



Night Light


Interreg Europe



European Union
European Regional
Development Fund

NIGHT LIGHT

GOOD PRACTICE DIRECTORY



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Table of contents

1. Introduction	5
1.1 Introduction	5
2. Designation and protection of dark sky places	6
2.1 Hortobágy International Dark Sky Park	6
2.2 Samsø – a dark sky island #1.....	8
3. Dark sky tourism	10
3.1 Night tourism near the Waddensea/ The Netherlands: ‘Night at the ‘Waddensea ...	10
3.2 Avila Starlight Tourist Destination	12
3.3 Observation Of Stars In Triglav National Park.....	15
3.4 La Palma Starlight Tourist Destination	17
3.5 Astrotourism in the Basilicata region	20
4. Lighting technology to reduce light pollution	22
4.1 Light Challenge	22
4.2 Technical training sessions and study visits	24
4.3 Samsø – a dark sky island #2.....	25
5. Public awareness and engagement on light pollution and dark skies	26
5.1 Memorandum of understanding ‘Dark Sky World Heritage Waddensea area’	26
5.2 DARK SKY: A campaign to reduce light pollution!	28
5.3 Astronomical sensitization workshops at annual Nature Park Feast.....	29
5.4 Samsø – a dark sky island #3.....	30
5.5 Social Light 20% - 19%	31
6. Other practices from dark sky places	33
6.1 Updating policy to include light pollution issues.....	33
6.1 Analysis on light pollution.....	35

1. Introduction

1.1 *Introduction*

2. Designation and protection of dark sky places

2.1 Hortobágy International Dark Sky Park

1. General information		
Title of the practice	Hortobágy International Dark Sky Park	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Hortobágy National Park	
Location of the practice	Country	Hungary
	NUTS 1	Észak és Alföld
	NUTS 2	Észak-Alföld
	NUTS 3	Hajdú-Bihar
2. Detailed description		
Night Light topic the practice is dealing with	<p>Select the relevant topics (one or more) related to this practice</p> <ul style="list-style-type: none"> - <u>Measures to designate and protect an area as a dark sky place (to protect the nocturnal wildlife habitats as well as the landscape values of Hortobágy)</u> - <u>Astro-tourism/dark sky tourism (e.g. nighttime stargazing walks)</u> - <i>Lighting technology to reduce light pollution</i> - <u>Public awareness and engagement on light pollution and dark skies (e.g. specific thematic programmes are available on Dark Sky Park values and good lighting practices)</u> - <i>Other [specify]</i> 	
Detailed information on the practice	<p>Hortobágy National Park earned dark sky status from the International Dark-sky Association: Hortobágy Starry Sky Park was announced as a Silver Tier International Dark Sky Park on 25 January 2011.</p> <p>Having the largest continuous native grassland in Europe while providing unique habitat for wildlife especially birds with its ancient marshland and alkaline flats, Hortobágy is recognized as a World Heritage site, Ramsar site and Biosphere Reserve. Hortobágy National Park as the first national park in Hungary (82.000 ha, designated in 1973) has specific importance: the area serves as home to 159 species of nesting birds while hosting 178 migrating species.</p> <p>To reduce existing light pollution endangering these species and to prevent further unfavourable changes, the National Park (as one of the biggest unpopulated areas in Hungary with dark, unpolluted starry sky) established the Hortobágy Starry Sky Park and started the process to be an internationally recognized dark sky park.</p> <p>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 regulation and zoning gives possibility to control artificial lights within the park.</p> <p>To increase public awareness and pay society's attention to the issue of light pollution, the National Park organizes stargazing walks and specific programmes on Dark Sky Park values as well as favourable lighting practices; besides, a public astronomical observatory is located in the Field Study Centre.</p> <p>The Park works in strong cooperation with relevant conservation and astronomy NGOs and local stakeholders to protect the area's dark sky</p>	

	values.						
Resources needed	To create the Dark Sky Park, specific physical and ecological research works have been done (mapping light pollution in the area, definition and study of special ecological issues, lighting inventory, tools to raise public awareness, etc.). Management Plan and Lighting Plan have been formulated. Dissemination materials, website were created. The work required professional human resources as well as appropriate financing. Financial support was provided by Norway Grants (2.900.000 HUF/about 10.350 EUR). Monitoring of former results also took place (2015) funded by Zöld Forrás programme (540.000 HUF/about 1.800 EUR granted - Green Source national grant for environment-related developments). Solid co-operation between parties concerned was an essential condition: National Park staff, Hortobágy Fish Farm, nature conservationists, astronomy association, different NGOs, University of Debrecen and the astronomy research institute of the Hungarian Academy of Sciences contributed to the successful implementation, Stakeholder forum was organised for farmers in the area.						
Timescale (start/end)	2009-2011						
Evidence of success (results achieved)	The designation of Hortobágy International Dark Sky Park efficiently contributed to prompt modifications in the national environmental protection law to include light pollution. The increasing number of visitors participating in stargazing walks, as well as measures proving the reduction of light pollution provide the basic evidence of success.						
Difficulties encountered/ lessons learned	<i>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</i>						
Potential for learning or transfer	<p>For the successful transfer there are specific criteria:</p> <ul style="list-style-type: none"> • starry sky park has to be protected, community-owned or community-used area managed by the state or local public body (e.g. national parks, other categories of protection) • good quality and undisturbed night sky is an essential • public lighting in the area means the use of appropriate luminaires • availability has to be provided for night visits <p>Hortobágy is the 2nd International Dark Sky Park in Hungary. The 1st one is Zselic Starry Sky Park. Two more new starry sky parks are ready to join the series of international dark sky parks: Bükk National Park and Balaton-felvidéki National Park both started the process.</p>						
Further information	http://hortobagy.csillagpark.hu						
	<table border="1"> <tr> <td>Name</td> <td>Mr. István GYARMATHY</td> </tr> <tr> <td>Organisation</td> <td>Hortobágy National Park Directorate</td> </tr> <tr> <td>E-mail</td> <td>gyistvan@hnp.hu</td> </tr> </table>	Name	Mr. István GYARMATHY	Organisation	Hortobágy National Park Directorate	E-mail	gyistvan@hnp.hu
Name	Mr. István GYARMATHY						
Organisation	Hortobágy National Park Directorate						
E-mail	gyistvan@hnp.hu						
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>						

2.2 Samsø – a dark sky island #1

1. General information		
Title of the practice	Samsø – a dark sky island #1	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Samsø Energy Academy	
Location of the practice	Country	Denmark
	NUTS 1	
	NUTS 2	
	NUTS 3	
2. Detailed description		
Night Light topic the practice is dealing with	<p>- Measures to designate and protect an area as a dark sky place</p> <p>Identify and develop a dark sky area on the island</p>	
Detailed information on the practice	<p>The municipality of Samsø is already initiating a number of nature protection initiatives. One of them is the recovery of Besser Made, a marsh area next to the NATURA 2000 protected area, Stavns Fjord. The project is focusing of restoring a former creek and wetlands – and at the same time diminishing the discharge of nutrients into the inlet.</p> <p>A pumping station will be closed (saving approximately 800,000 DKK / year). A nearby golf course will have water and nutrients. It conserves groundwater for irrigation. There will be no need for fertilizing the sandy soil, which is good for the nature and the wallet.</p> <p>The natural area and its biodiversity will be preserved. At the same time it will be possible to harvest clover grass and other energy crops for biogas production and thereby tie carbon and nitrogen locally. The farmers will receive the residual from biogas production as a fertilizer and thereby save money</p> <p>Last but not least, the area will be preserved as nature and remain dark</p> <p>The area and the project will act as a demonstration/pilot project and it is considered ideal to add the dark sky angle to the area.</p>	
Resources needed	<p>There is allocated an amount of 100.000 DKK per year for the Besser Made project. It's the plan to apply for LIFE funding to restore and protect the marshland. The resources (20 mio. DKK) will be used purchase land and compensations</p>	
Timescale (start/end)	<p>The Besser Made project will run un till beginning of 2018., probably longer</p>	
Evidence of success (results achieved)	<p>The activities uses the development of the darksky area to put focus on the light pollution issues</p>	
Difficulties encountered/ lessons learned	<p>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</p>	
Potential for learning or transfer	<p>Linkage between an existing nature preservation project and establishment of a dark sky area</p>	
Further information	<p>Links to further information on the good practice The project is mentioned in the municipality plan (in Danish)</p>	

	http://planer.samsøe.dk/dk/kommuneplan/redegoerelse_hovedstruktur_og_retningslinjer/det_aabne_land_og_naturen/naturgenopretning_ved_besser_made.htm http://energiakademiet.dk/7767/skumringsmode/ http://www.c2ccc.eu/projektmateriale/delprojekterne/by-projekterne/lar-som-rekreative-elementer/action-c19-lar-som-rekreative-elementer/	
Contact details	Name	Peter Christensen
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Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

