

**INTERREG V-A COOPERATION PROGRAMME**

**GREECE – BULGARIA 2014 – 2020**

Reinforcing Protected Areas Capacity through an Innovative  
Methodology for Sustainability

– **BIO2CARE** –

*(Reg. No: 1890)*

**WP4**

**Deliverable 4.4.2**

**Best practice examples for designing eco-friendly pathways,  
accessible by people with disabilities**

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## CASE STUDY 1: Wetland of Vravrona, Attica



Between Artemida and Markopoulo, in a fertile plain through which the Erasinos river flows, the wetland of Vravrona is formed, being one of the most important wildlife refuges in Attica. Just 30 km from Athens, it is a wonderful landscape with a rich history that has remained almost unchanged until today. The wide variety of habitats (reeds, running water, wet meadows, tamarisk bushes, etc.) combined with the mild human activities practiced in the area (e.g. vineyards, pistachios and vegetable crops) created a unique mosaic ecosystem, a place that is full of life, as more than 170 species of birds are found there.

Equally great is the cultural value of the area. Here is the temple of Vravronia Artemis and in the area great ceremonies were organized in ancient times - the Vravronia - which included music competitions, recitations of poems and water sports.

For many years the economic activities carried out in the area (agriculture and animal husbandry) were mild and did not cause drastic changes in the area. However, the harmonious coexistence of humans and nature has been seriously disrupted in recent years. Crops are being turned into housing plots, the wetland is being used as a landfill and human activities have damaged large areas, especially in the coastal zone. For this reason, it is imperative to protect the area of Vravrona and highlight its value, in order to preserve the uniqueness of the landscape.

The wetland and the surrounding area have been included in the network of sites under Directive 92/43/EEC on the protection of habitats also known as the European Network Natura 2000. This Network includes the most important sites at European level and aims to ensure the long-term

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conservation of the rarest and most endangered species and habitats, also through measures and policies that promote alternative forms of local development, such as ecotourism, agrotourism, organic farming and animal husbandry.

### **The people**

Vravrona is administratively part of the Municipality of Markopoulo and is located between the Municipality of Artemida and the settlement of Nea Vravrona. The presence of man in the area dates back to the Neolithic era, due to its favourable location, and until the 9th century BC, there was an organized settlement that had developed considerably. This settlement was abandoned for an unknown reason - probably due to an attack by hostile tribes. The area flourished again after 700 BC with the creation of the temple of Vravronia Artemis. Until 300 BC, when it was abandoned after a great storm that engulfed it, the temple became an important religious center. A procession that started from the propylaea of the Acropolis of Athens and ended at the temple of Artemis marked the beginning of the Great Vravronia, the games that took place every five years. From antiquity to the present day, the exploitation of land has remained largely unchanged, with viticulture remaining the most important form of cultivation. The remaining areas are dominated by pistachios, olives and figs, while there are also a few fields with vegetables.

### **The nature of Vravrona**

The wetland of Vravrona extends from the borders of the temple of Artemis to the sea where the river Erasinos flows. In this section, the river has water throughout the year. Among the fauna species that live in its waters, it is worth mentioning the Marathon Minnow (*Pelagius marathonicus*), a small endemic freshwater fish with a very limited distribution. Mosquito fish, which humans have introduced to fight mosquitoes, are also found in its waters, while terrapins, frogs, water snakes and eels are common.

In the reeds that cover the banks of the river, common moorhen and water rails nest, while during the migration, herons such as the little bittern find shelter. In wet meadows, endangered species such as the glossy ibis find food, while in the dense swamps that grow in places, the nightingale accompanies us with its famous song.

Cultivated areas are full with birds in spring and winter, while trees standing on the banks of the river are important resting places for migratory birds such as the European turtle doves, the Eurasian golden orioles and common cuckoos. The hills surrounding the wetland are used by birds of prey such as the long-legged Buzzard and the short-toed Snake-eagle, and finally the coastal zone provides plenty of food for seagulls, herons and kingfishers.

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The existence of fresh water all year round has created the conditions for rich biodiversity in the area. Thanks to the river of Erasinos, the fields withstand the difficult days of the dry summer, while its lush vegetation, that provides a number of nesting sites for birds, owes its existence to it. This wide variety of species also attracts terrestrial (fox, ferret, weasel) and flying predators (Eurasian Sparrowhawk, peregrine falcon, long-legged Buzzard and the short-toed Snake-eagle etc.). Finally, the freshwater that flows into the sea creates a brackish ecosystem in which large numbers of fish live, which in turn are food for herons, kingfishers and seagulls.

### The Environmental Education Programme



The presence of Erasinos river, the closed and shallow bay that develops at its mouth, the hills surrounding the wetland and the arable lands that appear around it have created a rich ecosystem, unique to the Mesogeia area. The Temple of Artemis, the variety of habitats and the rich birdlife of the area are among the many reasons that make the educational visit worth.

