



# ACTION PLAN HAJDÚ-BIHAR COUNTY



**Night Light**  
Interreg Europe



European Union  
European Regional  
Development Fund

November 2019





# NIGHT LIGHT PROJECT

“Improving regional policies to reduce light pollution and protect and valorise dark night skies”

## ACTION PLAN OF HAJDÚ-BIHAR COUNTY GOVERNMENT

Debrecen  
November 2019



## Part I – GENERAL INFORMATION

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**Project:** NIGHT LIGHT - Improving regional policies to reduce light pollution and protect and valorise dark night skies

Partner organisation concerned: HBCG – Hajdú-Bihar County Government

Other partner organisations involved (if relevant): -

Country: Hungary

NUTS2 region: Észak-Alföld

NUTS3 county: Hajdú-Bihar

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## Part II – POLICY CONTEXT

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The Action Plan aims to impact:

**Investment for Growth and Jobs programme**

European Territorial Cooperation programme

Other regional development policy instrument

Name of the policy instrument addressed:

Territorial and Settlement Development Operational Programme (TOP) 2014 – 2020

Further details on the policy context and the way the action plan should contribute to improve the policy instrument:

As a general background for state-of-the-art, Hortobágy National Park in Hajdú-Bihar County obtained Dark Sky Park status from International Dark Sky Association (USA) in 2011, acknowledging the pristine dark skies of the area. The Dark Sky Park's significance is related to the undisturbed night time landscape, the shepherd tradition related to the starlit skies and the protection of the high biodiversity, especially the great number of migrating bird species and special, nocturnal insect species. It is notable that many of the important breeding and nesting bird species (geese, crane, crakes etc.) and other species, especially many rare insect species are sensitive to light pollution.

Being a Dark Sky Park is an important tool to protect the nocturnal wildlife habitats and the landscape values of the Hortobágy which as an outstanding and unaltered wilderness area in the Great Hungarian Plain, in the middle of Europe. The Park has a cooperation agreement with local stakeholders and with local and national conservation and astronomy NGOs to protect the area's dark sky values. The Park included the articles of the Lighting Plan of the Dark Sky Park to its Management Plan to protect the natural and scenic values of the undisturbed night time environment.

The lighting regulations and the zoning gives us a possibility to control artificial lights within the park. Further work with local communities is still needed to reduce light emissions outside of the park.

The National Park organizes night time stargazing walks, special interpretation programs related to Dark Sky Park values and good lighting practices. There is a high interest by the general public to attend these night time adventures. Astronomy became part of the park's Field Study Center's curriculum. A public astronomical observatory is also part of the Center.

To further develop this potential for eco/astrotourism, the County now intends to encourage other regional actors (public, private) to develop concrete initiatives for sustainable tourism in the Dark Sky Park.

Focusing on the policy addressed, the Territorial and Settlement Development Operational Programme (TOP) 2014 - 2020 is an ERDF funded, centralised Operational Programme for territorial development of Hungarian regions, aiming at economic development, job creation and strengthening local identity. We aimed to improve implementation of following priorities (both linked to T.O.6):



Priority 1: Sustainable tourism development - Specific Objective 1B: Utilising endogen potential of territorial character for tourism to raise employment

Priority 2: Enterprise friendly territorial development, incl. improvement of green areas and environmental protection - Specific Objective 2A: Fostering economic development and population retention with initiatives for (...) decreasing environmental impact on settlements and decreasing amounts of pollutants.

Priority 1 contains measures in terms of tourism development of the county. Settlements can implement destination developments, improvement of tourist attractions, without harming the environment. This includes valorisation of dark skies in areas where this can be a tourist attraction, such as Hortobágy Dark Sky Park in Hajdú-Bihar county.

Tourism development in this kind of vulnerable areas requires careful balance of the need for developments, the need for tourists and the need for environment protection.

Priority 2 contains all incentives and development possibilities that a city or a town could utilize to improve the environment of settlements and to implement green concepts. This includes development of green areas, energy efficiency actions and other interventions to decrease environmental pressures. These developments should aim at the improvement of economic environment that could attract new investors to the area.