3. Dark sky tourism

3.1 Night tourism near the Waddensea/ The Netherlands: 'Night at the 'Waddensea

1. General information		
Title of the practice	Night tourism near the Waddensea/ The Netherlands: 'Night at the 'Waddensea	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	St. Feel the Night/ Keunstwurk	
Location of the practice	Country	The Netherlands
	NUTS 1	NL
	NUTS 2	NL 12
	NUTS 3	NL 121
2. Detailed description		
Night Light topic the practice is dealing with	<ul style="list-style-type: none"> - Astro-tourism/dark sky tourism - Public awareness and engagement on light pollution and dark skies 	
Detailed information on the practice	<p><i>Undisturbed nightly darkness and the sight of a bright sparkling starry sky has become a rare experience in our urbanized world. The Wadden Sea in the Netherlands is one of the few regions where this primordial experience is still dealing with. The presence of 'dark sky' and real darkness - with silence, tranquility and expanse - is one of the ecological values of the UNESCO World Heritage Wadden Sea. The cluster project 'Night at the Wad' requires attention for and develops an innovative leisure cluster in the coastal area Friesland near and in the village 'Zwarte Haan'. Goal is to profile the Wadden Sea and Friesland in the tourist market, develop a destination for dark sky experience, pilgrimage and other forms of slow-tourism and cultural tourism. And to exchange knowledge to visitors and stakeholders in the region through area-stories connected to scenic routes, culture and 'dark sky' perception of the Wadden Sea landscape.</i></p> <p><i>There will be developed activities and services to facilitate experiencing dark sky and pilgrimage. Zwarte Haan will be a test site / pilot for the construction of the first Dutch/ Waddensea World Heritage starbarn and the construction of a Night garden, these are the first kind of services in this category.</i></p> <p><i>The starbarn is open to the public and offers an outdoor observation for visitors at night to enjoy a bright starry sky using simple supporting facilities. There is a contest for young designers for the best design of the Starbarn.</i></p> <p><i>The Night Garden offers the experience of enjoying flora and fauna that comes alive at night. The Night Garden is open to visitors. The Night Garden offers facilities for small-scale cultural performances and activities in the open air that enhance the experience darkness.</i></p>	

	<p><i>Main stakeholders: Foundation Feel the Night, Foundation Santiago aan het wad/ "near the Waddensea", Landschapsbeheer Friesland, foundation Keunstwurk, Sense of place</i> <i>beneficiaries: tourists who love slowtourism, darkness, culture, walking.</i></p>						
<p>Resources needed</p>	<p>Specify the amount of funding/financial resources used and/or human resources required to set up and run the practice €554.896 (There has been applied for subsidy ad Waddenfonds)</p>						
<p>Timescale (start/end)</p>	<p>2017-2018</p>						
<p>Evidence of success (results achieved)</p>	<p>A lot of stakeholder are already working together in the projectpreparation: entrepreneurs, government/ municipality, foundations, Province. The project must start soon is the funding is organised.</p>						
<p>Difficulties encountered/ lessons learned</p>	<p><i>The project hasn't started yet, funding is uncertain but actions for getting the funding have been taken.</i> <i>There is a SWOT analysis. Weaknesses: Experiences are offered at less usual times (night), watching stars ('dark sky' experience) is weather dependent, possibilities for managing/ being hospitable for large groups is limited, dependence on volunteers (Administration / co-management, educational programming)</i></p> <p><i>Threats: Too much tourism offer makes darkness / silence perception vulnerable (parking at night, car lights), involvement from the local community volunteers for programming needs attention, Residents insufficient included in planning, Cluster Collaboration: miscommunication between parties directly or from the sideline in initiatives involved</i></p>						
<p>Potential for learning or transfer</p>	<p>- info on success or fail factors that will influence successful transfer to another region. See above, difficulties ans lessons. - info on transfers of the practice that already took place (if any)</p>						
<p>Further information</p>	<p>Links to further information on the good practice</p>						
<p>Contact details</p>	<table border="1"> <tr> <td>Name</td> <td>Roelof Koster</td> </tr> <tr> <td>Organisation</td> <td>KEUNSTWURK</td> </tr> <tr> <td>E-mail</td> <td>R.Koster@keunstwurk.nl</td> </tr> </table>	Name	Roelof Koster	Organisation	KEUNSTWURK	E-mail	R.Koster@keunstwurk.nl
Name	Roelof Koster						
Organisation	KEUNSTWURK						
E-mail	R.Koster@keunstwurk.nl						
<p>Expert opinion</p>	<p><i>[Will be filled in by INTERREG EUROPE programme experts]</i></p>						

3.2 Avila Starlight Tourist Destination

1. General information		
Title of the practice	AVILA STARLIGHT TOURIST DESTINATION	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	AVILA COUNTY COUNCIL	
Location of the practice	Country	SPAIN
	NUTS 1	ES4
	NUTS 2	ES41
	NUTS 3	ES411
2. Detailed description		
Night Light topic the practice is dealing with	<p>Select the relevant topics (one or more) related to this practice</p> <ul style="list-style-type: none"> - Astro-tourism/dark sky tourism - Public awareness and engagement on light pollution and dark skies 	
Detailed information on the practice	<p>[1500 characters maximum]</p> <p>What is the problem addressed and the context that triggered the introduction of the practice ?</p> <p>The special conditions of altitude and well preserved natural landscapes in a non populated rural area with almost empty little villages in the geographical area of Gredos Mountain Range in southern part of Avila province, make this place a special one for star gazing because of the shortage of pollution levels (due to lack of lighting pollution) as well as clear skies. Until few years ago there were no special measures to certificate the quality of the skies, therefore, a little group of enthusiastic amateur astronomers living in the area, decide to get in touch with different organizations, so they get in contact with Starlight Foundation who encourage them to measure and register periodically the levels of pollution to realize if they have good conditions indeed.</p> <p>How does the practice reach its objectives?</p> <p>Once they had the data, they applied to get the Starlight Tourist Destination, so a group of experts and auditors came to this zone in order to double-check if the area duly complies with all requirements, some of them based on tourist infrastructures and some others more scientific point of view in terms of sky darkness.</p> <p>How is it implemented?</p> <p>Once overcome the process, a specific geographical area of 27 villages got the Certification for 4 years, then a group of starlight monitors were trained in the main Astronomic Institute in Canary Islands in order to guide and explain the richness of the area for star gazing focused on tourist.</p> <p>Then also thanks to the amounts of Funds managed by Gredos-Iruelas Competitiveness Plan they built up 19 places for star gazing were settled in the territory, as well as some workshops were held to communicate and disseminate this value, as well as astrophotography contest among other activities.</p> <p>Who are the main stakeholders & beneficiaries of the practice ?</p> <p>The main stakeholders are a part of an entrepreneurship organization</p>	