The Environmental Education Program "*Vravrona: getting to know a coastal wetland*" is addressed to teachers and pupils who wish to get

acquainted with the natural environment of the wetland of Vravrona, a wonderful coastal wetland with great environmental and cultural value.

Particular emphasis is placed on research activities and also recreational activities while touring around the area. The main goal is for the children to become acquainted with the wetland ecosystem in order to take care of it in future, as a natural consequence.

The objectives of the program are:

- To motivate children to be in the countryside of the wetland of Vravrona with a feeling of curiosity about the secrets of its nature.
- To acquaint children with the special characteristics of the natural environment of the area.
- Children to think about environmental issues and perhaps reconsider habits and behaviours that negatively affect the environment in the protected area.

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The Environmental Education Program includes:

- Educational tour of the wetland.
- Educational tour on a specially designed path for people with visual impairments.
- Implementation of outdoor activities of Environmental Education.
- Bird watching.

The educational tour includes a walk in the wetland and the coastal zone, as well as information about the importance of the habitats, the rich biodiversity that it hosts and the human activities practiced over time. Throughout the year, outdoor activities of Environmental Education are implemented in the wetland, specially adapted to the specifics of the protected area. The educational activities are addressed to the pre-school age, as well as to pupils of primary and secondary education. At the same time, during the spring and autumn period, bird watching is organized with available equipment (binoculars, bird recognition guides) and the escort of experienced members of the Hellenic Ornithological Society.



The educational tour in a specially designed path for people with visual impairments starts from the Archaeological Museum of Vravra, continues east of the archeological site and ends shortly after the Erasinos river. The total length of the trail is 500 m and is equipped with a special guided system for visually impaired people. It includes an orientation system and environmental interpretation signs, specially designed and embossed. It also

includes a sound-hearing system, with sounds of characteristic birds of the wetland. Around the middle of the route, a resting station with benches has been set up, where part of the Educational activities of the Programme are implemented.

Source of information and photographs: Website of Hellenic Ornithological Society ([www.ornithologiki.gr](http://www.ornithologiki.gr))

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## CASE STUDY 2: National Park of Cairngorms, Scotland



The Cairngorms National Park, the largest park in the United Kingdom, is located in northeastern Scotland and was founded in 2003. It has an area of 4,528 km<sup>2</sup>, twice that of Lake District National Park and larger than Luxembourg. It covers the Cairngorms mountain range and the surrounding hills. It includes 4 of the 5 highest mountains in the United Kingdom; Ben Macdui (1,309 m), Braeriach (1,296 m), Cairn Toul (1,291 m) and Sgor an Lochain (1,258 m). It hosts 1/4 of Scotland's indigenous forests, it covers 1/3 of the British land at an altitude of more than 600 meters, it provides food, rest and reproduction in a huge number of waterfowl. Dense coniferous forests, arctic mountain peaks, lakes, rivers, peat bogs, are some of the area's most characteristic habitats, hosting a rich biodiversity and providing shelter to 1/4 of the rare and endangered species in the United Kingdom.

Almost half of the Park's area (49%) has been recognized as of international importance and is protected at European level. It includes 19 Protection Areas, 12 Special Protection Areas, 46 Areas of Special Scientific Interest, 9 Nature Reserves and 2 Wetlands of International Importance (Ramsar). It aims to protect and preserve the rich biodiversity of the area and provides a variety of opportunities for recreation and learning.

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About 18,000 people live within the Park; the larger settlements are: Aviemore, Ballater, Braemar, Grantown-on-Spey, Kingussie, Newtonmore and Tomintoul. Tourism accounts for about 80% of the economy and 43% of employment in the region. In 2018, 1.9 million visitors were recorded. More than 50% of visitors come from Scotland, 25% from other parts of the UK and 21% from other countries. In 2017 it was voted as one of the 7 best ecotourism destinations in Europe, as it has impressive landscapes, rich biodiversity, traditional villages, separate distilleries and an organized network of trails and routes suitable for all.

The Park is popular for activities such as hiking, cycling, mountain biking, climbing and canoeing. It is run by two of Scotland's Great Routes: Speyside Way and Catearan Trail. It is also an ideal destination for winter sports, as it has 3 out of the 5 ski resorts in Scotland.

It is accessible to everyone and can be explored on foot, in a wheelchair, on horseback, by bicycle, by boat and canoe, but always in a responsible way and with respect for others and the environment. Guests must consider the Scottish Accessibility Guide. The ease of accessibility, the care and the infrastructure for everyone, make it very dear to the public.



