



LIFE III

focus



LIFE, Natura 2000 and the military



European Commission

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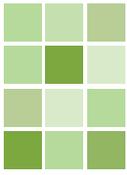
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General introduction to Natura 2000

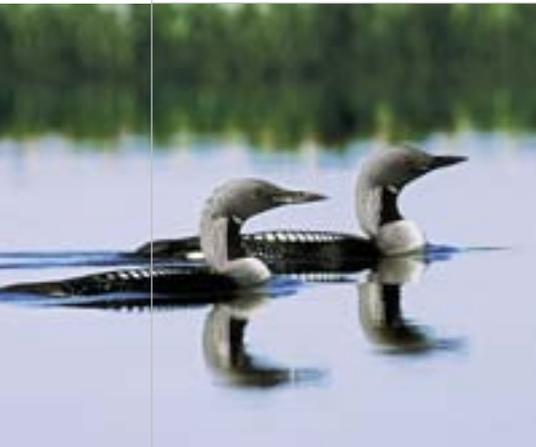


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The Natura 2000 network came into existence in 1992 through the adoption of the Habitats Directive, which, together with the Birds Directive adopted in 1979, forms the cornerstone of the EU's nature conservation policy. Together with the Special Protection Areas (SPAs) designated under the Birds Directive, the areas designated under the Habitats Directive as Sites of Community Importance (SCI) constitute a network of protected areas across the EU called Natura 2000, sheltering species and habitats which are rare or endangered at European level.

This network is one of the principal means for implementing the commitment made by the Union's Heads of State and Government at the Göteborg summit in June 2001 to 'halt the loss of biodiversity by the year 2010'. It is the EU's tool to fulfil its obligations under international conventions such as the Bern Convention and the Rio de Janeiro process.

For the first time, all member states are working together towards the same conservation goal and within the same legislative framework (the two directives) to protect and manage vulnerable species and

habitats across their natural range, irrespective of political boundaries.

Designation of SPAs and SCI is now almost complete in the 15 states which were members of the Union before May 1st 2004. In these fifteen, Natura 2000 covers no less than 18,000 sites with a total surface area greater than Germany. Most of the ten new member states which joined on May 1st 2004 already submitted their lists of Natura 2000 sites at the date of their accession. These site proposals are currently being analysed by the Commission with a view to integrating them into the Natura 2000 network.

The role of LIFE

Managing the Natura 2000 sites and restoring parts which have been damaged by past actions or neglect, adapting activities like farming, forestry, fishing, hunting and recreation to the sustainable maintenance of the sites, informing stakeholders and the general public about the conservation values and targets... all this costs money. The Habitats Directive acknowledges this and in its Article 8 foresees a contribution from the Community towards these costs.

Since 1992, the EU has had an instrument called LIFE exclusively devoted to funding environmental projects, within which there is a section for nature projects. This section, LIFE-Nature, is assigned 47% of the total LIFE budget, for actions which contribute to the protection of species and maintaining or restoring natural habitats under the Birds and Habitats Directives.

LIFE-Nature has been the only Community financial instrument to focus first and foremost on the conservation of sites within the Natura 2000 network. It has so far contributed €644 million to over 800 nature projects across the EU. As we shall see, 28 of these have a military dimension. Although a relatively small fund in EU terms, its contribution in helping to establish and manage the Natura 2000 network has been considerable. Close to 2,000 sites representing over 10% of the total network have been targeted by LIFE-Nature projects so far.



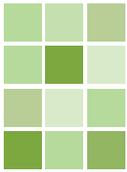


SECTION ONE

THE CONTEXT

This brochure looks both at the LIFE-Nature projects which had a military dimension as at the context within which these projects took place.

The term “military areas” covers a wide and heterogeneous range of terrains and infrastructures owned and/or used by the armed forces. Although some have no particular interest for nature conservation, most of the military areas, and especially those used for training and testing, contain significant, even spectacular, amounts of natural and semi-natural habitats and landscapes, with corresponding abundances of wildlife. Sometimes they are among the richest and most important sites for biodiversity in their country. Training areas can measure in the thousands or tens of thousands of hectares each, but smaller military areas should not be overlooked: between airfield runways or around munitions depots and radar installations, for instance, ecologically interesting pockets of nature often occur.



Why are military areas important for nature conservation?

The sheer size of the military areas in question: looking at a topographic map, military estates used for training and firing exercises stand out as large areas, uninterrupted by roads or built-up areas. Size is an important ecological condition for the population dynamics of many species.



Photo © John Houston

The French Ministry of Defence is one of the country's biggest landowners, controlling 265,000 ha, 0.5% of the total national territory. 13 military camps alone account for 40%, or 108,600 ha. The estate encompasses 84 military airfields, 195 training grounds, 133 firing ranges and 5,572 buildings.

The UK's Ministry of Defence owns 240,000 ha in total, 1% of total British land territory. The natural value of this estate is illustrated by the fact that it includes 190 SSSI (Sites of Special Scientific Interest, the most stringent

protection level under national legislation in the UK). There are more than 140 coastal sites in the Defence Estate, and these may cover part of the marine environment as well (e.g. firing ranges extending out to sea).

