s), ecosystem dynamics occur across a range of spatial and temporal scales throughout the biosphere reserve and beyond.]**

##### **4.1 Significant changes (if any) in the main habitat types, ecosystems, species or varieties of traditional or economic importance identified for the biosphere reserve, including natural processes or events, main human impacts, and/or relevant management practices (since the last report).**

According to the information which was provided by Nature Census project team:

- Forest habitats of EU importance in NVBR occupy 4.29% of the territory, which is 6% of all forest habitats found in Latvia. Some of the forest habitats in the NVBR are located in the protected nature area, for example, the "Salacas Valley Nature Park". In order to preserve these islands of natural diversity, the challenges in the past and also in future is to plan forestry activities, because most forest habitats are fragmented and continuous habitat areas are mostly minor;
- Biotopes of swamps and springs of EU importance occupy 3.64% of the NVBR territory. From the national scale perspective, 11.6% of the country's swamps and spring habitats are found in NVBR. The number is relatively high because in NVBR's north part of the territory are several large swamp complexes, for example, Seda swamp, Ziemeļu swamp, Saklaura swamp, etc. Extensive land reclamation during the Soviet era has affected practically all Latvian swamps, degrading the wetlands structures and vegetation. Therefore, the restoration of the degraded marshes is now essential;
- Grassland habitats of EU significance occupy only 0.57% of the Biospheres Reserves territory. Natural grasslands require management of mowing or grazing. Since last year NCA has used the grazing method in the nature reserve "Randu Meadows". Thus the disappearance of grasslands is facilitated by the interruption of management and fragmentation. Some grassland habitats are ploughed and afforested because of their fertile soils;
- The banks of the river Salaca provide 10.5% of all cave and rock outcrop habitats in Latvia;
- Freshwater habitats of EU importance (rivers and lakes) account for 1.42% of the NVBR area, which is 6.14% of the country's total;
- Lagoon habitats in NVBR should be particularly highlighted, as they account for 74% of the total lagoon habitats found in the country.

**4.2 Describe the main conservation programmes that have been conducted in the biosphere reserve over the past ten years as well as current on-going ones. Note their main goals and the scope of activities, e.g. biotic inventories, species-at-risk, landscape analyses, conservation stewardship actions. Cross reference to other sections below where appropriate.**

The restoration of Salmonid spawning ground was undergoing in the River Salaca.

State Monitoring programme on water quality is on-going in the coastal area. The results are available online: <https://lhei.lv/lv/karte> .

In order to protect the lesser spotted eagle population, for which Latvia has a special responsibility to the global community, the Latvian Fund for Nature together with the Latvian Ornithological Society, Ltd Tīravoti and film studio ELM Media implemented an ambitious project to protect the lesser spotted eagle in 2017 - 2021. The aim was to strengthen the protection of the lesser spotted eagle in Latvia, as well as to raise awareness about the importance of the species conservation in general. The project was funded by the LIFE+ Programme of the European Union and the administration of the Latvian Environmental Protection Fund (Project "Ensuring the conservation of the Lesser Spotted Eagle in Latvia" (LIFE 13 NAT/LV/001078)).

Results (and part of this in the NVBR) see in Fig 4.



The Invasive Species Manager website was created (in 2022) for public reporting for an early warning and response system for invasive species in Latvia by the EU Integrated LIFE project "Optimising the Governance and Management of the Natura 2000 Protected Areas Network in Latvia".

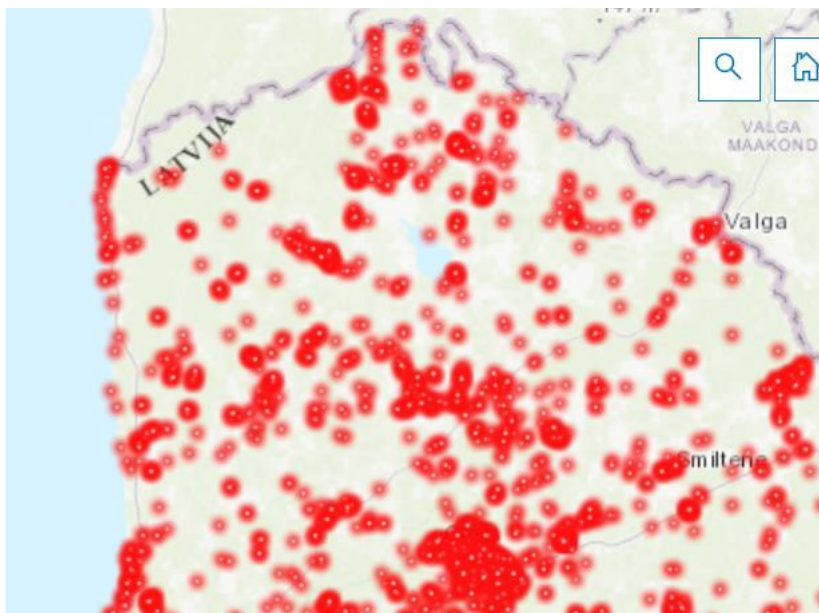


Fig 4. Reports on invasive species by the society (March 2023). The area of the NVBR.

#### **4.3 In what ways are conservation activities linked to, or integrated with, sustainable development issues (e.g. stewardship for conservation on private lands used for other purposes)?**

Valka town initiated the establishment of the Forest Park (2018-2020). The NVBR coordinator and the NCA nature expert provided suggestions for the planned Forest Park by incorporating biosphere reserve principles. The public hearing process was done in 2020 and the Forest Park of Valka is approved by local municipality.

The EU Integrated LIFE project “Optimising the Governance and Management of the Natura 2000 Protected Areas Network in Latvia” (lead by the NCA) is implementing several pilot activities to test different methods and approaches for supportive mechanisms to increase areas of natural grasslands and forestry management approaches. The selection process of pilot areas is on-going. We assume that there will be interest from the land owners from the NVBR.

The Estonian-Latvian joint LIFE project (LIFE20 NAT/EE/000074) "Restoring and promoting a long-term sustainable management of Fennoscandian wooded meadows in Estonia and Latvia" (2021- 2026) focuses on the restoration of wooded meadows in Estonia and Latvia, creation of sustainable solutions for maintenance and on raising public awareness of the natural and cultural heritage of wooded meadows and their protection and management. From the territory of the NVBR, the nature reserve Vidzeme Rocky Seashore is one of the selected protected areas for restoring wooded meadows.

#### **4.4 How do you assess the effectiveness of actions or strategies applied?**

**(Describe the methods, indicators used).**

Each of the implemented projects or activities within the NVBR has their own procedures for assessing effectiveness, for example, in the Cross border programme Vidzeme University of Applied Sciences (ViA) (2020) elaborated a methodology of the baseline value of the result indicator “Degree to which sustainability measures for natural resources are put in place for the objects supported by the Programme”. One of the project sites was the town of Rūjiena in the NVBR.

The nature tourism monitoring system developed by ViA helps to assess the investments in nature infrastructure for recreation.

In 2022, coordinated training on the management of biologically valuable grasslands was launched throughout Latvia, including the NVBR. The training was required and was only open to farmers and landowners who participated in the “Maintaining biodiversity in grasslands” activity of the Rural Development Programme 2014-2020 measure “Agro-environment and Climate” and who have made commitments for permanent grassland habitats of the EU importance. The training was provided under the Rural Development Programme (RDP) 2014-2020 sub-measure "Vocational education and skills training measures", LAD Contract No LAD131118/P44. Supported by the Ministry of Agriculture and the Rural Support Service.

**4.5 What are the main factors that influenced (positively or negatively) the successes of conservation efforts in the entire biosphere reserve? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be most effective for conservation for sustainable development?**

Within the territory of the biosphere reserve there are various other specially protected natural territories, and their management and conservation are determined by other regulatory acts than the Biosphere Reserve Law. Therefore, the biosphere reserve as a protected natural area does not impose restrictions and is practically easier to communicate with landowners and the society. However, the negative factor in communication is related to the use of the word "reserve", which in the classical sense means restrictions and prohibitions. This issue has been discussed not only in our biosphere reserve, but in international forums and conferences.

The Ministry of Environmental Protection and Regional Development verbally expresses the position that the biosphere reserve is not a specially protected natural area in its entirety and its management is not a priority of the Ministry. There have been talks that the management function of the biosphere reserve could be transferred to the planning regions, namely the Vidzeme Planning Region after the administrative and territorial reform in 2021, but no decisions have been made.

Current practice confirms that the strength and success of cooperation depends to a large extent on specific individuals, their interest and enthusiasm in doing their work. This report mentions examples of good practice that directly address the role of personalities.

Since 2017 Travellers' Days are held in the NVBR every year with the aim of getting to know this territory, nature, culture and people who live and work here.

**4.6 Other comments/observations from a biosphere reserve perspective.**

There are no additional comments.

## 5. THE DEVELOPMENT FUNCTION:

[This refers to programmes that address sustainability issues at the individual livelihood and community levels, including economic trends in different sectors that drive the need to innovate and/or adapt, the main adaptive strategies being implemented within the biosphere reserve, and initiatives to develop certain sectors such as tourism to complement and/or compensate for losses in other markets, employment, and community well-being over the past ten years]

**5.1 Briefly describe the prevailing trends over the past decade in each main sector of the economic base of the biosphere reserve (e.g. agriculture and forest activities, renewable resources, non-renewable resources, manufacturing and construction, tourism and other service industries).**

**Agriculture:** decline in the number of farms engaged in agriculture, largely due to the depopulation of rural areas and the continuation of the transition towards greater industrialisation of agriculture.

However, compared to 2018, the number of organic farms has slightly increased (by 19 farms) (in 2018, the number was 282 farms (Arkliņa, 2018), while in 2023, the number will reach 301 farms (PVD, 2023)). If in 2018 only 6% of these organically certified farms were engaged in product production and/or processing, then in 2023 their number will reach 10.3%, which shows the capacity of these farms and the trust of buyers in local products. During the COVID-19 pandemic, rural farms offered their produce through various e-platforms. For example, the REKO Valmiera market was established around Valmiera city on the Facebook platform: local farmers/home producers and buyers come together in a closed Facebook group. Buyers place advance orders on the Internet (with prepayment, if requested by the producer). Once a week the delivery-receipt of products is taking place at a certain place <https://www.facebook.com/groups/rekovalmiera/>. After the pandemic, local farmers' markets have become popular in the centres of towns and villages. In autumn the festival of lampreys with a traditional market is favoured in Salacgrīva by the River Salaca. The Salaca is the only river where lampreys are caught with such ancient fishing gear as taches. In the festival, you can both taste lampreys and get acquainted with the traditional fishing profession, which is unique only to this NVBR area.

The largest winter wheat grower in the territory of the NVBR is Ltd. "Valmieras gaudi" (1163 ha, Burtņieki Parish of Valmiera Municipality), summer wheat grower Ltd. "Grīnis" (437 ha, Katvari Parish of Limbaži Municipality), Farm "Jaunmārkundas" (233 ha in Matīši Parish of Valmiera Municipality), etc. One of the oldest farms in the territory of the NVBR after the restoration of Latvia's independence (founded in 1989) is Ltd. Farm "Zemturi". The farm has up to 200 dairy cows, more than 250 breeding cattle and 510 ha of managed land, the only biogas station in the NVBR territory, which allows to provide zero-residue technology and develop its own brand - ZEMTURU SVAIGPIENS. The largest herd of cows in the territory of the NVBR belongs to Ltd. "Lādes piens" (Limbaži Municipality, Limbaži Parish). The number of dairy cows (1 January 2022) was around 1380 cows with an average milk yield per cow per year - 9534 litres.

Ltd. "Aloja Starkelsen" (founded in 1991) is the largest producer of potato starch in the Baltic States and one of the largest producers of organic potato starch in the world, the company employs about 80 employees. Raw materials - potatoes - are supplied by not just one Latvian farmer. Every year there are more and more farms where starch potatoes are grown both organically and using the integrated cultivation method. In 2019, 149 farmers were engaged in the cultivation of starch potatoes in Latvia. In 2019 the company processed more than 19 thousand tons of potatoes.



Different types of support payments stimulate the activities of farmers and the management of land areas in conditions better suited for agriculture and thus contribute to the preservation of open agricultural land massifs in the landscape today. The single area payment is one of the indicators that the agricultural land is managed.

Comparing the data of 2018 and 2022 single area application submissions, it can be concluded that in the territory of the NVBR they are generally increasing (+ 3.5%), the number of declared areas has also increased (+6%), which means that the agricultural land is maintained, however, there are small regional differences between parishes and municipalities. However, the number of support applications is decreasing. The small farmer support (SFS) is a simplified annual direct payment of EUR 500 per farm and replaces the single area payment, greening payment, payment for young farmers. From this it can be concluded that more targeted support payments seem more attractive to farmers (they get involved in another support scheme), or the other aspect which is more likely – the withdrawal, as evidenced by the decrease of declared areas by a total of 26% (comparing 2018 and 2022).

Table 5. Applications submitted by farmers in the territory of the NVBR for payments of the single area payment and the small farmer support scheme in 2018 and 2022.

	Single area payment				Small farmer support scheme payment			
	Number of submissions 2018	Number of submissions 2022	Declared area 2018	Declared area 2022	Number of submissions 2018	Number of submissions 2022	Declared area 2018	Declared area 2022
Limbaži Municipality	1204	1198	48540.91	52692.15	401	304	947.21	689.45
Valmiera Municipality	1004	1104	58658.47	61888.47	283	226	692.95	517.24
Valka Municipality	228	221	10693.61	10988.76	101	81	248.48	191.08
	2436	2523	117893	125569.4	785	611	1888.64	1397.77

Source: Rural Support Service, 2023

In the territory of the NVBR, there is also one of the oldest breed horse farms in Latvia, Ltd. “Burtnieku zirgudzētava” (founded in 1941), which has around 200 horses and manages 300 ha of land, including leased land. The horses graze in the scenic meadows of the nature reserve on the shores of Lake Burtnieks and in its surroundings.

There are also several specialized sheep breeding farms operating in the territory of the NVBR, for example, Ltd. “Mikaitas” (Limbaži Municipality, Limbaži Parish) with the largest sheep herd in Latvia where the total number of registered sheep exceeds 2 thousand. Also Farm “Čakaiņi” (Valmiera Municipality Rencēni Parish) – more than 630 sheep, Farm “Resori” (Valmiera Municipality Jeri Parish) more than 520 sheep. In general, there is a greater interest in lamb meat production in Latvia, both from the breeders and from the consumers.

**Forestry:** increase in the volume of timber harvested, both in the country as a whole and in the NVBR area. The area of forest land has not decreased, but the lowering of the harvesting age for timber (year, law change - reference) has drastically reduced the proportion of old forests, which is particularly important for maintaining natural diversity also outside Natura 2000 sites. The failure to introduce a ban on felling forests during the bird nesting and fledgling periods remains a criticism.

Forest cover in the territory of the North Vidzeme Biosphere Reserve reaches 45% (Urtans, Seilis, 2009). From the point of view of management, the proportion of managed forests in the territory of the NVBR is similar to that of Latvia as a whole - forests without restrictions on forestry activities make up 90% of the total area of the reserve (National Forest Service, 2012).

124 thousand ha of the land of the NVBR (7.6%) are under the management of JSC Latvia's State Forests (LSF), of which 104 thousand ha is forest land (7.4% of the forests owned by LSF) (LSF, 2022). In 2008, JSC Latvia's State Forests introduced a network of eco-forests, which includes 10% of the NVBR forest stands, in which forestry restrictions are determined according to the individual planning of each eco-forest (Rendenieks, 2015).

In the territory of the NVBR, silviculture and other forestry activities are carried out by 78 enterprises. Among the 20 largest (by turnover in 2021) companies in Limbaži Municipality, 5 are related to the forestry industry (logging and woodworking). For example, Ltd. "Meža birojs" with a turnover of 17.87 million EUR, Ltd. "LATVIA TIMBER INTERNATIONAL" with a turnover of 17.5 million (Lursoft, 2023). The number of companies that produce wooden structure buildings is increasing, for example, Ltd. "3radi" in Vilkenes Parish of Limbaži Municipality is engaged in the design and manufacture of wooden frame building structures. Small workshops for woodwork are also topical, for example, Ltd. "JS WoodMagic" in Burtņieki Parish of Valmiera Municipality. Ltd. "Daworkss" in Limbaži offers individually produced furniture, while Ltd. "JMK LUX" in Salacgrīva Parish of Limbaži Municipality has become an export company as 90% of production (garden furniture) is exported. In Latvia as a whole the forest sector generates 5% of the total added value (this level has remained unchanged since 1995). The forest sector in Latvia makes a large contribution to the national economy, and macroeconomic considerations also influence the formation of the forestry action policy. The volume of available wood resources is one of the most important factors that determine the intensity of forest management and use.

There is an increase in the volume of timber harvested, both in the country as a whole and in the NVBR area. The area of forest land has not decreased, but the lowering of the harvesting age for timber (30 June 2022, Regulations of the Cabinet of Ministers No. 935 Regulations on felling trees in the forest - <https://likumi.lv/ta/id/253760-noteikumi-par-koku-cirsanu-meza>) has drastically reduced the proportion of old forests, which is particularly important for maintaining natural diversity also outside Natura 2000 sites. In the regulations, however, it is stipulated that "in specially protected nature areas and micro-reserves, these rules are applied to the extent that they do not contradict the regulatory enactments regulating the protection and use of specially protected nature areas and micro-reserves", which means that tree felling according to diameter is not allowed in any protected area including the North Vidzeme Biosphere Reserve. In January 2023, following an application by the Latvian Nature Foundation, the World Wildlife Fund and the Latvian Ornithological Society, a case was initiated in the Constitutional Court of the Republic of Latvia to evaluate the conformity of the amendments to the provisions of the basic law of Latvia. The failure to introduce a ban on felling forests during the bird nesting and fledgling periods remains a criticism. On the whole, the forest sector in Latvia is regulated by more than 20 regulatory acts.

**Tourism:** overall, there has been no drastic change in tourism pressure in any of the NVBR areas. The exception is the Baltic Sea coast, where both business activity and recreational visitors have increased. Overall, tourism development is taking place within a sustainable framework. More detail in 5.2.

**The retail industry** provides many services for the local people in the NVBR as well as is a crucial employer in the NVBR. There are also mobile shops that provide services in sparsely populated areas.

**Education and communication** (libraries) are significant sectors that provide many employment opportunities for the local people and maintain several cultural and historical buildings as they are used and managed.

**5.2 Describe the tourism industry in the biosphere reserve. Has tourism increased or decreased since nomination or the last periodic review? What new projects or initiatives have been undertaken? What types of tourism activities? What effect have these activities**

had on the economy, ecology and society of the biosphere reserve? Are there any studies that examine whether designation of the area as a biosphere reserve has influenced the number of tourists? Please provide the bibliographic information of any studies and/or a paper copy in an annex.

Tourism and leisure industry is very significant in the biosphere reserve. The backbone of the tourism industry is accommodation providers, particularly, if accommodation places are owned by locals.

There are 119 tourist accommodation establishments in the territory of the Northern Vidzeme Biosphere Reserve in 2022. According to the information available on the Internet (airbnb.com, booking.com, visitlimbazi.lv, visitsalacgriva.lv, visit.valmiera.lv, visit.valka.lv), 30% of the accommodation establishments are located in towns, while 70% are located in the territories of parishes of the municipalities. The total number of beds in the territory is 1672 (with 404 additional beds) in 328 rooms. The largest number of establishments are located in Liepupe and Salacgrīva parishes, and in the town of Salacgrīva. Tourist accommodation is mainly located along the coast of the Gulf of Riga. There are few offers in the central part of the Northern Vidzeme Biosphere Reserve, in Eastern and Southern parts (see Fig 5.).