	<p>based in North Gredos, -Asenorg- they organized different working groups, one of them focused on astrotourism to take advantage of the excellent conditions of the dark sky. Thus, the private owners of a rural hotel, so called Milano Real, jointly with some others who have installed the first astronomic observatory in the roof of their hotel, they gave the first steps: Starlight Foundation contacts, measures, applied to Certification and dissemination.</p> <p>The beneficiaries are the whole tourist sector, private and public, since the destination is giving first steps towards a stargazing destination, in terms of sustainable tourism, and also to take advantage of some other good practices using the night as a touristic resource. The challenge is a raising awareness campaign to put in value the NIGHT as tourist resource through the involvement of private and public actors, then get more guided starlight monitors in order to offer to the potential tourist. But the current certification must be renovated, as well as increased the geographical coverage.</p> <p>The challenge is a raising awareness campaign among public-private cooperation, a regional stakeholders working group to discuss both main topics: TOURISM + LIGHT POLLUTION, in order to improve the regional policy. It would be a good opportunity to enrolle the Regional Park of Gredos, a natural reserve, as well as all the private sector: rural lodging and restaurants, jointly with municipalities in the area and Active Outdoor activities. Thanks to the project, an Action Plan must be set up, including accurate actions like Guidelines, Awareness Campaigns, Involvement and Measures in other areas outside from current members, Dissemination activities, and Put in Value the dark sky as destination at regional level as an example to be replicated in other European Areas.</p>
<p>Resources needed</p>	<p>Specify the amount of funding/financial resources used and/or human resources required to set up and run the practice: Approximately the gross amounts</p> <p>10.000 certification measure 5.000 external dark sky certification taxes 20.000 training programme 20.000 stargazing points 3.000 workshops 5.000 external services 12.000 working hours 75.000 SUB TOTAL</p> <p>+ Pilot experiences: changing public lighting (to be specified by a company budget, tbc, still pending) 200.000 SUBTOTAL</p>
<p>Timescale (start/end)</p>	<p>Start March 2017-March 2020 Action Plan Implementation: April 2020-April 2022</p>
<p>Evidence of success (results achieved)</p>	<p>[500 characters maximum] Why is this practice considered to be good? Provide factual evidence to demonstrate its success or failure (e.g. measureable outputs or results)</p> <p>Different TV Channels are interested, TVE International, newspapers, specilized publications on this kind of sustainable tourist for all, is a familiar tourist and also to be enjoyable by disable people, so there is no limits, the sky is always above for all of us.</p> <p>Nowadays there are a lot of groups booking in the destination just</p>

	<p><i>because of the this fact, looking for astrotourism, also groups of youth people, the teachers want to teach them about this at divulgative level, but additionally some team building is taking place around this topic, including gastronomy experience based on “milky way”</i></p>	
Difficulties encountered/ lessons learned	<p><i>The involvement of the private sector, they still don't visualize clearly the benefits of the dark sky destination, they consider their business need a great investment, when is not the case, they only need to understand, to to get the contact of well trained guides. They need to be invited to a Technical Visit organized to some good experience in order to understand how many possibilities the astro tourism brings to them.</i></p> <p><i>There is no need to star gazing points, the most important is:</i></p> <ol style="list-style-type: none"> <i>1. involvement of PRIVATE SECTOR</i> <i>2. Training and creation of a starlight monitors net.</i> <i>3. to COMMUNICATE THE DARK SKY DESTINATION,</i> <i>4. Involvement of public body to promote this destination</i> <p><i>So the lesson learnt is no need to scientific level, just divulgative, no need of investment, just knowledge what we are talking about and capacity building of tourist guides. The effort must be set on preserving natural conditions (low light pollution, get certification and communication) all of them jointly with public body support.</i></p> <p><i>Another additional difficulty is the lack of funds to put in practice a pilot experience to change the public light of some little village to compater before/after results in terms of light pollution, therefore astro observation.</i></p>	
Potential for learning or transfer	<p><i>After holding meetings with the main stakeholder (Francisco Sacher) who was the “alma mater” of the project they have a cristal clear idea about what works and what not:</i></p> <p><i>The simplicity is the success factor, the complexity is the failure factor. Make private owners understand what dark sky is and how affects their business, capacity building, communication, preservation of conditions.</i></p> <p><i>The practice could be replicated in other European rural regions with some low pollution levels. There are a lot of sustainable destination with similar conditions, a net of good practices should be set up, then exchange knowledge, and in case a pilot experience by ERDF Funds thanks to Interreg programme could be set up as a kind of European Example in 2/3 different European geographical conditions.</i></p> <p><i>- info on transfers of the practice that already took place (if any) Alqueva (Portugal) an example of similar good experience</i></p>	
Further information	<p><i>Links to further information on the good practice</i></p> <p>https://turismogredosnorte.com/grupos-de-trabajo/cielo-oscuro http://www.turismoavila.com/es/cielos-oscuros_1/#inicio</p>	
Contact details	Name	Roberto Rodriguez-Pindado
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	E-mail	rrodriguez@diputacionavila.es
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

3.3 Observation Of Stars In Triglav National Park

1. General information		
Title of the practice	OBSERVATION OF STARS IN NATIONAL PARK	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	TRIGLAV NATIONAL PARK, LOCAL TOURIST BOARD BOHINJ, SKI RESORT VOGEL	
Location of the practice	Country	SLOVENIA
	NUTS 1	SLOVENIA
	NUTS 2	
	NUTS 3	GORENJSKA
2. Detailed description		
Night Light topic the practice is dealing with	<p>Select the relevant topics (one or more) related to this practice</p> <ul style="list-style-type: none"> - Measures to designate and protect an area as a dark sky place - <u>Astro-tourism/dark sky tourism</u> - Lighting technology to reduce light pollution - Public awareness and engagement on light pollution and dark skies - Other [specify] 	
Detailed information on the practice	<p>[1500 characters maximum]</p> <p>Triglav national park is responsible for the sustainable development of national park area and for the preservation of the biodiversity in the park.</p> <p>Possibility to see the stars somehow looks “ordinary” to inhabitants and they don’t have special relation towards privilege of dark sky.</p> <p>The guests - tourist were also not aware of the “night light” attraction”</p> <p>The observation of dark sky has become regular and it is organised during main season and off season at the ski resort Vogel with the support of experts from Triglav national park.</p> <p>Visitors can enjoy dark sky – they travel to the destination of observation with ski lift. Every event has different topic: e.g. Life in the space, development of universe, inside the earth, planets and stars, get to know the universe,...</p> <p>The number of interested visitors (domestic and foreign) is growing every year.</p> <p>Main stakeholders: Triglav national park, Local tourist board, Ski resort Vogel, local community Bohinj</p> <p>Beneficiaries of the practice; inhabitants and tourists that visit national park and local community Bohinj</p>	
Resources needed	<p>Triglav national park organise the event free of charge for visitors with their own experts. They also invite speakers for a modest payment. The guests pay the ski lift. Ski resort offer the space. So the costs of the organisation and implementation is very low (just costs of employee at Triglav national park , responsible for organisation of “dark sky” events.</p>	
Timescale (start/end)	since year 2013	
Evidence of success (results achieved)	<p>[500 characters maximum]</p> <p>Practice is good, since it represents the only practice of presentation of dark sky in National park.</p>	