The Italian armed forces control a territory whose total surface is 170,100 ha, four times the surface of the nation's flagship Abruzzo National Park. This includes 331 training areas, half of which are used as firing or shooting range, and about 200 sites occupied by lighthouses and radar devices. The distribution of the

military areas in the various administrative Regions mainly reflects previous assessments of the risk of invasion linked to the Cold War. Thus 70 areas are located in Friuli-Venezia Giulia, on the north-eastern border of Italy, and another 41 in the adjacent Trentino-Alto Adige region. On Sardinia the total military estate is almost 20,000 ha, with a single shooting range of 12,000 ha (Salto di Quirra, Nuoro Province), and another range in Capo Teulada (Cagliari Province) extending along 25 km of coastline (with a no-fly zone covering 75,000 ha).

Their intact microtopography: many rural areas have lost ecological gradients (wet-dry, alkaline-acidic, light-shade, hummocks and depressions) as a result of rural land consolidation programmes and intensification of agriculture. These processes bypassed military areas.

Their trophic situation: Many military areas have a high biodiversity because they were never used agriculturally, and so were never fertilised. A basic ecological principle is that the number of different plant species on a site increases as that site's soil and water becomes poorer in nutrients. An oligotrophic environment means that microhabitats, each with their peculiar plants and animals, stand out more clearly, whereas when soil and water become enriched with nitrogen and phosphorus (i.e. eutrophic) the ecosystem becomes more uniform and biodiversity declines.

Intact natural processes: some sites have been used only as military areas for very long periods, during which other users were not allowed in, or much constrained in their activities. This meant no intensive agriculture, no residential building, no quarrying or mining, no hydrological changes, etc. Hence, natural processes (river erosion and sedimentation processes, mobile dunes, accumulation of dead wood in forests, ...) could take place untrammelled over large areas and – often – on intact soils.

The armed forces may not originally have had the intention to preserve large tracts of natural heritage, but the fact that de facto they have done so, deserves to be acknowledged.

*Some examples: Most of the Dutch military estate was acquired over a century ago, on land **not** being used agriculturally at the time, or of only marginal agricultural value. Thus military areas preserved landscapes long gone in the rest of the Netherlands – without their military dedication they would very likely have been destroyed in the general intensification of land use in the later 20th century. In the Dutch military estate, heaths (25% of the current 30,000 ha), coastal and inland dunes and shifting sands (5%), dry nutrient-poor grassland (15%) and forests on poor soils (33%) are the most common habitat types. They host, on a few % of the country's total land area, half or more of all the species found in the Netherlands, depending on the taxonomic group.*

heaths, nutrient-poor grasslands, oligotrophic pools, alkaline fens, mixed oak-birch-beech woods, shifting sands, bogs and bog woodlands and alder swamps. Many plants, invertebrates, amphibians, reptiles and birds which are now rare in the rest of the country still occur in significant numbers inside the military perimeters.

Finally, the huge changes to the Danish landscape (agricultural intensification, loss of heathland) during the 20th century bypassed the military areas, which are now the country's last coherent semi-natural areas, untouched for decades. Their biodiversity is 5 times that of the surrounding countryside.

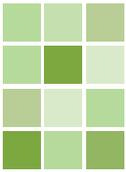
In a Mediterranean context, Italy's defence estate covers a number of sites of high ecological value, with a variety of well-preserved habitat types ranging from long tracts of coastline and alluvial plains to high mountain peaks, with karstic plateaux, heaths and Mediterranean scrub, wetlands and steppic

Taxonomic Group	Number of species in the Netherlands	Number of species found in Dutch military areas
Vascular plants	1,490	785
Dragonflies	60	40
Butterflies	70	46
Birds	236	144

source: Dutch Ministry of Defence, presentation to Salisbury Workshop July 2004

The military estate in Belgium covers 26,000 ha and was also acquired in the 19th and early 20th century in areas that were among the most marginal agricultural lands; sandy or hilly country that had for centuries been used in a very traditional and 'low-key' manner – burning of heath followed by cropping, grazing by itinerant flocks of sheep, etc. Subsequent agricultural intensification and rapid urbanisation in Belgium, especially Flanders, mean that the military areas are now among the last large unspoilt semi-natural areas left. They have preserved old landscapes like

grasslands in between. In all these areas public access is strictly forbidden, as well as any kind of exploitation, including building, agriculture and tourism development. Thus Italian military areas, although designated for purposes other than nature conservation, effectively acted as barriers against the uncontrolled building and overexploitation of natural resources which has ruined so much Mediterranean land and brought ecological degradation and impoverishment to many areas of particular conservation concern.



Saving the Hungarian meadow viper (*Vipera ursinii rakosiensis*) from extinction (LIFE 04/NAT/HU/0116)

The natural heritage preserved by the military includes some real rarities, even species teetering on the brink of extinction. LIFE-Nature is co-financing the rescue of a globally threatened reptile whose last stronghold is in and around a Hungarian military area.



Photo © Balint Halpern

Vipera ursinii rakosiensis is a small poisonous snake which used to occur over a relatively broad area in southeastern Europe, from Austria to Bulgaria. Agricultural intensification and afforestation of open grasslands destroyed its habitat to such an extent that by the 1970s its occurrence was restricted to Hungary, and even in this last stronghold its numbers have continued to plummet. Of 31 stations in the 1970s, only 3 were left at the beginning of the 21st century. Total population was then estimated at 250-500 individuals only – the Hungarian population is the last left in the world.