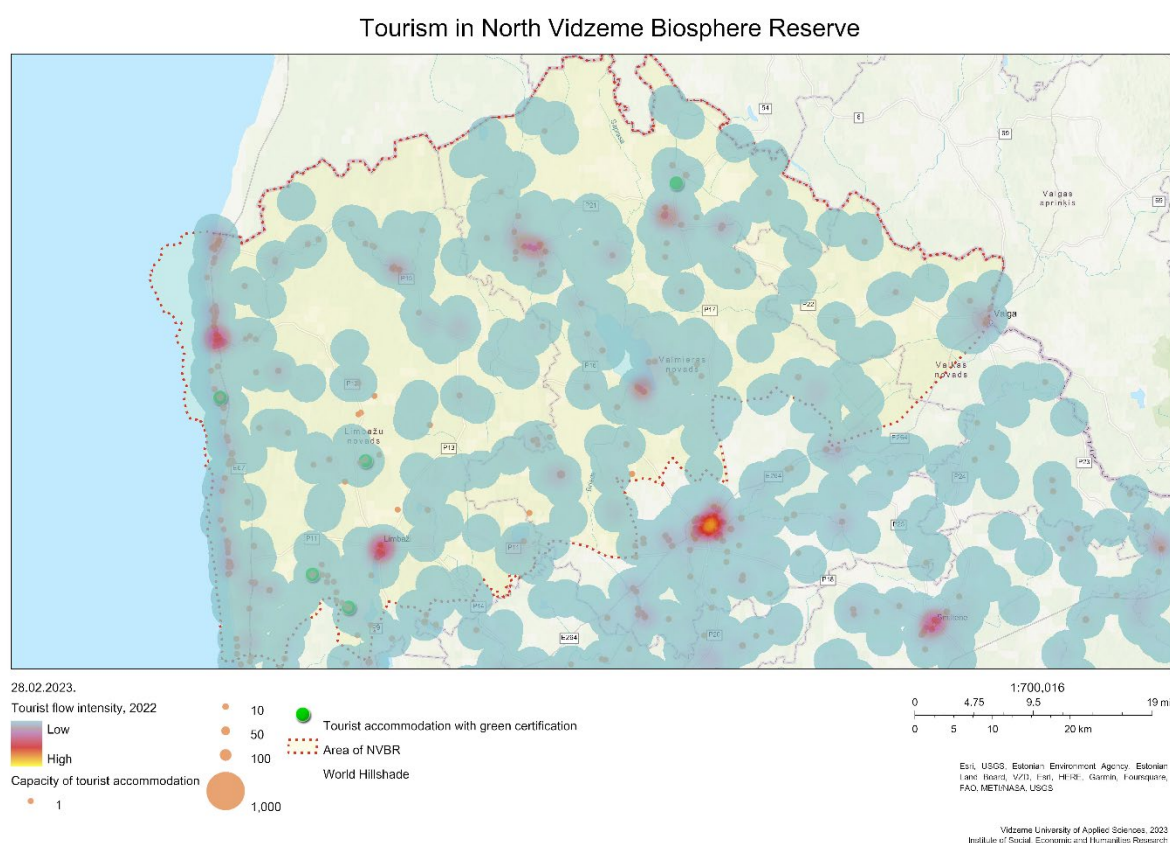


Fig 5. Tourist accommodation in the territory of the Northern Vidzeme Biosphere Reserve by their location and capacity, relationship with the rated intensity of the tourist flow.

According to the classification of tourist accommodation (see Fig 6.), holiday homes are the most in number, followed by guest houses and guest apartments. There are relatively few recreation complexes in the Northern Vidzeme Biosphere Reserve. Glampings "Mežurgas" and "Jēru kluba glampings" located in the territory of the reserve can be especially highlighted. The capacity of tourist accommodation is small, corresponding to the offer. The tourism business on the sea coast has developed most rapidly in the last decade. It has become a business in demand in export markets, albeit seasonal. Most of the lodgings are located near water bodies, in scenic areas and in towns. Holiday homes and small guest apartments dominate in the coastal area.

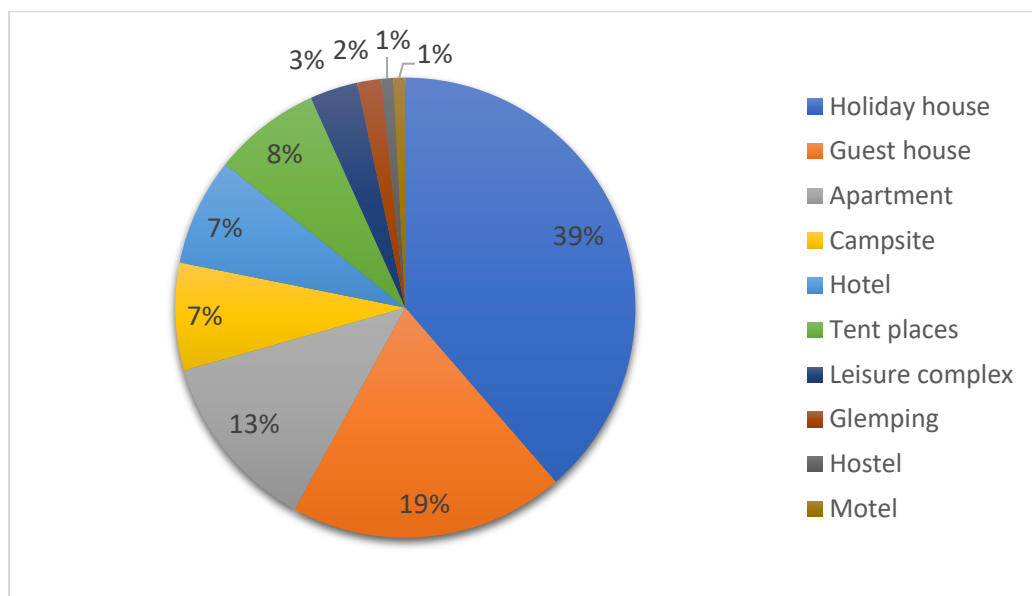


Fig 6. Types of tourist accommodation found in the territory of the Northern Vidzeme Biosphere Reserve.

The flow of tourists is related to both the attractiveness of places for tourism (tourist attractions) and the specific activities taking place there (public events), but in both cases it depends on public accessibility and the residence of tourists (or one day travellers).

The largest flow of tourists is along the sea coast, where the number of visits is estimated within the annual season for each kilometre (and in total exceeds 300 thousand per year along the entire coast). The transport highway crossing the territory (via Baltica) concentrates a large transit traffic (over 10 thousand cars per day). Only the smallest part of it can be attributed to tourism. Specific types of tourism related to the place are popular: boat trips on the River Salaca (about 10 thousand visits per year, concentrated in the warm season), about 6 thousand licenses for fishing in Lake Burtnieks are sold per year (the number has fallen from the historically highest number of visitors, which reached about 10 thousand per year), the number of visitors to Zilaiskalns exceeds 17 thousand visits per year, a similar number is also registered in the Skaņaiskalns Nature Park. In most parts of the territory, the number of tourists is not large, which hinders the development of quality hospitality services in the public catering sector, which are in stable demand.

The smallest part of tourist attractions is commercialized, and >100 companies in the region work on export markets. The most common are cultural tourist attractions, there are fewer competitive high-quality commercialized nature tourism offers. The network of lodgings largely overlaps with the locations of the most sought-after tourist destinations.

**5.3 When applicable, describe other key sectors and uses such as agriculture, fishing, forestry. Have they increased or decreased since the nomination or the last periodic review? What kind of new projects or initiatives have been undertaken? What effect have they had on the economy and ecology of the biosphere reserve, and on its biodiversity? Are there any studies that examine whether designation as a biosphere reserve has influenced the frequency of its activities? If so, provide the bibliographic information of these studies and/or a paper copy in an annex.**

**Fishing** in Lake Burtnieks and Lake Kiruma, the only area of the NVBR where commercial net fishing is possible, has been declining. A turning point occurred in 2021 after the administrative-territorial reform, when the length of nets allowed was significantly reduced, as was the volume of fish to be caught. In 2022, the promotion of the Burtnieks zander as the brand of protected geographical origin was launched.

**Forestry and biodiversity.** In 2019, there was a pronounced infestation of European spruce bark beetles in Vidzeme (see Fig 7.).

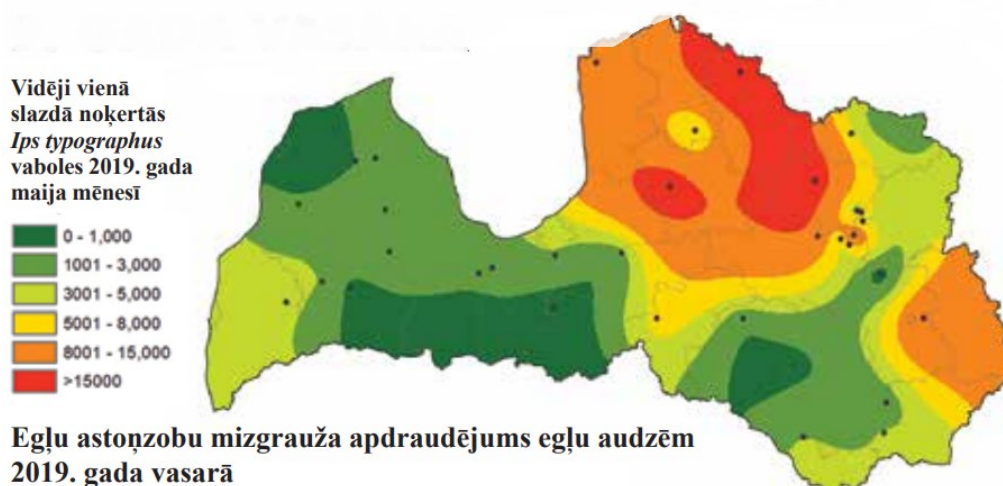


Fig 7. Map of European spruce bark beetles threat to spruce stands in 2019

In 2021, Latvia's State Forests in cooperation with the Nature Conservation Agency, in the framework of the project "Management measures in specially protected natural areas and micro-reserves to improve the state of protection of habitats and species" started the restoration of the habitats of the hermit beetle (*Osmoderma eremita*) in the Natura2000 territory in 42 state forests, incl. in the nature reserve "Augstroze" in the NVBR territory.

In 2011 the Cabinet of Ministers approved "Individual Protection and Use Regulations of the North Vidzeme Biosphere Reserve" that included:

- ✓ prohibition of installation of **wind power plants** in the NVBR, except wind power plants that do not exceed the height of 30 metres;
- ✓ wind power plants without height restriction if:
  - wind power plants shall be installed after the receipt of a written permit from the NCA;
  - wind power plants shall be located in groups where the number of wind power plants does not exceed 20, reducing as far as possible the distance between neighbouring wind power plants. The distance between the groups shall not be less than two kilometres.

The creation of wind farms has been particularly topical due to the Ukrainian war.

#### 5.4 How do economic activities in the biosphere benefit local communities?

Measuring the economic return from the Ice Cream Festival held in the small town of Rūjiena in June 2022, which was visited by around 4.5 thousand tourists and local travellers from the surrounding region (from Valmiera), the total amount of expenses for retail, fuel, catering, festive activities, etc. reached 110 thousand EUR per day.

In the survey of the residents of the Salaca Valley, tourism activities were not significantly disruptive. Leaving household waste, sometimes disregarding privacy, making noise in public recreation areas is more critically evaluated. At the same time, there are many private campsites on the banks of the Salaca River established, for which payment is requested, in some places additional services are available. The part of the society that is involved in the provision of tourism services gains more, also craftsmen and food producers. More than 96% of all the companies in the region are SMEs (with an emphasis on small and micro), there are many small family businesses. In scenic rural areas, the number of summer houses, which are sometimes formed from old homesteads, is increasing. Due to the impact of the COVID-19 pandemic in 2020-2022, a trend has been observed that some households have moved to live in their second homes (in rural areas, often these families are economically active and creative, start economic activities).

A new tradition is Home Cafe Days in the summer period, which was started by the Rural Tourism Association and is now supported by the Latvian State Investment Agency. It is an opportunity to test and try your ability to offer services publicly and also to get to know your neighbours, people around you, to give things a second life, for example, stylized and improvised tables, chairs.

The LEADER programme is an important financial support tool for local entrepreneurs and the local community to implement their plans and ideas.

2023 will be the first year in Latvia when all municipalities will be introduced to the practice of participatory budget planning, involving local communities in applying their ideas for financing.

## **5.5 How do you assess the effectiveness of actions or strategies applied?**

**(Describe the methods, indicators).**

Each of the institutions implementing projects and activities within the NVBR has their own procedure for assessing effectiveness.

The NCA prepares an annual assessment of the institution that includes also Vidzeme Regional Administration. Annually, the NVBR Consultative Board listens to the report provided by the NCA and Vidzeme University of Applied Sciences UNESCO Chair on Biosphere & Man.

The Rural Development Programme 2014-2020 LEADER has their own reporting requirements on impact and effectiveness.

## **5.6 Community economic development initiatives. What programmes exist to promote comprehensive strategies for economic innovation, change, and adaptation within the biosphere reserve, and to what extent are they implemented?**

From 2005 to 2008, the Small Grants Programme "Support for biodiversity conservation projects in the territory of the North Vidzeme Biosphere Reserve" was developed within the project "Biodiversity Protection in North Vidzeme Biosphere Reserve" to support economic development activities for local communities in forestry, agriculture, and tourism. In 2022, the NVBR is celebrating its 25th anniversary with a huge program involving all stakeholders – from kindergartens and nursing homes to youth, entrepreneurs and local governments. This is also linked to the fact that in 2022 the society as a whole and each person individually at the global, national and local levels need to rethink the sustainable and efficient use of resources. By resources we mean both tangible and intangible assets. Everyone has to rethink their daily habits, reassess their priorities, and review their values. Taking all the above into account, a study was planned to investigate the status of the Small Grants Programme "Support for biodiversity conservation projects in the territory of the North Vidzeme Biosphere Reserve" beneficiaries in 2022. Semi-structured interviews and field visits were chosen as a method. The semi-structured interview questions were divided into 3 groups: 1) about the Small Grant Programme and its implementation; 2) about other sources of finance used in entrepreneurship; 3) about the role (positive or negative) of the NVBR in entrepreneurship and everyday life.

The key results of the study showed that it is necessary to build trust with the population and the business community by involving key people of the area. Secondly, any amount of support is important for small businesses. Thirdly, it is important to build and create a sense of community and belonging to the North Vidzeme Biosphere Reserve, so that businesses and residents are proud to work and live in the area. In this way, sustainable decision-making and care for biodiversity will also be promoted. To create a sense of community, it is recommended to organize seminars, lectures, workshops, networking events, activities and initiatives highlighting the role of the NVBR. Although many problems hindering growth were highlighted, the interviewed entrepreneurs are hopeful about the future improvement of cooperation in similar projects (Report by A.Mežgaile, 2022).

At the national level, support is provided to households throughout the territory of Latvia for improving energy efficiency: renovation/ insulation of buildings, placement of solar panels,

electric cars. There are no statistics for the NVBR on how many of these funds are used within the NVBR.

In 2022, the bottle deposit system was launched in Latvia, allowing empty plastic and glass bottles to be handed over to the container dispenser. This is an important step in nature conservation and the reuse of materials.

The NCA has been implementing the principle of collecting waste in nature for a long time – “Carry away what you brought”.



Local municipalities are providing grant programmes for promoting economic activities in the area. In general, there are no more specific support programmes targeted at the NVBR.

### **5.7 Local business or other economic development initiatives. Are there specific “green” alternatives being undertaken to address sustainability issues? What relationships (if any) are there among these different activities?**

The map of tourist accommodation capacity and tourist flow (see above) shows tourist accommodation with a green certificate (granted, maintained and controlled by the Latvian Rural Tourism Association). There are not many of them in the NVBR territory - only five. The number has not increased over the years. At the same time, the owners interviewed (Vējavas, 2022) believe that it is kind of bureaucracy. Even without it, they are certain to be managing their enterprise in a "green" way, following the principles of sustainability.

Except for the sea coast (the Salacgrīva beach and the port of Kuiviži), there are no Blue Flag initiatives inland. In the development plans, they are considered at Lake Burtnieks and Lake Vaidava, but they have not been implemented.

Natural grasslands are coming in urban green areas by emphasising the role of biodiversity in sustainable development. There are examples in Valmiera City (gateway to the NVBR).

The development of greenways in the NVBR and planning of cycling routes and cycling paths (Vidzeme Tourism Development Strategy 2020-2025: Development of Greenways in Vidzeme 2020-2025) is initiated by the Latvian GreenWays Association. Greenways is a new initiative for Latvia with the aim to develop the former railway lines and adapt them to the needs of non-motorized tourism. It has been successful in Europe for more than 20 years, attracting millions of tourists to places usually left outside the tourist guides, and enabling them to enjoy landscapes and environments that once flourished due to the presence of railways.

The Greenway network in Vidzeme currently reaches the total of 558 km. The Action Plan viewed the directions within the NVBR to include also Valka/Valka – Ape, Ainazi – Puikule – Valmiera, Lade – Limbazi – Puikule – Mazsalaca (see Fig 8.). The Action Plan also viewed various support services for cycling tourism that are essential for the development of cycling: bike rental stations, electric car charging stations (see Fig 8.).



Fig 8. Cycling routes and Greenways in the Vidzeme Tourism Region, bike rental stations and rail biking offers

Source: AC Konsultācijas, LZCA, VTA & Northmaps

301 farms within the territory of the NVBR (in all three municipalities together, excluding the city of Valmiera) are registered as organic farming enterprises, the operation of which is controlled by institutions (March 2023).

### 5.8 Describe the main changes (if there are any) in terms of cultural values (religious, historical, political, social, ethnological) and others, if possible with distinction between material and intangible heritage.

(c.f. UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage 1972 and UNESCO Convention for the Safeguard of the Intangible Cultural Heritage 2003 ([http://portal.unesco.org/en/ev.php-URL\\_ID=13055&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/en/ev.php-URL_ID=13055&URL_DO=DO_TOPIC&URL_SECTION=201.html) and [http://portal.unesco.org/en/ev.php-URL\\_ID=17716&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/en/ev.php-URL_ID=17716&URL_DO=DO_TOPIC&URL_SECTION=201.html))).

In 2022 the Livonian Cultural Space of Vidzeme was established. More information in chapters 2.3.6. and 2.3.8.

The war in Ukraine made some changes in the population behaviour, and also Latvia and the NVBR region hosted refugees from Ukraine and provided different type of support, for example, knitted fabrics, dug candles.

In 2022 two sites from the NVBR were identified as National Landscapes.



### **5.9 Community support facilities and services. What programmes in/for the biosphere reserve address issues such as job preparation and skills training, health and social services, and social justice questions. What are the relationships among them and with community economic development?**

Development and restoration of recreation and tourism infrastructure, maintenance of Greenways' routes is important for improving active recreation and health of the local population, because there are less facilities and infrastructure in rural areas.

Rural partnerships and local governments make a significant contribution to solving social issues, ensuring lifelong learning. The NVBR cooperation partnership and the NCA also provide ample opportunities for the education and growth of citizens with training seminars, practical training - experiential learning events/trips.

Active and healthy citizens are also active in social and economic life.

### **5.10 What indicators are in place to assess the effectiveness of activities aiming to foster sustainable development? What have these indicators shown?**

For the sustainable development of tourism, the monitoring of ETIS criteria for sustainable tourism destinations has been introduced.

[https://single-market-economy.ec.europa.eu/sectors/tourism/offer/sustainable/indicators\\_en](https://single-market-economy.ec.europa.eu/sectors/tourism/offer/sustainable/indicators_en)

Monitoring was started in 2021, following the mobility restrictions of COVID-19 and the rapid increase in tourist attendance indicators of peripheral natural places (this was not experienced in many places during the previous ten years). The attendance of public events and cultural spending decreased. The visitation to the coast has been extended even outside the swimming season. A certain part of the environmental impact indicators was identified only in 2021 for the first time (for example, the impact of entrepreneurs on the environment from tourism activities) and trends will be comparable and identifiable only after several years.

The indicators of natural diversity are monitored for the entire territory of Latvia as a whole, not only specifically for the territory of the NVBR. The proportion of forest habitats whose protection is assessed as "favourable" (%): the evaluation for 2013-2018 period is worrying: **favourable** (0%), unfavourable, insufficient (50%), unfavourable, poor (40%), unknown (10%). Data source: Report to the European Commission on the state of habitat and species protection in Latvia.

Available at: <https://www.daba.gov.lv/lv/zinojumi-eiropas-komisijai>

The proportion of grassland habitats whose protection is assessed as "favourable": the evaluation for 2013-2018 period: **favourable** (0%), unfavourable, insufficient (10%), unfavourable, poor (90%). Data source: Report to the European Commission on the state of habitat and species protection in Latvia.

Available at: <https://www.daba.gov.lv/lv/zinojumi-eiropas-komisijai>

As well as that, the index of rural birds of Latvia, which is determined by the Ornithological Society of Latvia and the Nature Conservation Agency within the framework the background monitoring of diurnal birds. The value identified in the report for 2020 is the lowest in the history of the index. The forest bird index of Latvia is more stable, but it is decreasing for several species.

### **5.11 What are the main factors that influenced (positively or negatively) the success of development efforts in the entire biosphere reserve? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be most effective?**

The reform of the NVBR administration in 2009 affected the NVBR management, and its changes can be felt, namely that the reserve is not a special and priority nature protection area in Latvia.

A positive development in the territory of the NVBR was provided by the GEF project, whose partial post-evaluation was carried out in 2022 by a researcher from the UNESCO Chair surveying the recipients of small grants in the GEF project. The evaluation of the interviews

showed that such targeted small grant development programmes in the NVBR have been very important for business.

The economic crisis in the world in 2008 and the structural reform of the NCA in 2009 led to a reduction of resources in the state administration. This was followed by a slight and gradual improvement, but so far, the pre-crisis level in the amount of allocated resources has not been reached.

The establishment of ViA UNESCO Chair in 2019 has had a positive impact on the operation of the NVBR. The NVBR coordinator has appreciated the importance of the awareness that another organization cares about the activities and development of the biosphere reserve. The NVBR coordinator and the UNESCO Chair jointly plan and implement various activities.

The administrative-territorial reform of the municipalities has also affected the management of the NVBR. On the one hand, the management is not fragmented, there are fewer involved parties and requirements and procedures have been levelled. At the same time, the Tourist Information Centres in the towns of Strenči, Mazsalaca, Rūjiena have been closed. The internal flow of information has not yet stabilized.

## 6. THE LOGISTIC FUNCTION:

[This refers to programs that enhance the capacity of people and organizations in the biosphere reserve to address both conservation and development issues for sustainable development as well as research, monitoring, demonstration projects and education needed to deal with the specific context and conditions of the biosphere reserve.]

