

Final report on the project solution

Project name

Project registration number

APVV-20-0108

Implementing the 2030 Agenda through biosphere reserves

Principal investigator **Assoc. Prof. Katarína Vitálišová, PhD.**

Recipient **Matej Bel University in Banská Bystrica**

Start of project solution **01.07.2021**

End of project solution **30.06.2025**

PROJECT SOLUTION ANALYSIS (max. 10 pages)

Please indicate according to the following mandatory outline:

- 1. Progress of work on the project over the last year/period by the beneficiary and co-beneficiaries of APVV support in relation to the project implementation schedule**
- 2. Analysis of results for the entire solution period in relation to the set goals**
- 3. List of project outputs and benefits for the last year/period** – please provide in the attachment – form Project outputs and benefits for the year/period (copies of declared outputs are not attached, internet links to the stated outputs may be provided)

ŷŷ

- 1. Progress of work in solving projects over the last year/period at the beneficiary, as well as co-beneficiaries of APVV support, with regard to the project solution schedule:**

In the last half of the solution (January 1 - June 30, 2025), all project tasks were finalized.

In the area of theoretical and methodological knowledge transfer, several project outputs were finalized.

Specifically, it concerns the processing of the final draft of the model for financing biosphere reserves (BR) in the Slovak Republic. It concerns the creation of 2 variant proposals for financing biosphere reserves in Slovakia. One variant model takes into account the current legal status and legal subjectivity of national parks and protected landscape areas, which overlap with biosphere reserves in the Slovak Republic. The second variant works with the optimal version of financing biosphere reserves in order to recognize them as a full-fledged partner. In addition, given that citizen science was also an important aspect of the project implementation, examples of good practice in the use of citizen science in the development of biosphere reserves were also processed, both with examples from Slovak biosphere reserves and abroad.

Based on the methodological materials and analyses processed so far, the Pořana Biosphere Reserve's own strategic document, the Pořana Biosphere Reserve Development Strategy, was completed for the needs of the Pořana Biosphere Reserve, which was subsequently presented to project partners as well as relevant stakeholders from the biosphere reserve area.

Based on previous project activities and requirements of partner biosphere reserves, research and data collection were completed in the Tatras BR and the Slovak Karst BR. In both biosphere reserves, research was conducted among residents, tourists, and stakeholders of the biosphere reserves using the Qualtrics program. Based on this research, the current status and starting points for strategic planning and development of the Tatras BR and the Slovak Karst BR are processed, which should serve for further management decisions of these territories within their strategic development. Research in the Tatras BR should also include a more comprehensive assessment of the socio-economic potential of the Tatras BR. processed according to the requirements of the Tatras BR as a basis for creating development documents for the territory.

Although the Eastern Carpathians BR did not appear as a project partner since 2022, they were repeatedly approached with a request for cooperation, until 2025 this initiative was not successful.

Due to the change in management of the biosphere reserve, cooperation was restored in the first quarter of 2025 and research was also carried out in the conditions of the Eastern Carpathians Biosphere Reserve.

Similar to other biosphere reserves, this involved research among citizens, tourists, and stakeholders. This research is currently being processed into an analysis of the current state and the basis for strategic planning and development of the Eastern Carpathians Biosphere Reserve.

Following the implementation of research in foreign biosphere reserves in 2024, this research was evaluated and processed into a comprehensive management report.

and strategic planning in European BRs. The output maps the approach of foreign biosphere reserves to the management and strategic planning of the development of biosphere reserves. The knowledge was used not only in the creation of a financing model, but also in the methodology of strategic planning for the development of biosphere reserves. Furthermore, the

scientific book Biosphere Reserves in Slovakia. What Next? was finalized and published, which is one of the main publication outputs of the project. The publication cross-sectionally connects all key topics of the researched issue, namely the definition of biosphere reserves and their roles from the perspective of UNESCO, their characteristics in Slovakia, legislative aspects of the implementation of UNESCO soft law in Slovakia, strategic planning for the development of biosphere reserves, explanation of the essence of the landscape-ecological plan as an effective

tool for optimal use of the potential of biosphere reserves; review of the potential