*"It doesn't matter how old you are, how fit you are or where you come from, the Park is for everyone to access and enjoy".*

This is the main message that the Park addresses to its visitors. The aim of its management (The Cairngorms National Park Authority-CNPA) is to facilitate and ensure the safe movement of visitors, regardless of age, ability or background of the visitors, as well as to provide opportunities for everyone to play

sports (if they so wish), to get to know the Park, its rich nature and culture. For this reason, the Park Management works closely with the charity Open Access Trust for Scotland, for the development, improvement and promotion of route networks in the National Park. Furthermore, it plans and implements programs and actions for selected public groups, e.g. children, the elderly, the disabled, national minorities, economically weak groups, etc.

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Various partners are actively involved in the implementation of these programs and the local communities have an active role in undertaking the implementation of actions such as organized tours, provision of information, facilitation of travel, etc. As an example, one of the programs implemented by the Park in collaboration with 30 local communities is "Walking to Health" where trained volunteers accompany and guide the elderly and people with health problems, in organized hiking, encouraging them to exercise and giving them opportunity to socialize.



However, in addition to the volunteer groups, in the National Park several companies operate that offer specialized services (e.g. guided tours, access, accommodation, sports) to the above groups (e.g. Adventure Unlimited, Equal Adventure).

Particular emphasis is placed on visitor information. Visitors can be informed about the services provided in a variety of ways (e.g. printed publications, markings, National Park website, other relevant sites). The management of the Park has created rich informative material which is available to anyone who wishes to visit the Park or organize an excursion. The material includes detailed information on access and modes of transport, on the organization of travel and experience in the Park, on the possible risks and failures, on the services offered, etc.

As transportation costs can be an obstacle to visiting by certain public groups, the Administration supports financially (up to 75% or up to £ 200) school groups and groups that are at a disadvantage.

Finally, in order to be able to truly fulfill its role and the National Park to be truly "A Park for All", the Park has an Advisory Committee, called *Inclusive Cairngorms*, in which all relevant social partners are actively involved.

Indicatively, some of the areas of the Park that are easily accessible and have service infrastructure for visitors are the following:

- The Atholl Estate in Blair Atholl; the large white castle with gardens has routes and trails for people with mobility problems and wheelchairs.
- The Craigellachie Nature Reserve in Aviemore; it has well-designed paths, accessible to people with disabilities and with proper information in order to explore the wildlife of the area.

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- The Glenlivet Estate in Tomintoul; it includes accessible paths and information infrastructures to discover the rich history of the area and enjoy the landscape.
- The Glen Tanar Nature Reserve near Aboyne; it offers the right infrastructure for easy access and exploration of the area's forests, as well as properly trained guides.

Source of information and photographs: Website of National Park Cairngorms ([www.cairngorms.co.uk](http://www.cairngorms.co.uk))

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## CASE STUDY 3: National Park Hoge Kempen, Belgium



The Hoge Kempen National Park, in the Maas River Valley in the province of Limburg, covers an area of 5,700 hectares and is the first national park in Flanders. The area was created by the materials brought by the river and by man's long-term presence in the area (through livestock and mining activities).

Dense coniferous forests originally planted to provide timber for mines, extensive peatlands created as a result of grazing and burning meadows, wet meadows with ferns, pastures, hills and galleries of old mines create a complex and beautiful landscape, that hosts more than 7,000 species of plants and animals.

The idea of creating the Park began in 1990 with the establishment of the non-profit organization Kempen and Maasland Regional Landscape. In 1998, the Flemish Government undertook to draft a comprehensive development plan for the Park, which was completed in 2001 with the contribution of all parties involved. The purpose of the establishment is to reconnect man with nature, to preserve biodiversity and to give the area to society for education and recreation. The plan proposes the removal of incompatible economic activities and the strengthening of initiatives for the development of tourism and the attraction of visitors. In 2002, the Flemish Government formally committed to implementing the plan and provides 28 million euros to implement its parts. The Hogen Kempen National Park Office was established in 2003, and in 2004 the town of Maasmechelon rented more than 1,000 hectares to the Park. Since then, many coordinated actions have taken place and the Park was officially inaugurated in 2006. All social partners, the state, municipalities, services, businesses, NGOs, and citizens (through volunteer programs) are involved in the establishment and operation of the National Park). The development and promotion of sustainable tourism is in focus of this partnership.

Indicatively, some of the benefits (comparing the period of one year before and after the establishment of the Park) are:

- Doubling of visitors (700,000 visitors in 2007).

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- 10% increase in overnight stays in the 6 Municipalities within the National Park (from 153,000 to 187,000), which is 2.5 times higher increase in overnight stays than the rest of Flanders.
- Increase of tourists by 22% (from 460,000 to 510,000).
- Annual financial benefits worth 20 million euros from the exercise of various tourism activities.
- Direct and indirect employment of 400 people.

Today, the Park has a variety of routes and infrastructures for the service of the disabled, as well as trained staff for guided tours and for the implementation of educational programs.

Source of information and photographs: Website of National Park Hoge Kempen ([www.nationaalparkhogekempen.be](http://www.nationaalparkhogekempen.be))

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