**6.1 Describe the main institutions conducting research or monitoring in the biosphere reserve, and their programmes. Comment on organizational changes (if any) in these institutions over the past ten years as they relate to their work in the biosphere reserve.**

### **Nature Conservation Agency**

Since 2015, coastal breeding bird counts have been carried out along the entire coast of the NWB area. Species recorded in the census are: White Wagtail (*Motacilla alba*), Yellow Wagtail (*Motacilla flava*), Little Ringed Plover (*Charadrius dubius Scop*), Goosander, Common Merganser (*Mergus merganser*).

### **Latvia's State Forests**

The Lesser Spotted Eagle (*Aquila pomarina* C.L.Brehm) monitoring continues at the Pāle plot (10 x 10 km). On average, 12 nests are counted yearly, but nesting success is variable.

### **NGO "Latvian Ornithological Society"**

Since 2002, the birdwatching competition "Tower Fight" has been held. The competition aims to see, identify and count the bird species present in the territory during the twenty-four hours. Every year, the nature reserve "Randu meadows" tower also participates in this competition. The highest number of bird species recorded from this tower is 114 bird species.

### **Vidzeme University of Applied Sciences**

One research institution is located close to the NVBR – **Vidzeme University of Applied Sciences** (ViA) (founded in 1996). ViA is conducting research in the NVBR and in 2019 applied to UNESCO UNITWIN programme. In 2019 UNESCO Chair on Biosphere and Man was established in ViA.

Research activity/title of the project	Main goal, activities	Findings
Public involvement in the development of the "Burtnieka zandarts" brand and informing about the rational and sustainable use of the lake's fish resources ( <i>June 2022 – December 2022</i> )	Brand development to obtain Protected Geographical Indication (PGI) status to change the freshwater fishing business model from higher turnover to limited catch with higher added value	Application elaborated to obtain Protected Geographical Indication (PGI) status, a brand developed, and training carried out for fishers / entrepreneurs. A gradual change of the business model is taking place, it is still too early to evaluate the results.
Technological solutions for visitor flow management in specially protected natural areas ( <i>June 2021 – October 2022</i> )	Purchase of automatic visitor counters and development of an original solution for recording water tourists for comprehensive monitoring of visitors to specially protected natural areas.	The solution is integrated with the ViA HESPI created digital geospatial platform for data collection, analysis and interpretation, available to the NCA specialists and ViA researchers. Input for more effective visitor flow monitoring and management.
Monitoring of visitors to specially protected natural areas and digital solutions for more efficient visitor flow management ( <i>April 2021 – February 2022</i> )	To develop a methodology for assessing the impact of tourism and recreation, as well as visitor habits, for conducting a universal survey of visitors to most popular SPA's, involving the NVBR. To conduct surveys of 1000 residents and 1000 travellers, analyse the data and interpret their results. Adapt digital solutions for monitoring tourism and recreation performance indicators for effective and operational monitoring of the impact of tourism and recreation.	Recommendations have been developed for making reasonable decisions on the management and protection of the specially protected natural area for more effective management of the flow of visitors. Monitoring of the flow of visitors has been introduced.
Tourism Intelligence Latvia ( <i>September 2017 – August 2020</i> )	The aim of the research project is using advantages of ICT development to create GIS solutions-based tourism intelligence platform of market information, providing analyses and forecasts of pan-Baltic Big Data representing cross-sectoral industry performance in multi-destination levels to improve competitiveness of Latvia in export markets and facilitate regional development.	GIS solutions-based tourism intelligence platform has been developed to launch long-term monitoring program of tourism and recreation monitoring, including the NVBR territory.

Spatial Research Laboratory (since 2018)	The aim of the Spatial Research Laboratory is to provide support for the research within the economic sectors using automatic visitor counters and geospatial data, with an emphasis on the tourism industry.	A complete set of automatic visitor counters to record visitors at various natural and cultural heritage sites including the NVBR has been launched. That helps to integrate it with original data to visitor monitoring of the NVBR.
Lake experience tourism Explore the Nordic-Baltic lakes (2018-2019)	The aim of the project was to increase the internationalisation of the Lake region local tourism destinations, to develop new product connected with "Lake trails". Promote it in international markets. Experience exchange.	All tourism service providers, stakeholders of Lake Burtnieks vicinity were involved in several trainings and product development sessions. International marketing involved. Network has been strengthened partly.
Research on the environmental awareness of young people in NVBR ( <i>The Latvian Environmental Investment Fund 2018</i> )	A survey of the NVBR youth was conducted (120 respondents). The study was conducted within the framework of the Latvian Environmental Investment Fund project "Youth to youth about environment". Important goal of the project - to find out the opinions of young people on important environmental issues.	The results were used to develop proposals for nature protection, tourism organizations, educational institutions on possible ways of communication with young people. In order to increase the motivation of young people to visit the NVBR, it is necessary to improve the functional, emotional and symbolic image of the reserve among young people, also creating an emotional connection with it. <a href="http://journals.ru.lv/index.php/SIE/article/view/3928">http://journals.ru.lv/index.php/SIE/article/view/3928</a> ; <a href="https://www.hespi.lv/sites/default/files/Petijums_ZBR_skoleni_2018_final.pdf">https://www.hespi.lv/sites/default/files/Petijums_ZBR_skoleni_2018_final.pdf</a>
Evaluation of Sustainable Development Profile indicators of the North Vidzeme Biosphere Reserve (2018)	Analyse and assess the indicators of the sustainable development profile of the NVBR in four thematic groups, identifying the area development trends, in order to answer the research question about changes in the indicator trends over the last 10 years, from 2007 to 2017.	Indicators of sustainable development of the NVBR were researched, analyzed and compared in four thematic groups, their comparative assessment with the study conducted in 2009 was provided. <a href="http://darbi.va.lv/darbi/Arklina_Anda_bakalaura_darbs_2018.pdf">http://darbi.va.lv/darbi/Arklina_Anda_bakalaura_darbs_2018.pdf</a>

<p>Impact of social awareness changes on sustainable provision of ecosystem services (National research programme EKOSOC-LV "Economic Transformation, Smart Growth, Governance and Legal Framework for the State and Society for Sustainable Development - a New Approach to the Creation of a Sustainable Learning Community" (2014-2018)</p>	<p>Investigate the impact of changes in social awareness on the sustainable provision of the use of ecosystem services. Evaluate the potential of ecologically sensitive territories for the implementation of the Smart Specialization Strategy, based on pilot studies in selected model territories in Latgale and Vidzeme.</p>	<p>The results are included in the monograph "Over a hundred. Smart Latvia", 2018, 416 pages. Results: summary containing broad conclusions and recommendations about the necessary complex changes.</p>
<p>National research program "Latvia's heritage and future challenges for national sustainability", the project "The importance of researching documentary heritage, creating synergies between research and society" (2019)</p>		<p><a href="https://www.hespi.lv/sites/default/files/Plakats_Juris_Smalinskis.pdf">https://www.hespi.lv/sites/default/files/Plakats_Juris_Smalinskis.pdf</a>; <a href="https://www.youtube.com/watch?v=XkLOkddUA5I">https://www.youtube.com/watch?v=XkLOkddUA5I</a>;  <a href="http://realitymodels.northeurope.cloudapp.azure.com/rm/Skanaiskalns_3mx/App/index.html?scene=Skanaiskalns_3mx&amp;cX=38.1485&amp;cY=-75.2763&amp;cZ=44.1437&amp;upX=0.0000&amp;upY=0.0000&amp;upZ=1.0000&amp;tX=44.0272&amp;tY=16.7226&amp;tZ=5.0410&amp;fbclid=IwAR2FXPrE0ULRSmBdrr8aeMPnhjUQY3HbQKp1eahkPhuxsZH0g6PEyuP8Ltc#%2F">http://realitymodels.northeurope.cloudapp.azure.com/rm/Skanaiskalns_3mx/App/index.html?scene=Skanaiskalns_3mx&amp;cX=38.1485&amp;cY=-75.2763&amp;cZ=44.1437&amp;upX=0.0000&amp;upY=0.0000&amp;upZ=1.0000&amp;tX=44.0272&amp;tY=16.7226&amp;tZ=5.0410&amp;fbclid=IwAR2FXPrE0ULRSmBdrr8aeMPnhjUQY3HbQKp1eahkPhuxsZH0g6PEyuP8Ltc#%2F</a>;  <a href="http://realitymodels.northeurope.cloudapp.azure.com/rm/Maza_al_a2_3mx/App/index.html?scene=Maza_ala_3mx&amp;cX=1.7150&amp;cY=-11.1015&amp;cZ=22.1758&amp;upX=0.0000&amp;upY=0.0000&amp;upZ=1.0000&amp;tX=0.4158&amp;tY=-6.1601&amp;tZ=21.5249&amp;fbclid=IwAR3IQJ0AxVHvO2yw74mx_2ekHR_8HfHAMVMdNvkt_aApMvm7jLN1AO7A3Q#%2F">http://realitymodels.northeurope.cloudapp.azure.com/rm/Maza_al_a2_3mx/App/index.html?scene=Maza_ala_3mx&amp;cX=1.7150&amp;cY=-11.1015&amp;cZ=22.1758&amp;upX=0.0000&amp;upY=0.0000&amp;upZ=1.0000&amp;tX=0.4158&amp;tY=-6.1601&amp;tZ=21.5249&amp;fbclid=IwAR3IQJ0AxVHvO2yw74mx_2ekHR_8HfHAMVMdNvkt_aApMvm7jLN1AO7A3Q#%2F</a></p>

The NVBR territory and the data from the NVBR is used for different studies by various research institutions and also non-governmental institutions.

### University of Latvia

Research activity/title of the project	Main goal, activities	Findings
<p>Dynamic Ecological Information Management System - Site and dataset registry.</p>	<p>Carry out hydrobiological research in the Salaca River.</p>	<p>The data is not analysed about the last period due to lack of financial resources.  <a href="https://deims.org/81a2b50d-76ea-426b-8e5b-0560dc07ee57">https://deims.org/81a2b50d-76ea-426b-8e5b-0560dc07ee57</a></p>
<p>European Union Interreg Est-Lat</p>	<p>The objective is to identify terrestrial ecosystems</p>	<p>The target was met and land ecosystems dependent on underground</p>

project GroundEco "Joint management of groundwater dependent ecosystems in transboundary Gauja - Koiva river basin" (2018-2020).	(wetlands) dependent on groundwater and to develop a common Latvian-Estonian methodology for the identification and evaluation of these ecosystems in order to implement the EU water Structural Directive.	waters in the cross-border Basin of the Gauja-Koiva River were identified. Three publications were published.
European Union Interreg Est-Lat WaterAct "Joint actions for more efficient management of common groundwater resources" (2020-2022).	Objective to harmonise the management of groundwater in cross-border areas of Latvia-Estonia (Gauja and Salaca basins).	Within the framework of the project, guidelines for public involvement in the management of groundwater and associated ecosystems were developed. In addition, quality observations of selected sources were made. A scientific publication has been submitted for publication.
Latvia Nature Protection fund project "Identification and assessment of ecosystems dependent on groundwater at the level of groundwater bodies in Latvia" (2021)	The objective is to develop national methodologies and identify, assess the quality of ecosystems related to groundwater (rivers, lakes, wetlands, hot castles).	The results were achieved using the latest data from the Latvia habitat mapping project. Ecosystems were released that are potentially at risk due to poor groundwater status and require further research.
Spatial and temporal prediction of groundwater drought with mixed models for multilayer sedimentary basin under climate change (GURU) (2020-2022)	The aim of the project is to develop novel integrated groundwater level assessment approach that links meteorological forcing and hydrogeological setting to groundwater drought events with the ability to predict groundwater drought severity depending on catchment characteristics in the presence of climate change.	List of publications: <a href="https://www.gprm.lu.lv/en/projekti/guru/articles-publikacijas/">https://www.gprm.lu.lv/en/projekti/guru/articles-publikacijas/</a>

### University of Latvia, Institute of Biology

Research activity/tittle of the project	Main goal, activities	Findings
HORIZON 2020 project eLTER – <b>European Long-Term Ecosystem and Socio-Ecological Research Infrastructure</b> ". (Research leader Viesturs Melecis).	The project aims to develop European long-term ecosystem research sites and socioecological research platforms to ensure their ability to carry out high-quality research and unrestricted access by researchers to research infrastructure. There are three monitoring points in the Salaca River and	<a href="https://elter-ri.eu/">https://elter-ri.eu/</a> Research results and obtained data is included in data base DEIMS-SDR (Dynamic Ecological Information System - Site and Dataset Registry; <a href="https://deims.org">https://deims.org</a> )

	one monitoring plat in land in Mazsalaca.	
Sustainable use of nature resources in the context of climate change. (Since 2016 – ongoing). Funded by the University of Latvia.	During the project, long-term ecological monitoring is ensured in Salaca at three monitoring points: the source at Vecate, near Skanaiskalns, in the estuary at Vecsalaca.	The River Salaca is included in International Long Term Ecological Research (ILTER) network. <a href="https://www.ilter.network/">https://www.ilter.network/</a> Data about Salaca have been collected since 1982 and are used to analyse the role of natural and anthropogenic factors on aquatic ecosystems and biodiversity. Monitoring data are used in the preparation of international publications: Pilotto, F., Kühn, I., Adrian, R. Alignier, A., Andrews, Ch., Bäck, J., Ozoliņš, D., Skuja, A., Sprinģe, G. <i>et al.</i> 2020. Meta-analysis of multidecadal biodiversity trends in Europe. <i>Nature Communications</i> , 11, 3486. <a href="https://doi.org/10.1038/s41467-020-17171-y">https://doi.org/10.1038/s41467-020-17171-y</a> Jourdan, J., O’Hara, R.B., Bottarin, R., Huttunen, K.L., Kuemmerlen, M., Monteith, D., Muotka, T., Ozoliņš, D., Paavola, R., Pilotto, F., Springe, G., Skuja, A., Sundermann, A., Tonkin, J.D., Haase, P. 2018. Effects of changing climate on European stream invertebrate communities: A long-term data analysis. <i>Science of The Total Environment</i> , 621, 588-599. <a href="https://doi.org/10.1016/j.scitoten.v.2017.11.242">https://doi.org/10.1016/j.scitoten.v.2017.11.242</a>
Cross border cooperation project between Latvia and Estonia. „Towards joint management of the transboundary Gauja/Koiva river basin district” („Gauja/Koiva”) 2011-2013		<a href="https://www.estlat.eu/en/supported-projects">https://www.estlat.eu/en/supported-projects</a>

### VZI APP "National Botanic Garden"

Research activity/title of the project	Main goal, activities	Findings



PhD thesis “Impact of the ecological factors on viability of populations <i>Liparis Loeselii</i> (L.) Rich. In Latvia. (Thesis defended in Daugavpils University) by Daina Roze	Area in Limbaži Municipality Šalku quarry is included in the research.	<a href="https://old.du.lv/wp-content/uploads/2015/12/Roze_kopsavilkums_save.pdf">https://old.du.lv/wp-content/uploads/2015/12/Roze_kopsavilkums_save.pdf</a>
State Research programme “The value and dynamic of Latvia’s ecosystems under changing climate” (2014-2018)	Area in Limbaži Municipality Šalku quarry is included in the research	<a href="http://www.vpp-evident.lv/index.php/en/">http://www.vpp-evident.lv/index.php/en/</a> Research includes findings about <i>Lēzela Lipares</i> in Limbaži Municipality. Findings in publication: Megre D., Roze D., Dokane K., Jakobsons G., Karlovska A. 2018. Survival of an endangered orchid <i>Liparis loeselii</i> in habitats with different water level fluctuations. <i>Pol. J. Ecol.</i> , 66: 126-138, DOI: 10.3161/15052249PJE2018.66.2.004 Belogradova I., Grauda D., Lapiņa L., Jakobsons G., Roze D., Ornicāns R., Fokina O., Rashal I. 2018. Genetic Diversity of <i>Liparis loeselii</i> in Latvia. <i>Proceedings of the Latvian Academy of Sciences, Section B, Volume 72</i> , 341-348, DOI: 10.2478/prolas-2018-0042

### Daugavpils University, Hydro Ecology Research Institute

Research activity/title of the project	Main goal, activities	Findings
Water monitoring station	There is a 159K monitoring station in the sea waters of the NVBR. Physico-chemical indicators are measured regularly (3x per year 2014, 2015, 2016, 2017, 2018, 2021; and 2x per year 2020, 2022.g.).	

## Latvian Institute of Aquatic Ecology

Research activity/title of the project	Main goal, activities	Findings
European Union Interreg Est-Lat project GroundEco "Joint management of groundwater dependent ecosystems in transboundary Gauja - Koiva river basin" (2018-2020).	In the sea from Vitrupe to Ainaži, video observations and physical measurement of different parameters was made	The joint methodology for GDE identification and assessment is developed. Increased public awareness of groundwater and associated nature protection. ( <a href="http://www.balticrivers.eu">www.balticrivers.eu</a> )
Video measurements in areas: 2013 - around Skultes 2018 - from Ainaži to Svētciems 2022 – from Ainaži to Vārzas (State monitoring programme).		The monitoring/observation stations and results of measurements available at the institute website: <a href="https://lhei.lv/lv/karte">https://lhei.lv/lv/karte</a>

## Latvian Academy of Culture

Research project “The Vidzeme River Svētupe in the Mythical and Real Cultural Space” (2013-2016) implemented with support of the Latvian Council of Science. The river and its banks were explored from the viewpoint of archaeology, folklore studies, linguistics and ethnology, applying the methodological framework of the abovementioned disciplines, thus probing deep into changes and development of the cultural landscape of the river from prehistory to the present day.

The aim of this research was to study the essence and significance of the cultural landscape of the river Svētupe in a complex and interdisciplinary way by examining whether and how an extraterritorial and hydrogeological object can form the identity of the riverside and its people. The project was completed in December, 2016. While working on the project, the banks of the river Svētupe were surveyed on foot and by boats, establishing the population of the river banks and the use of the river for economic purposes both in the past and present.

### During the implementation of the project:

- ✓ the river Svētupe was recognized as an essential part of the local identity in forming an understanding a united cultural and historical space that manifests itself in the economic activities, traditions and values of the local community;
- ✓ a positive correlation was established between a high level of local identity awareness and readiness to take care, tend and maintain the factors that create the originality of this place: the cultural landscape, traditions and language that for their part contribute to Latvian national culture as a whole.

The research findings allow us to conclude that the river Svētupe, which is a mid-sized river for the Latvian circumstances, forms a united cultural and historical region in Vidzeme; it has its own characteristic cultural landscape and unique features of local identity. In its time the Svētupe used to be an important waterway while the banks of the river were and still are a populated area. It provides the local communities not only with nature’s benefits of everyday use, but it also forms a definite folklore repertoire and a sense of belonging to one’s locality that is very important; it also contributes to enriching the Latvian national culture as a whole. Head of the project Prof., Dr.hist., Dr.habil.art. Juris Urtāns. (<https://lka.edu.lv/en/research/research-projects/fundamental-and-applied-research-projects/archive-fundamental-and-applied-research-projects/vidzeme-river-svetupe-mythical-and-real-cultural-space/>)

### **Latvian Biomedical Research and study centre**

Research project „ Assessment of magnitude and importance of vector - borne Babesiosis in Latvia: epidemiological and diagnostic approach”. Funded by European Regional Development Fund (ERDF) 1.1.1.1. measure “Support for applied research” (2017-2020).

The aim of this project is to generate a comprehensive epidemiologic understanding of babesiosis in Latvia and to develop novel methods for epidemiological and diagnostic needs. The project intends to compare prevalence and distribution of *Babesia* pathogens in Latvia that will be combined with phylogenetic and epidemiological studies to generate a comprehensive epidemiologic understanding of these infections, to identify disease risks and increase awareness about babesiosis. The pathogen typing data along with tick and clinical samples will serve as a basis for the development of novel systems of pathogen detection.

The results showed that the occurrence of canine babesiosis in Latvia is most likely related to the spread of the new tick species *D. reticulatus*, however, other factors are involved in the pathogen distribution process. Phylogenetic results of *B. canis* indicate the existence of two large disease clusters in the territory of Latvia. During the project we were also able to find out the current situation of tick-borne pathogens in the country and their prevalence data in Latvian ticks was obtained. A real-time PCR-based method for simultaneous detection of *B. canis* and *A. phagocytophilum* in canine clinical specimens has been successfully developed, and all planned design indicators and conditions have been met.

Link: <https://biomed.lu.lv/project/1-1-1-1-16-a-044/>

### **6.2 Summarize the main themes of research and monitoring undertaken over the past ten years and the area(s) in which they were undertaken in order to address specific questions related to biosphere reserve management and for the implementation of the management plan (please refer to variables in Annex I).**

**(For each specific topic provide reference citations. Provide the full citations alphabetically by lead author at the end of Section 6 or in a separate annex).**

Many research and monitoring activities were carried out in the NVBR in the period 2012-2022. Unfortunately, research and monitoring measures regarding the Northern Vidzeme Biosphere Reserve as a research object have been carried out significantly less. The studies listed below have been conducted specifically to investigate and evaluate the NVBR:

- Research on the environmental awareness of young people in NVBR (*The Latvian Environmental Investment Fund 2018*)
- Evaluation of Sustainable Development Profile indicators of the North Vidzeme Biosphere Reserve (*2018*)
- Experimental study of the NVBR as a place of inspiration for prose, literary works, photo albums (*2021*)
- Post-evaluation of the recipients of small grants in the GEF project (2005-2008) in the NVBR (*2022*). It was the microgrant program to support economic development activities for local communities in forestry, agriculture, and tourism.