Regarding Priority 1, we aimed to further develop sustainable tourism in Hajdú-Bihar County, Hortobágy National Park, building on its Dark Sky Park status. Our action plan was planned to focus on introducing new initiatives for environmental and ecotourism, development of event infrastructures that fit the Dark Skies concept and combine development with good protection.

Linked to Priority 2, we planned to define actions for cities around Hortobágy National Park and other vulnerable environmental sites in the county to maintain dark skies in the area by implementing street lighting in an efficient way.

Hajdú-Bihar County Government together with the regional stakeholders, aimed to improve implementation of the TOP 2014-2020 by introducing new projects and initiatives that can be realised in the region with the support of the TOP.

By the end of Phase 1, it became clear that due to progress of national operational programmes, there is no option to introduce new projects as *there are no further calls within this programming period*. In order to have a direct impact on the current policy, we took the advantage of the recent project of Hajdú-Bihar County Government (TOP 5.3.2 – *Strengthening county identity – Following “Hajdú” traditions* – a project financed by and implemented within the addressed policy).

**Within this project, there is a strongly defined intention of Hajdú-Bihar County Government to build the theme of shepherd's culture and traditions linked to starry sky into the activities to strengthen county identity, to protect and preserve cultural heritage and utilize its potential based on storytelling.**

The regular smooth and strong cooperation with the targeted policy's responsible body, the Managing Authority for Regional Development Operational Programmes, Ministry of Finance strongly contributed to the creation of a mutually appreciated, well-based action plan document being applicable even beyond the project lifetime.



That's why we are going to build Night Light's lessons learnt into the above-mentioned TOP project, strongly collaborating with its Managing Authority to provide the opportunity for the future wider utilization of the results.

Beyond this direct link to the policy addressed, based on the systematic and collaborative efforts of Hajdú-Bihar County Government and the Night Light regional stakeholder team, there is a significant improvement in case of paying attention to light pollution and relevant professional recommendations concerning several policies:

- light pollution issues and astrotourism related topics *have been inserted* in the baseline document of the modification and the policy recommendation part of *Spatial Development Plan of Hajdú-Bihar County*; *specific zones are suggested to be designated* as "Dark Sky Park Zone" – the document is expected to be submitted for comments
- light pollution issues and astrotourism related topics *have been inserted to the comments of settlements' spatial and regional development plans by the county chief architect* so the theme of light pollution and astrotourism have been widely disseminated to pay local decision makers' attention on the importance of these issues
- as concerns astrotourism, the new ecotouristic attraction provided by the Hortobágy Dark Sky Park became a significant factor in the past years. At the same time – although astrotourism related activities have been built in the ecotourism offers of the Hortobágy National Park - utilization is still at low level and infrastructure also needs serious update and development
- one of the main experiences of recent years is that astrotourism and dark sky-related environmental education has been integrated in the national park offers, but it can be further developed and for this development the required human and infrastructural conditions should be created; furthermore, cooperation with other actors of the tourism sector also should be enhanced
- the Management Plan of the Hortobágy National Park's Natura 2000 natural areas of national significance has been amended by a separate chapter for light pollution
- there is strong intention at national level policy making to develop a specific Guideline on lighting practice for nature conservation bodies and national park directorates
- discussion on a new legal framework or regulation/law on lighting started
- Hortobágy National Park has been declared as part of the UNESCO-ICOMOS-IAU Astronomy and World Heritage list in 2018

The interregional learning process allowed stakeholders in Hajdú-Bihar County to identify proven practices from other EU regions and design an action plan for the improvement of tourism around Hortobágy Dark Sky Park and to further reduce light emissions from local communities.

The Peer Review event held in Debrecen in 2017 also provided a significant contribution through its main findings and recommendations.

In order to achieve the objectives defined within the project and utilize the value and potential of lessons learnt through the interregional learning process including the regular discussions with regional stakeholders, actions have been defined to adapt the selected good practices and peer review results.