	<i>Each year the number of visitors is growing, for each event around 10 participants, which is for new topic a very good results.</i>	
Difficulties encountered/ lessons learned	<i>[300 characters] Difficulties:lack of interest from possible users (guests, inhabitants Lessons learned; guests are very interested in the topic and through start up of the small events also the understanding of stakeholders for dark sky issues become bigger and they started to understand the “challenge of dark sky” also in connection of how lights influence the biodiversity.</i>	
Potential for learning or transfer	<i>[1000 characters maximum]. The practice is interesting since it started with small steps and it can be a nice “good start up” for regions where dark sky is not a “topic” yet.Additionally although small in scale it considerably influence the views and opinions of the stakeholders regarding the influence of lighting on protected areas.</i>	
Further information	<i>http://www.tnp.si/national_park/</i>	
Contact details	Name	Davorin Koren
	Organisation	Triglav national park
	E-mail	davorin.koren@tnp.gov.si
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

3.4 La Palma Starlight Tourist Destination

1. General information		
Title of the practice	LA PALMA STARLIGHT TOURIST DESTINATION	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	LA PALMA ISLAND GOVERNMENT	
Location of the practice	Country	SPAIN
	NUTS 1	CANARY ISLANDS (La Palma)
	NUTS 2	
	NUTS 3	
2. Detailed description		
Night Light topic the practice is dealing with	<p>Select the relevant topics (one or more) related to this practice</p> <ul style="list-style-type: none"> - Astro-tourism/dark sky tourism - Public awareness and engagement on light pollution and dark skies 	
Detailed information on the practice	<p>[1500 characters maximum]</p> <ul style="list-style-type: none"> - what is the problem addressed and the context that triggered the introduction of the practice <p>La Palma Island is nowadays a worldwide recognised place for performing astronomical observation and related research activities. Indeed, the Island currently hosts the world's largest telescope for optical-IR astronomy, i.e. the Gran Telescopio de Canarias (GranTeCan or GTC), along with other 16 internationally owned telescopes installed within the research complex of the Observatory of El Roque de Los Muchachos (altitude 2.420 m above the sea level – 8.000 ft) one of the most extensive battery of telescopes in the world.</p> <p>To protect and enhance the natural suitability of the Island for carrying out astrophysics combined with the growing interest of tourists for stars' observation, the Insular Government, the Instituto de Astrofísica de Canarias (IAC) and other stakeholders, began since late eighties a process to protect the quality of its dark skies, clear almost all year. In 1987 the first charter flight landed in La Palma, developing new economical activities based on tourism.</p> <p>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.</p> <ul style="list-style-type: none"> - how does the practice reach its objectives <p>In 1988 a pioneering national law was promoted, the "Sky Law"ⁱⁱ (Act 31/1988), to protect the sky in the island of La Palma and partially in Tenerife. In addition, in 1992, it was created the Sky Quality Protection Technical Officeⁱⁱⁱ specialized in monitoring and in providing advice on the correct application of the Sky Law.</p> <p>In 2007, La Palma Island hosted the first "International Starlight Conference", promoted by the IAC under the slogan "<i>Starlight, a Common Heritage</i>" to increase awareness among population on the need of protecting the night sky as an outstanding common value – not only a necessary work condition for scientific researchers and technicians – as well as a condition to promote and develop the "astronomical tourism". The Conference attracted the participation of a relevant number of national and international organizations (i.e. UNESCO, UNWTO, IAU, UNEP-CMS, CE, SCBD, COE, MAB) which unanimously adopted a series of principles and recommendations contained in the "Declaration in Defence of the Quality of the Night Sky</p>	

and the Right to Starlight" ("La Palma Declaration"^{iv}, 2007). Since then, Starlight was launched as an international movement in defence of the Night Skies and the Right to Starlight and in 2012 La Palma Island was declared Starlight Tourist Destinations and first world Starlight Natural Reserve renewed in 2016. Now we are organizing the 10th Anniversary of the Starlight Declaration with a good number of activities as the scientist congress: "Preserving the Skies".

Conscious of this and considered that La Palma Island has been declared **UNESCO Biosphere Reserve**, under the framework of the Covenant of Mayors' European movement, the Insular Government and its 14 municipalities, in 2013 applied and obtained funding from the European Energy Efficiency Fund(EEEF) to carry out investments aiming at reducing within the Island the energetic consumption (- 70% in public lighting and -24% in public buildings) and CO2 emissions (- 1.517.140 Kg CO2) as well to intervene in favour of the renewable energies.

- *how is it implemented*

Among project's objectives there is the relevant one of progressively dotting the Island up to 75% with LED lighting which will serve the double purpose of saving over the 70% energy by protecting, at the same time, the astronomical activities carried out by the several institutions headquartered on the Island. The project funded by the EEEF also foresees to improve the remaining 25% lighting system of the Island by making it more efficient and with improved technologies (i.e. efficient discharge lamps, auto-attenuating electronics, remote controls, etc.)

In 2009 after some initiatives linked with stargazing or astrotourism, developed from different organizations, the island government Cabildo Insular decided to lead a committee: "The stars tourism table", created to organise a joint effort to build a new tourist product for La Palma. IAC and the Starlight Foundation form 14 "Starlight Guides" prepared to explain the sky quality on La Palma and the Infrastructures linked to it. Also the visits to the ORM are provided much easier than ever, after the GTC inauguration.

In 2011 the Plan development starts with a wide range of activities planned on the worksheet approved by the product table: 52 tourist companies theming, special training on telescopes using, 16 astronomical viewpoints, 4 astronomical paths, public activities... The challenge is the public-private cooperation to improve the island policy for developing a better ASTROTURISM product.

PROJECTS IN PROGRESS:

The creation of a "WALK OF THE STARS OF SCIENCE" by the sea shore, in which to shape, in the form of stars, a recognition to those scientific personalities of international prestige who have visited our island, already have a star: Professor Stephen Hawking and Russian cosmonaut Alexei Leonov.

X ANNIVERSARY OF THE STARLIGHT DECLARATION (April 17-22, 2017): International Congress "Preserving the Skies" with working groups that will analyze the evolution of the dark skies in the last decade and which are intended to produce a text which reinforces the message of the 2007 International Starlight Declaration.

Macro exposure on O'Daly Street for nighttime photographs of Starlight Tourist Destinations and Starlight Reserves around the world. Contests of drawing children in the schools of the island. Outreach activities for street children. Public conferences of astronomers. Astronomical workshops and puppet theater, g-astronomical menus, etc ...One-hour shutdown on the island with astronomical Observations at Astronomical

	<p>Viewpoints and later musical concerts.</p> <p>ASTRONOMIC OBSERVATION HOUSE: We already have the project for the construction of a portable and self-sufficient building, with a roof that opens to make observations with a telescope.</p> <p>- <i>who are the main stakeholders & beneficiaries of the practice</i></p> <ol style="list-style-type: none"> 1. La Palma Biosphere Reserve 2. Instituto de Astrofísica de Canarias (IAC) 3. EU funded Project “ClustArs: Achieving Excellence in Cluster Management 4. Municipalities of the Island of La Palma 5. La Palma Tourism Patronage 6. ADER La Palma 7. CEPYME La Palma 	
	<p><i>Specify the amount of funding/financial resources used and/or human resources required to set up and run the practice</i></p> <p>“WALK OF THE STARS OF SCIENCE” 100.000€ X ANNIVERSARY OF THE STARLIGHT DECLARATION 50.000€ ASTRONOMIC OBSERVATION HOUSE 80.000€</p>	
Timescale (start/end)	<p>“The WALK OF THE STARS OF SCIENCE” will take much longer because the ride in which the stars will be installed is still under construction but the other projects are supposed to be ready this year.</p>	
Evidence of success (results achieved)	<p><i>[500 characters maximum]</i> <i>Why is this practice considered to be good? Provide factual evidence to demonstrate its success or failure (e.g. measureable outputs or results)</i></p> <p>THE CONSOLIDATION OF THE PRODUCT OF ASTROTURISM requires the constancy and development of activities and infrastructures that maintain the media interest and that of the local population with which a double purpose is achieved: promotion of destination and awareness of business and of the inhabitants. The local, national and international media have echoed the innovations carried out at Astroturismo in La Palma. The number of tourists who demand activities of astroturism has increased by 50% per year in the last 4 years.</p>	
Difficulties encountered/ lessons learned	<p><i>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</i></p> <p>There is a lack of citizen awareness about the importance of keeping the sky dark. It is essential to work jointly between the administration and the business community because otherwise the interest is diluted and the project fails.</p>	
Potential for learning or transfer	<p><i>[1000 characters maximum]. Explain why you consider this practice is potentially interesting for other regions to learn from.</i></p> <p>- <i>info on success or fail factors that will influence successful transfer to another region.</i></p> <p>- <i>info on transfers of the practice that already took place (if any)</i></p>	
Further information	<p><i>Links to further information on the good practice</i></p> <p>http://www.iac.es/servicios.php?op1=28&lang=en http://www.starsislandlapalma.es/ http://www.iac.es/congreso/preservingskies2017/</p>	
Contact details	Name	Ana Castañeda-Pérez
	Organisation	La Palma island government
	E-mail	Ana.castaneda@cablapalma.es
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