Biosphere reserve territories as an object of fulfilling the sustainable development goals of the **2030 Agenda, Error! Bookmark is not defined.** participatory management of biosphere reserves **Error! Bookmark is not defined.**, proposal for financing biosphere reserves in the Slovak Republic, marketing communication of biosphere reserves, raising awareness and working with the public in the Poľana Biosphere Reserve, citizen science in the context of biosphere reserves. The entire project team participated in the authorship.

The publication was published in electronic and printed form.

The project outputs were presented at the final scientific event of the project in the form of a field workshop The Future of Biosphere Reserves in Slovakia, which took place on May 13, 2025 at the premises of the LS in Kyslinky. The workshop was attended by representatives of partner organizations with partners in the BR. The workshop presented the project outputs with an open discussion. The field workshop included a tour of the Poľana BR and a meeting with representatives of municipalities whose cadastres belong to the Poľana BR. (Hriňová, Hrochoň).

Within the Poľana BR, a field final workshop was subsequently held with partners from the Poľana BR area (Forests of the Slovak Republic, SAS, ÚEL) and collaborators of the Poľana PLA Administration in order to present good practice of the project and establish further cooperation in the region. The program included field excursions focused on the development and protection of the Poľana BR.

The final project meeting of the project team took place on June 23, 2025 at the Faculty of Economics of the University of Ljubljana, where the tasks in creating the final report were agreed upon and the achieved project results were reviewed.

Throughout the entire six months, information about project activities was added to the project website (at least once a month), as well as by project partners on their websites.

As part of the popularization activities, an article was published that evaluated the course of the final field workshop, as well as a review by a renowned expert on the subject, prof.

A mistake on the Poľana BR Development Strategy.

To continue investigating the issue, a new project proposal entitled APVV-24-0101Biosphere reserves as living laboratories was developed and submitted within the general call of APVV with a call deadline of February 7, 2025 with project partners ŠOP SR, Constantine the Philosopher University, Faculty of Natural Sciences, where ŠOP SR is also the recipient of the project outputs.

Another finalized and disseminated output in 2025 is a popularization brochure on the importance of biosphere reserves in the context of the 2030 Agenda published in electronic form by the authorship of the project team members.

For the successful implementation of all project activities, the project team met via online meetings on a monthly basis, more often if necessary. The above activities were implemented using the funds allocated to individual project partners, who used them economically and effectively with slight deviations from the planned spending (UMB, ŠOP, NP Slovenský kras).

2. Analysis of results for the entire solution period in relation to the set goals

The main objective of the project was to create *a proposal for a sustainable institutional, financial and legislative model for the functioning of biosphere reserves in the conditions of the Slovak Republic and the basis for their strategic development based on an analysis of the potential of the territory in the context of fulfilling the goals of the 2030 Agenda, the theory of resilience, foreign experiences and examples of good practice.*

The main objective was fulfilled through activities within the sub-objectives as follows:

1. to analyze the conditions in four Slovak biosphere reserves, i.e. their natural, socioeconomic, socio-demographic and innovation potential, in the context of the theory of resilience and the goals of the 2030 Agenda. In order to achieve the

above goal, extensive material was first collected (2021/2022), which represents a summary of the outputs of research carried out in the biosphere reserves of the Slovak Republic (from the establishment of the BR to 2021) declared in publication outputs, materials on all Slovak biosphere reserves (legislative, evaluation, development materials, map materials and other relevant ones). Thus, the collection of secondary data necessary for the processing of the analysis of biosphere reserves was carried out. Secondary data was also collected, mapping the effects of the external environment. Material covering international and national influences (political and governmental, social, economic, institutional and technical and technological) was developed.