The three stations where it still occurs are Hanság in the northwest

of Hungary, the Bocsa-Bugac hills in the southern Kiskunság (between Danube and Tisza in central Hungary) and, the most important population, half of the total, the Dabasi-Turjanos area between Dabas and Tatarszentgyörgy in the northern Kiskunság.

A large part of this last station is taken up by the Taborfalva military shooting range, used by Soviet and Hungarian Armed Forces since the Second World War. The range is a mosaic of marshy grassland (*Succiso Molinietum coeruleae*) in lower parts and sandy meadows (*Astragalo-Festucetum rupicolae*) and pastures (*Potentillo arenariae* – *Festucetum pseudovinae*) in the hilly sections,

with patches of trees alternating with open woodland.

The existence of the military training area has acted as a brake on intensification of land use. Fields were left out of most agricultural activities, preserving a steppe-type grassland vegetation. Consequently Dabasi-Turjanos is still very rich in natural values, serving as a refuge for several rare species. It is no coincidence that the largest remaining *Vipera ursinii rakosiensis* population in the world has managed to hang on in and around the military training area, and it is this population that offers the best prospects to drag the species back from the brink of extinction.

Generally, during the period before 1990 military training areas preserved land from intensive use like ploughing or afforestation, which affected so much of the Hungarian steppes under successive plans to boost output. After the political changes in 1990 most of the training areas were closed, while military activities increased on the remaining ones, especially after Hungary joined NATO. Nature conservation bodies and agricultural interests competed for the use of the decommissioned areas.

The Hungarian Ministry of Defence kept Taborfalva and stepped up training there, e.g. for SFOR and Hungarian units deployed to Iraq and Afghanistan. It is used for exercises (infantry, trucks, armoured vehicles) and for shooting.

Because of the *Vipera ursinii rakosiensis* presence, MME, a Hungarian conservation NGO, and the Duna-Ipoly National Park concluded an agreement with the Hungarian Armed Forces about joint collaboration for its conservation. The Taborfalva military personnel notify MME well in advance of their activities and allow it to carry out field studies on any part of the range during inactive periods. Two blocks of land belonging to the Ministry of Defence, Dög-hegy and Göbölj-
 jaras, located in the buffer zone around the central shooting ranges, were leased by MME from 1994 onwards as viper reserves. Together they cover nearly 1,000 hectares. Under the terms of the five-year renewable lease agreements MME has to present its annual management plan and list of activities (mowing etc) to the Ministry by March of each year. Although the military may occupy the area if needed without any previous consent of MME, it will inform MME three days prior to the event, in order to minimise damage to the viper populations. The Ministry refuses all liability for accidents or damage caused by an increased snake population.

To kick-start species recovery, using the vipers in and around the military area, MME in 2003 successfully

applied for a LIFE-Nature project with the following actions:

- > A comprehensive monitoring programme will try to find all viper subpopulations in and around the military area and track their evolution, and pave the way for reintroduction of captive-bred animals.
- > On the Dög-hegy block, land management ideally suited to the vipers will be launched (no annual mowing, partial mowing only every 3 years to keep enough open habitat, cutting out bushes to stop succession).
- > Another ideal habitat will be created on non-military land near the shooting range by clearing trees to restore open grasslands.
- > Finally and most significantly, LIFE-Nature will fund the construction of a captive-breeding centre nearby. Vipers taken from the populations in the buffer zones around the shooting ranges will be used as breeding stock, and the progeny will be released back into these areas as well as the new habitat to be created by the project. This should not only shore up the wild

population and reverse its decline, but also increase genetic diversity and eventually allow a greater area to be populated.

During the LIFE project, the military area's central shooting ranges will also be monitored. They are a risk factor because the fires caused by the shooting can kill vipers outright and burn off vegetation, leaving an unsuitable environment lacking in prey and cover. The shooting ranges will stay in use – this has been confirmed by recent NATO training missions there – and so the project will, on the basis of its monitoring work, discuss other options with the Ministry of Defence to conserve the vipers (e.g. avoidance during training of areas where vipers are known to occur, or removal of vipers from sites where military use can not be stopped). Vipers are also sensitive to vibrations, so the movement of truck or tank convoys can be a negative factor for them; this too is to be looked at during the project. This LIFE project will run until Dec 31st 2007.

Photo © Marton Horvath



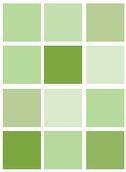


Photo © Birdlife, Hungary



Another endangered species, the great bustard (*Otis tarda*), has also benefited from the presence of the Taborfalva military area. One of Hungary's populations of the great bustard extends across the Kiskunsag, including the military area. A LIFE-Nature project (***Otis tarda* in Hungary – LIFE04NAT/H/0109**) addressing all populations of the great bustard in Hungary, to secure and increase its populations, began in 2004. The Kiskunsag National Park is responsible for the part of the project which includes Dög-hegy and the surrounding part of the Taborfalva military area. Measures in the Kiskunsag include counting great bustards, monitoring their habitat, scouting for nests, guarding them where necessary and reintroduction of captive-bred birds.