Implementing the actions to be introduced will enhance the Territorial and Settlement Development Operational Programme's scope and impact on the county's performance in

- ✓ preserving its cultural heritage (darky sky, transhumance)
- ✓ strengthening regional identity and communities (shepherds' traditions)
- ✓ protecting natural values and habitats (national park)
- ✓ raising awareness concerning light pollution at several levels
- ✓ increasing the economic utilization of natural and cultural values in a sustainable way (astronomy-gastronomy, linking spa/wellness-national park/nature)
- ✓ creating a solid team of experts representing different sectors and levels to ensure the representation of light pollution and astrotourism in several relevant policies



## Part III – DETAILS OF THE ACTIONS ENVISAGED

### **ACTION 1. Utilizing dark sky as cultural heritage**

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Action 1 is dedicated to have direct impact on the targeted policy “Territorial and Settlement Development Operational Programme” through the implementation of the project called “Strengthening county identity – Following “Hajdú” traditions”.

Specific activities will be built in the process involving the members of the Night Light stakeholder group as well as the Managing Authority of the targeted policy.

As a result, an innovative new interactive travelling exhibition is planned to be established introducing the wonderful dark sky heritage of Hortobágy, the role it had on the life and work of shepherds and how they traditionally used this unique natural value.

This activity is going to be incorporated in the work plan of the TOP 5.3.2 project including the tasks to be done, the actors, the infrastructure and materials needed as well as the expected impact.

The costs of this activity will be covered by the TOP 5.3.2 project. Thanks to the engagement of the Hortobágy Starry Sky Park staff, high-quality expertise and experience will be built in and provided through the exhibition.

The exhibition is expected to impress visitors (first particularly local communities), to educate them on the plentiful past and traditions as well as the dark sky being the same as centuries ago. The process also intends to teach people how to preserve this heritage, what are the sustainable ways to use.

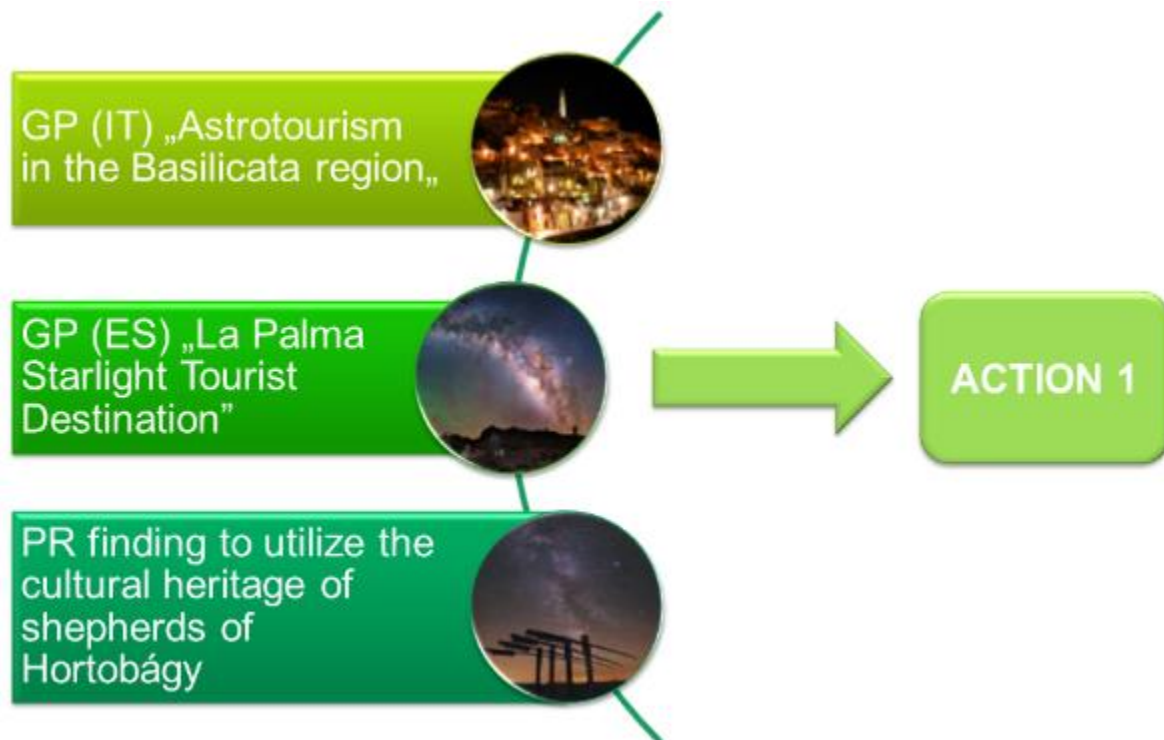
Direct beneficiaries include the citizens, communities of Hajdú-Bihar County, foreign visitors, decision makers well as entrepreneurs concerned. Indirect beneficiaries are communities at national level having similar values, national level policy makers and planning experts.