Subsequently, a draft methodology for the BR analysis was developed - with the elaboration of a detailed outline dedicated to the natural-geographic potential, specifically a detailed elaboration of abiotic components, secondary landscape structure, biotic components, positive and negative socio-ecological phenomena, the definition of socio-demographic, socio-economic and innovative potential.

potential, proposals for processing the perceptions of key stakeholders and the population, proposals syntheses and interpretations, conflicts of interests in the country and propositions for the needs of BR analysis; draft structure of the BR Development Strategy, which includes BR analysis. The methodology was commented on by representatives of all biosphere reserves in the Slovak Republic, as well as by relevant employees of the Ministry of the Environment of the Slovak Republic and the Slovak MAB Committee. Subsequently, the analysis methodology was pilot tested in the conditions of the Poľana BR (2022/2023) Specific data collection techniques were developed (structured interviews with stakeholders, questionnaires for residents, tourists, interested parties, mayors and mayors), which were field-tested in the conditions of the Poľana BR.

Subsequently, primary and secondary data were collected, evaluated using mathematical and statistical methods and subsequently processed as part of the document Starting points for the development strategy of the Poľana BR (analytical part). In the conditions of the Poľana Biosphere Reserve, which is the most progressive BR in the Slovak Republic, in-depth research of its current marketing communication was carried out in order to map the starting points for its own communication strategy. Given the specific problems in the development of the Ivín area within the Poľana BR, the Landscape-ecological Planning Methodology and the Landscape-socio-ecological Plan of Iviny (2022) were developed specifically for the needs of this area by members of the ŠOP SR team. All documents were mutually commented on by all the research teams.

Based on the pilot research in BR Poľana, the steps of the field survey in BR Tatry were planned. A series of customized questionnaires were developed for the implementation of the questionnaire survey with individual target groups (residents, tourists SJ/AJ, stakeholders – mayors, mayors, business entities, associations) (2024/2025). In addition, this research was supplemented with analyses necessary for the processing of the documents for the periodic evaluation of BR Tatry (Assessment of the socio-economic potential of BR Tatry). Research was also carried out in BR Slovenský Kras. Data were collected through structured interviews and questionnaires (residents, tourists SJ/MJ, stakeholders – mayors, mayors, business entities, associations) (2024/2025). Questionnaires were prepared in printed form as well as electronically using the Qualtrics program. In addition, based on secondary data, the marketing communication of the Tatras, Slovak Karst and Eastern Carpathians BRs was researched and evaluated, especially for the needs of creating a methodology for communication and marketing strategy.

It is necessary to state that the amendment to Act No. 543/2002 Coll. on Nature and Landscape Protection on 14 December 2021 by Act No. 6/2022 Coll. had a significant impact on the implementation of the project. The project originally included the State Nature Conservation of the Slovak Republic (ŠOP SR) and the Institute of Landscape Ecology of the Slovak Academy of Sciences (ÚKE SAS). The research team of the Slovak National Park (SOP SR) included workers from 4 biosphere reserves of the Slovak Republic (Tatra Mountains, Slovak Karst, Eastern Carpathians, Poľana. As a result of the amendment to the law, as of March 31, 2022, national park administrations (9 national parks) were established as independent state contributory organizations under the jurisdiction of the Ministry of the Environment of the Slovak Republic, therefore, the workers of 3 biosphere reserves from our research team became employees of individual contributory organizations. The individual national park administrations were established as successor organizations of the Slovak National Park from this date and assume all rights and obligations for their territories, including the agenda related to individual biosphere reserves. All organizations had to re-obtain a certificate of competence to conduct science and research. In September 2022, the Slovak Karst National Park and TANAP obtained this certificate, therefore they were added to the project through a request for a project change as full-fledged project partners. NP Poloniny with changed management, managed by BR Východné Karpaty, was not interested in continuing cooperation on the project and therefore has not been involved in the project assets since 2022. Despite this, representatives of this biosphere reserve were repeatedly approached with offers of cooperation. After another change of management in 2025, they expressed interest in cooperation and in the second quarter of 2025, the research was also carried out in the Eastern Carpathians BR (residents, tourists of the SJ, interested parties - mayors, business entities, associations).

