

Sternenpark Nationalpark Eifel

Sternenregion Eifel



www.sternenpark-nationalpark-eifel.de

Natürliches Nachterlebnis
Himmelsbeobachtungen
Tages- & Mehrtagesangebote
Veranstaltungen



Förderung: Europäischer Landwirtschaftsfonds
für die Entwicklung des ländlichen Raums: Hier
investiert Europa in die ländlichen Gebiete.



IDA Dark Spaces Annual Reporting October 2016

IDA Dark Spaces Annual Reporting October 2016

Reporting Period from 1th of October 2015 to 30th of September 2016

Prepared by Harald Bardenhagen,
primary IDA contact of Sternenpark Nationalpark Eifel



General

Harald Bardenhagen is the primary IDA contact of [Sternenpark Nationalpark Eifel](#). The status of the Dark Sky Park is still “provisional”. An application for a status change is prepared during the actual reporting period. A lot of work has been done and progress was achieved to apply for a status upgrade in the future.



1 Stargazing at the Observatory at the International Place Vogelsang

Credit: Medienzentrum Kreis Euskirchen

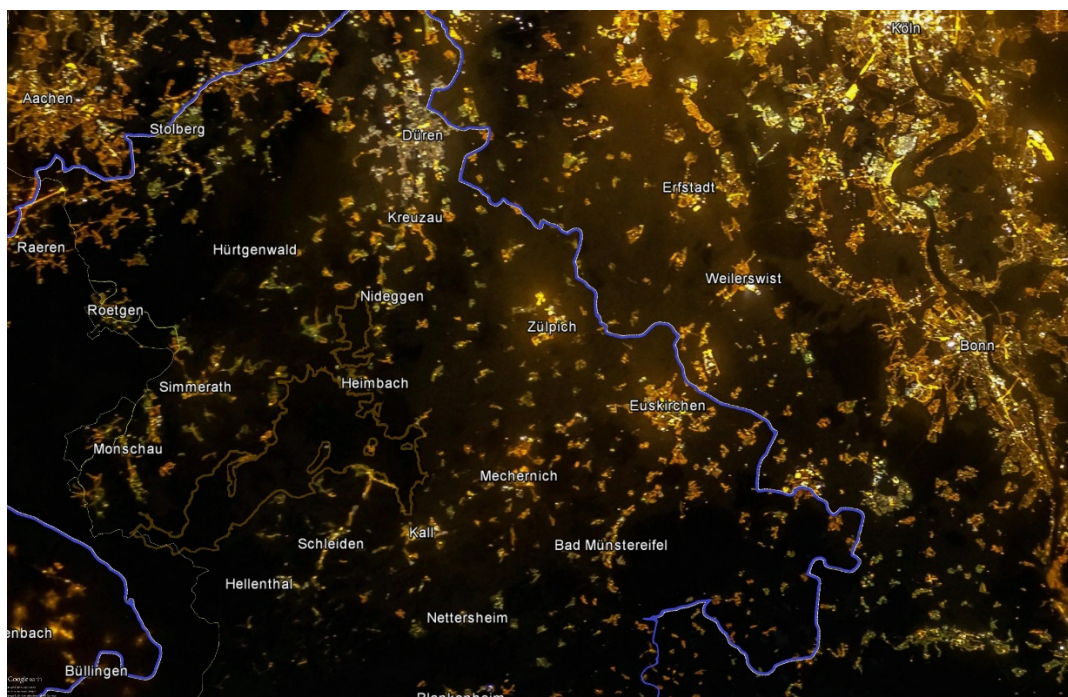
Funding

The [Nature Park Nordeifel e.V.](#) set up a project to develop “[Sternenregion Eifel](#)” (*Dark Sky Region Eifel – an IDSR*). This project is funded by several institutions like European Union ([LEADER Region Eifel](#)), [NRW-Stiftung](#) (*Charity Foundation for Nature, Homeland and Culture in North Rhine-Westphalia*) and [Kreis Euskirchen](#) (*County of Euskirchen*). The objective of the project is to develop, prepare and deploy all necessary requirements for a successful application to become an International Dark Sky Reserve with the area of the National Park Eifel as a core zone. An enhancement to include the complete area of the bi-national Naturpark Eifel – Hohes Venn is considered too. Project owner is Nature Park Nordeifel e.V., primary project commissioner is Astronomie-Werkstatt “Sterne ohne Grenzen” (AWSOG), secondary project commissioner is Nordeifel Tourismus GmbH (NET). Because of diseases and illness the funding of the project period is expanded until 30th of July 2017.