#### **1. Relevance to the project**

The action has been generated on the basis of 2 good practices identified and presented in the project and the main findings of the peer review held in Debrecen in September 2017:

- Good Practice “Astrotourism in the Basilicata region”
- Good Practice “La Palma Tourist Destination”
- Recommendation of peers to utilize the cultural heritage of shepherds of Hortobágy





### **Good practice “Astrotourism in the Basilicata region”**

***Lessons learnt from Basilicata Region, based on good practice defined in GP Directory and experienced during the Peer Review in Matera in 2018 and the interregional policy learning event in 2019***

In Basilicata, sky observation on winter and summer solstice have been organized: in cooperation with the National Research Group “Pedagogy of the sky”, they organize a night tour of the park along with *theatrical performances*, both for adults and children, aimed at mapping the stars and revive either the *ancient mythologies* and the *popular traditions* connected to the position of the stars. Transhumance is also part of the story – similar to transhumance tradition in Hungary, HBCG plans to take the benefit to build the story in its actions.

### **Good practice “„La Palma Starlight Tourist Destination””**

***Lessons learnt through the good practice defined by La Palma in the GP Directory and experienced in La Palma during the Peer Review event in 2018***

There are several nice examples implemented in La Palma in connection with dedicated astro-tourism offers; different strategic and touristic marketing plans, through the years, conclude that La Palma’s tourist development must be linked, not only with the mild weather and the beaches, but with its exceptional dark sky.

This idea inspired the representatives of Hortobágy National Park to link different values and potentials of dark sky and traditions/culture, to make the communities living in Hajdú-Bihar County recognize these values in a clearly understandable way.



## **Main findings of the Peer Review, Debrecen, September 2017**

### ***Recommendations of Roberto Rodriguez, Susana Malon, Ana Castañeda, Ana Garcia, Laurent Spithoven, Carole Ewert, Peter Christensen, Sjon De Haan***

As recognized by the Peers, Hajdú-Bihar County has the tourist resources needed to create an astrotourism product: it has traditions related to the sky and the course of the stars, it has a National Park certified with the Dark Park category, it has a long number of legends related to the sky.

On the other hand, apparently there is a link to other innovative touristic projects and cultural resources (e.g. shepherd's orientation), what certainly bring opportunities for Rural development: actually, searching for new economic opportunities.

Based on the above-mentioned statements and recommendations, county representatives in strong cooperation with stakeholders discussed the opportunities to find the point to link cultural heritage, dark sky and storytelling. The TOP policy brought a great potential to exploit so it is planned to build such actions in the relevant project.

## **2. Nature of the action**

- ✓ A1.1 Design the framework of a travelling exhibition introducing shepherds' culture, its traditions and link to dark sky
- ✓ A1.2 Establishment of travelling exhibition
- ✓ A1.3 Introducing the exhibition in several locations around the county
- ✓ A1.4 Monitoring the implementation process of the action

## **3. Stakeholders involved**

- ✓ Ministry of Finance - Managing Authority for Regional Development Operational Programmes
- ✓ Ministry of Agriculture
- ✓ Municipalities of Hajdú-Bihar County
- ✓ General Assembly of Hajdú-Bihar County – official body of the county to approve the activities planned
- ✓ Hortobágy National Park Directorate
- ✓ County Office of Hungarian Government – Department of Environment and Nature Protection
- ✓ Hungarian Association of Astronomy

## **4. Timeframe**

- ✓ July 2019 – February 2021



## 5. Costs

- ✓ establishment of exhibition, preparing (design and print) informative materials, transporting the exhibition, staff cost: about 30.000 EUR