MBU students were also involved in the analysis, especially the collection of data in individual BRs and their evaluation. The focus group led by the Poľana PLA Administration created a needs questionnaire that addressed young people in the Poľana BR and its immediate surroundings. Their involvement included intensive participation of young people in the creation of educational and experiential programs, as well as the evaluation and interpretation of research results within peer groups in the area. The meeting of young people and their activity outputs complemented the collection of data in the Poľana BR. In other Slovak biosphere reserves, students were involved through field research and also data collection.

In cases where students came from biosphere reserve areas, citizen science methods were used.

2. create a methodology for creating development documents for biosphere reserves (development strategy, action plan, marketing communication strategy) and develop them for all four biosphere reserves. At the beginning of the project,

the project team was familiarized with the basic legal and methodological regulations that guide the functioning and development of biosphere reserves.

with an overlap with various types of protected areas, with the principles of UNESCO periodic evaluation through materials developed by members of the ŠOP SR team. Furthermore, an analysis of program documents in the field of Agenda 2030, environmental protection policy, regional development, legislative regulations, internal materials of ŠOP SR, strategic and political documents in the field of agriculture, forestry, green infrastructure, as well as transnational strategic documents related to the issue being addressed was carried out. Analysis

secondary data was supplemented with information from interviews with representatives of the Slovak National Park Service, the Ministry of the Environment of the Slovak Republic, the Ministry of Foreign and European Affairs of the Slovak Republic in the form of 2 workshops and other working meetings with representatives of biosphere reserves and relevant stakeholders from the territory of biosphere reserves. Based on this, a draft structure of the BR Development Strategy was developed, which also includes the methodology of (mentioned in the fulfillment of the first partial objective), a draft of a general methodological manual for landscape-ecological planning of the BR, a draft methodology for the creation of marketing and communication strategy and action plan. Based on a professional discussion between the solvers on how to precisely define individual documents with regard to their content, UNESCO requirements and also the documents required for these types of territory (overlap with NP and PLA), these methodologies were finalized and subsequently re-tested in the conditions of the Poľana BR. The result is the processing of the Poľana BR Development Strategy, including the analytical part, in the structure of an analysis of the external environment, an analysis of the potential of the Poľana BR, an analysis of the assessment of the quality of life by residents, an analysis of the quality of functioning and cooperation in the Poľana BR territory and an evaluation in the form of a TOWS synthesis for the Poľana BR. A marketing and communication strategy for the Poľana BR was developed. Based on the piloting, the methodology was supplemented by a projection on the goals of the Agenda 2030 and consideration of the theory of resilience. For other partner biosphere reserves (Tatra Mountains and Slovak Karst), the required outputs were adjusted according to the requirements of their representatives. Both biosphere reserves were interested in assessing the current status and strategic planning bases, with the intention of using these materials for specific needs (e.g. creating a tourism development strategy, zoning of the territory, etc.). Specifically for the needs of the Tatra BR, also the Assessment of the socio-economic potential of the Tatra BR. Recommendations for building awareness of the BR and its marketing communication were developed for both BRs based on the assessment of current communication activities. 3. to

propose a sustainable interactive model of the institutional, legislative and financial status and functioning of biosphere reserves in the Slovak Republic based on the results of the analysis, implemented policies in the field of biosphere reserves at the level of supranational institutions (e.g. UNESCO, EU, OSCE, OECD), as well as experience and good practice from abroad, and to apply it in specific conditions of Slovak biosphere reserves (development of specific business models),

As a basis for fulfilling the given partial goal, the documents and materials that define the legislative status of biosphere reserves in the Slovak Republic, or define their role in society in the Slovak Republic, were summarized, and materials were also collected regarding the current functioning of biosphere reserves in the Slovak Republic. Examples of good practice within biosphere reserves from abroad were identified, which could be the subject of study tours.