Finally, the imperial eagle *Aquila heliaca*, which has lost much of its original range and inside the EU is now effectively reduced to Hungary (50-60 pairs) and Slovakia. A LIFE project (**Conservation of *Aquila heliaca* in the Carpathian basin LIFE02/NAT/H/8627**) is monitoring the imperial eagle throughout Hungary, guarding nests where needed and formulating appropriate management for each population. The eagles are scattered over many sites, and some of these populations owe their existence to military use. At Miskolc-Kisgyor in the eastern Bukk mountains, the DIGEP

armaments factory used the slopes to test the artillery it manufactured. Consequently, the forests were out of bounds, even for foresters, and were ideal undisturbed nesting areas for the imperial eagle. Three breeding pairs settled there, foraging in grasslands in the lowlands which

were also used as shooting range. DIGEP closed ten years ago, and although the eagles are still there, forestry and tourism are increasing now that access to the land is open. The LIFE project is examining how to achieve the suitable conditions for the eagle once guaranteed by the military presence.

Two other populations are associated with military training areas: Varpalota-Hajmasker (Bakony mountains) and Markaz-Abasar (Matra mountains). The former is still used as shooting range and the short grass covering it is full of sousliks (*Spermophilus citellus*), prey for a pair of eagles which nest here. The latter was employed for shooting until the early 1990s, and used by four or five eagles as foraging area, but since the end of military training the grass has grown longer and the site's value for foraging has probably declined. The LIFE project is studying this with an eye to proposing measures if required.

Photo © Janos Bagyura



Disturbance is an important factor in determining the quality of ecosystems. Several habitat types can only attain a good conservation status if there is an absence of disturbance, for instance intensive forestry may have negative impacts on biodiversity of

forest habitats, while raised bogs lose their ecological quality if they are subjected to drainage and/or peat excavation. On the other hand, there are habitat types which benefit from disturbance: grasslands and heathlands which are not browsed by

large herbivores or mowed, will gradually disappear as shrubs and trees take hold and grow into thickets and eventually woodland. Military areas contain both groups of habitats, but they also exhibit both sides of the disturbance coin!

Absence of disturbance

This may sound strange, given the kind of activities commonly associated with military use. Disturbance does occur in military areas, but mostly at regular intervals, often in the same sections of the area, while the size of many military areas allows migration possibilities. Although military exercises may seem violent and spectacular, in many bases and training areas only a part of the site is used. Firing ranges for instance typically consist of long straight 'shooting galleries' separated by broad areas of wood or heath in between. The ranges are used, but for obvious reasons there is not much traffic on them, and the swathes of nature between the firing lines are seldom if ever used for anything. Tanks and other heavy vehicles tend to be used on well-defined tracks or routes which do not change that often. Infantry exercises do range over a wider area, but their impact is often low.



Photo © Philip H. Smith

Photo © Marcel Van Wäerebeke



Presence of disturbance

*Paradoxically, some of the disturbance that occurs during military activities can be beneficial for conservation. Pioneer communities of fauna and flora depend upon disturbance; in nature this can be soil erosion, wildfire, flooding etc., to which certain species are adapted. In the absence of disturbance, such communities evolve into other habitats through the process of natural succession. Bombing, shelling, prescribed burning for training purposes and armoured vehicle manoeuvres can mimic these natural disturbances and create pioneer communities, or maintain them against natural succession. Thus bare sand and soil, uncommon habitats which rapidly evolve through succession but host a range of rare plants and invertebrates (as well as birds such as *Burhinus oedicephalus*, the stone curlew), are constantly created in military areas used for such exercises. Holes left by tracked vehicles can fill with water and become pools which are ideal breeding habitat for amphibians.*

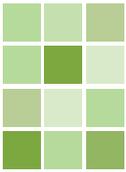


Photo © Andy Hay, RSPB Images



Photo © Dante Munns, RSPB



Photo © Andy Hay, RSPB Images

LIFE challenges established wisdom: Conservation lessons to be learnt from the military

*One of the functions of LIFE is to innovate and discover new approaches to environmental problems and to shake up existing practice. That bombing, shelling and driving tanks through a landscape can have positive ecological effects will surprise many, but this is one of the lessons learned by the **LIFE-Nature project Dorset Heaths (LIFE92/NAT/UK/0133)** and its follow-up!*

Much heath in northwest Europe has been lost to development, and what is left is almost everywhere threatened by the growth of shrubs and trees. The conservation NGO Royal Society for the Protection of Birds (RSPB) requested and obtained LIFE-Nature funds for a pilot project to stop the decline in Dorset, the UK's leading district for lowland heaths, and evaluate ways to manage the heathland so that it does not evolve into woodland. This project thus had two objectives: immediate restoration of heathland sites in Dorset, and testing techniques and collecting experience in order to refine heathland management. The results were published in the RSPB 'Handbook on Heathland Management', which, to mark the good collaboration with the armed forces (who assisted RSPB's restoration work with their earth-moving machinery), was officially launched at a military site in Dorset.