## 6. Funding sources

- ✓ Territorial and Settlement Development Operational Programme (TOP 5.3.2 – Strengthening county identity – Following “Hajdú” traditions)
- ✓ staff cost of Night Light project particularly in the design and monitoring of Action 1 (A1.1 and A1.4)



## ACTION 2. Creating the framework for good lighting

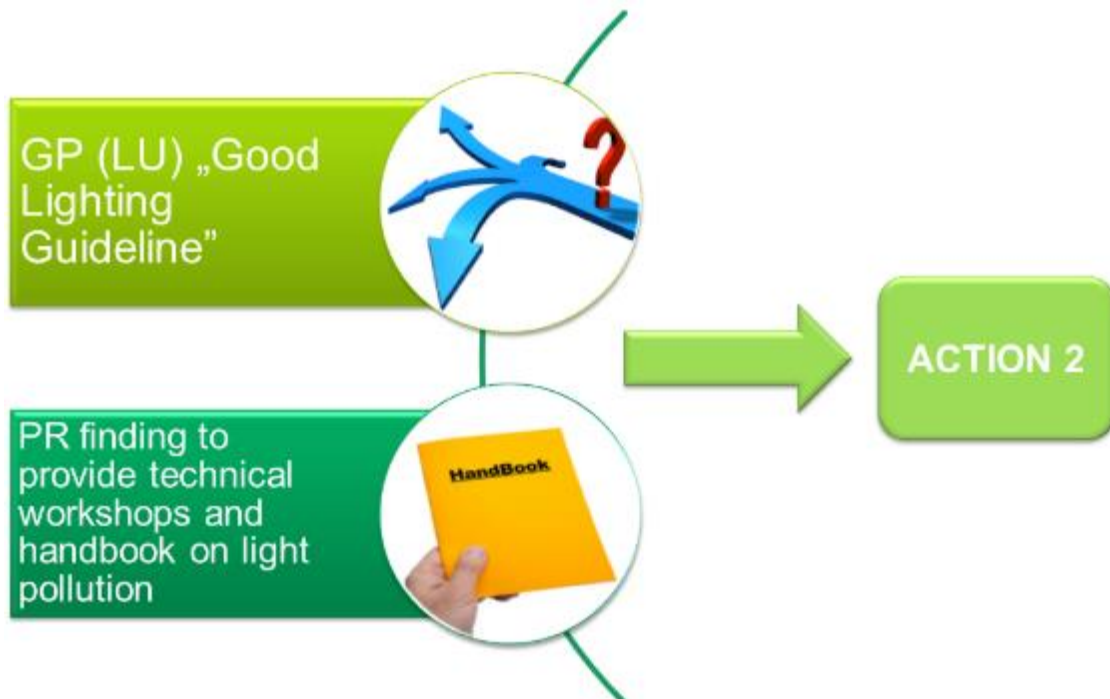
Action 2 is dedicated to the provision of a newly updated comprehensive guidance on good lighting solutions for relevant actors, particularly for nature conservation bodies and national parks as well as to insert light pollution issues in relevant policies.

During the stakeholder meetings organized in the county, it was found that there is a significant number of engaged experts and professionals including enterprises, service providers, policy and decision makers to put light pollution on the agenda and take the role to insert good and applicable recommendations and practices in policy documents of different sectors and bodies. The process is expected to start both at regional and national level.

### 1. Relevance to the project

The action has been generated on the basis of a good practice identified and presented in the project and the main findings of the peer review held in Debrecen in September 2017:

- Good Practice "Good Lighting Guideline"
- Recommendation of peers to provide technical workshops and handbook on light pollution





## **Good practice “Good Lighting Guideline”**

### ***Lessons learnt through the Peer Review event in Naturepark Our, Luxembourg in 2018***

Although the concrete law is still missing in Luxembourg, but there were significant preliminary preparations done to develop and publish good lighting guidance (Leitfaden „Gutes Licht“ im Außenraum für das Großherzogtum Luxemburg, 2018).