Lighting

Most of the 24 affected communities (in regard to the proposed application for IDSR) are already contacted and progress has been made to convince them to change their lighting practice, reduce light emission in general and recognize the value of a natural dark sky and landscape. The resulting touristic value is an important lever and driving force to limit and reduce light pollution.



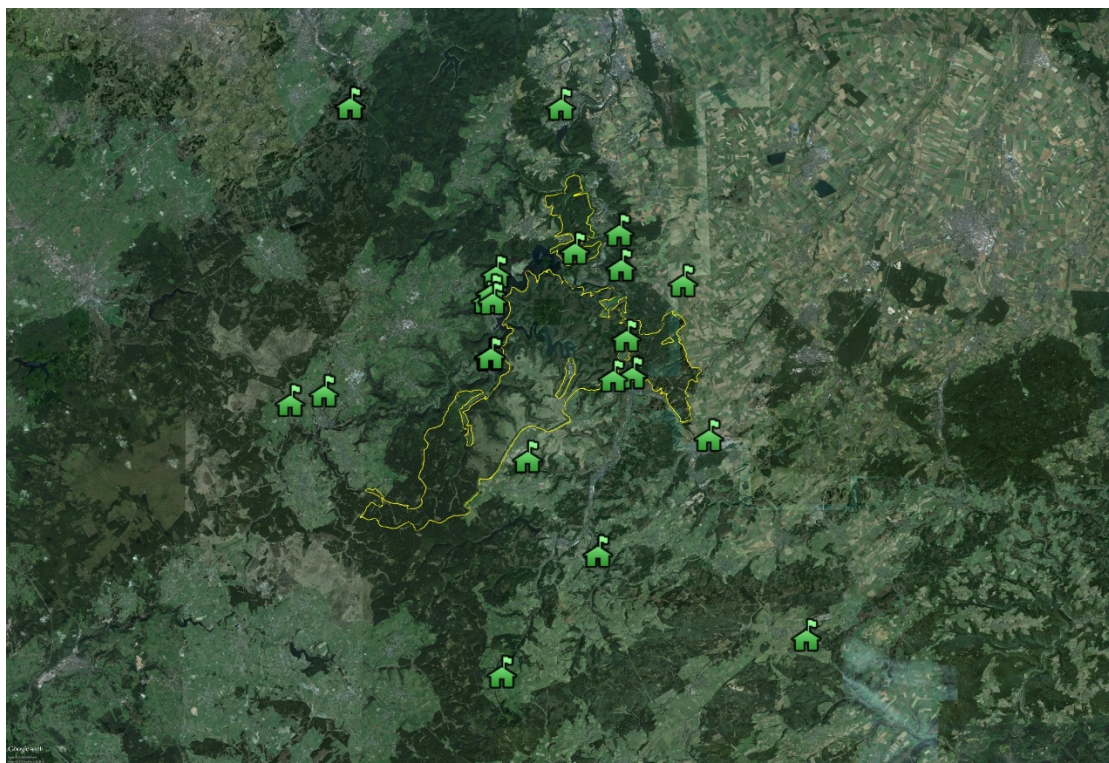
2 The Northern Eifel Region at Night the City of Cologne

Credit: ESA/NASA

[Hotels, motels and hosts](#) were invited not only to create special [night time arrangements](#) and offerings, but also to change their lighting installations. This is an ongoing process as well.

Touristic Offerings

The observatory at International Place Vogelsang IP is operational since April 2014 and offers public stargazing events and information about the value of natural, dark nightscapes. There were about 600 guests in the 2014 period (April to December) and about 2.500 guests in 2015 and about 1.800 guests until 30th of September 2016. Please see details and media coverage [here](#). Hoteliers and hosts do see a significant increase of over-night-stays caused by night-time nature observing offerings.