3.5 *Astrotourism in the Basilicata region*

1. General information		
Title of the practice	ASTROTOURISM	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	BASILICATA REGION / MATERA-BASILICATA 2019 FOUNDATION	
Location of the practice	Country	ITALY
	NUTS 1	ITF 4 - South Italy
	NUTS 2	ITF 5 - Basilicata
	NUTS 3	
2. Detailed description		
Night Light topic the practice is dealing with	<p>Select the relevant topics (one or more) related to this practice</p> <ul style="list-style-type: none"> - Astro-tourism/dark sky tourism 	
Detailed information on the practice	<p>[1500 characters maximum]</p> <ul style="list-style-type: none"> - what is the problem addressed and the context that triggered the introduction of the practice <p>Basilicata region is in the southern part of Italy: a large part of its territory is designated as natural park and this is a pivotal asset for its development.</p> <p>Four designated natural parks cover a large part of Basilicata territory, including important migratory birds habitats. Population is concentrated the cities Matera and Potenza and smaller towns. The city of Matera borders directly on the Parco del Materano.</p> <p>Basilicata is one of the “darkest” regions in Italy (http://www.lightpollutionmap.info/) but light quality and light distribution collide with biodiversity and nature values of the parks, in particular where cities (like Matera) and settlements border the natural areas. The values of light pollution are very different throughout the region: anyway the main issue related to light pollution is not the high radiance values across the region but rather the light quality and light distribution that collide with the necessity to preserve biodiversity and natural aspects, whereas Basilicata is a region with a great environmental value in.</p> <p>On the other hand, thanks to this “darkness”, in Basilicata we host one of the biggest telescope in Italy (Astronomic observatory in Anzi) and the Italian Space Agency, where they study and observe the stars to see the Earth from the other side.</p> <p>Formal policies to protect and benefit from dark skies do not yet exist, but there are some scattered community projects in this field</p> <ul style="list-style-type: none"> - how does the practice reach its objectives <p>ASTROTOURISM / DARK SKY TOURISM</p> <p>So far, there have been many scattered experimentation focussed on the dark sky in order to highlight the beauty and the magic of the night light.</p> <p>Every year, on a regular basis, the Regional natural and historical Park of Matera, in cooperation with its environmental education centres, organizes a series of events around the observation of stars and the myths connected to the sky.</p> <p>The Astronomical Observatory Planetarium in Anzi, a small village, located on the top of a mountain (1100 meters) deals with tourism services and training for years and organizes guided tours and</p>	

	<p>educational workshops for schools of all levels. The staff is composed of young highly specialized, with certificates recognized by the Ministry of Education and the European Space Agency and proven teaching skills; especially regarding astronomy and science, cultural anthropology, history etc. Cars are not allowed to reach the site.</p> <p>- <i>how is it implemented</i> Sky observation on winter and summer solstice: 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; Sky observation on St. Lawrence night: dissemination of the scientific information about the Perseids meteor shower and on the history of the Martyrdom of St. Lawrence Nightly pedestrian walk from Matera to Montescaglioso: about 30 Kilometres across the park, on the route used by the shepherds using the stars for orienteering (like ground sailors). Year by year the audience involvement has grown and the appointments attract more and more tourists.</p> <p>- <i>who are the main stakeholders & beneficiaries of the practice</i> 1. Regional natural and historical Park of Matera 2. Municipality of Matera and Montescaglioso 3. Astronomical Observatory Planetarium in Anzi</p>						
	<p><i>Specify the amount of funding/financial resources used and/or human resources required to set up and run the practice</i> Not defined – actions are not directly under our control</p>						
Timescale (start/end)							
Evidence of success (results achieved)	<p><i>[500 characters maximum]</i> <i>Why is this practice considered to be good? Provide factual evidence to demonstrate its success or failure (e.g. measureable outputs or results)</i> The number of citizens and tourists who look for nightly experience is growing. In addition, also thanks to these kind of practice, the Park has trained youngsters (11-13 years old) as “Young park guides”</p>						
Difficulties encountered/ lessons learned	<p><i>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</i></p>						
Potential for learning or transfer	<p><i>[1000 characters maximum]. Explain why you consider this practice is potentially interesting for other regions to learn from.</i> - <i>info on success or fail factors that will influence successful transfer to another region.</i> There is a lack of citizen awareness about the beauty of darkness and stars observation. Also it is important to highlight more and more the opportunity to develop new touristic products for private entrepreneurs. It is essential to work jointly between the administration and the business.</p>						
Further information	<p><i>Links to further information on the good practice</i> http://www.dreaminglucania.it/OSSERVATORIO_ANZI_Home.aspx http://www.ceamatera.it/materaceae/ http://www.parcoturismo.it/</p>						
Contact details	<table border="1"> <tr> <td data-bbox="528 1839 719 1877">Name</td> <td data-bbox="719 1839 1418 1877">Rita Orlando</td> </tr> <tr> <td data-bbox="528 1877 719 1915">Organisation</td> <td data-bbox="719 1877 1418 1915">Matera- Basilicata 2019 Foundation</td> </tr> <tr> <td data-bbox="528 1915 719 1962">E-mail</td> <td data-bbox="719 1915 1418 1962">orlando@matera-basilicata2019.it</td> </tr> </table>	Name	Rita Orlando	Organisation	Matera- Basilicata 2019 Foundation	E-mail	orlando@matera-basilicata2019.it
Name	Rita Orlando						
Organisation	Matera- Basilicata 2019 Foundation						
E-mail	orlando@matera-basilicata2019.it						
Expert opinion	<p><i>[Will be filled in by INTERREG EUROPE programme experts]</i></p>						