Considering this practice beyond other relevant and already studied sources, relevant ministries and policy making actors made it clear that they are open to follow-up the existing process of this field and apply some findings and content of the document as a resource for a similar national guidance or handbook.

## **Main findings of the Peer Review, Debrecen, September 2017**

### ***Recommendations of Roberto Rodriguez, Susana Malon, Ana Castañeda, Ana Garcia, Laurent Spithoven, Carole Ewert, Peter Christensen, Sjon De Haan***

As defined by Peers, the actual revision process of the county spatial plan is a unique opportunity to introduce high standard regulation criteria (e.g. zoning). This step would generate an additional legitimation to fix details (for technical/physical factors for the use of artificial light: light temperature, orientation, shielding, etc.) on a lower level (e.g. settlement spatial plan, settlement identity handbook, municipality decrees). Working on a legislation draft that involves municipal technicians, scientists, lighting manufactures, energy companies, ecological and dark sky associations, etc. in outdoor lighting based in the actual technology, taking care about international lighting recommendation.

Besides, it was recommended to plan and implement technical workshops for stakeholders on lighting issues and in the medium term to provide a Handbook on Light Pollution to get the basic knowledge and regulations.

Recognizing the value of these recommendations, both county and national level measures have been started.

## **2. Nature of the action**

- ✓ A2.1 Creating „Guideline on lighting practice for nature conservation bodies and national park directorates“ at national level
- ✓ A2.2 Building light pollution issues in county spatial planning through the revision of Spatial Development Plan of Hajdú-Bihar County
- ✓ A2.3 Setting up „Team for the Sky“ working group at county level involving national policy makers
- ✓ A2.4 Introduction of latest challenges, achievements and measures concerning light pollution and astrotourism for the General Assembly of Hajdú-Bihar County by the “Team for the Sky” working group; regular meetings at least once a year



### 3. Stakeholders involved

- ✓ Ministry of Finance - Managing Authority for Regional Development Operational Programmes
- ✓ Ministry of Agriculture
- ✓ Municipalities of Hajdú-Bihar County
- ✓ General Assembly of Hajdú-Bihar County – official body of the county to approve the activities planned
- ✓ Hortobágy National Park Directorate
- ✓ Bükk National Park Directorate
- ✓ County Office of Hungarian Government – Department of Environment and Nature Protection
- ✓ Hungarian Association of Astronomy
- ✓ Lighting Society of Hungary
- ✓ E.ON Electricity Supplier

### 4. Timeframe

- ✓ December 2019 – December 2021

### 5. Costs

- ✓ catering fees for group consultation (800 EUR)

### 6. Funding sources

- ✓ public funding through the governmental budget of Hajdú-Bihar County Government and Night Light project budget for RSG group consultation



### **ACTION 3. Strengthening astrotourism through special offers**

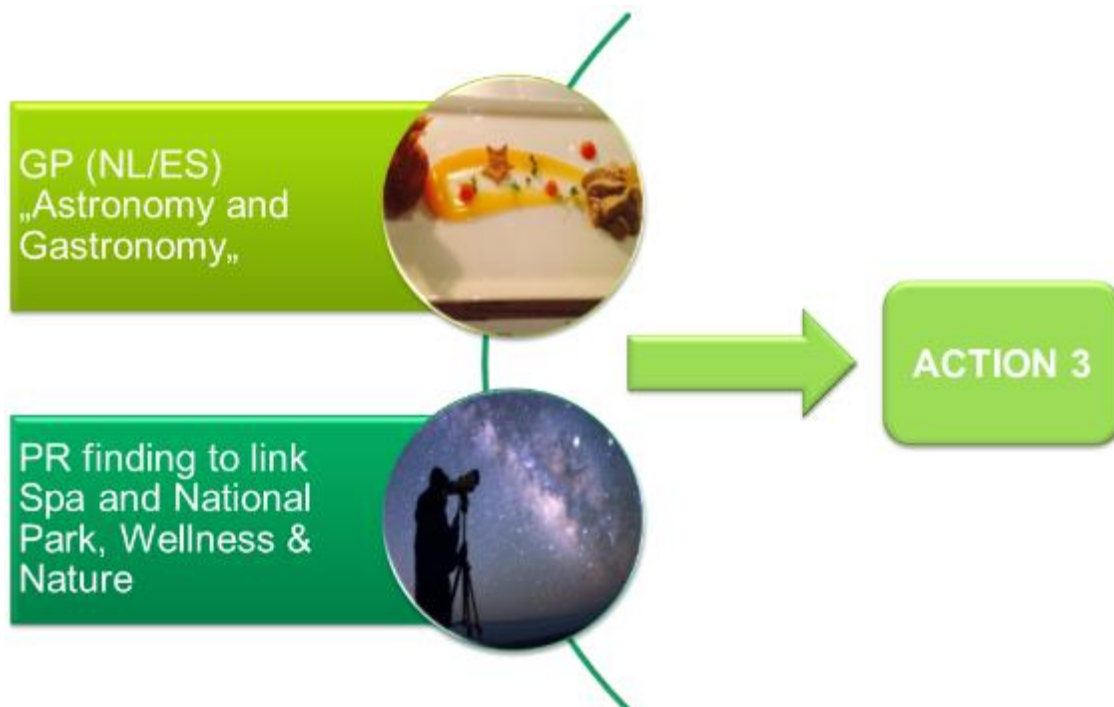
Action 3 is dedicated to the revision of current ecotourism offers provided in Hajdú-Bihar County related to dark sky.