3 Many hosts, hotels and motels are already dedicated for "nighthawks"

Credit: Harald Bardenhagen

Several touristic products are well accepted in the market already (<http://www.nordeifel-tourismus.de/aktiv-natur/sternenregion-eifel/>). Two special brochures are spread beyond the boundaries of the Eifel region. Several travel magazines reported about the Sternenpark Eifel National Park. (<http://www.sterne-ohne-grenzen.de/medien-echo/>)





Eifeltimes

2015/16

Herbst/Winter
Herfst/Winter
Autumn/Winter
Automne/Hiver

Die Gästezeitung des **WOCHENSPIEGEL**

- ▶ **Sternenpark: Eifel unterm Sternenhimmel**
- ▶ **Sterrenpark: Eifel onder de sterrenhemel**
- ▶ **Dark Sky Park: Eifel under the starry sky**
- ▶ **Un parc aux étoiles: l'eifel sous le ciel d'étoiles**

▶ Mit seinem funkelnden Sternenhimmel hat sich der Nationalpark Eifel 2014 als Sternenpark qualifiziert. Zehn Jahre nach seiner Gründung erhielt das Großschutzgebiet die bedeutsame Anerkennung der International Dark-Sky Association (IDA). Seit 2010 bereitet der Kölner Astronom Harald Bardenhagen gemeinsam mit der Region ein Schutzgebiet für den Sternenhimmel vor: „Die Nationalparkregion Eifel ist eine der wenigen Orte in Deutschland, in denen man die Milchstraße mit eigenen Augen sehen kann.“ Fledermäuse, Zugvögel und viele andere Tiere profitieren von dem geschützten Nachthimmel. Veranstaltungen der Astronomie-Werkstatt „Sterne ohne Grenzen“ lassen die Schätze des Nachthimmels mit bloßen Augen, Ferngläsern und Teleskopen auf der Sternwarte in Vogelsang IP erleben.



▶ Met zijn vonkelende sterrenhemel heeft zich het Nationaalpark Eifel in 2014 als Sterrenpark gekwalificeerd. Tien jaar na de oprichting kreeg het natuurbeschermingsgebied de belangrijke erkenning van de International Dark-Sky Association (IDA). Sinds 2010 bereidt de astronoom Harald Bardenhagen samen met de regio een beschermingsgebied voor de sterrenhemel voor: 'De Nationaalparkregio

Eifel is één van de weinige plaatsen in Duitsland waar men de Melkweg nog met eigen ogen kan zien. Vleermuizen, trekvogels en vele andere dieren profiteren van de beschermde nachthemel. Tijdens de evenementen van de Astronomie-Werkstatt 'Sterren zonder grenzen' kunt u de nachtelijke hemel met het blote oog, verrekijkers en telescopen op het observatorium in Vogelsang IP beleven.

▶ With its starry sky the Eifel National Park has qualified as a Dark Sky Park in 2014. Ten years after its establishment the major conservation area was awarded the most significant recognition of the International Dark-Sky Association (IDA). Since 2010 the astronomer Harald Bardenhagen together with the region has been working on the establishment of a conservation area for night sky: 'The National Park

Region Eifel is one of a few places in Germany, where you can see the Milky Way galaxy with your own eyes. Bats, migratory birds and many other animals benefit from the protected night sky. At events with the astronomy workshop 'stars without borders' the treasures of the night sky become visible to the naked eye or can be experienced with binoculars and telescopes in Vogelsang IP.

▶ Avec un ciel nocturne magnifiquement scintillant, le Parc national de l'Eifel fut qualifié de « parc aux étoiles » en 2014. Dix ans après sa fondation, cette réserve naturelle a obtenu ainsi ce label important accordé par l'International Dark-Sky Association (IDA). Depuis 2010, Harald Bardenhagen, astronome de Cologne, et la région sont, en effet, en train de préparer une réserve de ciel étoilé : « La région du Parc national de l'Eifel est l'un des rares endroits en Allemagne où l'on peut vraiment voir la Voie lactée de ses propres yeux. » Chauve-souris, oiseaux migrateurs et bon nombre d'autres animaux profitent du ciel nocturne protégé. Les événements proposés à l'atelier d'astronomie « Étoiles sans frontière » permettent une découverte des richesses du ciel nocturne à l'œil nu ou à l'aide de jumelles ou des télescopes de l'observatoire du Vogelsang IP.

