

# PUBLIC INSTITUTION NATURE PARK MEDVEDNICA OUTPUT FACT SHEET

Pilot actions (including investment, if applicable)

Version 2

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Lead partner	Regione Emilia-Romagna - Servizio Aree Protette, Foreste e Sviluppo della Montagna
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Investment number and title (if applicable)	
Responsible partner (PP name and number)	Public Institution Nature Park Medvednica Javna ustanova "Park prirode Medvednica", PP09
Project website	<a href="https://www.interreg-central.eu/Content.Node/CEETO.html">https://www.interreg-central.eu/Content.Node/CEETO.html</a>
Delivery date	11.2019.

Summary description of the pilot action (including investment, if applicable) explaining its experimental nature and demonstration character

Since the very beginning the Public institution "Nature Park Medvednica" recognized a predominant function of the Nature Park Medvednica in the Croatian protected areas system - the communication with the general public. In June 2013, Public institution NPM founded Nature Park Medvednica Stakeholder's Forum because of the nomination for the European Charter for Sustainable Tourism. The Stakeholder's Forum created smaller projects whose goals and expected results were to be useful to all stakeholders, including the visitors. The members of the Forum are various institutions for the protection of nature and cultural heritage, tourist sector, fire brigades, police, hotel and catering industry and the local community. Members of the Forum were also involved in preparing of the Sustainable Tourism Action Plan.

The Pilot area issues are primarily related to the visitor's overload and to the generated traffic, especially during the weekend and ski season, resulting in environmental problems within the Pilot area as well as in the surrounding area - "buffer zone". During winter the Pilot area is particularly attractive due to the ski centre that attracts tourists from Zagreb, surrounding area and Krapina-Zagorje county, but also from the wider area. The most important ski competition FIS "Snow Queen Trophy" is a two-day event during which about 15,000 people visit the Pilot area. A large number of visitors at the Pilot area also generates a large number of cars and other motor vehicles. Lack of parking spaces as well as uncontrolled number of cars represent one of the biggest problems in the winter period for the entire recreational complex within the Pilot area, but also an environmental pressure (pollution of air, soil, etc.) and dissatisfaction of visitors during spring and autumn weekend.

Implemented monitoring activities are grouped in three pilot actions:

- monitoring of visitation impacts on nature and environment
- survey of visitors' profiles, habits and opinions
- car counters and surveillance cameras data analysis

The planned monitoring of selected indicators of visitation related pressures on nature and environment was implemented in the period between June and September 2019. The research was focused on the peak area of the Park, as well as the broader area influenced by intensive visitation. The selected locations were: the ski track Crveni spust, artificial water retention (Jezero), surrounding forest area and watercourse Bistra. Hunjka meadow, as a location of lower visitation pressure, was selected as a control point and as such, used for benchmarking against samples collected from the locations under intensive visitation pressures. The selection of particular research locations was proposed during the first two stakeholders' meetings and was further confirmed after the field visits. The Public institution got the relevant insight on the natural and environment status after the thorough analysis of the indicators such as soil, vegetation, water, air, climate changes, frogs, bugs and stone cryfish, etc.

The visitor survey was conducted in January and February 2019 during ski season.

The survey included a sample of 406 respondents by direct questioning (field surveying i.e. oral survey at a frequent location within the Pilot area) and by indirect questioning (on-line survey, gathering surveys by distribution at other locations where area users are gathering (ski clubs and catering facilities). The data was analysed in an excel table and the results showed that the largest number of Pilot area users came from Zagreb (76,8%), which was expected and in accordance with previous research. The information collected regarding the arrival mode refer to the direction from which they reached the peak zone, the means of arrival (personal car, public transport, organized transport etc.) and the reasons for the selection, parking places (whether they use public parking lots or park along the road, how many of them come to the peak zone by car, how many of them park at the foot, etc.), number of

people in the car and whether they come with children. Considering the issues of this pilot area that are primarily related to traffic, the survey collected information on whether visitors are bothered by the number of cars at Medvednica, i.e. does it reduce their experience and pleasure of visiting the NPM. 63% of respondents answered affirmatively. Road traffic intensity monitoring was conducted with the help of the road traffic counters, installed in November 2018 on two locations within the Park. Counter 1 was installed on the one-way entry road near the Park headquarters, with the aim to monitor all road traffic coming from Zagreb via Bliznec and going to the Park peak zone. Counter 2 was installed in the peak area, near the two-way main road in the vicinity of Hunjka, that goes in the direction of Krapina-Zagorje county.