Considering the traditional gastronomy culture and also the available spa services, there are several ways to link both to astronomy/dark sky related offers in order to create new, innovative, attractive and sustainable ecotourism offers involving different county actors including local entrepreneurs.

#### **1. Relevance to the project**

The action has been generated on the basis of a good practice identified and presented in the project in different partner events and the main findings of the peer review held in Debrecen in September 2017:

- Good Practice "Astronomy and Gastronomy"
- Recommendation of peers to link Spa and National Park, Wellness & Nature



#### **Good practice "Astronomy and Gastronomy"**

***Lessons learnt through Peer Review in La Palma in 2018 and Ávila in 2019***

The good practice of successfully linking astronomy and gastronomy has been realized by several Night Light partners including Ávila County Council, La Palma and Fryslan.



This practice has a really good and valuable potential in Hajdú-Bihar County based on the existing cooperation of Hortobágy National Park, Hortobágy Nature Protection and Gene Preservation Nonprofit Ltd. There is a great opportunity to visit endemic species, meet and discuss shepherds and enjoy a traditional meal while learn about the dark sky of the area.

### **Main findings of the Peer Review, Debrecen, September 2017**

***Recommendations of Roberto Rodriguez, Susana Malon, Ana Castañeda, Ana Garcia, Laurent Spithoven, Carole Ewert, Peter Christensen, Sjon De Haan***

According to the findings of the Peers, the spa sector of Hajdú-Bihar County can bring in new target groups that are interested in doing more than being in the Spa, they come outside the main season and go for a visit to Debrecen, spend one day and evening in the national park to experience the nature and learn about the stars. They learn about the way the herdsmen used the stars to navigate through Europe, somehow coming back to their/own roots.

The new target to be considered as potential could be some of the following:

- Traditional Spa guests
- City trippers from Western Europe, make the stay longer by offering a dark sky or a Hortobágy World heritage trip
- Cultural tourist, higher educated they want the story about regional traditions and legend
- Bird watching guests as Nature oriented guests
- Education guest, through offering various Astronomy courses

It is important to make the herdsman/shepherd and the grey cattle a centre stage of the promotion in order to easily connect the products (national park, dark sky, World Heritage, lake, Debrecen) to this story.