Of the 6,500 ha lowland heath left in Dorset after the destruction of most of its original extent by agricultural changes and urbanisation, 1,350 ha, 20%, are owned by the Ministry of Defence, distributed over 5 military sites. These sites are used for live firing, which causes expanses of heath to burn off, and for tank exercises, which create deep tracks or expanses of bare sand. This sounds very damaging, yet according to the LIFE project manager, Dante Munns (RSPB), such rough treatment mimics the traditional use which created and maintained the heathland semi-natural habitat for many centuries. In the 19th century and before, carts and livestock etched out sandy tracks across the heaths, while areas were regularly burned for grazing and cropping. The trick, when making a conservation management plan, is to define the optimum use. This is borne out by the example of the Bovington military area: in the 1980s tanks used all of it to train, leaving behind vast expanses of bare sand. In reaction, initial conservation advice was to restrict the tanks to well-defined tracks, but then it transpired that the land between the tracks was evolving from heath to scrub because it was too undisturbed.

Moreover, bare sand is a valuable habitat in itself because it supports unique specialised invertebrates, but has become rare. At a comparable non-military heathland site in Dorset, specialist invertebrates have to make do with only a few m² of bare sand on average.

In other words, the armed forces had all those years been doing recurring heathland management and bare sand habitat creation on their Dorset sites, but not deliberately, simply as part and parcel of their normal activities.

This particular conclusion of the broad reflection on heathland management launched by the LIFE project, is backed up by literature. So it is not a new discovery. However, it is important that it is tested, reiterated and disseminated by the LIFE project and its follow-up (for instance, Mr Munn gave a presentation at the July 2004 workshop in Salisbury on Natura 2000 and military site management), because many conservation agents are either not aware that military training can benefit heath and sand habitats, or do not fully accept that.

A provocative question raised by the work of this LIFE project: why spend money in military sites on manual scrub-cutting or sod removal, the classic conservation techniques to restore overgrown heath and recreate bare sand, when it might be cheaper and just as effective to shift the location of tank exercises into the scrub areas until a "dustbowl" is created on which heath can regenerate naturally?

The LIFE-Nature project Dorset Heathlands made a systematic examination of heath management, including on military sites, and its conclusions about the beneficial role of military use when dealing with habitats requiring disturbance and active management, are mirrored by other case studies.

- > Shifting sands are very rare in the Netherlands after centuries of work to contain and afforest them, but are still a typical feature of Dutch military areas because they are deliberately kept open in shooting ranges as fire barriers and because in sandy areas 'free-for-all exercises' (i.e. drive where you like) keep ripping up the turf and exposing the sand.
- > For much the same reason, the last morphologically active continental dune left in the German region Sachsen-Anhalt is found in the military training area Altmark. Throughout eastern Germany in the early 1990s there were large expanses of bare sand and

pioneer vegetation in the many training areas left by the Warsaw Pact armies.

- > In the German region Rheinland-Pfalz, a survey revealed that the biggest individual amphibian populations occurred in the armoured vehicle training areas Koblenz-Schmittenhöhe and Baumholder – depressions and holes left by the vehicles' tracks filled with water and became ideal breeding habitats.
- > A joint workshop on Jan. 20 2005 by Metsähallitus (Finnish forest and park service) and the Pori Brigade of the Finnish Armed Forces evaluated past management of thermophile habitats on eskers (designated pSCI) in the Säkylä training area. It concluded that military use was positive because it kept these habitats open, by burning and by creating bare ground through exploding munitions. Even better outcomes for nature might be achieved by rotating firing exercises over the site instead of aiming at the same target

zones. This, and other discoveries, is being integrated into the Natura 2000 management planning for the training area.

- > The Salisbury Plain training area in the UK has vast expanses of chalk grassland, and tanks and exploding shells turn about 26 ha of this chalk grassland into bare ground annually. This sounds negative. However, the site conservation manager has investigated and concludes that such a first impression would be deceptive. Bare ground is a rare habitat in itself, a last refuge for wild plants once common in arable fields, for various invertebrates etc, and eventually it returns to chalk grassland. Similarly, the deep holes in tank tracks fill with water and become ideal habitat for toads, newts and fairy shrimp (a species restricted to temporary pools). The stone curlew, a shy Annex I bird which has lost much ground in the UK, was even found breeding within an armoured vehicle driving range.

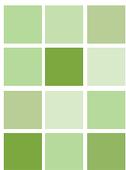
The impact area of the firing ranges on the Salisbury Plain is kept open by burning, and this is good for the Annex II butterfly Euphydryas aurinia. Why? Its host plant, Succisia pratensis, requires early succession stages to germinate and spread, and is easily shaded out by natural succession; the wrong kind of grazing causes it to decline vis-à-vis other plants. Loss of host plant meant that 66% of Euphydryas populations in England in 1990 were extinct by 2000. In the Plain military training area, regular burning gives the host plant the chance to maintain itself against its competitors. Moreover, shell craters provide ideal egg-laying and caterpillar habitat for the butterfly. With 35% of total English population, the Plain is now northern Europe's most important site for this Annex II species. The LIFE-Nature project which began on the Salisbury Plain and Porton Down in April 2001, further boosted the Euphydryas aurinia population by a number of measures:

- > scrub encroaching on grassland rich in Succisia pratensis (butterfly habitat) was cleared (12.6 ha);
- > restoration of 5 sections of degraded Succisia pratensis grassland totalling 9 ha;
- > a 4 ha plantation of trees was cut down to create additional habitat;
- > there is grazing on parts of the Salisbury Plain, and a number of plots (over 10 ha in all) were fenced off on the grasslands to prevent grazing damage to, and stimulate growth of, the butterfly host plant and so increase habitat and create stepping stones between fragmented populations;
- > at Porton Down, Euphydryas sites were connected by 'seeding' corridors between them with plugs of suitable grass grown from seeds collected from the chalk grasslands. These plugs would spread outward to become corridors. Over 1,000 such plugs were planted.