► www.nationalpark-eifel.de/go/eifel/german/Willkommen/Sternenpark.html



5 Inspection

Credit: Medienzentrum Kreis Euskirchen



4 The first star?

Credit: Medienzentrum Kreis Euskirchen

Special events to promote the “Culture at Night” and the “[Culture of the Night](#)” took place in 2015 with large number of attendees. The first time ever full dome projection was offered in the Eifel region: a 7m planetarium dome was setup for two days in the Kulturkino in Vogelsang IP. The do-it-yourself planetarium projector projected several astronomical full dome movies and the IDA movie “Losing the Dark” was one of the blockbusters. (<http://www.sterne-ohne-grenzen.de/neugierig-rueckblicke/2015/kultur-bei-nacht-2015>)



6 A view into the 7m globe with full-dome projection

Credit: Harald Bardenhagen

Media Relations

There was a [enormous media coverage](#) about the Dark Sky Park Eifel National Park. The Eifel National Park did observe more than 300 press releases about the Sternenpark. International, national and regional TV and press did report continuously not only about the Dark Sky Park as a touristic destination, but also about the value of darkness during night and the light pollution caused by the big cities around. This is an important indicator: the Dark-Sky-Designation does not influence within the region itself, but also far across its borders. www.sterne-ohne-grenzen.de/medien-echo/