## **2. Nature of the action**

- ✓ A3.1 Formulation of „Astro-Gastro” tours on Hortobágy
- ✓ A3.2 Making the base for linking Spa, National Park, Wellness & Nature – preliminary plan to create/update current tourism offers

## **3. Stakeholders involved**

- ✓ Ministry of Finance - Managing Authority for Regional Development Operational Programmes
- ✓ Ministry of Agriculture
- ✓ Municipalities of Hajdú-Bihar County
- ✓ General Assembly of Hajdú-Bihar County – official body of the county to approve the activities planned
- ✓ Hortobágy National Park Directorate
- ✓ County Office of Hungarian Government – Department of Environment and Nature Protection





- ✓ Hungarian Association of Astronomy
- ✓ local enterprises/entrepreneurs being active in gastronomy and hospitality
- ✓ Spa operators of Hajdú-Bihar County

#### **4. Timeframe**

- ✓ December 2019 – November 2021

#### **5. Costs**

- ✓ design and plan new astrotourism offers (5000 EUR)
- ✓ catering fees for group consultation (800 EUR)
- ✓ development of structure of potential ecotourism offers linking wellness and nature (3000 EUR)

#### **6. Funding sources**

- ✓ public sources of Hortobágy National Park (central governmental budget)
- ✓ public funding through the governmental budget of Hajdú-Bihar County Government and Night Light project budget for RSG group consultation
- ✓ national and EU sources (potential new cooperation projects)
- ✓ private sources provided by local enterprises/entrepreneurs being active in gastronomy and hospitality



## Part IV – MONITORING PROCESS

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### Monitoring activities

Hajdú-Bihar County Government (HBCG) will monitor the implementation of the actions defined in this Action Plan to see the progress and determine the impact of the collaboration.

HBCG will check how the measures introduced are actually implemented and what results are experienced when actions completed.

Partners will continue the mutual learning process during the implementation phase of the action plan. “Exporting” and “importing” regions will be in continuous contact in order to successfully implement the defined actions and adapt the selected lesson learnt to other regions’ context.

HBCG will stay active during the monitoring phase:

- ✓ regular check of the state-of-the art of different actions will take place in every 3 months
- ✓ regular contact and common work will be ensured with involved stakeholders in case of each action
- ✓ relevant events organized within an action will be documented
- ✓ short evaluation report (max. 2 pages) will be compiled including the efforts done and the results achieved when an action is completed
- ✓ structured informal interviews will be applied with relevant actors (responsible policy makers, municipalities, nature protection bodies, enterprise representatives, etc.) in order to practically see the progress and to use monitoring information to adjust the implementation of actions for areas that are underperforming
- ✓ final monitoring report (3 pages) will be compiled by the end of Phase 2 including all actions completed, results achieved and impact on policy addressed in the AF
- ✓ at the end of each year HBCG will take part in interregional project meeting to discuss all regions’ achievements.



**NIGHT LIGHT** (Improving regional policies to reduce light pollution and protect and valorise dark night skies) project (2017-2021) brings together two significant challenges: the need to preserve dark skies and to utilize the potential they have in a sustainable way.

The project was planned to introduce packages of regional policy measures for each of the partner regions that will result in a lasting reduction of light pollution, the designation of nature areas where dark skies are protected and the introduction of new services and facilities to attract eco-tourism to these dark sky areas.

## Partners

- ❖ Province of Fryslân- Lead Partner
- ❖ Hajdú-Bihar County Government (HU)
- ❖ Avila County Council (ES)
- ❖ Nature Park Our (LU)
- ❖ Samsø Energy Academy (DK)
- ❖ BSC, Business support centre Ltd. (SI)
- ❖ Basilicata Region (IT)
- ❖ Matera-Basilicata 2019 Foundation (IT)
- ❖ Island Government of La Palma (ES)




The project has been co-financed by the European Union European Regional Development Fund (ERDF) and the Government of Hungary and made possible by the INTERREG EUROPE Programme

For further information about the NIGHT LIGHT project please visit:  
<http://www.interregeurope.eu/nightlight>



Date: 29 November 2019

Name: Zoltán PAJNA, President, Hajdú-Bihar County Government

Signature: 

Stamp of the organisation (if available):

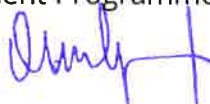


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On behalf of Managing Authority for the Territorial and Settlement Development Operational Programme (targeted policy instrument of the Night Light project for Hungary) we acknowledge the content of the Action Plan.

Date: 29 November 2019

Name: Gábor OLÁH, Deputy State-secretary, Ministry of Finance, Managing Authority for Regional Development Programmes

Signature: 

Stamp of the organisation (if available):