Significant research is being conducted on water quality both on the coast and in rivers and lakes, the largest of which is Lake Burtnieks. Also studies on the practices of improving biological diversity and eradication of invasive species are ongoing, but they are not specifically targeted at the area of the biosphere reserve, but include the entire country.

### **6.3 Describe how traditional and local knowledge and knowledge from relating to management practices have been collected, synthesized and disseminated. Explain how**

**such knowledge is being applied to new management practices, and how and if it has been integrated into training and educational programmes.**

On 30 November 2017, Vidzeme University of Applied Sciences hosted the North Vidzeme Biosphere Reserve 20th Anniversary Scientific-Practical Conference “Biosphere Reserve: Timeline and Life Line.” The Nature Conservation Agency of Latvia and Vidzeme University of Applied Sciences invited guests to look back at the twenty years of activities in areas such as the management of the biosphere reserve, the monitoring, the implementation of the landscape ecological plan and the management of habitats, as well as to hear guest speakers on the opportunities for economic development in protected areas (P. Fredman, Sweden; T. Kokovkin, Estonia) and public involvement in nature conservation (R. Biassone, Iceland). Five focus group discussions were organized during the conference on topics important for the NVBR: Biosphere reserve management and public involvement (leaders - Dipl.Ing. Petrs Čupa, Deputy Director of the Lower Moravian Biosphere Reserve; Rene Biasone, Head of the Nature Department of the Icelandic Environment Agency); Biological diversity (leader - Dr. biol. Otars Opermanis, SiA Biota, Project Manager); Cultural landscape (leader - Dr. geogr. Anita Zariņa, Docent of the University of Latvia, Faculty of Geography and Earth Sciences); Entrepreneurship (Dr. geogr. Andris Klepers, Vidzeme University of Applied Sciences, Researcher, Assistant Professor; Dr. geogr. Tomas Kokovkins, Head of the Estonian UNESCO MAB Programme Contact Point); Tourism and recreation (manager - Ilze Millere, Head of the Tourism Information Centre of Limbaži Municipality), whose summaries helped in the assessment of the trends of individual indicators. Full record of the conference is available here: [https://www.youtube.com/watch?v=pMFThkH5r\\_g](https://www.youtube.com/watch?v=pMFThkH5r_g)

For this conference, the students of Vidzeme University of Applied Sciences conducted interviews with the creators of the NVBR, creating a video “How the NVBR was created”. This is a historical material that preserves the evidence of the creation of the reserve. [https://www.youtube.com/watch?v=K\\_QBlajCyY8](https://www.youtube.com/watch?v=K_QBlajCyY8)

**6.4 Environmental/sustainability education. Which are the main educational institutions (“formal” – schools, colleges, universities, and “informal” services for the general public) that are active in the biosphere reserve? Describe their programmes, including special school or adult education programmes, as these contribute towards the functions of the biosphere reserve. Comment on organizational changes (if any) in institutions and programmes that were identified in the biosphere reserve ten or so years ago (e.g. closed down, redesigned, new initiatives). Refer to programmes and initiatives of UNESCO Associated Schools networks, UNESCO Chairs and Centers where applicable.**

The North Vidzeme Biosphere Reserve Nature Centre is providing several environmental awareness programmes with engagement and practical activities. This is one of the destinations for schools where to go on study excursions.

There are two schools (Valmiera Primary School and Valmiera State Gymnasium) from Valmiera city (which is a gateway to the NVBR) that are part of the UNESCO Associated Schools network.

There are several schools that are involved in the Eco-Schools programme: Limbaži Secondary School, Salacgrīva Secondary School, Rūjiņa kindergarten and 5 schools in and 3 kindergartens in Valmiera city. In February 2023, Valmiera city hosted Winter Eco-School Forum with more than 230 participants from all over Latvia.

Vidzeme University of Applied Sciences is a member of Eco-Universities programme and member of UNESCO UNITWIN programme. The UNESCO Chair Biosphere and Man was established in 2019. Vidzeme University of Applied Sciences elaborated informal education programme for youth (14 - 18 years) “Smart travel school”, and applied it in 2021 and in 2022 received license of informal education programme from Valmiera City Council.

The Nature and Technology Park “URDA” is providing training programmes and activities for different target groups, but primarily for children and youth to explore nature processes and technologies. The centre is a unit of waste management company in the NVBR.

There is a problem with primary and secondary school network remaining in rural areas because the number of students is decreasing. This is a significant threat to the development and resilience of the areas.

## **6.5 How do you assess the effectiveness of actions or strategies applied?**

### **(Describe the methods, indicators).**

Each of the projects have their own procedures for assessing effectiveness. In 2018, Vidzeme University of Applied Sciences (a student and supervisor) performed the NVBR analysis and the assessment of sustainable development profile. The profile included 20 indicators in four themes. Every year the NCA prepares a report on the work carried out in the previous year and reports to the Consultative Board. After the report, it is possible to follow up on the priorities and activities of the Action Plan and their implementation.

### **6.5.1 Describe the biosphere reserve's main internal and external communication mechanisms/systems**

The coordinator of the NVBR is communicating by phone, e-mails and on-line meetings with individual stakeholders or in smaller groups for internal and external communication, for example, the NCA regularly provides information for the World Network of Islands and Coastal Biosphere Reserves. The coordinator of the NVBR is going to local municipalities in person to meet representatives and specialists with an aim to explain and remind of the NVBR mandate and future vision, and collaborative work.

Internal communication takes place primarily during the annual meetings of the Consultative Board.

The NCA has their own internal communication tool and management system.

For the external communication, it is crucial to take part in international conferences, forums to keep live contacts and to develop joint activities.

The UNESCO Chair on Biosphere and Man (ViA) contributes to the internal communication by the monthly newsletter which is elaborated jointly with the coordinator of the NVBR. As well as that, the Chair gives input in international communication, for example, in 2022 ViA hosted the 11<sup>th</sup> International Conference on Monitoring and Management of Visitors in Recreational and Protected Areas.

The social media accounts are used regularly for the communication.

### **6.5.2 Is there a biosphere reserve website? If so, provide the link.**

The information of the NVBR is integrated in the website of the NCA.

<https://www.daba.gov.lv/lv/ziemelvidzemes-biosferas-rezervats> in Latvian

<https://www.daba.gov.lv/en/north-vidzeme-biosphere-reserve> in English

### **6.5.3 Is there an electronic newsletter? How often is it published? (provide the link, if applicable).**

The UNESCO Chair on Biosphere & Man at Vidzeme University of Applied Sciences in close partnership with the Nature Conservation Agency and the UNESCO Latvia National Committee has been developing monthly newsletter since 2020 in Latvian.

<https://www.hespi.lv/lv/unesco-zinas>

The newsletter is sent out to more than 120 recipients.

**6.5.4 Does the biosphere reserve belong to a social network (Facebook, Twitter, etc.)? Provide the contact.**

The NVBR has a Facebook page: <https://www.facebook.com/Ziemelvidzeme> with 1400 followers.

The NCA has a Facebook page: <https://www.facebook.com/dabasparvalde> with more as 11thousand followers.

**6.5.5 Are there any other internal communication systems? If so, describe them.**

There are no other internal communication systems.

**6.6 Describe how the biosphere reserve currently contributes to the World Network of Biosphere Reserves and/or could do so in the future.**

Members of NCA and NVBR have participated in several EuroMAB conferences, also in NordMAB and Biosphere for Baltic network exchanges events. In 2017 NVBR was represented in 7th Meeting of the WNICBR in Jeju Island (Korea) where the NVBR representer gave a presentation about the Biosphere Reserve. Meeting people from other biospheres reserves and exchanging knowledge, best practices and experience is necessary in our field as well as rewarding and developmental.

In the future we would like to continue to share our examples from our activities, knowledge, good examples of initiatives and experience.

**6.6.1 Describe any collaboration with existing biosphere reserves at national, regional, and international levels, also within regional and bilateral agreements.**

Unfortunately, North Vidzeme Biosphere Reserve is the only biosphere in Latvia, so we don't have an opportunity to create collaborations regionally or nationally.

In the last 10 years NVBR has been active member of the Nordic network NordMab and EuroMab. NVBR normally participated in conferences held by both networks. In 2016 NVBR together with Estonian Archipelago Biosphere Reserve and Blekinge Archipelago Biosphere Reserve had multiple meetings with aim to develop projects. One project idea was focussed on tourism and branding within Estonian and Latvian Biospheres Reserves. NVBR as well in 2016 attended Nordic cooperation Project – Conference “Community implementing Biosphere Program”. In 2018-2019 the NGO “North Vidzeme Biosphere Reserve Support Association” cooperating with West – Estonian Archipelago Biosphere Reserve and Blekinge Archipelago Biosphere Reserve carried out a NORDPLUS programme-funded project “Project Adult Education in Biosphere Reserves - Nordic Learning Network” that provided an opportunity to meet and visit Biosphere Reserves in Sweden and Estonia. The aim of the project was to establish permanent contacts and to create a new network among educational and scientific institutions in BRs around Baltic Sea.

The NVBR is also part of the Biosphere for Baltic" thematic network, which includes nine biosphere reserves in seven countries around the Baltic Sea. The project aims to gather and disseminate experiences from biosphere reserves in the Baltic Sea region and to create opportunities for exchange between biosphere reserves and organizations with a Baltic Sea focus. The project also aims to make visible the role of biosphere reserves in contributing to the Agenda 2030 and to communicate good examples that contribute to the global goals.

Since 2019 Biosphere Reserve has been an official member of World Network of Islands and Coastal Biospheres Reserves. In 2017 NVBR was represented in 7th Meeting of the WNICBR in Jeju Island (Korea) where the NVBR representer gave a presentation about the Biosphere Reserve. NVBR coordinator also participated in both virtual annual meetings in 2020 and 2021. Besides attending meetings, NVBR coordinator prepared information about good practice examples or current affairs in NVBR for the WNICBR newsletter twice a year.

### **6.6.2 What are the current and expected benefits of international cooperation for the biosphere reserve?**

The current and expected benefits is that NVBR gains insight into what other biospheres reserves are working on and how they do it. Also, biospheres reserves between them share understanding of biosphere challenges and successes. Through the study tours, representatives from the NVBR and other stakeholders from the biosphere reserve have seen concrete examples of local cooperation, sustainable tourism/ development and solutions that have inspired and provided ideas for the development in our NVBR.

### **6.6.3 How do you intend to contribute to the World Network of Biosphere Reserves in the future and to the Regional and Thematic Networks?**

The NVBR will continue to be an active member of the Biosphere Reserves Networks to which it belongs, and we will continue to participate in EuroMab, NordMAB as well as Biosphere for Baltic and World Network of Islands and Coastal Biospheres Reserves meetings. Furthermore, we would like to share our good examples and experiences from our work. We will continue to ensure NVBR participation in both ongoing initiatives and new actions, particularly in tourism and education area with the aim to promote sustainable development.

### **6.7 What are the main factors that influenced (positively or negatively) the success of activities contributing to the logistic support function? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be favored as being most effective?**

The establishment of the UNESCO Chair Biosphere and Man in ViA in 2019 has had a positive effect on strengthening the logistical support function. The establishment of the Chair has strengthened targeted research in the territory of the NVBR, as well as research on the development of the NVBR in general. A successful dialogue has been established between the UNESCO Chair and the NVBR coordinator in planning activities and works.

The cuts of financial resources for the public sector, incl. the NCA during the economic crises have had a negative influence on the NVBR management (particularly on the development function).

### **6.8 Other comments/observations from a biosphere reserve perspective.**

There are not additional comments.

## **7. GOVERNANCE, BIOSPHERE RESERVE MANAGEMENT AND COORDINATION:**

**[Biosphere reserve coordination/management coordinators/managers have to work within extensive overlays of government bodies, business enterprises, and a “civil society” mix of non-governmental organizations and community groups. These collectively constitute the structures of governance for the area of the biosphere reserve. Success in carrying out the functions of a biosphere reserve can be crucially dependent upon the collaborative arrangements that evolve with these organizations and actors. Key roles for those responsible for the biosphere reserve coordination/management are to learn about the governance system they must work within and to explore ways to enhance its collective capacities for fulfilling the functions of the biosphere reserve.]**

### **7.1 What are the technical and logistical resources for the coordination of the biosphere reserve?**

See 2.2.7.

The NCA is the main body responsible for the NVBR governance and coordination. There is a coordinator position at Vidzeme Regional Administration of the NCA and 2.5 inspectors, 2 nature experts. The senior specialist on state lands and property management takes care of tourism infrastructure and visitor counters in the whole of Vidzeme region including the NVBR area. Two office buildings are located in the town of Salacgrīva. There is a car park for both nature experts and inspectors, the NVBR coordinator has a workplace, a computer and paid telecommunication bills and transport costs. Also, special work clothing such as outdoor jackets etc. are provided to the NCA employees.

The data base Ozols includes the information on all protected areas in Latvia. The NCA has developed the app Dabas tūrisms which has more than 10 thousand downloads. The NCA has also developed the website “Meet in nature” <https://www.tiekamiesdaba.lv/>

The Communication Department provides communication for all the protected areas in Latvia and helps to create public releases, design of posters etc., as well as visual materials for communication with society and stakeholders about the activities in the NVBR. One of the employees has a working place in the Salacgrīva office.

The NCA design souvenirs as representative materials, for example, the annual calendar with nature photos etc.

The NVBR fits into the common bloodstream of the Nature Conservation Agency.

### **7.2 What is the overall framework for governance in the area of the biosphere reserve? Identify the main components and their contributions to the biosphere reserve.**

See Chapter 1.5.1.

Included in the NCA Vidzeme Administration, which manages the territory of the NVBR, there is a coordinator dedicated to the NVBR.

The Law of the North Vidzeme Biosphere Reserve stipulates the establishment of the NVBR Consultative Board with the aim of balancing the interests of nature protection and economic activity. The law defines the representative organizations. The Minister of Environment and Regional Development of Latvia approves the members of the Consultative Board.

The Latvian National Commission for UNESCO is in the Consultative Board and is invited to the most important events, but there is no close joint cooperation in the planning of work. The basic principle is to receive information and requests. In 2022 the information about the NVBR on the UNESCO website was updated.

Municipalities perform their functions in accordance with the procedure established by law. The Salacgrīva Tourism Information Center of Limbažu County is ready for closer cooperation with the NVBR, because in this area there are both seaside and special sand meadows, and historically



there has been a very close connection with the NVBR, because the NVBR administration was physically located in Salacgrīva.

There have been discussions that the management function of the NVBR could move to the management of planning regions, but decisions have not followed. The issue of the NVBR management model is still on the agenda and very relevant. The main functions of the NCA are to take care of biodiversity, conservation, restoration and development of nature values and to promote nature awareness and communication with society on nature issues. But the mandate of the biosphere reserve is broader.

Municipalities perform their functions in accordance with the procedure established by the law. The Salacgrīva Tourism Information Centre in Limbaži Municipality is ready for closer cooperation with the NVBR, because both seaside and special sand meadows are located in this area, and historically there has been a very close connection with the NVBR, because the NVBR administration was physically located in the town of Salacgrīva.

### **7.3 Describe social impact assessments or similar tools and guidelines used to support indigenous and local rights and cultural initiatives (e.g. CBD Akwé:Kon guidelines, Free, Prior, and Informed Consent Programme/policy, access and benefit sharing institutional arrangements, etc.).**

The legislation determines the activities when the public hearing process is mandatory in Latvia. The same rules apply to the NVBR. One of the most active planning during this review period was the construction of the new railway route (Railbaltica).

During this period, the coastal long-distance hiking route Jūrtaka (Coastal hiking) was developed and marked in nature. The locals were involved in the planning process, at least the tourism enterprises.

In 2023 the Days of the Livonian Heritage are taking place for the first time. Bird Awakening Day will take place in the spring, which invites us to return to our dead relatives to be together throughout the year. The Livonian Day will be held for the first time raising the Livonian flags in the towns of Salacgrīva, Svētciems, Limbaži. In November 2022, the Livonians of Vidzeme were included in the national list of intangible heritage.

On the whole, during this period much more attention has been paid to the observance of research ethics by conducting interviews and surveys with local residents and organizations.

### **7.4 What (if any) are the main conflicts relating to the biosphere reserve and what solutions have been implemented?**

Overall, there are no conflict situations.

The title “reserve” raises issues as people often interpret it as a no-go area.

In order to address this, new explanatory posters will be developed in 2023 on the difference between a reserve and a biosphere reserve. This problem has also been discussed in international forums, there are attempts in some countries to use such terms as biosphere ranges in Lithuania and biosphere territories in Germany.

#### **7.4.1 Describe the main conflicts regarding access to, or the use of, resources in the area and the relevant timeframe. If the biosphere reserve has contributed to preventing or resolving some of these conflicts, explain what has been resolved or prevented, and how this was achieved for each zone?**

Overall, there are no conflict situations.

The title “reserve” raises issues as people often interpret it as a no-go area.

In order to address this, new explanatory posters will be developed in 2023 on the difference between a reserve and a biosphere reserve. This problem has also been discussed in international forums, there are attempts in some countries to use such terms as biosphere ranges in Lithuania and biosphere territories in Germany.

#### **7.4.2 Describe any conflicts in competence among the different administrative authorities involved in the management of the area comprising the biosphere reserve.**

There are no explicit conflicts between public administration institutions. For example, the State Environmental Service (fish inspectors) is physically located and operates in the same building in Salacgrīva as the staff of the NCA.

In some cases, municipalities are sometimes unresponsive or slow in communication, with weak feedback. Before the administrative-territorial reform, there were 11 municipalities - now there are 3. After the reform, if one municipality says no or refuses a cooperation offer/event, then it is a large part of the NVBR territory. There is a very good cooperation with Zilaiskalns in Valmiera Municipality, Kārķi and Ērgemes Parishes in Valka Municipality.

The NVBR coordinator has good cooperation with ViA, Salacgrīva Secondary School, Valmiera Green School, Svētciems Kindergarten, Limbaži Kindergarten, Salacgrīva Kindergarten, libraries in Svētciems, Salacgrīva, Vīlzēni, Korģene.

The head of the Nature Education Centre of the North Biosphere Reserve has excellent cooperation with kindergarten teachers and primary schools regarding the use of methodology. Of course, the COVID-19 pandemic had a significant impact on cooperation, but it is being renewed with new vigour.

#### **7.4.3 Explain the means used to resolve these conflicts, and their effectiveness. Describe its composition and functioning, resolution on a case-by-case basis. Are there local mediators; if so, are they approved by the biosphere reserve or by another authority?**

There are no major conflicts that require mediators.

We are friendly and resolve issues so as not to end up in heated conflicts. The key is a timely and direct communication with the parties involved.

#### **7.5 Updated information about the representation and consultation of local communities and their participation in the life of the biosphere reserve:**

##### **7.5.1 Describe how local people (including women and indigenous people) are represented in the planning and management of the biosphere reserve (e.g., assembly of representatives, consultation of associations, women's groups).**

The NGOs that involve local people are represented in the NVBR Consultative Board. As well as that, the State Forest Service has local offices. The NCA has cooperation with rural partnerships, and via a rural partnership the NCA has implemented the international territorial project "Implementation of sustainable tourism development principles in national park/protected area regions" supported by the LEADER programme.

See part 2.4.3. and 2.4.4.

##### **7.5.2 What form does this representation take: companies, associations, environmental associations, trade unions (list the various groups)?**

The representation structure is outlined in Sections 1.5.1. and 7.2.

There are representatives from such sectors as education (incl. higher education), forestry, agriculture, culture and local municipalities, NGOs.

##### **7.5.3 Indicate whether there are procedures for integrating the representative body of local communities (e.g., financial, election of representatives, traditional authorities).**

The law on the North Vidzeme Biosphere Reserve determines that representatives from all the local municipalities and from the three non-governmental organisations are involved in the Consultative Board of the NVBR. Each institution nominates the representative to work in the Consultative Board. The Minister for Environmental Protection and Regional Development approves the members of the Consultative Board.

#### **7.5.4 How long-lived is the consultation mechanism (e.g., permanent assembly, consultation on specific projects)?**

The Consultative Board was established in 2009. See Section 7.5.3.

The existing legislation sets out the procedure of public hearing for investment projects, and also determines if it is necessary to conduct an environment impact assessment. During the public hearing, everyone has their right to speak out.

#### **7.5.5 What is the impact of this consultation on the decision-making process (decisional, consultative or merely to inform the population)?**

The information exchange with stakeholders at the Annual Meetings of the Consultative Board primarily is aimed at informing stakeholders about the on-going and planned activities.

Public hearing meetings have more influence on decision-making process, they can stop some projects and ideas.

The NCA provides information and nature education for different target groups.

#### **7.5.6 At which step in the existence of a biosphere reserve is the population involved: creation of the biosphere reserve, drawing up of the management plan, implementation of the plan, day to day management of the biosphere reserve? Give some practical examples.**

The NVBR does not have a single management plan. Each municipality has development programmes and strategies, nature reserves have nature protection plans. The population is involved in creation of these policy planning documents.