Road traffic counter data analysis covers the period from 1 December 2018 until 30 September 2019. It is important to emphasize that, in accordance with Decree of City Office for the Local Self-Administration (City of Zagreb), the road traffic has been banned at the Sljeme road section from Bliznec (Pilana Bliznec) to Stara Lugarnica, every week day from 09:00 - 16:00 hours in the period from 18 February until 15 November 2019. In the mentioned period it has been possible to cross Sljeme Road two times per day, at 11.30 and 13.50 hours, following the regular public transport.

### NUTS region(s) concerned by the pilot action (relevant NUTS level)

Public institution Nature Park Medvednica has a headquarters in Sub region NUTS3 in City of Zagreb. All area of the Park is situated in Region NUTS2, Continental Croatia (City of Zagreb, Krapina-Zagorje and Zagreb county). The Sustainable Tourism Action Plan, which was developed in the framework of the CEETO project, addresses the area of Nature Park Medvednica and not the entire NUTS2 Region.

### Investment costs (EUR), if applicable

The investment included the following costs:

- a) Purchase of the electronical car counters and surveillance cameras - 10.637,81 €
- b) The Sustainable Tourism Action Plan including the survey of visitor's profiles, habits and opinions - 7.000,00 €
- c) Monitoring of visitation impacts on nature and environment -10.296,77 €
- d) External expertise for producing the Pilot Action Final Report - 5.000,00 €

Added value to the project is organized "Open days" in June 2019, promotion of CEETO project and PA - 5.000,00

### Expected impact and benefits of the pilot action for the concerned territory and target groups and leverage of additional funds (if applicable)

In the future, Public Institution is planning to continue with the Pilot Actions in accordance with the human resources and investment capacity. The management activity will be developed together with the relevant stakeholder and their responsibility (especially due to possible congestion due to the heavy traffic). A cable car is going to be in use in 2020. The cable car is a valuable solution for the traffic issues according to the recent history. It was in use until 2007 and lot of visitors had used it to get to the peak zone.

The car counters are continuously collecting data. Those will be of help in the future and for restricting the traffic to the peak zone of the Park. Restrictions will be discussed together with the City of Zagreb since it is in charge of the cable car and main road to the Medvednica Nature Park.

Working together with the Croatian Ski Association, the Public institution achieved important management activity of continuous water and soil monitoring (microbiological and chemical parameters).

In general, pilot actions aim to increase the use of public transport and to reduce congestion and traffic jams; to increase the use of bicycles or to get to the PA by foot (Medvednica Nature Park has more than 70 trails); to raise visitors' awareness and sensitivity for the natural and environmental values.

### Sustainability of the pilot action results and transferability to other territories and stakeholders.

Working together with the stakeholders, local government and inhabitants is very demanding, but it is crucial in our PA. More than 1,2 million inhabitants are living in the Medvednica Nature Park surroundings. Zagreb, the capital of Republic Croatia is on the south part of the Park with all kinds of infrastructure and lights by night, inhabitants that have a big impact and pose a threat and make pressure to the PA.

Meetings and cooperation, as well as visitors' surveys helped us to raise awareness among the stakeholders.

Future brings more opportunities for better cross-sectorial cooperation. Public institution recently held a presentation on the Sustainable Tourism Action Plan at the Kopački rit Nature Park at the 8th International Symposium called "KOPAČKI RIT JUČER, DANAS, SUTRA 2019." The main focus of the presentation was cooperation among the stakeholders and their involvement in the CEETO project activities. Thus, participants from different fields and sectors were introduced to the methods and necessary steps taken in the creation of the Sustainable Tourism Action Plan.

### Lessons learned and added value of transnational cooperation of the pilot action implementation (including investment, if applicable)

The most beneficial value of the pilot action implementation is improving the cooperation of the PA management with stakeholders from different sectors such as tourism, skiers, nature conservation, faculties, education, local government etc. Stakeholders and specific people are necessary for the development and implementation of the pilot actions. Also, the big effort is needed to encourage the main stakeholders for their participation within the actions and activities. The best way is to set a common goal. At the same time, it is very important to motivate

stakeholders in the Park to protect the nature area itself, flora and fauna, geo-diversity and all components of the environment, air, landscape, soil and water. The CEETO project implementation is a part of the Public Institution's Management Plan.