LIFE-Nature is also funding a monitoring programme for Euphydryas aurinia. The NGO Butterfly Conservation, a partner in the project, made a baseline survey in the beginning of the project measuring the presence of Euphydryas, its host plant and grass height. The survey will be repeated towards the end of the project to assess changes, e.g. as a result of the actions financed by LIFE-Nature.

Photo © Stephen Davis, English Nature





Natura 2000 and the military – designation and its consequences

Given that they host such important natural heritage, it is not surprising that considerable portions of the military estates in the EU scientifically qualify for inclusion in the Natura 2000 network, and have indeed been proposed.



Photo © Ministry of Defence, Denmark

Photo © Marcel Van Waerebeke



Some examples:

- > in the Netherlands, 50% of the total military estate of 30,000 ha and all firing ranges have been included into Natura 2000.
- > in Belgium, of the 26,000 ha total military estate, 70% was included into Natura 2000 – 9,400 ha (12 sites) in Flanders and 8,000 ha (3 sites) in Wallonia.
- > 45% of Danish military areas (which total 32,000 ha) has been included into Natura 2000.

What were the main concerns from the military concerning Natura 2000?

As the implementation of the Habitats Directive and Natura 2000 began to gather pace in the second half of the 1990s, many stakeholders raised concerns about the process and what Natura 2000 might mean to them. The military authorities were no exception. The main concerns they raised, were, in summary:

- > What does Natura 2000 mean in terms of day-to-day site use and activities?
- > Does Natura 2000 mean that the environment authorities, to fulfil their obligations towards the EU, declare military areas as formal nature reserves under national law, with long lists of rigid 'don'ts' and prohibitions?
- > What is the consequence of Articles 6.3 and 6.4 of the Habitats Directive for changes to the use of a military area? Will the military authorities have to do impact assessments and get a go-ahead from the environment authorities each time they want to change their activities?
- > A significant negative impact on Natura 2000 values means that the desired change to activities must be modified, or an alternative found. This can only be circumvented for an "overriding public interest" (and for sites with priority habitats and species this is further restricted!). Given that the main mission of the armed forces is to defend the individual member states' vital interests (so by implication, the Community's too) and protect the essential values of European societies, can military obligations and concerns be considered by definition one of the 'imperative reasons of overriding public interest' allowing plans for new or changed military training or infrastructure to go ahead even if there was an impact

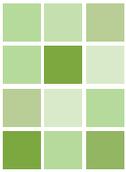
on the Natura 2000 values? Assuming that in the event of an armed attack on a country, 'overriding public interest' absolutely applies, a grey zone is left: Does training and preparing for a possible attack qualify as also being 'overriding public interest'?

- > According to Articles 6.3 and 6.4, ecological damage that can not be prevented must be compensated elsewhere, and the Commission informed (or even consulted in advance, for certain cases concerning priority habitats and species). Does this mean that for all new military activities, or intensification of existing activities, the ministries of defence must invest time and money in modifying plans or in compensatory actions? Where would such sites be found, who will pay for the compensation and what if the Commission rejects the proposed compensation?
- > Change of activities up to a certain level or degree could perhaps be handled within site management plans, especially if they are elaborated together with the conservation authorities, but can the kind of change where a training area is used today for infantry training and in future for battle tank training also be included in the management plans?
- > Generally, when a mission abroad has to be started, the military has very little time between the order from the government and the actual deployment to the theatre of operation. In this short period the units that will go, must be prepared for the job. This means a dramatic increase in the exercising activities. If this is being done in Natura 2000 sites, how can this be squared with Article 6? Even doing an EIA, let alone the full Article 6.3 and 6.4 procedure, will take time, which contradicts

the need to move fast with the training and deployment.

- > If major changes to existing military activity are connected to the testing of new types of weapons or new exercises linked to impending operations where surprise will be a critical factor, giving details to obtain an Article 6 blessing might contradict military secrecy. Is it opportune for other authorities to be given details of classified military developments? In this context, the legislation on access to environmental information allows a request to be refused by the military authorities if divulgation of the information can harm its activities. This seems to conflict with Article 6 requirements.

Underlying these critical questions, there seemed to be a deeper sense of loss of autonomy. In certain countries, national legislation, sometimes dating back to Napoleonic times, gave the military authorities total autonomy for everything concerning the military estate. Having to justify and get permission for legitimate military use from (civilian) authorities in the framework of Natura 2000, was not welcomed and would take considerable adjustment – that appeared to be an underlying message in several statements from military authorities. In this same light, there was a fear that the right of every individual citizen or association/NGO to petition the European Commission and European Parliament about alleged breaches of EU environment law, such as Article 6, would further mortgage military work by complainants seizing on any military activity which might impact on the Natura 2000 values, 'without considering the proportionality principle', as it was put.



Can the LIFE programme help address these questions and concerns?

When it finances management planning work to reconcile, for a particular site, conservation and military use, developing a model which can be transposed to other military areas, it is doing just that. Partnership projects between the military and environment authorities, co-financed by LIFE, are excellent laboratories to learn to work together and gain mutual trust and a professional working relationship. The next section will go into this in more detail, and show how LIFE can also help with other aspects of Natura 2000 site management.