For example, during the development of the nature protection plan for the Nature Reserve Vidzeme Rocky Seashore, several meetings were held in which landowners and local residents participated. The opinions of the public were considered and evaluated, and all the submitted questions were answered in the plan.

During the LIFE REEF project, a number of discussion on sea conservation were held. Local residents are involved in practical activities, for example, the Reed Festival started in the Seda Marsh, then in the Randu Meadows, now it has moved outside the NVBR. In this festival, local teams participated. Spring clean-ups are also organized, for example, to preserve the habitat of the sand frog.

### **7.6 Update on management and coordination structure:**

#### **7.6.1 Describe any changes regarding administrative authorities that have competence for each zone of the biosphere reserve (core area(s), buffer zone(s) and transition area(s))? If there are any changes since the nomination form/last periodic review report, please submit the original endorsements for each area.**

In the NVBR, the zones and management has not changed since the previous period.

The NVBR plans to achieve the biodiversity goals, and there will be additional stricter protected areas within the NVBR, and then the zones might be changed, but this might happen in the next period.

#### **7.6.2 Update information about the manager(s)/coordinator(s) of the biosphere reserve including designation procedures.**

The position of the coordinator of the NVBR was created by the Nature Conservation Agency. The designation process is publicly open. During this period, 3 coordinators have changed (due to the change of residence, maternity leave).

**7.6.3 Are there any changes with regard to the coordination structure of the biosphere reserve? (if yes, describe in details its functioning, composition and the relative proportion of each group in this structure, its role and competence.). Is this coordination structure autonomous or is it under the authority of local or central government, or of the manager of the biosphere reserve?).**

There are no changes in the coordination structure of the NVBR. The NVBR coordination is under the authority of the NCA, as it was in the previous period. Nevertheless, the new position of a coordinator for the NVBR has been established. The position was created on the basis of the UNESCO recommendations following the previous report.

**7.6.4 How has the management/coordination been adapted to the local situation?**

After the amalgamation of local municipalities in Latvia in 2021, there are now three local municipalities which means a fewer number of directly involved stakeholders. The main advantage from this process is unified rules and processes in each municipality. In 2023 regular meetings with local municipalities are going to be resumed (during COVID-19 it was stopped).

**7.6.5 Was the effectiveness of the management/coordination evaluated? If yes, was it according to a procedure?**

The NCA conducts an annual internal employee evaluation, for example, the employee's internal and external communication, cooperation with municipalities and foreign cooperation partners is evaluated. The main tasks include ensuring the implementation of the functions of the NVBR concept in accordance with the Management Strategy and the NVBR Action Plan, and developing cooperation with other biosphere reserves.

The NCA reports annually to the Consultative Board, its members express assessments and proposals.

**7.7 Update on the management/cooperation plan/policy:**

**7.7.1 Are there any changes with regard to the management/cooperation plan/policy and the stakeholders involved? If yes, provide detailed information on process for involvement of stakeholders, adoption and revision of the plan.**

It has not changed, the number of municipalities has decreased.

**7.7.2 Describe contents of the management/cooperation plan (provide some examples of measures and guidelines). Is the plan binding? Is it based on consensus?**

The draft action plan was created by the NVBR coordinator. It was sent out electronically to all the Consultative Board members who supplemented the sections of the plan. The action plan was adopted on 7 February 2019 at the meeting of the Consultative Board.

The aim of the territory of the North Vidzeme Biosphere Reserve (hereinafter – the NVBR) is to act as a sustainable development promotion and innovation area in the network of the UNESCO Programme "Man and Biosphere". The NVBR Action Plan 2019-2025 (hereinafter - the Action Plan) has been developed based on the strategy 2015-2025 of the UNESCO programme "Man and the Biosphere" and the Lima Action Plan, which is binding to all biosphere reserves until 2025. The implementation of the action plan requires mutual cooperation of national and international institutions, non-governmental organizations, entrepreneurs, educational institutions and local governments.

In the action plan, 5 main areas of action and the responsible institutions for the implementation of the action were proposed:

- 1) Sustainable management and use of natural resources
- 2) Sustainable development of local products and services
- 3) Local cultural-historical heritage preserved and promoted
- 4) Involvement of the local community in the development of the biosphere reserve
- 5) Governance of the biosphere reserve and cooperation between the stakeholders

The largest sections of the plan are devoted to the sustainable management and use of natural resources, as well as to the promotion of cooperation between the parties involved.

For example, in the direction of action on the sustainable management and use of natural resources, the following sub-actions were determined: preservation of biological diversity and ensuring sustainable use (which in turn included actions aimed at increasing support for the implementation of measures promoting the preservation of biological diversity, for example, organizing training and informational events, preparation and distribution of informative materials), climate change adaptation measures, sustainable management of inland waters and wetlands, promotion of sustainable forestry, promotion of cooperation between territories included in the cross-border Ramsar Convention.

**7.7.3 Describe the role of the authorities in charge of the implementation of the plan. Describe institutional changes since the nomination form/last periodic review report. Please provide evidence of the role of these authorities.**

In the Action Plan, each activity has a responsible institution, the NCA is the coordinator.

**7.7.4 Indicate how the management plan addresses the objectives of the biosphere reserve.**

The 1st objective of the action plan – **sustainable management and use of natural resources**, and the 3rd objective – **local cultural-historical heritage preserved and promoted** with its sub-actions address the goal set for biosphere reserves - conservation of biodiversity and cultural diversity.

The plan includes the following sub-actions in the context of this goal:

- a) preservation of biological diversity and ensuring sustainable use (which, in turn, included actions aimed at increasing support for the implementation of measures promoting the preservation of biological diversity, for example, organizing training and informational events, preparing and distributing informative materials);
- b) climate change adaptation measures (public education and involvement in climate change adaptation measures. Organization of information and educational events for various target groups to promote public understanding of climate change issues and interest in participating in adaptation measures);
- c) sustainable management of inland waters and wetlands (measures to improve the ecological condition of the Salaca River and Lake Burtnieks, development of the project for the further development and management of the degraded Seda marsh);
- d) promotion of sustainable forestry;
- e) promotion of cooperation between territories included in the cross-border Ramsar Convention.
- f) identification, management and popularization of cultural and historical heritage. Identification and management of old parks, alleys and plantations.

The goal of economic development that is socio-culturally and environmentally sustainable is addressed by the 2nd objective of the action plan – **sustainable development of local products and services** with the defined actions: the promotion of small and medium-sized businesses, including support for the promotion of organic agriculture, promotion of local food products, nature-friendly tourism development.

The biosphere reserve goal – logistic support, underpinning development through research, monitoring, education and training is addressed by the 4th objective of the action plan –

**involvement of the local community in the development of the biosphere reserve**, and the 5th objective – **governance of the biosphere reserve and cooperation of the involved parties**. The actions included in the plan envisage the promotion of cooperation with municipalities, nature and environmental institutions, administration of the planning region, schools, non-governmental organizations, universities and research institutes. International cooperation is also emphasized - collaboration with the UNESCO International Office and the regional networks of biosphere reserves - European Man and Biosphere Network (EuroMAB), Nordic Man and Biosphere Network (NordMAB), World Network of Island and Coastal Biosphere Reserves. The plan also includes updating and promoting the public monitoring programme, maintaining the Junior rangers' movement, and developing the Nature Centre "Ziemeļvidzeme".

### **7.7.5 What are the progresses with regard to the guidelines of the management/cooperation plan/policy?**

The following actions were carried out in the implementation of the NVBR Action Plan regarding the 1st objective – **sustainable management and use of natural resources**:

1) Support in the implementation of measures promoting the preservation of biological diversity: In 2020, the restoration of the habitat of the sand toad in the "Karateri" Nature Reserve: <https://lv-pdf.panda.org/?230850/Karateru-karat--paa-talka-liegum-Karateri-paldzs-retajam-smilu-krupim>

In 2020, the clean-up of the River Kurlīņupīte: <https://www.lsm.lv/raksts/dzive--stils/vide-undzivnieki/koku-tirisanas-talka-kurlinupe-atkal-atgriez-dzivibu.a368998/>

In 2022, the mobile herd in Randu meadows: <https://grasslife.lv/mobilais-ganampulks-ierodas-noganit-randu-plavas/>

2) The nature protection plans have been updated: in 2018 for the Nature Reserve "Ziemeku purvi", in 2019 for the Nature Reserve "Augstroze", the Nature Reserve "Dūņezers", in 2020 for the Nature Reserve "Vidzeme Rocky Seashore" <https://www.daba.gov.lv/lv/dabas-aizsardzibas-plani>

3) In the promotion of sustainable forestry, the annual Forest Days events in Kārki of Valka Municipality can be mentioned. As well as that, the activities of JSC Latvia's State Forests (monitoring of natural values, innovative, more nature-friendly solutions for the construction of forest roads)

<https://www.lvm.lv/jaunumi/6004-meza-cela-buvnieciba-lvm-izmanto-inovativus-risinajumus>

The implemented actions for the achievement of the 2nd objective – **sustainable development of local products and services**:

In cooperation with LEADER local action groups, support has been provided to small-scale farmers and organic farms in the NVBR territory. There are 3 associations operating in the territory of the NVBR which organize the receipt of financial support for rural entrepreneurs: the Association "Jūrkante", the Association "Vidzeme Rural Partnership Brasla" and the Association "From Salaca to Rūja". For example, in Salacgrīva Parish of Limbaži Municipality entrepreneurs are developing a home ice cream factory (Individual merchant "Ledus oga") and a tea factory (Farm "Dunduri) with the support of LEADER. In Mazsalaca Parish of Valmiera Municipality, the creation of a hemp seed product production plant (Ltd. Spelta), in Valmiera Municipality Jeri Parish – the accessibility and use of social life of Oleri Manor (Association Oleri Manor).

The implemented actions for the achievement of the 3rd objective – **local cultural-historical heritage preserved and promoted**:

In cooperation with municipal cultural administrations and organizations involved in tourism, the Fishermen's Festival is held on the coast every year (on the first weekend of July), which popularizes fishing traditions. In October, the Lamprey Festival takes place in Salacgrīva where

the traditions of catching lampreys in Salaca and Svētupe tachs are demonstrated. Several associations, with the financial support of the LEADER or other projects, implement the preservation of the Livonian heritage (the Livonian Museum "Pivāind", the Folk Applied Art Studio "Staicele" in the town of Staicele. Year 2023 has been declared the year of the Livonian heritage; Kuiķule (Liv) Sacrificial Caves have been declared the archaeological object of the year, for which a 3D model has been created, which will preserve the existing appearance of this object for future generations:

<https://www.youtube.com/watch?v=XkLOkddUA5I&t=104s>

<https://www.arheologubiedriba.lv/blog/2023/1/9/latvijas-arheoloiskais-pieminekis-2023-gad-svtupes-lbieu-upuralas>

In Jeri Parish of Valmiera Municipality, the Association Oleri Manor implements the project "Accessibility and use of the social life of the Oleri Manor". Improvement works are carried out and public concerts are held in the manor in the framework of the project. <http://www.olerumuiza.lv/en>. The Association "Puikules muiža" is also active in Brīvzemnieki Parish of Limbaži Municipality.

The implemented actions for the achievement of the 4th objective – **involvement of the local community in the development of the biosphere reserve:**

The following events can be considered significant in the education of the public: the clean-up of natural objects, and the annual NVBR Travelers Days, Reed Sculpture Festival in Randu Meadows, Bird Days.

Vidzeme Rocky Seashore was chosen as Latvia's geo-site of the year 2019, the Association "Ziemeļvidzeme Geopark" organized events there.

<https://www.lsm.lv/raksts/dzive--stils/vide-un-dzīvnieki/geovieta-2019-vidzemes-jurnalas-stavkrasti.a306086/>

Youth education activities carried out by the Nature Education Centre (NEC) "Ziemeļvidzeme" (for example, in 2019 116 lessons were conducted (number of participants 2969), in 2020 – 69 lessons (1133 participants), in 2021 – 47 (884 participants). The decrease in the number of participants can be explained by the restrictions of the COVID-19 pandemic.

- ✓ Already in 2019, a **curriculum for teachers** (primary school - secondary school) was developed at the NEC "Ziemeļvidzeme" with the aim of training teachers so that they could include elements of nature education in every subject.
- ✓ In 2020, the first **remote lessons** were developed and created for both student and teacher audiences.
- ✓ In 2021, **the methodological material on nature-friendly behaviour** "Walking in nature. Take away what you brought" was developed.
- ✓ In 2022, **the methodological materials on the coast and the river were developed for all age groups.**
- ✓ 30 young people from Aloja, Salacgrīva, Vilķene, Strenči have got involved in the Junior Rangers' Movement.
- ✓ In 2021, the camp for Junior Rangers from all over Latvia was held in the territory of the NVBR

<https://www.daba.gov.lv/lv/jaunums/jaunie-reindzeri-nometne-ziemelvidzemes-biosferas-rezervata-iepazist-piekraustes-un-juras-dabas-bagatibas>

Cooperation with research institutions:

- ✓ Vidzeme University of Applied Sciences - publication of a monthly newsletter on topical issues, monitoring of sustainable development indicators.
- ✓ Researchers from the Institute of Biology of the Faculty of Geography and Earth Sciences of the University of Latvia are conducting an ecological assessment of the lagoons.
- ✓ Scientific Institute "BIOR" - counting of salmon and smolts in the River Salaca, an automatic fish recorder installed - counting of migrated salmon.

- ✓ LIFE REEF – the project initiates the creation of unified nature protection plans for specially protected marine and Natura 2000 areas.

In the field of international cooperation:

- ✓ World Network of Islands and Coastal Biosphere Reserves
- ✓ West Estonian Archipelago Biosphere Reserve
- ✓ Biosphere for Baltics - Biosfärprogrammet Sverige
- ✓ Conducting an online lecture for students of Kanazawa University (Japan).
- ✓ Admission of Master's students from Eberswalde University

The implemented actions for the achievement of the 5th objective – **governance of the biosphere reserve and cooperation of the involved parties:**

Examples of cooperation between many involved parties were mentioned in the description of the 4th objective.

However, it should be noted that in the area of governance in the NVBR territory, a different management model should be considered, because the existing one with one coordinator cannot fully ensure the fulfilment and achievement of all the goals mentioned in the action plan.

The Consultative Board meets regularly at least once or twice a year, however, its activity can be assessed as passive. Greater involvement of the board members in promoting the ideas of the biosphere reserve would be desirable.

#### **7.7.6 Were there any factors and/or changes that impeded or helped with the implementation of the management/coordination plan/policy? (Reluctance of local people, conflicts between different levels of decision-making).**

There are no direct conflicts in the territory of the NVBR with regard to the mandate of the NVBR. In everyday work, the addressed municipalities, researchers and entrepreneurs are responsive.

On a daily basis, neither residents, nor entrepreneurs advertise or point out that they live and operate in a biosphere reserve. This was also confirmed by the population survey conducted in 2018. The reason for this is that the NVBR does not have a unified management and development plan, people more distinctly associate their affiliation with the municipality and not the name of the NVBR.

#### **7.7.7 If applicable, how is the biosphere integrated in regional/national strategies? Vice versa, how are the local/municipal plans integrated in the planning of the biosphere reserve?**

**(Please provide detailed information if there are any changes since the nomination form/last periodic review report).**

The engagement of representatives from the local municipalities and the Vidzeme Planning Region and Riga Planning Region (until 2021) in the NVBR Consultative Board and the attendance at the annual meetings enable the integration of local and regional development strategies into the NVBR Development Plan. The rural partnerships “Brasla”, “Jūrkante” and “Ziemeļgauja” are leading several development projects funded by the EU LEADER fund as part of the Rural Development Programme.

In 2022 and 2023, new development strategies and sectorial strategies, for example, Tourism Development strategies for Limbaži and Valmiera municipalities, have been developed for the local municipalities by involving students and academics from Vidzeme University of Applied Sciences. The Vidzeme Planning Region is elaborating the investment strategy for the region. There will be emphases on such fields as:

- ✓ woodworking, including furniture production;
- ✓ food and beverage production;



- ✓ forestry;
- ✓ agriculture, including cattle breeding;
- ✓ energy production from renewable resources;
- ✓ health rehabilitation and care;
- ✓ the blue bioeconomy, including fisheries.

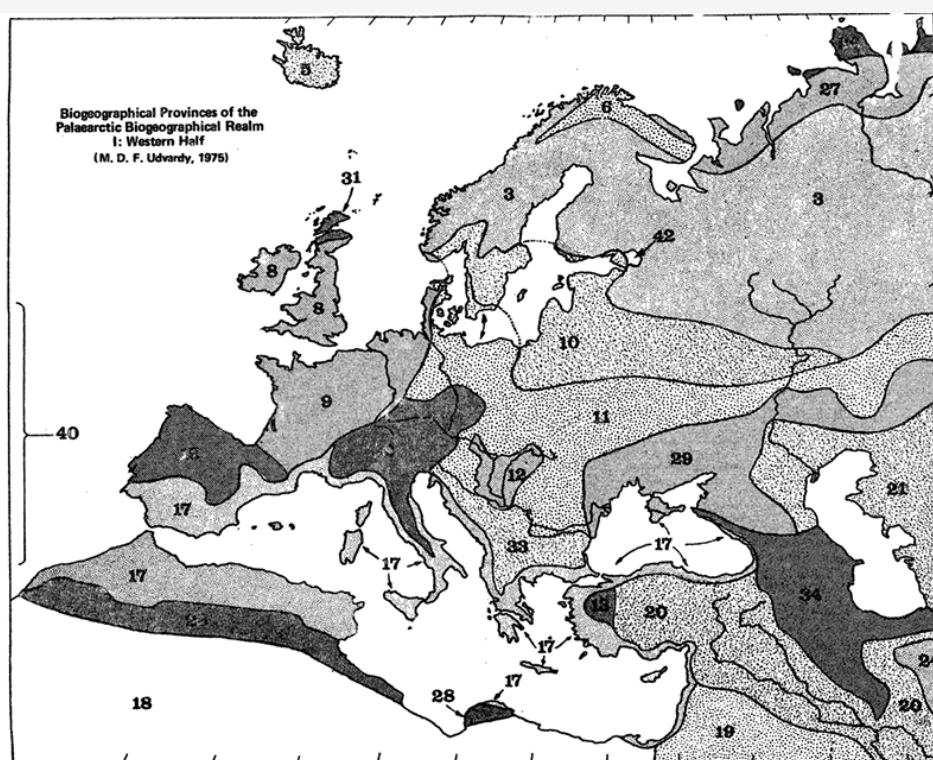
## 8. CRITERIA AND PROGRESS MADE:

[Conclude by highlighting the major changes, achievements, and progress made in your biosphere reserve since nomination or the last periodic review. How does your biosphere reserve fulfill the criteria. Develop justification for the site to be a biosphere reserve and rationale for the zonation. What is lacking, and how could it be improved? What can your biosphere reserve share with others on how to implement sustainable development into practice?]

**Brief justification of the way in which the biosphere reserve fulfills each criteria of article 4 of the Statutory Framework of the World Network of Biosphere Reserves:**

1. "Encompass a mosaic of ecological systems representative of major biogeographic region(s), including a gradation of human interventions".

(The term "major biogeographic region" is not strictly defined but it would be useful to refer to the Udvardy classification system ([http://www.unep-wcmc.org/udvardys-biogeographical-provinces-1975\\_745.html](http://www.unep-wcmc.org/udvardys-biogeographical-provinces-1975_745.html))).



The NVBR represents Palearctic Realm with the Boreal floristic system and the Western-Palearctic faunistic system as an outstanding example of Boreonemoral province (Udvardy, 1975) or Baltic Lowland (Dasmann, 1974). With the Salaca River Basin as a spin bone, a diverse landscape formed after the last North European Glacier at the Baltic Sea, and rich habitats with typical flora and fauna, the NVBR fully encompasses a mosaic of the ecological system representing the mentioned major biogeographic region, including a gradation of human

intervention. The fourth most productive wild salmon (*Salmo salar*) spawning river in the whole Baltic Sea catchment still maintaining its potential.

The NVBR is needed as a typical example from a geographical regional subdivision of the surface of the earth that contains floristic and faunistic elements important for conservation. No radical changes to the land surface and landscape have occurred in the past ten years to significantly affect these values. There are, of course, a number of external and internal risks that prevent the agreed objectives of the "Man and the Biosphere" programme from being considered outstandingly harmonised and fully achieved. The marine coastal area has more human intervention and particularly during the summer season. The NVBR is an important element in the World Network of Biosphere Reserves that covers all major representative natural and semi-natural ecosystems.