The Open Day event held on 2nd June 2019 added a special value to the CEETO project activity. The main topic of this event was Accessibility and Inclusion of All Visitors and aimed to remind Park visitors there are many persons with disabilities that face a challenge when they want to visit the Park. For this reason, visitors were invited to get to the Park by public transportation, on foot or by bicycle. Several institutions working with people with disabilities (blind, mental problems, physical disabilities) had the opportunity to present their work and their projects. An educational guided tour along the Forest trail Bliznec (trail adapted for people with disabilities) was organized for persons with disabilities. Lectures on nature protection were organized by experts for caves and bats, as well as by experts for streams and cry fish (*Austropotamobius torrentium* (Schrank, 1803)). Those included the Faculty of Science students.

**Contribution to/ compliance with:**

- relevant regulatory requirements
- sustainable development - environmental effects. In case of risk of negative effects, mitigation measures introduced
- horizontal principles such as equal opportunities and non-discrimination

In the case of awareness-raising measures, stakeholders' meetings were held having the goal to raise awareness of the protected nature value.

The car counter at the entrance of the PA counts vehicles going to the peak zone. One good management mechanism for PA and the city of Zagreb as the relevant stakeholder, is reduction of the vehicle number going to the top of the mountain. Visitors will be encouraged to use public transport or to go by foot.

The Open Day event held at the 2nd June targeted people with disabilities since the main topic was Accessibility and Inclusion of All Visitors. Several disability institutions (blind, mental problems, physical disabilities) were presenting their work and activities. The event was held at the entrance of the PA, at the Forest trail Bliznec, the first trail in Croatia which is adapted for people with disabilities. At the entrance, there is also a Natura 2000 labyrinth with species and habitats listed on the ecological network Natura 2000, as a part of the HR2000583 Medvednica. This entrance zone was earlier renovated using the funds of another project called Natura 2000 Integration Project, co-financed by IBRD.

**References to relevant deliverables (e.g. pilot action report, studies), investment factsheet and web-links**

**If applicable, additional documentation, pictures or images to be provided as annex**

For further information please see the listed documents below:

- D.T2.2.3 Sustainable Tourism Action Plan
- D.T2.4.1 Monitoring Workplan
- D.T2.4.2 Report on the purchase of thematic equipment
- D.T2.4.3 Report on monitoring workplan implementation
- D.T.3.1.1 General and specific questionnaire and interview
- D.T2.5.1. Pilot Actions Final report

Monitoring of visitation impacts on nature and environment:

- Soil and edaphic indicators 8/19/SS
- Freshwater analysis - microbiological parameters 9/19/SS
- Climatological indicators (10-year analysis based on data collected by CHMI) 10/19/SS
- Streams and wells fauna - stone crayfish 11/19/SS
- Streams and wells fauna - yellow-bellied toad and Italian crested newt 12/19/SS
- Vegetation mapping - determination of bioindicator species of meadows 13/19/SS
- Invertebrates indicators - *Rosalia longicorn* and long-horned beetle 14/19/SS



Figure 1. Work field at the artificial water retention Jezero, collecting yellow-bellied toad



Figure 2. Ski slope and artificial water retention Jezero



Figure 3. artificial water retention Jezero and ski slopes



Figure 4. Collecting samples of the soil and stone crayfish



Figure 5. Presentation at the 8. Symposium Kopački rit jučer, danas, sutra

Protected Areas Open Days at Nature Park Medvednica, Croatia

<http://interreg-central.eu/Content.Node/Protected-Areas-Open-Days-at-Nature-Park-Medvednica--Croa.html>

<https://www.vecernji.hr/zagreb/po-prvi-puta-otvorena-vrata-medvednice-1323509>

<https://www.in-portal.hr/in-portal-news/in-mreza/18406/otvorena-vrata-medvednice-poticanje-inkluzivnostisvih-posjetitelja-zasticenih-podrucja-u-hrvatskoj>

<https://www.sensa.hr/clanci/najave/otvorena-vrata-medvednice>

<http://www.infozagreb.hr/dogadanja/zagreb-za-djecu/otvorena-vrata-medvednice>

<https://narod.hr/kultura/park-priode-medvednica-poziva-posjetitelje-na-dane-otvorenih-vrata-2-lipnja>