In the context of institutional and legislative definition, a legal analysis of the current status of biosphere reserves in the Slovak Republic was prepared. Based on it, alternative proposals for the legal anchoring of biosphere reserves were developed (both with a change in legislation and while maintaining the status quo). These proposals were presented and discussed at several project workshops with the invitation of partners from all Slovak BRs, with the participation of members of the Slovak MAB Committee, as well as with the participation of experts from the Ministry of the Environment of the Slovak Republic. Meetings were repeatedly called and held directly at the Ministry of the Environment of the Slovak Republic in an effort to achieve a change in the perception of BRs in Slovakia, however, due to other priorities and the direction of the given areas in the Slovak Republic, these proposals were not supported. Again, in this area, the legislative change from 2022 had a great impact, which created the conditions for national parks (3 BRs) to become independent legal entities and only BR Poľana remained a part of the Slovak National Park. In view of this, the research team approached a variant solution for the status of the BR without changing the legislation, based on a cooperation agreement for biosphere reserves based on the partnership principle within the meaning of the Civil Code. This was prepared as an example for the Poľana BR. The institutional model of the functioning of the biosphere reserve also depends on the legislative solution.

The created model of the BR organization from the point of view of institutionalization defines mainly the coverage of personnel resources and mutual relationships between individual levels of management. In the context of proposals for a financing model for biosphere reserves (BR) in the Slovak Republic 2 alternative proposals for financing biosphere reserves in Slovakia were created. One

The model variant takes into account the current legal status and legal personality of national parks and protected landscape areas, which overlap with biosphere reserves in the Slovak Republic. The second variant works with the optimal version of financing biosphere reserves, assuming their recognition as a full-fledged partner, e.g. on the basis of a partnership agreement. These 2 models also define the possibilities of business models that can be applied in the conditions of Slovak BRs. However, a very limiting factor is the non-existent legal personality of biosphere reserves, or rather the non-existence of an institution that would represent them (except for national parks, which often have different priorities than BRs). The exception is BR Poľana, where the Coordination Council of BR Poľana has legal personality as a civic association, which is why it was chosen as an example for the preparation of a partnership agreement.

Part of the implementation of this goal is also the implementation of research in foreign biosphere reserves on the European continent, within which it was possible to obtain original data on the functioning of biosphere reserves in 15 European countries, specifically on the legal anchoring of BRs, their competencies, BR actors, the fulfillment of the goals of the 2030 Agenda through BRs, strategic planning of BR development and financing of BRs. But also the implementation of study trips in foreign biosphere reserves. In 2022, a study trip was carried out to the selected biosphere reserves: BR Julian Alps and BR Skocjan Caves Park – Karst and BR Mura as examples of good practice in Slovenia. In 2023, a visit to the partner biosphere reserve BR Vienna Forest was carried out in order to learn about examples of good practice and exchange knowledge of members of the research team of the MBU and ŠOP SR with partners from Austria.

The meeting was attended by representatives of the Austrian MAB Committee, headed by the chairwoman, scientists from the Austrian Academy of Sciences and representatives of the Vienna Forest Biosphere Reserve. In 2024, a foreign study trip to the Czech Republic was carried out. Members of the delegation met with a representative of the Ministry of the Environment of the Czech Republic in Prague. The topic of the meeting was the setting up of the functioning of the Czech committee and a demonstration of good practice from the Slovak Republic. The discussion focused on the creation of the statute of the national committee of the MAB Program, the periodic evaluation of the Biosphere Reserves, as well as the management of biosphere reserves in Slovakia and the Czech Republic. Other meetings took place in the Dolní Morava Biosphere Reserve. The key topics were the management of the Biosphere Reserves in the form of coordination councils with legal personality, and the periodic evaluation of biosphere reserves. In order to establish international cooperation and exchange of experience in BR management, mutual communication was also developed with the Portuguese Biosphere Reserve (Paul do Boquilobo and Berlengas BR) represented by Luis Carreira dos Santos from the Instituto Politécnico de Tomar.