4. Lighting technology to reduce light pollution

4.1 Light Challenge

1. General information		
Title of the practice	Light Challenge	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Municipality Heerenveen The Netherlands, Jan Bakker	
Location of the practice	Country	The Netherlands
	NUTS 1	NL123
	NUTS 2	
	NUTS 3	
2. Detailed description		
Night Light topic the practice is dealing with	<ul style="list-style-type: none"> - <i>Lighting technology to reduce light pollution</i> - <i>Public awareness and engagement on light pollution and dark skies</i> - <i>other</i> 	
Detailed information on the practice	<p>Light Challenge evolved from the need to more energy efficient public lighting, more durable and make it better. Often, public lighting was addressed to the "old" way, a lamp topped with a light source, which in the past did not yield the most savings.</p> <p>From pilots and trials in the city of Heerenveen is the experience that this can be done differently and the light team of the municipality Heerenveen, together with the municipalities of Assen and Groningen set up the Light Challenge 2011.</p> <p>In 2011, the first edition of the Light Challenge was the task to design a new lighting concept for a residential street. A great success! The success formula of Light Challenge students to design the new lighting concept in cooperation with partner companies and local authorities, and especially the participation of end users. The partner companies provide the technology resources and knowledge to design something and the municipalities provide a street and residents willing to think about practical use.</p> <p>The Light Challenge has managed to bring together municipalities, industry, research institutes and of course the end users. They look together at light from a different perspective and provide input to participating students to come up with innovative solutions. For the new edition has been chosen for a new assignment, namely New Light on the Inner City. The teams design a lighting plan together with the additional challenge of working out a local issue in the development of the plan. The participating municipalities the task to formulate this part of the Light Challenge. Examples: city marketing, the Internet as an opportunity or a threat, changing shopping hours, security, routing, dynamics and energy enough in town to give an extra dimension to the Light Challenge here.</p> <p>In the Light Challenge program included special master classes to educate students with additional knowledge, "change in thinking",</p>	

	design & design, etc. In addition, they have to deal with a group of 'real' users and companies that have committed to the contest . That makes Light Challenge a unique process in which education, business and government collaborate on innovation and development.	
Resources needed	<i>PM Specify the amount of funding/financial resources used and/or human resources required to set up and run the practice</i>	
Timescale (start/end)	From 2011 untill now	
Evidence of success (results achieved)	<i>[500 characters maximum] Why is this practice considered to be good? Provide factual evidence to demonstrate its success or failure (e.g. measureable outputs or results)</i>	
Difficulties encountered/ lessons learned	<i>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</i>	
Potential for learning or transfer	<i>[1000 characters maximum]. Explain why you consider this practice is potentially interesting for other regions to learn from. - info on success or fail factors that will influence successful transfer to another region. - info on transfers of the practice that already took place (if any)</i>	
Further information	www.lightchallenge.eu www.facebook.com/FFF3fm	
Contact details	Name	Jan Bakker
	Organisation	Municipality Heerenveen
	E-mail	j.bakker@heerenveen.nl Projectorganisatie Light Challenge 2017-2018 E: lightchallenge@heerenveen.nl
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

4.2 Technical training sessions and study visits

1. General information		
Title of the practice	Technical training sessions and study visits	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Nature Park Our	
Location of the practice	Country	Luxembourg (LUXEMBOURG)
	NUTS 1	LUXEMBOURG
	NUTS 2	Luxembourg
	NUTS 3	Luxembourg (Region of the Nature Park Our)
2. Detailed description		
Night Light topic the practice is dealing with	- <i>Lighting technology to reduce light pollution</i>	
Detailed information on the practice	[1500 characters maximum] - <i>lack of specific know-how in the technical administration of member municipalities and in-transparent product market</i> - <i>exchange, information and training by experts graduate knowledge and experience at the implementation level (e.g. public infrastructure municipalities (decision makers & technical administration)</i>	
Resources needed	- 500-1000€/training day - 2000-7500€/study visit	
Timescale (start/end)	- since 2014	
Evidence of success (results achieved)	- <i>over 50% of the member municipalities took an invest in new, light-efficient lighting infrastructure</i>	
Difficulties encountered/ lessons learned	- <i>finding independent lighting experts</i>	
Potential for learning or transfer	- <i>good experience, everyone can copy</i> - <i>you need a coordinating structure with close contacts to the municipalities to gain their interest (conviction work)</i>	
Further information	http://klimapakt.naturpark.lu/index.php?id=3;lang=de;com=14	
Contact details	Name	Laurent Spithoven
	Organisation	Nature Park Our
	E-mail	laurent.spithoven@naturpark-our.lu
Expert opinion	[Will be filled in by INTERREG EUROPE programme experts]	

4.3 Samsø – a dark sky island #2

1. General information		
Title of the practice	Samsø – a dark sky island #2	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Samsø Energy Academy	
Location of the practice	Country	Denmark
	NUTS 1	
	NUTS 2	
	NUTS 3	
2. Detailed description		
Night Light topic the practice is dealing with	<i>Lighting technology to reduce light pollution</i> LED Lighting in the central village of Tranebjerg	
Detailed information on the practice	<i>Through a ELENA funded project the municipality of Samsø has analysed the street lightning in the central village of Tranebjerg (population:800) in order to assess whether the lighting should be replaced with more environmentally friendly light sources. Based on the ELENA report the municipality has just decided to replace all mercury based light sources with LED lighting in the whole village. Furthermore the street lightning will be shut off in the period between 24 -06</i>	
Resources needed	2.855.000 DKK (380.000€) <i>Specify the amount of funding/financial resources used and/or human resources required to set up and run the practice</i>	
Timescale (start/end)	?	
Evidence of success (results achieved)	<i>Role model showing how to save energy and diminishing of light pollution in a village – inspiration to other villages throughout Denmark and project partners</i>	
Difficulties encountered/ lessons learned	<i>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</i>	
Potential for learning or transfer	<i>Lowest hanging fruits Good and bad experiences</i>	
Further information	<i>Links to further information on the good practice ???</i>	
Contact details	Name	Peter Christensen
	Organisation	Samsø Energy Academy
	E-mail	pc@energiakademiet
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

5. Public awareness and engagement on light pollution and dark skies

5.1 Memorandum of understanding 'Dark Sky World Heritage Waddensea area'

1. General information		
Title of the practice	Memorandum of understanding 'Dark Sky World Heritage Waddensea area'	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Feel the Night/ PRW	
Location of the practice	Country	Netherlands
	NUTS 1	NL
	NUTS 2	NL 12
	NUTS 3	NL 121
2. Detailed description		
Night Light topic the practice is dealing with	<p>Select the relevant topics (one or more) related to this practice</p> <ul style="list-style-type: none"> - Public awareness and engagement on light pollution and dark skies 	
Detailed information on the practice	<p>A lot of stakeholders (43) in the Waddensea region have signed a memorandum of understanding 'Dark Sky World Heritage Waddensea area':</p> <p>They note that</p> <ul style="list-style-type: none"> • The Netherlands is one of the countries with the most light pollution in the world; • The Wadden Sea area on the other hand belongs to one of the darkest regions of Europe; • Darkness is of great importance for the well-being of humans and animals; • Dark nights and star skies excellent fit in the pursuit of sustainable tourism in the Wadden Sea area (opportunities for economics and experience); • Preservation of darkness requires cooperation. <p>Speaking to put themselves out for</p> <ul style="list-style-type: none"> • Increasing awareness of the importance of darkness for humans and animals; • Joint reinforcement of the darkness in and around the Wadden Sea, consistent with the laws and safety requirements for lighting; • And thus contributing to the ecology, taking into account the economic interests in the Wadden Sea. <p>The signatories intend to have a joint plan for completion of the above ambitions in 2018. Under the flag of UNESCO World Heritage Wadden Sea they will prepare an implementation program and there is a coordination point with respect to the activities. It is a bottom-up process in which each party is responsible for its own efforts and financial commitment. A lighting technician will visit all signatories to identify within their organization / environment how lighting can be reduced and to agree on possible measures that can be taken for light reduction</p>	