Photo © Ministry of Defence, Denmark

Dialogue at European level

Ministries of Defence and military authorities have been aware of environmental concerns for a long time, and have been addressing them at national level, in the context of national legislation and programmes, but also at supranational level.

NATO, which brings together most EU member states' ministries, has been dealing with environmental issues for many years through its Committee on the Challenges of Modern Society and its Division of Scientific and Environmental Affairs. In May 2002 the NATO Partnership for Peace held a conference in Brussels with as theme 'NATO and EU environmental policies, the implications for military planning, operations training and exercises'. In 2003 NATO environment policy was agreed in Document MC469 'NATO military principles and policies for environmental protection'. The Environment Protection Working Group translates this NATO environment policy into directives for practical implementation, such as Standard NATO Agreement 7141EP 'Environmental protection during NATO-led operations and exercises' which stipulates preventive measures during exercises.

The NATO (SHAPE) school at Oberammergau (Bavaria) has long been training NATO military in environmental matters. The United States Armed Forces in Europe implement environmental protection programmes on their bases, which, at training areas like Grafenwöhr

(Bavaria), include management actions and sanctuaries for natural habitats and species.

When the potential impact of EU environmental legislation became ever clearer, contacts were laid with the Commission. This led to a first workshop in Brussels in January 2001, co-hosted by DG Environment and the US Department of Defence Office of Environmental Security, entitled 'Environment Initiatives in the EU: Implications for Military Forces'. It brought together the heads of the environmental sectors within the ministries of defence of 13 nations and Commission officials, and was meant to improve mutual understanding of the issues. All environment issues were covered, including the Habitats and Birds Directive.

Participants to this workshop wanted to continue such exchanges and this led to the establishment of an informal network of representatives of the ministries of defence of EU member states, with the USA and Canada as observers. This network, dubbed

DEFNET, meets twice a year, hosted by the member state holding the Presidency, to discuss latest developments concerning EU environmental policy.

The Habitats and Birds Directives and Natura 2000 have been debated at many DEFNET meetings since 2001. Within DEFNET, Belgium from the beginning took the lead on this issue. On Nov 8-9 2001, during the Belgian Presidency, it organized a DEFNET workshop, 'Environment and Defence in the European Union', at which Natura 2000 was a major topic. A common position was reached which acknowledged the importance of protecting biodiversity and reaffirmed the will of the armed forces to contribute, in particular through implementing management plans which reconcile the protection of habitats with the military use of the Natura 2000 sites but leave the possibility open to temporarily suspend, or deviate from, the plans in case of operational necessity motivated by an emergency situation.

NATO is interested in LIFE and Natura 2000: the LIFE-Nature project for the Salisbury Plain military training area gave a presentation on its work to the NATO Committee on the Challenges of Modern Society in Sept. 2003.

The DEFNET meeting of Nov. 18-19 2004 in Rotterdam, once again had Natura 2000 on its agenda, but now mainly focusing on how the LIFE-Nature programme could help armed forces implement the Birds and Habitats Directives on their estate.

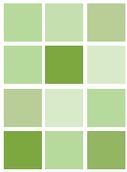
Footnote: NATO, contacts, please see annex. DEFNET, contact: Ronald De Rooij, r.d.rooij1@mindex.nl



SECTION TWO

HELPING IMPLEMENT NATURA 2000 – LIFE ON ACTIVE MILITARY SITES





Helping implement Natura 2000: LIFE on active military sites

The armed forces are already important stakeholders in Natura 2000 by the very fact that military areas have been proposed for the network, but they are also potential partners. Natura 2000 has much to gain from a partnership with the military owners and managers of pSCI and SPAs.



Photo © John Houston

Natura 2000 is by no means intended to be a system of totally closed reserves, and multifunctional use (including military activities) of the sites is one of the essential characteristics of the network.

The core question is: how can future use by the armed forces of their own

sites, particularly changes to use, be integrated with the obligation to maintain a favourable conservation state under Natura 2000? How can military site managers best and most smoothly work together with the national and EU competent nature authorities on complying with the Natura 2000 requirements?

There are two large-scale LIFE-Nature projects, both of them partnerships between the ministries of defence and the environment, covering military areas simultaneously important for training and for Natura 2000, which are exploring answers to this question.

LIFE-Nature project



‘Geïntegreerd natuurherstel op militaire domeinen in Natura 2000’

(LIFE03/NAT/B/0024), approved by the Commission in Sept. 2003, runs from Sept. 2003 to Dec. 2008

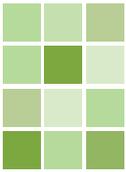
The project is a partnership between the Belgian Ministry of Defence and the Flemish Environment Ministry, which both invest matching funds to the LIFE cofinance. Their collaboration is laid down by two contracts – one for financial management (Dec. 2003) and one for technical implementation and decision-making (March 2004).