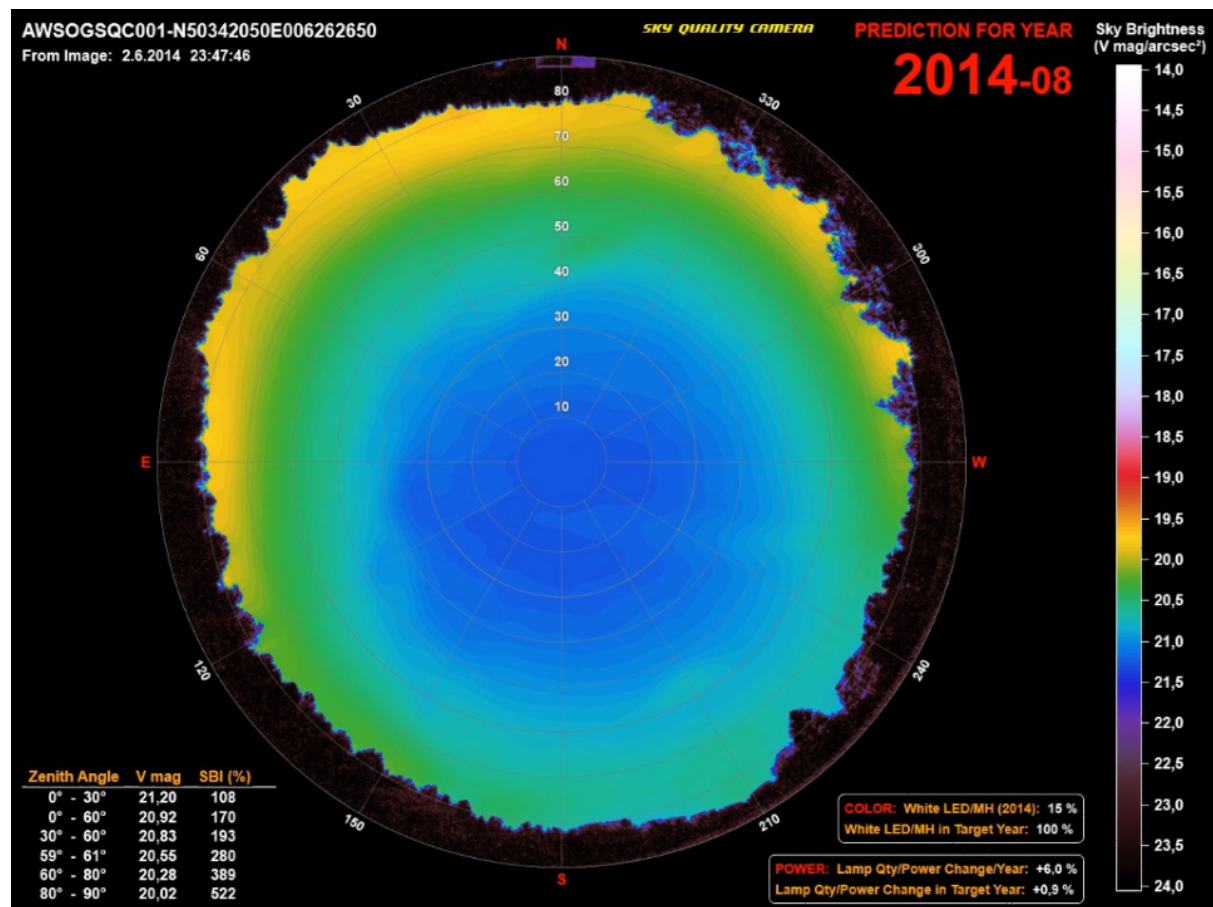
Sky Quality

There is a small decrease in Sky Quality due to the growing light emission from large cities at a distance of more than 50 km (e.g. Cologne, Aachen), although light emissions from communities around the park decrease in general. This phenomenon highlights the importance to control light pollution far beyond the border of the protected area. Some activities did happen in the city of Cologne: successful prevention of an illuminated running part; lowering of the intensity of emissions from billboards. A case study produced by Astronomie-Werkstatt was used to accomplish this. (<https://youtu.be/PDvdacXo8A0>)



Monitoring

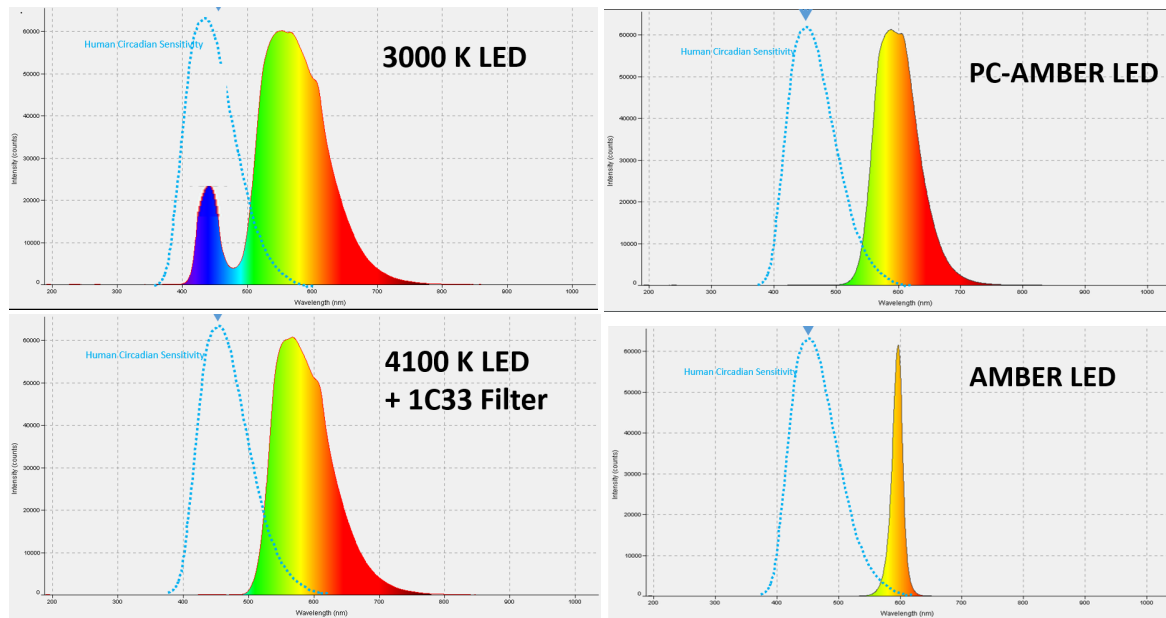
There are four fixed SQM stations which collect data (DL), and eight temporary locations for measuring the sky quality. A calibrated DSLR with fisheye is used to take pictures which are analyzed by "Sky Quality Camera" (SQC) software from Andrey Mohar and Dark Sky Slovenia. The SQC solution is much more precise than SQM measurements and also give CCT and distribution of brightness over the complete visible sky.