	<p>(quick wins). In return each signatory implements at least one quick-win for 2018.</p> <p>The stakeholders who signed are: Waddensea Provinces, Rijkswaterstaat, Municipalities, Ministry of Economics, Nature organisations, harbours, National Parks, Environmental organisation NMF.</p>	
Resources needed	Each party is responsible for its own efforts and financial commitment	
Timescale (start/end)	2016-2018	
Evidence of success (results achieved)	<p>[500 characters maximum]</p> <p>Within a couple of months all partners were willing to sign. They were all together at the moment of signing. They are enthusiastic to work on the theme now.</p>	
Difficulties encountered/ lessons learned	<p>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</p> <p>There was discussion about the logo's on the signed paper, some organisations wished their own logo on the paper instead of the Waddensea Logo. It took a lot of communication about the text of the memorandum of understanding.</p>	
Potential for learning or transfer	<p>[1000 characters maximum]. Explain why you consider this practice is potentially interesting for other regions to learn from.</p> <ul style="list-style-type: none"> - info on success or fail factors that will influence successful transfer to another region. - info on transfers of the practice that already took place (if any) <p>The Memorandum shows commitment of all organisations to work on the subject, also of their Boards and directors, they are committed. People working in the organisations can do their jobs on the subject more easily, referring to this memorandum. Good communication to all partners is necessary, some do not want to sign a paper that says they need to pay a certain amount of money so the text has to be abstract enough. They have to sign a paper that commits the partners but isn't too strict.</p>	
Further information	https://rijkwaddenzee.nl/nieuws/dark-sky-werelderfgoed-waddengebied/	
Contact details	Name	Titian Oterdoom/
	Organisation	PRW
	E-mail	oterdoom@eopm.nl
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

5.2 DARK SKY: A campaign to reduce light pollution!

1. General information		
Title of the practice	DARK SKY: A campaign to reduce light pollution!	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	<i>Astronomes amateurs du Luxembourg (AAL) and National Museum of Natural History (MNHN) in cooperation with Mouvement écologique, Lëtzebuenger Natur- a Vulleschutzliga and Nature Park Our</i>	
Location of the practice	Country	Luxembourg (LUXEMBOURG)
	NUTS 1	LUXEMBOURG
	NUTS 2	Luxembourg
	NUTS 3	Luxembourg
2. Detailed description		
Night Light topic the practice is dealing with	- <i>Public awareness and engagement on light pollution and dark skies</i>	
Detailed information on the practice	<ul style="list-style-type: none"> - <i>the campaign was initiated by the members of a private association for amateur astronomers, the AAL, with the aim to raise public and political awareness of problems relating to the increasing of light pollution in the country of Luxembourg</i> - <i>the sensitization campaign, which took place in the international year of astronomy (2009) included a public road show and informative meetings with municipalities, stargazer workshops and events and promotion materials</i> - <i>implemented by volunteers</i> - <i>main beneficiaries of the practice: public</i> 	
Resources needed	<i>Voluntary service and minimal funding for the production of leaflets by the involved organisations</i>	
Timescale (start/end)	during the year 2009	
Evidence of success (results achieved)	<i>no factual evidence available</i>	
Difficulties encountered/ lessons learned	<i>ephemeral effect on public and policies</i>	
Potential for learning or transfer	- <i>sensitization campaigns are essential for the prevention of light pollution, but maybe not the key element</i>	
Further information	<i>http://www.aal.lu/</i>	
Contact details	Name	Nic Feierstein
	Organisation	Astronomes amateurs du Luxembourg (AAL)
	E-mail	mail@aal.lu
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

5.3 Astronomical sensitization workshops at annual Nature Park Feast

1. General information		
Title of the practice	Astronomical sensitization workshops at annual Nature Park Feast	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Nature Park Our, National Museum of Natural History (MNHN) and Astronomes amateurs du Luxembourg (AAL)	
Location of the practice	Country	Luxembourg (LUXEMBOURG)
	NUTS 1	LUXEMBOURG
	NUTS 2	Luxembourg
	NUTS 3	Luxembourg (Region of the Nature Park Our)
2. Detailed description		
Night Light topic the practice is dealing with	<i>Public awareness and engagement on light pollution and dark skies</i>	
Detailed information on the practice	<ul style="list-style-type: none"> - to raise public, especially children's awareness of negative effects on nature and environment relating to light pollution - Inviting to learn, understand and appreciate landscapes with its natural dark sky by involving children in scientific exercises, games and activities - the Nature Park Our annually organizes its Nature Park Feast (~2000 visitors) which offers about 30 nature-educational workshops for kids and their families (including 2 astronomical sensitization workshops) - main beneficiaries of the practice: public 	
Resources needed	40.000 € for the whole Nature Park Feast including voluntary service	
Timescale (start/end)	since 2012	
Evidence of success (results achieved)	on average more than 100 kids a day participating to the astronomical workshops in the last 2 years	
Difficulties encountered/ lessons learned	<i>funding</i>	
Potential for learning or transfer	- children sensitization also reaches adults	
Further information	http://www.naturpark-our.lu/index.php?id=28;lang=de;projcat=3;project=47	
Contact details	Name	Laurent Spithoven
	Organisation	Nature Park Our
	E-mail	laurent.spithoven@naturpark-our.lu
Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

5.4 Samsø – a dark sky island #3

1. General information		
Title of the practice	Samsø – a dark sky island #3	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Samsø Energy Academy	
Location of the practice	Country	Denmark
	NUTS 1	
	NUTS 2	
	NUTS 3	
2. Detailed description		
Night Light topic the practice is dealing with	- <i>Public awareness and engagement on light pollution and dark skies</i> Create awareness through the regional stakeholder group and the many projects, network and partners of Samsø Energy Academy	
Detailed information on the practice	<p><i>Samsø Energy Academy</i> has a very strong position in Denmark as a role model when it comes to green transition and green policy making in general. As the only geographical location in the country the academy receives grants from the government in order to show how the island can be Fossil free within the year 2030 - 20 years ahead of the rest of the country.</p> <p>That puts a strong national attention on the activities the academy are involved in. A position that will be used to promote and create awareness on the light pollution issues and to involve a variety of stakeholders throughout the Region.</p> <p>Furthermore the Academy has developed a highly praised Safari concept tailor-made the many incoming visitors to the island. Here it is the plan include the dark sky issues and develop safaris to the darksky area and the light/energy saving installations on the island</p>	
Resources needed	Most of the awareness activities is already foreseen in the NightLight project and included in the budget. The academy will invest resources in development of dark sky safaris.	
Timescale (start/end)	Throughout the lapse of the Night Light project	
Evidence of success (results achieved)	<i>Homepages, media exposure, issues on the agenda</i>	
Difficulties encountered/ lessons learned	<i>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</i>	
Potential for learning or transfer		
Further information	<i>Links to further information on the good practice</i>	
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Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

5.5 Social Light 20% - 19%

1. General information		
Title of the practice	SOCIAL LIGHT 20%-19%	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	BASILICATA REGION / MATERA-BASILICATA 2019 FOUNDATION	
Location of the practice	Country	ITALY
	NUTS 1	ITF 4 - South Italy
	NUTS 2	ITF 5 - Basilicata
	NUTS 3	
2. Detailed description		
Night Light topic the practice is dealing with	<p>Select the relevant topics (one or more) related to this practice</p> <ul style="list-style-type: none"> - Public awareness and engagement on light pollution and dark skies 	
Detailed information on the practice	<p>[1500 characters maximum]</p> <ul style="list-style-type: none"> - what is the problem addressed and the context that triggered the introduction of the practice <p>The Dark Skies cluster of projects under the Matera 2019 Capital of Culture programme are intended to highlight the beauty and importance of the dark skies existing in the area, but also to mobilise the regional community to contribute to a lasting protection of this regional quality. Socialight 20/19% is a format that explores light's role in a cityscape. It is a process of collective creation, aiming at generating new community values in social environments which usually lack both meaning and function. Socialight 20/19% is made up of a cycle of workshops for citizens interested in the redesign of the illumination of symbolic places that form part of the everyday experience of Matera. In 2019, a regional competition will take place to foster the building of a lighting system that will cut energy waste by 20-19%. With the assistance of artists and technicians, citizens will experiment new models of public illumination, beginning with installations that individual citizens have built themselves. There have been two experimentations: Matera starred sky - The district shines</p> <ul style="list-style-type: none"> - how does the practice reach its objectives <p>In both cases it has been necessary to involve a significant part of the citizenship as well as the Municipality. The social awareness about the role of light and darkness was raised through a direct participation of people in the process from the very beginning also thanks to the contribution of experts of light design and artists.</p> <ul style="list-style-type: none"> - how is it implemented <p>Matera starred sky (Sept 2013)</p> <p>It was a community- driven project developed on the community web platform of Matera 2019 during the bidding phase. In the distant past, at dusk, after the sound of a trumpet, all the citizens of Matera, in the Sassi neighbourhood, used to put a candle in front of their homes. Thanks to hundreds of twinkling lights, the city seemed as a beautiful starry sky. An unforgettable experience, narrated by all</p>	