In addition, all developed project outputs were continuously consulted with members of the Slovak Committee for the Intergovernmental Programme Man and the Biosphere and with foreign experts, e.g. with experts from UNESCO's World Network of Mountain Biosphere Reserves (V. Piscová), Biosphere Reserves Institute of HNE Eberswalde within the framework of the workshop on Research in European UNESCO Biosphere Reserves.' (13 – 16. 2. 2024, Sýkorová), within the framework of the Euro MAB meeting (3.

– 7. 6. 2024, Miřová, Piscová, Turayová) with experts from the Agency for Nature and Landscape Protection, Prague, Czech Republic (Urban), experts from the Vienna Forest Nature Reserve.

4. to build awareness among the professional and lay public about the issues being addressed, to popularize the project results and to mutually share knowledge, ideas and experiences with actors from the public, private and non-profit sectors in the form of workshops, conferences, public discussions, lectures, conference papers and high-quality research materials (the project's own website, monograph, scientific papers in indexed and peer-reviewed journals, recommendations for policy in the given area, etc.).

As part of the popularization activities, a website was created for the project under the administration of ŠOP SR, where information about project activities, outputs and events was continuously published. During the project, 2 large project workshops were organized every year, always provided by a different project partner, in the territory of a different biosphere reserve. The project workshops presented the ongoing outputs of the project, but in addition, local stakeholders, experts in the field, representatives of ministries, etc. were invited in order to obtain relevant feedback and to co-create project outputs in a participatory manner, which is one of the main principles of the functioning of biosphere reserves.

Given that several team members are also members of the Slovak Committee of the UNESCO "Man and the Biosphere" (MAB) program, the Committee was involved in the project throughout the entire project period.

by commenting on project outputs, making suggestions for improving project implementation, etc. Project activities were also presented within the World Network of Mountain Biosphere Reserves (V. Piscová) and the European Network of Biosphere Reserves (Euromab, V. Piscová, L. Miřová, M. Turayová).

During the project implementation, as part of the dissemination of project outputs in the Pořana and Tatry biosphere reserves, meetings were held with stakeholders who were familiar with the project activities. These activities were also presented to the UNESCO Partners Forum.

As part of awareness-raising in schools, a series of lectures by employees of the Pořana Protected Landscape Area (PLA) was held at Matej Bel University using various interactive teaching techniques focused on understanding the importance of biosphere reserves, their specificities, participatory management and their role in local and regional development in the subjects Participatory public policy making, Culture and creativity in regional development, Rural development (documented in previous annual reports), as well as integrating the attitudes and opinions of young people into the creation of the Pořana BR development strategy under the management of the Pořana PLA staff.

Among the significant dissemination outputs of the project is the published scientific book Biosphere Reserves in Slovakia. What next? (<https://repo.umb.sk/items/0a13778d-c651-42ab-afd5-0f1aeff7b95>), which is one of the main publication outputs of the project. The publication cross-sectionally connects all key topics of the researched issue and was published in electronic and printed form. The publication was/is distributed to all biosphere reserves in the Slovak Republic, members of the Slovak Committee of the UNESCO "Man and the Biosphere" (MAB) program, the Ministry of the Environment of the Slovak Republic, the Ministry of Foreign and European Affairs of the Slovak Republic, or other relevant partners.

Following the scientific book, a publication was created aimed at building awareness of the importance of BR in the context of the 2030 Agenda, published in electronic form in 2025 by a collective of authors from the project team.