7 The Software Sky-Quality-Camera (TM) is used to analyze fisheye pictures of the night sky Credit: Harald Bardenhagen

Light pollution abatement

More and more communities consider not only full-cut off but also warm white or pc-amber LED luminaires.



The city of Heimbach has setup a luminaire demonstration place in the city center with four LED luminaires with no spectral emission below 500 nm wavelength.

New lighting installations are in place at Vogelsang IP forum and several other buildings. The old luminaires are replaced with filtered LEDs, an EVONIC 1C33 acrylic filter cuts of all emission below 500 nm. There is a central lighting management system in place to control switch of and dimming individually.

There still are negotiations necessary about the illumination of a refugee camp at Vogelsang IP right in the center of the dark sky park which does not fit to the strict “no-blue”-light regulations of the park. Security officers claim color recognition is to be provided to allow reliable witness statements. A large alliance from the Supervisory Council of Vogelsang IP up to the County Council of Euskirchen protested for compliance with the guidelines and did involve the prime minister of North Rhine Westphalia.

Outreach

There are one permanent exhibition at Vogelsang IP Kulturkino and one mobile exhibition which is display at alternate locations like regional fairs, city halls or Nature Centers since 2014.

More than 35 schools, which are designated as “Nationalpark-Schulen”, visited workshops about “Value of the Darkness and Astronomy” – some of them already performed project weeks and arranged star gazing sessions for the teachers and pupils at the observatory in Vogelsang IP.

One additional school established an “[Astronomie AG](#)” (*astronomy working group*) with regular weekly class hours. There will be a cooperation contract with the school to introduce the “Value of the Night” in to the school’s curriculum altogether.

Environmental NGOs

It is an ongoing process to address each school, nature education institution and NGOs like [NABU](#), [BUND](#) and [DAV](#) with the surrounding region of the Dark Star Park Eifel Nationalpark and attract them to become multipliers. There already is a collaboration with “Arbeitskreis Fledermausschutz Aachen, Düren, Euskirchen”, the regional NABU- and BUND-sections in place.



The “Dark Sky Park Eifel National Park” is represented at an European level in two organizations indirectly:

- EUROPARC Federation via Astronomie-Werkstatt “Sterne ohne Grenzen” (www.europarc.org)
- European Environmental Bureau (EEB) via “Licht und Natur e.V.” (www.eeb.org)



A booth about the dark sky park at the 2015 Annual General Meeting of EUROPARC Federation introduces the environmental threat light pollution and the challenges to protect dark skies and landscape to 250 participants from protected areas.

There will be a booth, a workshop and a side meeting about the value of the night and light pollution abatement during the upcoming AGM in October 2016. There also will be ballot and a draft proposal to encourage the members to act against light pollution.

The 2016 Annual General Meeting of EEB decided on a 2017 Work Program and a Midterm Strategy 2017-2019 recently. EEB included notions and actions against light pollution now – first time ever.

“The negative impacts and downsides of the emission of artificial light at night is another topic which should be given greater attention by policy makers. Light pollution is a crosscutting topic with potential implications for e.g. biodiversity and health. For example, measures to improve the energy efficiency of lighting are positive in tackling climate change but may increase the amount of ‘blue’ light at night, which might be harmful to humans and other species. The goal of avoiding light pollution should be considered in relevant policy areas.”

“The EEB will also seek to ensure that avoidance of light pollution is factored into relevant policy areas such as energy efficiency and biodiversity protection.”

This is a significant step forward to get the environmental groups in Europe be involved in light pollution abatement and to influence EU policies accordingly.

Links:

Dark Sky Park at Eifel National Park website

<http://www.nationalpark-eifel.de/go/eifel/german/Willkommen/Sternenpark.html>

Dark Sky Park at Nordeifel Tourismus GmbH website

<http://www.nordeifel-tourismus.de/aktiv-natur/sternenregion-eifel/>

Project "Sternenregion Eifel" website

<http://www.sternenregion-eifel.de/>

Observatory at Astronomie-Werkstatt „Sterne ohne Grenzen“ website

<http://www.sterne-ohne-grenzen.de/sternwarte-in-vogelsang-ip/>

Licht und Natur e.V. website

<http://licht-und-natur.eu>