	<p>travellers. For over a century now, the public lighting and the evacuation of the Sassi neighbourhood have taken the stars from Matera and have confined in the sky.</p> <p>Until September 2013 when, one night, the public lighting were turned on one hour later than usual. Starting from 7 pm, 2019 candles were lit by residents, shopkeepers and 35 voluntary organizations in the area. At the same time, in the darkness, there were over 10 concerts by the Conservatory and readings of songs all over the place.</p> <p>The district shines</p> <p>A group of active citizens, living in a peripheral neighbourhood, started to collect 5000 plastic bottles in order to create artistic installations. More than 50 people, on a volunteering basis, worked together for 6 week: the results were 60 sustainable city lamps, energy saving, that were installed on Christmas time through a collective process which put together different generation (students from high schools and elderly people up to 80 years old).</p> <p>- who are the main stakeholders & beneficiaries of the practice 1. Citizens and tourists 2. Municipality of Matera 3. Other Municipalities</p>	
	<p>Specify the amount of funding/financial resources used and/or human resources required to set up and run the practice</p> <p>The district shines 8.000 euros (electric equipments, communication, leaflet, design, performances)</p> <p>Matera starred sky: 10.000 euros (candles, communication, leaflet, artistic performances)</p>	
Timescale (start/end)		
Evidence of success (results achieved)	<p>[500 characters maximum]</p> <p>Why is this practice considered to be good? Provide factual evidence to demonstrate its success or failure (e.g. measureable outputs or results)</p> <p>This first experimentation raised a lot of interests. Citizens from other neighbourhood took place in the process and are willing to do the same.</p>	
Difficulties encountered/ lessons learned	<p>[300 characters] Specify any difficulties encountered and lessons learned during implementation of the practice.</p>	
Potential for learning or transfer	<p>[1000 characters maximum]. Explain why you consider this practice is potentially interesting for other regions to learn from.</p> <p>- info on success or fail factors that will influence successful transfer to another region.</p> <p>This kind of practices can support people in recreating the sense of communities. It is necessary to identify a leader truly committed who can work daily to motivate other people and to have the clear objective in mind. Also it needs a certain of involvement and support from public administration which has to acknowledge the potential of such practices and try to facilitate it.</p> <p>- info on transfers of the practice that already took place (if any)</p>	
Further information	<p>Links to further information on the good practice</p> <p>https://www.facebook.com/quartiereriluce/</p>	
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Expert opinion	[Will be filled in by INTERREG EUROPE programme experts]	

6. Other practices from dark sky places

6.1 Updating policy to include light pollution issues

1. General information	
Title of the practice	Updating policy to include light pollution issues: Hungarian Government Decree 211/2012 (VII. 30.) amending the 253/1997 (XII. 20.) Government Decree about the National Requirements of Building and Town Planning (Building Code)
Project acronym	NIGHT LIGHT
Interreg Europe objective	4.1. Improving natural and cultural heritage policies
Main organisation involved in the practice	Government of Hungary (responsible for decision making) based on the cooperation of several organisations and stakeholders making huge efforts to pay the policy makers', decision makers' attention to the issue of light pollution: the Lighting Society of Hungary, the Hungarian Astronomical Association, nature conservationists, biologists, medical professionals took part in the common activities amended by the contribution of the Hungarian Chamber of Architects in the preparation phase of the regulation.
Location of the practice	Country Hungary
	NUTS 1 Észak és Alföld
	NUTS 2 Észak-Alföld
	NUTS 3 Hajdú-Bihar
2. Detailed description	
Night Light topic the practice is dealing with	<p>Select the relevant topics (one or more) related to this practice</p> <ul style="list-style-type: none"> - Measures to designate and protect an area as a dark sky place - Astro-tourism/dark sky tourism - Lighting technology to reduce light pollution - Public awareness and engagement on light pollution and dark skies - <u>Other: updated policy - modification of government decree</u>
Detailed information on the practice	The practice represents a significant improvement in the legal regulation of light pollution issues. Beforehand, light pollution was addressed only by the Hungarian Act No. XCI. of 2008 amending the Hungarian Act on Nature Protection (Act No. LIII of 1996) focusing on only protected areas excluding the problems of settlements mostly affected by light pollution. This newly updated Decree includes a clear definition of light pollution (Annex 1.) including the general requirement to focus lights on where and when it's needed. Beside the definition, there are two sections in the regulation including light pollution; the first one is related to the health issues of light pollution in buildings while the second one provides specific instructions of the lighting of buildings, public lighting, sky signs and advertising lights.
Resources needed	Systematic work of human resources including all relevant stakeholders
Timescale (start/end)	2003 (identification and definition of the problem) – 2012 (regulation)
Evidence of success (results achieved)	As this step is the first significant one towards the reduction of light pollution concerning regulatory aspects, there were no concrete measures and evaluation so far. However, the general consideration of light pollution during the construction and planning of settlements and buildings efficiently started; potential improvement is expected to stop solutions with disturbing light pollution while not providing real lighting benefit.
Difficulties encountered/	<i>Unfortunately the definition of thresholds is missing. It is especially</i>

lessons learned	<i>important in case of light temperature, the blue spectrum component. Applying cold white lighting (it is still usual) has unfavourable impacts on human health and wellbeing. To look forward, there is a strong need to have a more specific and detailed regulation concerning light pollution not only at regional but national level.</i>	
Potential for learning or transfer	This practice can be considered as applicable in countries/regions without any regulations/legal background for light pollution. Specific preliminary professional background (measures, identification of concrete problem – e.g. public lighting, lighting of private buildings, light pollution in protected areas, protection of habitat and wildlife, etc. -, studies, common understanding, cooperation of specific stakeholders concerned) is required. Inserting this kind of regulation (policy update) into existing legal background depends of specific national frameworks.	
Further information		
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Expert opinion	<i>[Will be filled in by INTERREG EUROPE programme experts]</i>	

6.1 Analysis on light pollution

1. General information		
Title of the practice	Analysis on light pollution	
Project acronym	NIGHT LIGHT	
Interreg Europe objective	4.1. Improving natural and cultural heritage policies	
Main organisation involved in the practice	Ministry of sustainable development and infrastructure	
Location of the practice	Country	Luxembourg (LUXEMBOURG)
	NUTS 1	LUXEMBOURG
	NUTS 2	Luxembourg
	NUTS 3	Luxembourg
2. Detailed description		
Night Light topic the practice is dealing with	- <i>Other: pollution survey</i>	
Detailed information on the practice	- <i>scientific evaluation of the light pollution on a national and local level</i> - <i>commissioning of an expert</i> - <i>beneficiaries of the practice: government and municipalities</i>	
Resources needed	<i>No indication</i>	
Timescale (start/end)	11/2016 – 3/2017	
Evidence of success (results achieved)	- <i>not yet to estimate</i>	
Difficulties encountered/ lessons learned	- <i>not yet to estimate</i>	
Potential for learning or transfer	- <i>not yet to estimate</i>	
Further information	<i>Links to further information on the good practice</i>	
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Expert opinion	[Will be filled in by INTERREG EUROPE programme experts]	