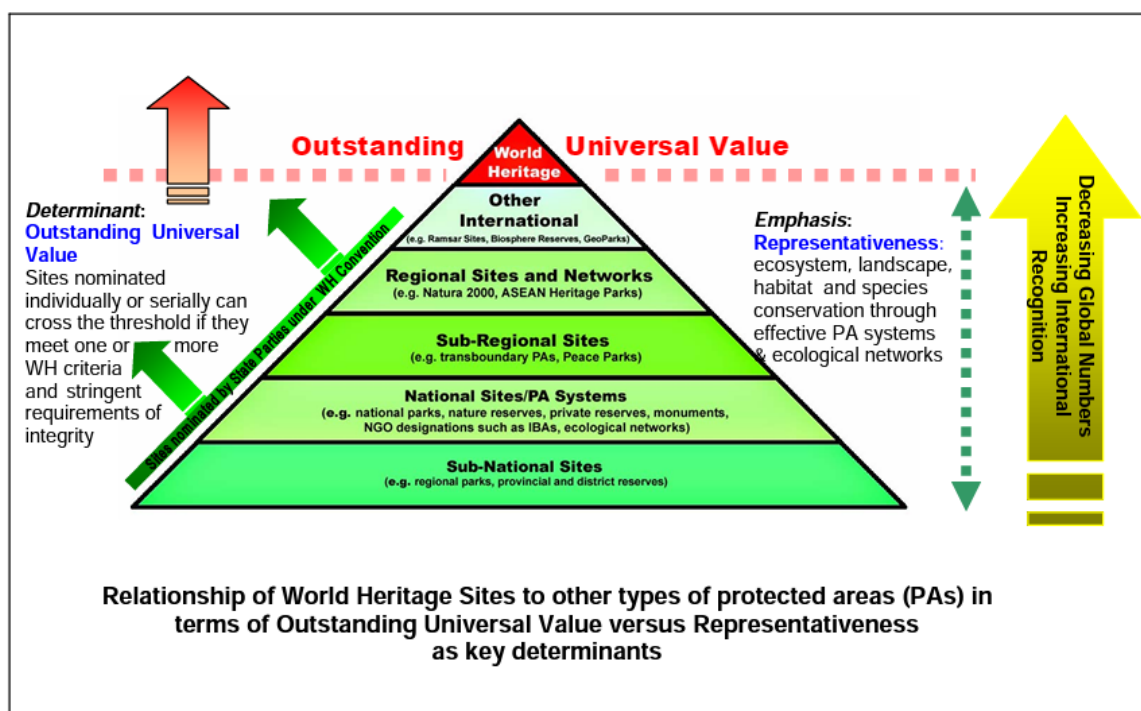
## 2. "Be of Significance for biological diversity conservation".

The NVBR is the largest protected area in Latvia with the widest representation and integrity of ecosystems, landscapes, habitats and species and includes several Natura 2000 sites and areas of national importance, and is part of a network of international protected areas of equivalent importance. Its outstanding value is not entirely unique to qualify as an undisputed World Heritage Site (as from Chape, 2004, see Figure below), but complex measures implemented for nature conservation and sustainable regional development are there to preserve and enhance its value in the long term. Ecosystem integrity through skilfully implemented nature conservation measures allows for a more holistic approach to the interconnected relationships between landscape, habitats and species diversity, and a dialogue on societal needs towards sustainable coexistence.

The marine coastal areas of the NVBR are an important way of bird migration, as well as that, 2 protected marine nature areas are found here (Ainaži – Salacgrīva and Vitrupe – Tūja). Still, the River Salaca is the fourth biggest Wild Atlantic salmon *Salmo salar* spawning river in the whole Baltic Sea.

Burtņieku drumlin field is the largest drumlin in Latvia and Eastern Europe, formed as a result of melting glaciers. Kõņi hill absolute height is 92.6m, relative 35 m, length 9.6km, width 2.4.km. The cognitive stone trail has been built in the area. There is an exhibition with the Baltic Sea model.

ANNEX 1: Schematic representation of the relationship of World Heritage Sites to other types of protected areas (Chape 2004)



However, overall, the nature conservation efforts of the NVBR could not be seen as completely different from the critical report (Data source: Report to the European Commission on the conservation status of habitats and species in Latvia. Assessment for the period 2013-2018<sup>1</sup>) on the overall state of nature conservation in the country, which Latvia submitted to the European Union, assessing, for example, the provision of protection for forests and semi-natural grasslands. The proportion of forest habitats' conservation rated as "favourable" (%) according to Latvia's overall Report to the European Commission on the conservation status of habitats and species in Latvia was rated rather critically: favourable (0 %), insufficient, poor (50 %), unfavourable (40 %), unknown (10 %). The grassland habitats were assessed as favourable (0 %), insufficient, poor (10 %), unfavourable (90 %).

**3. “Provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale”.  
(Including examples or learning experiences from putting sustainable development into practice).**

The NVBR as a whole provides an opportunity to explore and demonstrate sustainable development approaches on a regional scale, including examples or lessons learned from implementing sustainable development in practice. There are many good examples, but they are not fully representative of the whole area or all areas of the economy. However, there are complex efforts to achieve sustainable development in places (for example, with the management of fish resources in Lake Burtnieks, which serves as a national example), but the lack of financial resources or coordination capacity to achieve this fully is also evident.

The regional-scope North Vidzeme Biosphere Reserve Nature Centre is operating in the NVBR, Salacgrīva. The specialisations of the centre are:

- ✓ Zoning of the NVBR, opportunities for economic activities, tasks and functions of the NVBR
- ✓ Flora and fauna in the Baltic Sea. Dunes and coastal area.
- ✓ Salmons, rivers of salmon, lampreys
- ✓ Climate change, adaptation and smart housekeeping to mitigate them.

The documentation of Rock inscriptions and petroglyphs with 3D technologies: laser scanning and photogrammetry – a case study of sandstone outcrops and caves in the biosphere reserve: Skaņais kalns (Resounding Hill) and the Livs` Sacrificial Caves was done by a group of Vidzeme University of Applied Sciences researchers (2019-2020).

**4. “Have an appropriate size to serve the three functions of biosphere reserves”.**

The North Vidzeme Biosphere Reserve involves local communities and, where possible, all the stakeholders in its planning and management. The territory of the NVBR covers about 7.4% of the territory of Latvia, and the size of the area is fully adequate to fulfil the three main functions: (1) conservation of biodiversity and cultural diversity, (2) socio-culturally and ecologically sustainable economic development, (3) logistic support, underpinning development through research, monitoring, education and training. Demographic change, with a shrinking rural population and a more aging remaining population, is one of the main external national scale factors that continue to affect the quality of implementation of these functions.

**5. Appropriate zonation to serve the three functions**

There is an appropriate zonation to serve the three functions in the NVBR, including (1), buffer zones/landscape protection zones that includes special areas of conservation -nature reserves, including such core areas (Natura 2000) as the marshland, the Salaca river valley, and the Seashore of the Baltic Sea and surround or adjoin the core areas (category V according to the IUCN classification) and are used for activities compatible with sound ecological practices that

---

<sup>1</sup> Available at: <https://www.daba.gov.lv/lv/zinojumi-eiropas-komisijai>

can reinforce scientific research, monitoring, training and education, and (2) transition areas, where communities foster socio-culturally and ecologically sustainable economic and human activities.

The NVBR aims to achieve a balance in national and international terms in protecting natural diversity, promoting economic development, and preserving cultural values, as well as ensuring the flow of information in environmental research, monitoring, and environmental education, raising public awareness of environmental and nature protection and promoting the restoration of degraded ecosystems in the area.

The zoning has been incorporated into the long-term spatial development plans of the municipalities. Outside the Natura 2000 areas (where there are stricter regulations) there are no significant restrictions on economic activity or any specific regulation. The new initiative on nationally important landscape areas (without specific status yet) could result in some specific rules for large-scale industrial objects, e.g. wind power stations, etc.

**6. “Organizational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and the carrying out of the functions of a biosphere reserve”.**

Organizational arrangements are provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and carrying out of the functions of a biosphere reserve by the NVBR Consultative Board. The core function of the NCA is conservation and protection of nature values, biodiversity and nature education, but the mandate and functions of the biosphere reserve are broader.

However, it cannot be said that this dialogue is fully coherent and absolutely democratic. A disproportionate balance is created, for example, by the strategy of Latvia's State Forests as a state capital stock company, where economic interests dominate and areas outside strict nature reserve zones are not managed in a particularly different way than elsewhere in Latvia. Particular mention should be made of the Rural Development Programme LEADER, which has become an important instrument for strengthening the capacities of local communities and raising their voices, which will be reinforced in the coming years by the public participation budget initiative in municipalities. The initiative to establish a UNESCO Chair at Vidzeme University of Applied Sciences has resulted in targeted research in the area. Even better coordination, administrative capacity, a genuine desire of all stakeholders to develop a sustainable management approach in the region should be achieved in the future.

**7. Mechanisms for implementation:**

**a) Mechanisms to manage human use and activities**

**b) Management policy or plan**

**c) Authority or mechanism to implement this policy or plan**

**d) Programmes for research, monitoring, education and training**

People's use of the territory and their activities depend on the overall value system, education and upbringing, material conditions and other developments in the society. This is regulated more specifically by the national legislation, including the Act on the North Vidzeme Biosphere Reserve (in force since 1998) and the resulting "Individual Rules for the Protection and Use of the North Vidzeme Biosphere Reserve" (since 2011). The Law on Specially Protected Nature Areas (since 1993) plays an important role.

Subordinate to the National Development Plan, the Development Programme 2021-2027 of the Vidzeme Planning Region has been developed, together with the Environmental Report of the Strategic Environmental Impact Assessment (which covered the whole Vidzeme region, not only

the NVBR area). The long-term spatial plans and territorial planning of the local authorities have the most important influence on day-to-day development. The NVBR needs a new comprehensive action plan to implement the biodiversity strategy.

The North Vidzeme Biosphere Reserve Nature Centre is an important unit for educational work, but with a relatively low capacity to fulfil the functions of a coordinating administration (the coordinator of the NVBR works in the Centre since January 2013) and to be actively involved in municipal and community planning, and to contribute fully to the implementation of the objectives of the Biosphere Reserve in the society. The NCA, as the coordinating authority, is fully capable of carrying out its functions in the strict regime nature conservation areas, while the organisation of sustainable development in the buffer zone/landscape protection and transition zones/neutral zones lacks both political delegation and capacity.

While the amount of money spent on science and research remains low in terms of gross national product (GNP) comparisons for national research programmes, the number of different types of research needed for the NVBR has increased in the recent years (during the reporting period). Often, the research is uncoordinated between different organisations, or the NVBR is part of a wider study area. The eco-schools initiative, the establishment of the UNESCO Chair at Vidzeme University of Applied Sciences, and the significant increase in the number of non-governmental organisations in the Reserve, as the local community becomes more organised, are important for sustainable environmental education and development in general. Although some monitoring programmes are in place, some of which are voluntary or self-funded, there is a lack of comprehensive, unified monitoring of the NVBR.

**Does the biosphere reserve have cooperative activities with other biosphere reserves (exchanges of information and staff, joint programmes, etc.)?**

**At the national and regional level:**

There is only one biosphere reserve in Latvia, so it is not possible to cooperate at national or regional level with a similar organisation. However, as far as it is managed by the Nature Conservation Agency, there is a close cooperation within the organisation with nature conservation specialists from national parks, etc., including joint educational programmes, information exchange and staff exchange, and a significant partner for daily cooperation is the UNESCO chair on Biosphere and Man at ViA.

**Through twinning and/or transboundary biosphere reserves:**

There are some fragmentary (occasional) joint activities with the nearest one, the West Estonia Archipelago Biosphere Reserve, as well as some activities and interactions with specialists from other biosphere reserves.

**Within the World Network:**

The Research Assistant at the UNESCO Chair "Biosphere and Man" of Vidzeme University of Applied Sciences has become a laureate of the UNESCO Young Scientist Award for the "Man and the Biosphere" programme (2022). This award is given to young scientists conducting research in the field of biodiversity, and as part of her research, she interned at a biosphere reserve in Germany and attended related events in the USA and China.

There are several other activities related to global partnerships led by the NCA at the NVBR as Nord Mab Biosphere Reserve network and World Network of Island and Coastal Biosphere Reserves.

There is not much capacity to organise cooperation activities directly by the Reserve administration.

## **Obstacles encountered, measures to be taken and, if appropriate, assistance expected from the**

### **Secretariat:**

Meeting with the Latvian Government, Ministry of Environmental Protection and Regional Development and Ministry of Agriculture to discuss capacity issues in the NVBR administration and policy options for sustainable development of national forests.

### **Main objectives of the Biosphere Reserve:**

#### **Describe the main objectives of the biosphere reserve integrating the three functions and the sustainable development objectives for the coming years.**

At the 20th Anniversary Conference (2017) of the North Vidzeme Biosphere Reserve under the UNESCO Man and Biosphere Programme, the Head of the Education Sector of the Latvian National Commission for UNESCO stressed that by establishing the Biosphere Reserve the government had committed to providing resources for its management and development, and in this context it is not just about natural values alone. The development of the Biosphere Reserve is not fully possible without the involvement of the local community and the financial support from the government, the UNESCO representative said. In the context of the development of the area, it is also necessary to talk about the promotion of cultural heritage, the creation of a single tourist destination, and the use of the NVBR identity to promote business growth. This potential is currently underutilised, the experts concluded. The invited guest speakers from the Czech Republic, Estonia and Iceland on the administration of biosphere reserves concluded that the support provided to address economic, cultural and nature issues, as well as the promotion of a sense of belonging among local people are crucial for the successful management. The conference participants concluded that there is a need to work on interdisciplinary issues together with representatives of the cultural, educational and economic sectors, strengthening the governance of the NVBR and involving local authorities.

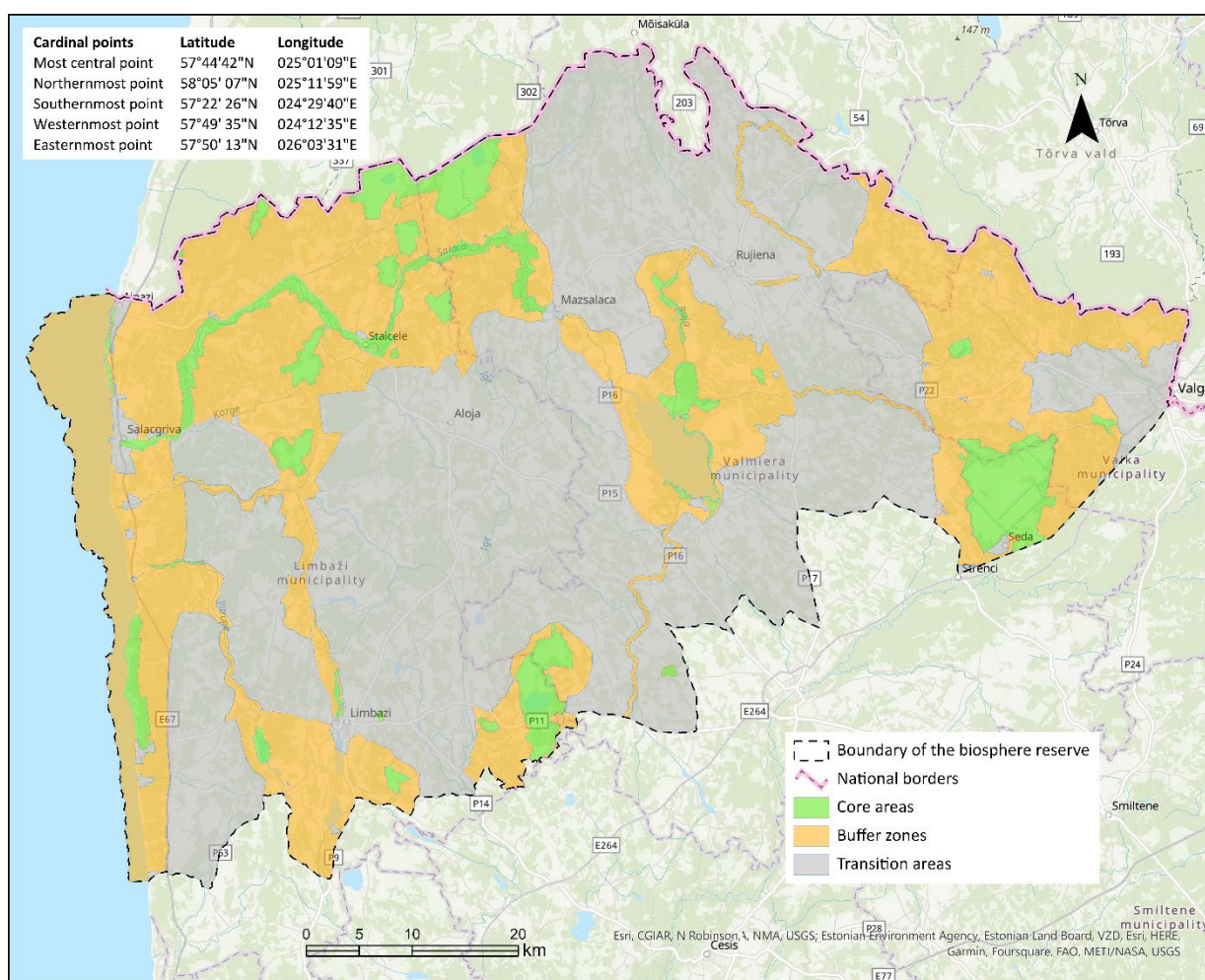
The administrative capacity of the NVBR needs to be strengthened to coordinate the activities of the different organisations involved more effectively, ensuring an interdisciplinary approach. The possibility of influencing functions by introducing individual grants at household or small enterprise level should be increased. A common understanding of sustainable development should be achieved also in sectors controlled and influenced by the state, as in the case of Latvia's State Forests. Sometimes what is written in planning documents at municipal or regional level is also in line with how a place should develop, but sometimes there is not enough political will, understanding and resources to make it a reality.

## 9. SUPPORTING DOCUMENTS

[List of the annexes submitted with periodic review report.]

### (1) Updated location and zonation map with coordinates

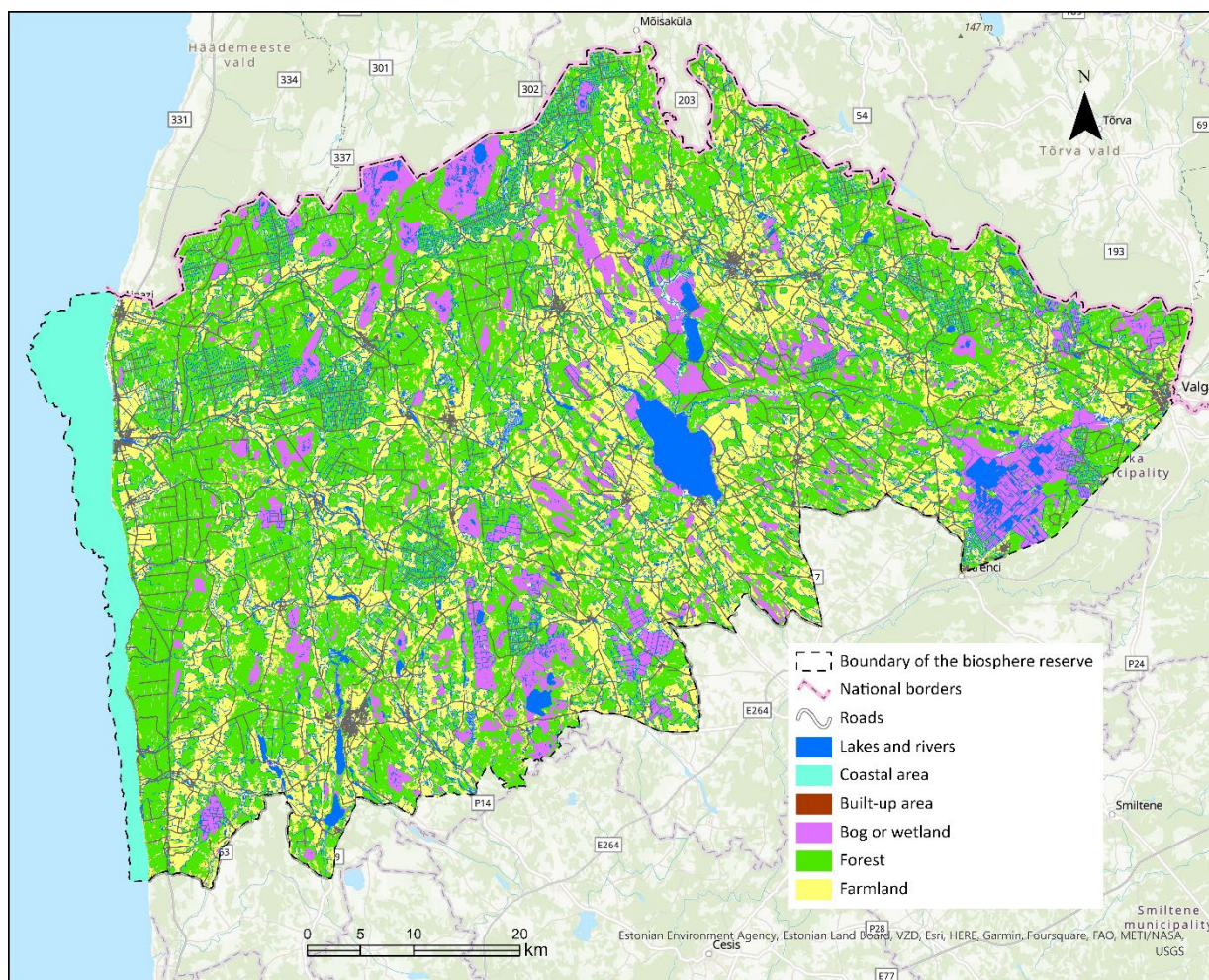
[Provide the biosphere reserve's standard geographical coordinates (all projected under WGS 84) . Provide a map on a topographic layer of the precise location and delimitation of the three zones of the biosphere reserve (Map(s) shall be provided in both paper and electronic copies). Shapefiles (also in WGS 84 projection system) used to produce the map must also be attached to the electronic copy of the form. If applicable, also provide a link to access this map on the internet (e.g. Google map, website...)].