The project outputs were presented at the final scientific event of the project in the form of a field workshop The Future of Biosphere Reserves in Slovakia, which took place on May 13, 2025 at the premises of the LS in Kyslinky. The workshop was attended by representatives of partner organizations with partners in the BR. The workshop presented the project outputs with an open discussion. The field workshop included a tour of the Pořana BR and a meeting with representatives of municipalities whose cadastres belong to the Pořana BR. (Hriřová, Hrochoř). The output of the workshop is also a processed professional material with the same name of the workshop summarizing the content of the workshop.

Other activities that can identify a contribution to the achievement of a given goal include active participation and promotion of the project at events organized by biosphere reserves, such as the Open Day of the Pořana Biosphere Reserve, the Partners' Forum, etc.

To continue investigating the issue, a new project proposal entitled APVV-24-0101Biosphere reserves as living laboratories was developed and submitted within the general call of APVV with a call deadline of February 7, 2025 with project partners ŠOP SR, Constantine the Philosopher University, Faculty of Natural Sciences, where ŠOP SR is also the recipient of the project outputs.

In addition, the quality of the projects' dissemination is evidenced by numerous high-quality publication outputs of the projects and contributions presented at international scientific events presented in reports - Project outputs and benefits on an annual/semi-annual basis.

During the entire project, 6 articles were published in peer-reviewed foreign journals (plan 2), 18 scientific papers were published in peer-reviewed scientific journals and non-reviewed scientific journals and proceedings in the Slovak Republic (plan 9), 26 scientific papers in published peer-reviewed scientific and non-reviewed professional journals and proceedings abroad (plan 13), 2 scientific monographs (we are based on the breakdown in the APVV form). Thus, the plan of publication activities was significantly exceeded in number and quality. In addition, another 5 articles are in the review process in renowned publishers and quality imprinted journals (e.g. Springer, Taylor and Francis).

In connection with the project, 3 diploma theses were conducted and successfully defended, including the thesis of M. Vavrúšová received an international award and 2 bachelor's theses. 3 doctoral students were actively involved in the project (1st year – Z. Fulajtárová, from the 2nd year – M. Vavrúšová, the entire period Jakub Melichar).

Given the above fulfillment of the partial goals, we can declare that we have managed to fulfill the main goal of the project.

Given that all project outputs are specifically oriented towards the needs and management of biosphere reserves, they are primarily available to all biosphere reserves in the Slovak Republic that actively work with them.

3. List of project outputs and benefits for the last year (see Annex VPP)

The publication activity plan for the first year of 2025 was filled with 13 publications, of which 2 articles in current journals, 2 articles in domestic scientific journals, 2 articles in scientific journals abroad, 4 scientific papers published in non-reviewed professional journals and proceedings of the Slovak Republic (they are also actually reviewed, but they are proceedings), 2 scientific papers published in non-reviewed professional journals and proceedings abroad (they are also actually reviewed, but they are proceedings).

In addition, another 5 articles are in the review process at renowned publishers and high-quality impact journals (e.g. Springer, Taylor and Francis).

7 application outputs were completed, which follow up on activities in 2024 focused on research abroad, but also on strategic starting points for planning the development of Slovak BRs.

As already mentioned, the main output is a collective monograph of the project and also a guide on the importance of BR in the context of the 2030 Agenda.

The plan was not met in terms of the number of citations, which is unrealistic in half a year, both due to the length of time the contributions were published and the shortness of the reporting period. On the other hand, some citations have already appeared continuously and it is likely that their number will increase.

Among the benefits in the area of education and popularization, we can include the involvement of students in the project, in the form of participation in data collection within the Slovak Karst and Eastern Carpathian Mountains Regional Nature Reserves and the completion of 1 dissertation directly related to the project's issues.

Other activities include a final workshop for partners from the territory in the case of BR Poľana in June 2025.

In an effort to further develop the research of the problem being addressed, a new project APVV-24- was submitted. 0101Biosphere reserves as living laboratories within the framework of the APVV general call.