<https://ozols.gov.lv/pub>

### (2) Updated vegetation map or land cover map

[A vegetation map or land cover map showing the principal habitats and land cover types of the biosphere reserve should be provided, if available.]



(3) Updated list of legal documents (if possible with English, French or Spanish synthesis of its contents and a translation of its most relevant provisions)

[If applicable update the principal legal documents since the nomination of the biosphere reserve and provide a copy of these documents.]

The list remains the same as last time.

(4) Updated list of land use and management/cooperation plans

[List existing land use and management/cooperation plans (with dates and reference numbers) for the administrative area(s) included within the biosphere reserve. Provide a copy of these documents. It is recommended to produce an English, French or Spanish synthesis of its contents and a translation of its most relevant provisions.]

(5) Updated species list (to be annexed)

[Provide a list of important species occurring within the proposed biosphere reserve, including common names, wherever possible.]

Nature Census project team is analysing the obtained data about species in Biosphere Reserve. But right now we can provide list of the coastal birds you can see at NVBR.

Anser anser	Greylag Goose
Anser albifrons	Greater White-fronted Goose
Anser fabalis fabalis	Taiga Bean Goose
Anser serrirostris	Tundra Bean Goose



<i>Branta bernicla</i>	Brant
<i>Branta leucopsis</i>	Barnacle Goose
<i>Branta canadensis</i>	Canada Goose
<i>Cygnus olor</i>	Mute Swan
<i>Cygnus columbianus</i>	Tundra Swan
<i>Cygnus cygnus</i>	Whooper Swan
<i>Tadorna tadorna</i>	Common Shelduck
<i>Spatula querquedula</i>	Garganey
<i>Spatula clypeata</i>	Nothern Shoveler
<i>Mareca strepera</i>	Gadwall
<i>Mareca penelope</i>	Eurasian Wigeon
<i>Anas platyrhynchos</i>	Mallard
<i>Anas acuta</i>	Nothern Pintail
<i>Anas crecca</i>	Winged Teal
<i>Aythya ferina</i>	Common Pochard
<i>Aythya fuligula</i>	Tufted Duck
<i>Aythya marila</i>	Greater Scaup
<i>Somateria mollissima</i>	Common Eider
<i>Melanitta fusca</i>	Velvet Scoter
<i>Melanitta nigra</i>	Common Scoter
<i>Clangula hyemalis</i>	Long - tailed Duck
<i>Bucephala clangula</i>	Goldeneye
<i>Mergellus albellus</i>	Smew
<i>Mergus merganser</i>	Common Merganser
<i>Mergus serrator</i>	Red -breasted Merganser
<i>Tadorna tadorna</i>	Common Shelduck
<i>Podiceps cristatus</i>	Great Crested Grebe
<i>Columba livia</i>	Feral Pigeon
<i>Columba oenas</i>	Stock Dove
<i>Columba palumbus</i>	Common Wood Pigeon
<i>Streptopelia turtur</i>	European Turtle Dove
<i>Cuculus canorus</i>	Common Cuckoo
<i>Caprimulgus europaeus</i>	Common Nightjar
<i>Apus apus</i>	Common Swift
<i>Crex crex</i>	Corn Crake
<i>Porzana porzana</i>	Spotted Crake
<i>Fulica atra</i>	Eurasian Coot
<i>Grus grus</i>	Common Crane
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher
<i>Pluvialis squatarola</i>	Black-bellied Plover
<i>Pluvialis apricaria</i>	European Golden plover
<i>Vanellus vanellus</i>	Nothern Lapwing
<i>Charadrius hiaticula</i>	Common Ringed Plove
<i>Charadrius dubius</i>	Little Ringed Plover
<i>Numenius phaeopus</i>	Whimbrel
<i>Numenius arquata</i>	Eurasian Curlew
<i>Arenaria interpres</i>	Ruddy Turnstone
<i>Calidris canutus</i>	Red Knot
<i>Calidris maritima</i>	Purple Sandpiper
<i>Calidris minuta</i>	Little Stint
<i>Scolopax rusticola</i>	Woodcock
<i>Gallinago gallinago</i>	Common Snipe
<i>Actitis hypoleucos</i>	Common Sandpiper
<i>Tringa ochropus</i>	Green Sandpiper

Tringa totanus	Redshank
Rissa tridactyla	Black -legged Kittiwake
Chroicocephalus ridibundus	Black -headed Gull
Hydrocoloeus minutus	Little Gull
Larus canus	Mew Gull
Larus argentatus	Herring Gull
Larus fuscus	Lesser Black - backed Gull
Larus marinus	Great Black -backed Gull
Sternula albifrons	Little Tern
Hydroprogne caspia	Caspian Tern
Chlidonias leucopterus	White- winged Tern
Sterna hirundo	Common Tern
Sterna paradisaea	Arctic Tern
Gavia stellata	Red-throated Loon
Gavia immer	Common Loon
Ciconia ciconia	White Stork
Ciconia nigra	Black Stork
Phalacrocorax carbo	Great Cormorant
Botaurus stellaris	Great Bittern
Ardea cinerea	Grey heron
Ardea alba	Great Egret
Pandion haliaetus	Osprey
Pernis apivorus	European Honey Buzzard
Clanga pomarina	Lesser Spotted Eagle
Circus aeruginosus	Eurasian Marsh Harrier
Circus cyaneus	Hen Harrier
Circus macrourus	Pallid Harrier
Accipiter nisus	Eurasian Sparrowhawk
Accipiter gentilis	Nothern Goshawk
Milvus migrans	Black Kite
Haliaeetus albicilla	White-tailed Eagle
Buteo buteo	Common Buzzard
Bubo bubo	Eurasian Eagle Owl
Surnia ulula	Nothern Hawk Owl
Glaucidium passerinum	Eurasian Pygmy Owl
Strix aluco	Tawny Owl
Strix uralensis	Ural Owl
Asio flammeus	Short -eared Owl
Aegolius funereus	Boreal Owl
Upupa epops	Eurasian Hoopoe
Jynx torquilla	Eurasian Wryneck
Dendrocopos leucotos	White-backed Woodpecker
Dendrocopos major	Great Spotted Woodpecker
Dryocopus martius	Black Woodpecker
Falco tinnunculus	Eurasian Kestrel
Falco columbarius	Merlin
Falco subbuteo	Eurasian Hobby
Falco peregrinus	Peregrine Falcon
Oriolus oriolus	Eurasian Golden Oriole
Lanius collurio	Red -backed Shrike
Lanius excubitor	Great grey Shrike
Garrulus glandarius	Eurasian Jay
Pica pica	Eurasian Magpie
Coloeus monedula	Eurasian Jackdaw

Corvus frugilegus	Rook
Corvus corone cornix	Hooded Crow
Corvus corax	Common Raven
Parus ater	Coal Tit
Lophophanes cristatus	Crested Tit
Poecile palustris	Marsh Tit
Poecile montanus	Willow Tit
Cyanistes caeruleus	Eurasian Blue Tit
Parus major	Great Tit
Remiz pendulinus	Eurasian Penduline Tit
Lullula arborea	Woodlark
Alauda arvensis	Eurasian Sky Lark
Iduna calligata	Booted Warbler
Hippolais icterina	Icterine Warbler
Acrocephalus schoenobaenus	Sedge Warbler
Acrocephalus dumetorum	Blyths Reed Warbler
Acrocephalus palustris	Marsh Warbler
Acrocephalus scirpaceus	Reed Warbler
Acrocephalus arundinaceus	Great Reed Warbler
Locustella fluviatilis	River Warbler
Locustella luscinioides	Savi's Warbler
Locustella naevia	Common Grasshopper Warbler
Riparia riparia	Bank Swallow
Hirundo rustica	Barn Swallow
Delichon urbicum	Common House Martin
Phylloscopus sibilatrix	Wood Warbler
Phylloscopus trochilus	Willow Warbler
Phylloscopus collybita	Common Chiffchaff
Phylloscopus trochiloides	Greenish Warbler
Aegithalos caudatus	Long-tailed Tit
Sylvia atricapilla	Eurasian Blackcap
Sylvia borin	Garden Warbler
Sylvia curruca	Lesser Whitethroat
Sylvia communis	Whitethroat
Regulus regulus	Goldcrest
Sitta europaea	Eurasian Nuthatch
Certhia familiaris	Eurasian Treecreeper
Troglodytes troglodytes	Eurasian Wren
Sturnus vulgaris	European Starling
Turdus viscivorus	Mistle Thrush
Turdus philomelos	Song Thrush
Turdus iliacus	Redwing
Turdus merula	Blackbird
Turdus pilaris	Fieldfare
Turdus torquatus	Ring Ouzel
Muscicapa striata	Spotted Flycatcher
Erithacus rubecula	European Robin
Luscinia luscinia	Trush Nightingale
Luscinia svecica	Bluethroat
Ficedula parva	Red-breasted Flycatcher
Ficedula hypoleuca	Pied Flycatcher
Phoenicurus ochruros	Black Redstart
Phoenicurus phoenicurus	Common Redstart
Oenanthe oenanthe	Northern Wheatear

Saxicola ruberta	Whinchat
Panurus biarmicus	Bearded tit
Bombycilla garrulus	Bohemian Waxwing
Prunella modularis	Dunnock
Passer domesticus	House sparrow
Passer montanus	Tree Sparrow
Motacilla cinerea	Grey Wagtail
Motacilla flava	Yellow Wagtail
Motacilla citreola	Citrine Wagtail
Motacilla alba	Pied Wagtail
Anthus campestris	Tawny Pipit
Anthus pratensis	Meadow Pipit
Anthus trivialis	Tree Pipit
Anthus cervinus	Red-throated Pipit
Anthus petrosus	Rock Pipit
Fringilla coelebs	Common European Chaffinch
Coccothraustes coccothraustes	Hawfinch
Carpodacus erythrinus	Common Rosefinch
Pyrrhula pyrrhula	Eurasian Bullfinch
Chloris chloris	European Greenfinch
Linaria cannabina	Eurasian Linnet
Acanthis flammea	Common Redpoll
Acanthis hornemanni	Arctic Redpoll
Loxia curvirostra	Common Crossbill
Carduelis carduelis	European Goldfinch
Serinus serinus	Serin
Spinus spinus	Siskin
Calcarius lapponicus	Lapland Longspur
Plectrophenax nivalis	Snow Bunting
Emberiza citrinella	Yellowhammer
Emberiza schoeniclus	Reed Bunting
Emberiza rustica	Rustic Bunting

(6) Updated list of main bibliographic references (to be annexed)

Arkliņa, A., Grinberga, K., Singh, N., Livina, A. (2020) Influence of cognitive and emotional advertisements on biosphere reserve image and visitation intention for youth. *Journal of Environmental Management and Tourism*, 2020, 11(6), pp. 1391–1399

Arkliņa, A. (2018) Bachelour Thesis “Evaluation of Sustainable Development Profile indicators on the North Vidzeme Biosphere Reserve“ [http://darbi.va.lv/darbi/Arkliņa\\_Anda\\_bakalaura\\_darbs\\_2018.pdf](http://darbi.va.lv/darbi/Arkliņa_Anda_bakalaura_darbs_2018.pdf)

Belogradova I., Grauda D., Lapiņa L., Jakobsons G., Roze D., Ornicāns R., Fokina O., Rashaļ I. 2018. Genetic Diversity of *Liparis loeselii* in Latvia. Proceedings of the Latvian Academy of Sciences, Section B, Volume 72, 341-348, DOI: 10.2478/prolas-2018-0042

Central Statistical Bureau, 2023

Dynamic Ecological Information System - Site and Dataset Registry. Available <https://deims.org>

Druva-Druvaskalne I., Liviņa A. (2019) Environmental awareness perception of young people living in the biosphere reserve in Latvia. In: *SOCIETY. INTEGRATION. EDUCATION. Proceedings of the International Scientific Conference* May 24th-25th, 2019, Volume 5, pp. 109-118.

- Druva-Druvaskalne, I., Līviņa, A. (2018) Ziemeļvidzemes biosfēras rezervātā dzīvojošo jauniešu vides apziņa. Vidzeme University of Applied Sciences. Available [https://www.hespi.lv/sites/default/files/Petijums\\_ZBR\\_skoleni\\_2018\\_final.pdf](https://www.hespi.lv/sites/default/files/Petijums_ZBR_skoleni_2018_final.pdf)
- Evaluation of Sustainable Development Profile indicators of the North Vidzeme Biosphere Reserve (2018) Vidzeme University of Applied Sciences
- Grīnberga, K. (2020) Master thesis "Communication Challenges And Solutions of Natural And Cultural Heritage For Generation Z In The North Vidzeme Biosphere Reserve". Vidzeme University of Applied Sciences
- Individual Protection and Use Regulations of the North Vidzeme Biosphere Reserve (2011) The Cabinet of Ministers
- Jourdan, J., O'Hara, R.B., Bottarin, R., Huttunen, K.L., Kuemmerlen, M., Monteith, D., Muotka, T., Ozoliņš, D., Paavola, R., Pilotto, F., Springe, G., Skuja, A., Sundermann, A., Tonkin, J.D., Haase, P. 2018. Effects of changing climate on European stream invertebrate communities: A long-term data analysis. *Science of The Total Environment*, 621, 588-599. <https://doi.org/10.1016/j.scitotenv.2017.11.242>
- Laime, S., Urtāns, J. (2016) Svētupes Lībiešu upurāla. Nordik, Rīga
- Latvia's Sustainable Development Strategy 2030 (2010). Saeima. Available [https://www.pkc.gov.lv/sites/default/files/inline-files/Latvija\\_2030\\_7.pdf](https://www.pkc.gov.lv/sites/default/files/inline-files/Latvija_2030_7.pdf)
- Lima declaration and UNESCO programme Man and Biosphere strategy 2015-2025
- Long-term thematic planning for the development of the public infrastructure of the Baltic Sea coast of Latvia. Available <https://likumi.lv/ta/id/286733-par-valsts-ilgtermina-tematisko-planojumu-baltijas-juras-piekrastes-publiskas-infrastrukturas-attistibai>
- Lursoft data base, 2023
- Megre D., Roze D., Dokane K., Jakobsone G., Karlovska A. 2018. Survival of an endangered orchid *Liparis loeselii* in habitats with different water level fluctuations. *Pol. J. Ecol.*, 66: 126-138, DOI: 10.3161/15052249PJE2018.66.2.004
- Mežgaile, A. (2023) Report on Economic assessment of cultural ecosystem services in biosphere reserves. Case: NVBR, Latvia.
- Mežgaile, A., Grinberga, K., Singh, N., Livina, A. (2021). A Study on Youth Behavior towards the North Vidzeme Biosphere Reserve in Latvia. *Journal of Environmental Management and Tourism*, (Volume XII, Fall), 5(53): 1171-1178. ISSN 2068-7729. <https://journals.aserspublishing.eu/jemt/article/view/6344>
- Mežgaile, A. (2020) Master thesis "A Study On Youth Behaviour Towards Nature Protected Areas. Vidzeme University of Applied Sciences
- Mežgaile, A., Livina, A., Gavinolla, M.R., Druva-Druvaskalne, I. (2022). Chapter: Impact of Cultural Ecosystem Services on Livelihoods in the North Vidzeme Biosphere Reserve, Latvia. In book: *Management of Tourism Ecosystem Services in a Post Pandemic Context*. (ed. Vanessa G. B. Gowreesunkar, Shem Wambugu Maingi, Felix Lamech Mogambi Ming'ate). Routledge
- Motnhly Newsletter on Biopshere and Man. Vidzeme University of Applied Sciences. Available <https://www.hespi.lv/lv/unesco-zinas>
- National Forest Service, 2012
- NVBR Coastal tourism development plan 2012 – 2018 (2011) The Latvian Fund for Nature. Available [https://www.salacgriva.lv/files/news/10370/zbr\\_turisma\\_attistibas\\_plans.pdf](https://www.salacgriva.lv/files/news/10370/zbr_turisma_attistibas_plans.pdf)
- Pilotto, F., Kühn, I., Adrian, R., Alignier, A., Andrews, Ch., Bäck, J., Ozoliņš, D., Skuja, A., Springe, G. *et al.* 2020. Meta-analysis of multidecadal biodiversity trends in Europe. *Nature Communications*, 11, 3486. <https://doi.org/10.1038/s41467-020-17171-y>

Project: Research of marine protected habitats in EEZ and determination of the necessary conservation status in Latvia. Available [https://reef.daba.gov.lv/public/eng/about\\_the\\_project/](https://reef.daba.gov.lv/public/eng/about_the_project/).

Rendenieks, Z., Nikodemus, O., Brūmelis, G. (2015) The implications of stand composition, age and spatial patterns of forest regions with different ownership type for management optimisation in northern Latvia. *Environmental Science*

Report Accessing coastal visitor flow, public infrastructure and environmental pressures. (2020) Nocticus Ltd. Available <https://land-sea.eu/wp-content/uploads/2020/07/LSA-Coast-Visits-Summary-2020.pdf>

Rural Support Service, 2023

Smaļinskis, J. Līviņa, A., Lukss, I., Java, O. (2021) Klinšu uzrakstu un petroglifu dokumentēšana ar 3 D tehnoloģijām - lāzerskenēšanu un fotogrammetriju. Piemērs: smilšakmens atsegumi un alas Latvijā. Latvijas Nacionālā bibliotēka

The Action Plan for the NVBR 2019-2025 (2019) The Nature Conservation Agency

The Development Programme of Vidzeme Planning Region (2022)

The Nature Education Development Concept 2018 – 2028 (2018) The Nature Conservation Agency

The Operational strategy 2021 - 2023 of the Nature Conservation Agency (2021) The Nature Conservation Agency

Vidzeme Planning Region Sustainable Development Strategy 2030. Available [http://jauna.vidzeme.lv/upload/VIDZEMES\\_PLANOSANAS\\_REGIONA\\_ILGTSPEJIGAS\\_ATTISTIBAS\\_STRATEGIJA.pdf](http://jauna.vidzeme.lv/upload/VIDZEMES_PLANOSANAS_REGIONA_ILGTSPEJIGAS_ATTISTIBAS_STRATEGIJA.pdf)

Vidzeme Tourism Development Strategy 2020-2025: Development of Greenways in Vidzeme 2020-2025 (2020) AC Konsultācijas Ltd.

(7) Further supporting documents

No further supporting documents.

## 10. ADDRESSES

### 10.1 Contact address of the proposed biosphere reserve:

[Government agency, organization, or other entity (entities) to serve as the main contact to whom all correspondence within the World Network of Biosphere Reserves should be addressed.]

Name: Nature Conservation Agency  
 Street or P.O. Box: Baznīcas iela 7  
 City with postal code: Sigulda, LV-2150  
 Country: Latvia  
 Telephone: + 371 67509545  
 E-mail: [daba@daba.gov.lv](mailto:daba@daba.gov.lv)  
 Web site: [www.daba.gov.lv](http://www.daba.gov.lv)

### 20.2. Administering entity of the core area(s):

Name: Nature Conservation Agency  
 Street or P.O. Box: Baznīcas iela 7  
 City with postal code: Sigulda, LV-2150  
 Country: Latvia  
 Telephone: + 371 67509545  
 E-mail: [daba@daba.gov.lv](mailto:daba@daba.gov.lv)  
 Web site: [www.daba.gov.lv](http://www.daba.gov.lv)

### 20.3. Administering entity of the buffer zone(s):

Name: Nature Conservation Agency  
 Street or P.O. Box: Baznīcas iela 7  
 City with postal code: Sigulda, LV-2150  
 Country: Latvia  
 Telephone: + 371 67509545  
 E-mail: [daba@daba.gov.lv](mailto:daba@daba.gov.lv)  
 Web site: [www.daba.gov.lv](http://www.daba.gov.lv)

### 20.4. Administering entity of the transition area(s):

Name: Nature Conservation Agency  
 Street or P.O. Box: Baznīcas iela 7  
 City with postal code: Sigulda, LV-2150  
 Country: Latvia  
 Telephone: + 371 67509545  
 E-mail: [daba@daba.gov.lv](mailto:daba@daba.gov.lv)  
 Web site: [www.daba.gov.lv](http://www.daba.gov.lv)

## Annex I to the Biosphere Reserve Periodic Review

### MABnet Directory of Biosphere Reserves

#### Administrative details

**Country:** Latvia

**Name of BR:** North Vidzeme Biosphere Reserve

**Year designated:** 1997

**Administrative authorities:** (7.6) Nature Conservation Agency

**Name Contact:** (10.1) Nature Conservation Agency

**Contact address:** *(Including phone number, postal and email addresses)* (10.1) + 371 67509545, Baznīcas iela 7, Sigulda, LV – 2150, [daba@daba.gov.lv](mailto:daba@daba.gov.lv)

**Related links:** *(web sites)* [www.daba.gov.lv](http://www.daba.gov.lv)

**Social networks:** (6.5.4) The NVBR Facebook page: <https://www.facebook.com/Ziemelvidzeme>  
 The NCA Facebook page: <https://www.facebook.com/dabasparvalde>

#### Description

##### **General description:**

Approximately 25 lines

North Vidzeme Biosphere Reserve comprises a coastline of 62 km along the Gulf of Riga and borders in the north with the Republic of Estonia. It covers 475 514 hectares of terrestrial area and corresponding to the catchment basins of the Salaca, Svetupe and Vitrupe Rivers. The territory includes 17 806 hectares of marine area. More than hundred different size wetlands, some of them with open pool systems are characteristic feature of the area. Lakes characterise the landscape (over 60 lakes are greater than 3 hectares) and gently glacial formed hills and rolling plains. The coastal part consists of sandy beaches and coastal meadows. The area is an important from a conservation point of view since it harbours raised bogs, rivers with wild Baltic salmon, coastal meadows, which are traditionally maintained by grazing, and remnants of the ancient broadleaf forest. Wetlands on the border with the Republic of Estonia constitutes Transboundary Ramsar site “the North Livonian Wetlands”.

In the surrounding areas, forestry and extensive agriculture is the main economic activity. The role of tourism is increasing with more than 40 000 visitors alone to the the Nature Park “Skanais kalns” and 15 000 canoists visiting the River Salaca. Monitoring focuses on topics such as water quality, spawning success of salmon, plant communities, insects and climate change aspects. There are also many training and environmental education activities.



**Major ecosystem type:** Boreal and Temperate coniferous and mixed forests, including mire, riverine systems and coastal/marine components

**Major habitats & land cover types:** Coniferous and mixed forests, raised bogs, natural rivers and lakes, coastal and marine component, semi-natural grasslands, sandstone outcrops.

**Bioclimatic zone:** Temperate climate zone in the zone of mixed forests

**Location** (latitude & longitude): 57.74494; 25.020202

**Total Area** (ha): 475 708 ha of terrestrial area and 17 806 ha of marine area

**Core area(s):** 23 722 ha (terrestrial area); 10 ha (marine area)

**Buffer zone(s):** 175 086 ha (terrestrial area); 17 780 ha (marine area)

**Transition area(s) :** 258 912 ha (terrestrial area); 0,16 ha (marine area)

**Different existing zonation:**

**Altitudinal range** (metres above sea level): 0m asl. - 127m asl.

**Zonation map(s)** (refer to section 2.2.2):

### **Main objectives of the biosphere reserve**

#### **Brief description**

Approximately 5 lines

According to the Law “On the North Vidzeme Biosphere Reserve”, December 1997 the tasks of the reserve are:

- a) preservation of the territory’s landscapes, ecosystems, species and genetic diversity;
- b) promotion of the territory’s sustainable social and economical development;
- c) ensure information exchange on environmental research, monitoring and education in relation to nature protection and regional development in the territory;
- d) promotion of understanding in regard to environmental protection and sustainable development within the Reserve;
- e) promoton of the restoration of degraded ecosystems in the reserve.

### **Research**

#### **Brief description**

Approximately 5 lines

Changes in species diversity in the background of fluctuations in climate and anthropogenic factors. Impact of environmental changes on the development of freshwater communities and quality of ecosystem in Salmon spawning dynamics. Structure, interaction and transformation of boreal and nemoral plant communities in Latvia under the influence of climate warming and environmental pollution.

## **Monitoring**

### **Brief description**

Approximately 5 lines

We have monitoring programs for birds, salmon, water quality, insects in forests, plants in Randu meadows.

**Specific variables (fill in the table below and tick the relevant parameters)**

<b>Abiotic</b>		<b>Biodiversity</b>	
Abiotic factors	x	Afforestation/Reforestation	x
Acidic deposition/Atmospheric factors	x	Algae	x
Air quality	x	Alien and/or invasive species	x
Air temperature	x	Amphibians	X
Climate, climatology	x	Arid and semi-arid systems	
Contaminants	x	Autoecology	
Drought	x	Beach/soft bottom systems	X
Erosion	x	Benthos	X
Geology	x	Biodiversity aspects	X
Geomorphology		Biogeography	X
Geophysics		Biology	X
Glaciology		Biotechnology	X
Global change	x	Birds	X
Groundwater	x	Boreal forest systems	X
Habitat issues	x	Breeding	
Heavy metals		Coastal/marine systems	x
Hydrology	x	Community studies	x
Indicators	x	Conservation	x
Meteorology		Coral reefs	
Modeling		Degraded areas	X
Monitoring/methodologies	x	Desertification	
Nutrients		Dune systems	x
Physical oceanography		Ecology	x
Pollution, pollutants	x	Ecosystem assessment	X
Siltation/sedimentation	X	Ecosystem functioning/structure	X
Soil	X	Ecosystem services	X
Speleology	x	Ecotones	
Topography	x	Endemic species	x
Toxicology		Ethology	X
UV radiation	x	Evapotranspiration	
		Evolutionary studies/Palaeoecology	
		Fauna	x
		Fires/fire ecology	
		Fishes	X
		Flora	x
		Forest systems	X
		Freshwater systems	X
		Fungi	X
		Genetic resources	
		Genetically modified organisms	
		Home gardens	X
		Indicators	
		Invertebrates	
		Island systems/studies	
		Lagoon systems	X
		Lichens	x
		Mammals	x

		Mangrove systems	
		Mediterranean type systems	
		Microorganisms	x
		Migrating populations	X
		Modeling	
		Monitoring/methodologies	X
		Mountain and highland systems	
		Natural and other resources	X
		Natural medicinal products	X
		Perturbations and resilience	
		Pests/Diseases	x
		Phenology	x
		Phytosociology/Succession	
		Plankton	x
		Plants	x
		Polar systems	
		Pollination	x
		Population genetics/dynamics	
		Productivity	
		Rare/Endangered species	
		Reptiles	x
		Restoration/Rehabilitation	x
		Species (re) introduction	x
		Species inventorying	x
		Sub-tropical and temperate rainforest	
		Taxonomy	x
		Temperate forest systems	x
		Temperate grassland systems	x
		Tropical dry forest systems	
		Tropical grassland and savannah systems	
		Tropical humid forest systems	
		Tundra systems	
		Vegetation studies	x
		Volcanic/Geothermal systems	
		Wetland systems	x
		Wildlife	x

		<b>Integrated monitoring</b>	
Agriculture/Other production systems	x	Biogeochemical studies	
Agroforestry	x	Carrying capacity	
Anthropological studies	x	Climate change	x
Aquaculture	x	Conflict analysis/resolution	
Archaeology	x	Ecosystem approach	x
Bioprospecting		Education and public awareness	x
Capacity building		Environmental changes	x
Cottage (home-based) industry	x	Geographic Information System (GIS)	
Cultural aspects	x	Impact and risk studies	x
Demography	x	Indicators	
Economic studies	x	Indicators of environmental quality	
Economically important species		Infrastructure development	x
Energy production systems		Institutional and legal aspects	
Ethnology/traditional practices/knowledge		Integrated studies	
Firewood cutting		Interdisciplinary studies	
Fishery	x	Land tenure	
Forestry	x	Land use/Land cover	x
Human health		Landscape inventorying/monitoring	
Human migration	x	Management issues	
Hunting	x	Mapping	
Indicators		Modeling	
Indicators of sustainability		Monitoring/methodologies	x
Indigenous people's issues		Planning and zoning measures	x
Industry		Policy issues	
Livelihood measures		Remote sensing	
Livestock and related impacts		Rural systems	
Local participation	x	Sustainable development/use	x
Micro-credits		Transboundary issues/measures	
Mining		Urban systems	
Modeling		Watershed studies/monitoring	x
Monitoring/methodologies			
Natural hazards			
Non-timber forest products			
Pastoralism			
People-Nature relations			
Poverty			
Quality economies/marketing			
Recreation			
Resource use	x		
Role of women	x		
Sacred sites			
Small business initiatives	x		
Social/Socio-economic aspects	x		
Stakeholders' interests	x		
Tourism	x		
Transports	x		

## Annex II to the Biosphere Reserve Periodic Review, Promotion and Communication Materials for the biosphere reserve

*Provide some promotional material regarding the site, notably high quality photos, and/or short videos on the site so as to allow the Secretariat to prepare appropriate files for press events. To this end, a selection of photographs in high resolution (300 dpi), with photo credits and captions and video footage (rushes), without any comments or sub-titles, of professional quality – DV CAM or BETA only, will be needed.*

*In addition, return a signed copy of the following Agreements on Non-Exclusive Rights for photo(s) and video(s)*

In the past years we have created two short films about North Vidzeme Biosphere Reserve:

- [https://www.youtube.com/watch?v=RPn\\_gQT2RGc](https://www.youtube.com/watch?v=RPn_gQT2RGc) (2020)
- <https://www.youtube.com/watch?v=oaKXCylmdV8> (2022), with English and French subtitles



Promoting process of NVBR Travelers Day travel campaign "Travel and get to know the North Vidzeme Biosphere Reserve".  
Photograph: Linda Kauliņa



Promoting process of NVBR Travelers Day travel campaign "Travel and get to know the North Vidzeme Biosphere Reserve".  
Photograph: Daiga Zvejniece



Randu meadow management – reed cutting.  
Photograph: Linda Kauliņa



Randu meadow management – grazing of meadows.  
Photograph: Linda Kauliņa



Educating schoolchildren about bird diversity in Randu meadows.  
Photograph: Linda Kauliņa



Educational hike in a nature reserve “Vitrupes ieleja”  
Photograph: Linda Kauliņa



North Vidzeme Biosphere Reserves Junior Rangers playing educational games about Specially Protected Nature Territories in Latvia.  
Photograph: Linda Kauliņa



Nature Conservation Agency in cooperation with World Wildlife Fund Latvia hold initiative “Daru labu dabai” (Do well for nature). Junior Rangers weeding *Lactuca Tatarica* or blue lettuce.  
Photograph: Linda Kauliņa



Educational event “The insect world at night”  
Photograph: Andris Soms



Educational event “Meadow plant diversity and variety”  
Photograph: Andris Soms





Cooperation with kindergartens. Valkas kindergarteners' collage about theme "My North Vidzeme Biosphere reserve"

Source: Valkas kindergarten



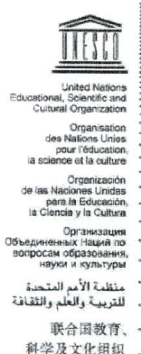
Cooperation with libraries. Strenču library exhibiting authors books and articles dedicated to NVBR.

Source: Strenču Library



Monitoring of coastal nesting birds

Photograph: Andris Soms



UNESCO Photo Library

**Bureau of Public Information**

AGREEMENT GRANTING NON-EXCLUSIVE RIGHTS

Reference:

1. a) I the undersigned, copyright-holder of the above mentioned photo(s) hereby grant to UNESCO free of charge the non-exclusive right to exploit, publish, reproduce, diffuse, communicate to the public in any form and on any support, including digital, all or part of the photograph(s) and to licence these rights to third parties on the basis of the rights herein vested in UNESCO
- b) These rights are granted to UNESCO for the legal term of copyright throughout the world.
- c) The name of the photographer will be cited alongside UNESCO's whenever his/her work is used in any form.

2. I certify that:

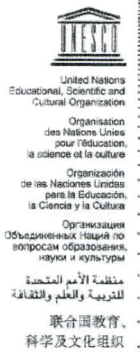
- a) I am the sole copyright holder of the photo(s) and am the owner of the rights granted by virtue of this agreement and other rights conferred to me by national legislation and pertinent international conventions on copyright and that I have full rights to enter into this agreement.
- b) The photo(s) is/are in no way whatever a violation or an infringement of any existing copyright or licence, and contain(s) nothing obscene, libellous or defamatory.

Name and Address: Andris Širovs, Acting Director General of Nature Conservation Agency of Latvia, Baznīcas iela 7, Sigulda, LV – 2150, Latvia

Signature :

Date: 14.09.2023.

(Sign, return to UNESCO two copies of the Agreement and retain the original for yourself)  
Mailing address: 7 Place Fontenoy, 75352 Paris 07 SP, Direct Telephone: 00331 – 45681687  
Direct Fax: 00331 – 45685655; e-mail: [photobank@unesco.org](mailto:photobank@unesco.org); [m.ravassard@unesco.org](mailto:m.ravassard@unesco.org)



UNESCO Photo Library

**Bureau of Public Information**

AGREEMENT GRANTING NON-EXCLUSIVE RIGHTS

Reference:

a) I the undersigned, copyright-holder of the above mentioned video(s) hereby grant to UNESCO free of charge the non-exclusive right to exploit, publish, reproduce, diffuse, communicate to the public in any form and on any support, including digital, all or part of the photograph(s) and to licence these rights to third parties on the basis of the rights herein vested in UNESCO

These rights are granted to UNESCO for the legal term of copyright throughout the world.

The name of the author/copyright holder will be cited alongside UNESCO's whenever his/her work is used in any form.

I certify that:

I am the sole copyright holder of the video(s) and am the owner of the rights granted by virtue of this agreement and other rights conferred to me by national legislation and pertinent international conventions on copyright and that I have full rights to enter into this agreement.

The video(s) is/are in no way whatever a violation or an infringement of any existing copyright or licence, and contain(s) nothing obscene, libellous or defamatory.

Name and Address: Andris Širovs, Acting Director General of Nature Conservation Agency of Latvia, Baznīcas iela 7, Sigulda, LV – 2150, Latvia

Signature :

Date: 14.09.2023.

(Sign, return to UNESCO two copies of the Agreement and retain the original for yourself)  
Mailing address: 7 Place Fontenoy, 75352 Paris 07 SP, Direct Telephone: 00331 – 45681687  
Direct Fax: 00331 – 45685655; e-mail: [photobank@unesco.org](mailto:photobank@unesco.org); [m.ravassard@unesco.org](mailto:m.ravassard@unesco.org)

## **Annex III to the Biosphere Reserve Periodic Review**

### **The Statutory Framework of the World Network of Biosphere Reserves**

#### **Introduction**

Within UNESCO's Man and the Biosphere (MAB) programme, biosphere reserves are established to promote and demonstrate a balanced relationship between humans and the biosphere. Biosphere reserves are designated by the International Co-ordinating Council of the MAB Programme, at the request of the State concerned. Biosphere reserves, each of which remains under the sole sovereignty of the State where it is situated and thereby submitted to State legislation only, form a World Network in which participation by the States is voluntary.

The present Statutory Framework of the World Network of Biosphere Reserves has been formulated with the objectives of enhancing the effectiveness of individual biosphere reserves and strengthening common understanding, communication and co-operation at regional and international levels.

This Statutory Framework is intended to contribute to the widespread recognition of biosphere reserves and to encourage and promote good working examples. The delisting procedure foreseen should be considered as an exception to this basically positive approach, and should be applied only after careful examination, paying due respect to the cultural and socio-economic situation of the country, and after consulting the government concerned.

The text provides for the designation, support and promotion of biosphere reserves, while taking account of the diversity of national and local situations. States are encouraged to elaborate and implement national criteria for biosphere reserves which take into account the special conditions of the State concerned.

#### **Article 1 - Definition**

Biosphere reserves are areas of terrestrial and coastal/marine ecosystems or a combination thereof, which are internationally recognized within the framework of UNESCO's programme on Man and the Biosphere (MAB), in accordance with the present Statutory Framework.

#### **Article 2 - World Network of Biosphere Reserves**

1. Biosphere reserves form a worldwide network, known as the World Network of Biosphere Reserves, hereafter called the Network.
2. The Network constitutes a tool for the conservation of biological diversity and the sustainable use of its components, thus contributing to the objectives of the Convention on Biological Diversity and other pertinent conventions and instruments.
3. Individual biosphere reserves remain under the sovereign jurisdiction of the States where they are situated. Under the present Statutory Framework, States take the measures which they deem necessary according to their national legislation.

### **Article 3 - Functions**

In combining the three functions below, biosphere reserves should strive to be sites of excellence to explore and demonstrate approaches to conservation and sustainable development on a regional scale

- (i) conservation - contribute to the conservation of landscapes, ecosystems, species and genetic variation;
- (ii) development - foster economic and human development which is socio-culturally and ecologically sustainable;
- (iii) logistic support - support for demonstration projects, environmental education and training, research and monitoring related to local, regional, national and global issues of conservation and sustainable development.

### **Article 4 - Criteria**

General criteria for an area to be qualified for designation as a biosphere reserve:

1. It should encompass a mosaic of ecological systems representative of major biogeographic regions, including a gradation of human interventions.
2. It should be of significance for biological diversity conservation.
3. It should provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale.
4. It should have an appropriate size to serve the three functions of biosphere reserves, as set out in Article 3.
5. It should include these functions, through appropriate zonation, recognizing:
  - (a) a legally constituted core area or areas devoted to long-term protection, according to the conservation objectives of the biosphere reserve, and of sufficient size to meet these objectives;
  - (b) a buffer zone or zones clearly identified and surrounding or contiguous to the core area or areas, where only activities compatible with the conservation objectives can take place;
  - (c) an outer transition area where sustainable resource management practices are promoted and developed.
6. Organizational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and carrying out the functions of a biosphere reserve.
7. In addition, provisions should be made for:
  - (a) mechanisms to manage human use and activities in the buffer zone or zones;
  - (b) a management policy or plan for the area as a biosphere reserve;

- (c) a designated authority or mechanism to implement this policy or plan;
- (d) programmes for research, monitoring, education and training.

### **Article 5 - Designation procedure**

1. Biosphere reserves are designated for inclusion in the Network by the International Coordinating Council (ICC) of the MAB programme in accordance with the following procedure:

- (a) States, through National MAB Committees where appropriate, forward nominations with supporting documentation to the secretariat after having reviewed potential sites, taking into account the criteria as defined in Article 4;
- (b) the secretariat verifies the content and supporting documentation: in the case of incomplete nomination, the secretariat requests the missing information from the nominating State;
- (c) nominations will be considered by the Advisory Committee for Biosphere Reserves for recommendation to ICC;
- (d) ICC of the MAB programme takes a decision on nominations for designation. The Director-General of UNESCO notifies the State concerned of the decision of ICC.

2. States are encouraged to examine and improve the adequacy of any existing biosphere reserve, and to propose extension as appropriate, to enable it to function fully within the Network. Proposals for extension follow the same procedure as described above for new designations.

3. Biosphere reserves which have been designated before the adoption of the present Statutory Framework are considered to be already part of the Network. The provisions of the Statutory Framework therefore apply to them.

### **Article 6 - Publicity**

- 1. The designation of an area as a biosphere reserve should be given appropriate publicity by the State and authorities concerned, including commemorative plaques and dissemination of information material.
- 2. Biosphere reserves within the Network, as well as the objectives, should be given appropriate and continuing promotion.

## **Article 7 - Participation in the Network**

1. States participate in or facilitate co-operative activities of the Network, including scientific research and monitoring, at the global, regional and sub-regional levels.
2. The appropriate authorities should make available the results of research, associated publications and other data, taking into account intellectual property rights, in order to ensure the proper functioning of the Network and maximize the benefits from information exchanges.
3. States and appropriate authorities should promote environmental education and training, as well as the development of human resources, in co-operation with other biosphere reserves in the Network.

## **Article 8 - Regional and thematic subnetworks**

States should encourage the constitution and co-operative operation of regional and/or thematic subnetworks of biosphere reserves, and promote development of information exchanges, including electronic information, within the framework of these subnetworks.

## **Article 9 - Periodic review**

1. The status of each biosphere reserve should be subject to a periodic review every ten years, based on a report prepared by the concerned authority, on the basis of the criteria of Article 4, and forwarded to the secretariat by the State concerned.
2. The report will be considered by the Advisory Committee for Biosphere Reserves for recommendation to ICC.
3. ICC will examine the periodic reports from States concerned.
4. If ICC considers that the status or management of the biosphere reserve is satisfactory, or has improved since designation or the last review, this will be formally recognized by ICC.
5. If ICC considers that the biosphere reserve no longer satisfies the criteria contained in Article 4, it may recommend that the State concerned take measures to ensure conformity with the provisions of Article 4, taking into account the cultural and socio-economic context of the State concerned. ICC indicates to the secretariat actions that it should take to assist the State concerned in the implementation of such measures.
6. Should ICC find that the biosphere reserve in question still does not satisfy the criteria contained in Article 4, within a reasonable period, the area will no longer be referred to as a biosphere reserve which is part of the Network.
7. The Director-General of UNESCO notifies the State concerned of the decision of ICC.
8. Should a State wish to remove a biosphere reserve under its jurisdiction from the Network, it notifies the secretariat. This notification shall be transmitted to ICC for information. The area will then no longer be referred to as a biosphere reserve which is part of the Network.

**Article 10 - Secretariat**

1. UNESCO shall act as the secretariat of the Network and be responsible for its functioning and promotion. The secretariat shall facilitate communication and interaction among individual biosphere reserves and among experts. UNESCO shall also develop and maintain a worldwide accessible information system on biosphere reserves, to be linked to other relevant initiatives.
2. In order to reinforce individual biosphere reserves and the functioning of the Network and sub-networks, UNESCO shall seek financial support from bilateral and multilateral sources.
3. The list of biosphere reserves forming part of the Network, their objectives and descriptive details, shall be updated, published and distributed by the secretariat periodically.