‘Improving management of Salisbury Plain Natura 2000 sites’

(LIFE00/NAT/UK/7071), approved by the Commission in 2001, which runs from April 2001 to Sept. 2005

A partnership was formed between English Nature, the statutory conservation agency, and the UK Ministry of Defence (Defence Estates and Defence Evaluation Research Agency – now DSTL), with other conservation organisations. A programme of activities was agreed: restore the conservation value of the site and demonstrate continuing military use, in partnership with conservation, on a Natura 2000 site. A Memorandum of Understanding (MOU) was signed between partners on 17th January 2003. A high-level Project Board oversees the project; this steering group is supported by the Project Management Team and three sub-groups (Monitoring, Public Awareness and Implementation).

<p>The project covers all 9,400 ha of the military estate in Flanders proposed for Natura 2000.</p>	<p>The project covers the 40,000 ha Salisbury Plain military training area and the nearby defence research and testing site Porton Down (2,750 ha).</p>
<p>There are 12 project sites. They consist of three munitions depots, two air force bases and one training airfield, two firing ranges and four training areas for exercising ground forces. Two practically contiguous training areas (Beverlo and Helchteren) account for over half the total surface area and a firing range (Brasschaat) for another 20%.</p>	<p>The Salisbury Plain was acquired by the British armed forces in 1897. It is the UK's foremost armoured manoeuvre site and NATO's second-largest urban combat training area. Firing is both dry training (blank munition) and live-firing – air, artillery, armoured vehicles. Parachute drops are also carried out. Over 700,000 man-days of training take place each year.</p> <p>DSTL Porton Down is a Ministry of Defence research and testing/training site.</p>
<p>The 12 sites cover a mosaic of habitats: heaths (Annex I types 2310, 4030 & 4010), grasslands on fossil inland dunes (Annex I 2330), <i>Nardus</i> grasslands (6230), habitats associated with oligotrophic pools (3130), tall herb vegetations (6430), alder woods along brooks (91E0) and mire habitats associated with succession in stagnant waters (7140, 7150).</p>	<p>The Salisbury Plain contains the largest unbroken block (14,000 ha) of chalk grassland in northwest Europe, accounting for 43% of the UK's total resource of this Annex I habitat. Elsewhere, these grasslands, which once covered the downs of southern England, have been ploughed up for arable land, particularly after the advent of the CAP in the 1970s. Very likely, if it had not been for their military status, the Plain and Porton Down would have been converted to grainfields as well.</p> <p>The project sites also contain the largest community of <i>Juniperus communis</i> in lowland England (18,000 bushes) and the Plain hosts 35% of the total population of the Annex II butterfly <i>Euphydryas aurinia</i> in the UK. The Natura 2000 area covering the chalk grasslands supports 20% of the UK breeding population of the Annex I bird <i>Burhinus oediconemus</i>; adjacent farmland supports an additional 12.4% of total UK breeding population which uses the grasslands for feeding.</p>
<p>This project's objectives are:</p> <ul style="list-style-type: none"> > elaborate and test management planning to reconcile Natura 2000 conservation requirements with military use; > set up systems to ensure that the plans are used in practice; > carry out habitat restoration work, notably against succession, which is a major problem after decades without proper conservation management; > build up the framework for lasting recurring management after the project; > tackle recreational pressures; > initiate monitoring of conservation status. 	<p>This project has as aims:</p> <ul style="list-style-type: none"> > continue and deepen the partnership between the military and environment authorities in running the sites for mutual benefit; > provide input into the Integrated Land Management Plan being drawn up; > maintain and expand grazing management; test and introduce systems for grazing which both increase returns for farmers and conservation benefit; > carry out restoration work to correct the results of past neglect (overgrown grasslands) or inappropriate actions (tree planting to create cover for exercising troops); > carry out specific measures for species (<i>Burhinus oediconemus</i>, <i>Euphydryas aurinia</i>, <i>Juniperus communis</i>); > start up monitoring schemes; > information and awareness-raising work towards the military staff and the local communities; > disseminate best practice and lessons learnt.
<p>Between them, the two projects show the different tasks which together constitute the complete scenario for taking care of a Natura 2000 site:</p> <ul style="list-style-type: none"> > management planning (including preliminary inventories) > training and other measures to ensure correct application of the plans 	<ul style="list-style-type: none"> > restoration of degraded habitats to a good conservation status > recurring management to keep habitats in a favourable conservation status (including monitoring) > communication with stakeholders and the public > controlling and guiding visitor access (tourism and recreation) <p>> dissemination of results and exchange of experience with peers.</p> <p>We will look at each of these tasks in turn, how they have been addressed by military authorities in general and how LIFE-Nature, through the two projects mentioned above, is showing how it can help carry them out.</p>



How LIFE helps: management planning

What has been done to plan conservation and military use until now?



Photo © Stephen Davis, English Nature

The first step to reconcile conservation and military use is to find out what the natural values were and where they occur (surveys and inventories) and then to plan how military use could take them into account, identifying points of conflict which need a decision and consensus by both parties (management planning).

LIFE-Nature has not invented management planning for military areas, but is currently financing the two large projects presented in the

preceding section where management planning is developed in a strategic manner and with Natura 2000 in mind. A few examples of management planning on military areas done previous to LIFE are given here as an introduction.



Photo © John Houston



Photo © R. Van der Wijngaart, Ministry of Defence, The Netherlands

France

In France, a nation-wide inventory of biologically valuable sites (zones naturelles d'intérêt écologique, faunistique et floristique, ZNIEFF) in the 1980s by the Ministry of the Environment revealed that large parts of the military estate qualified. The French Ministry of Defence responded by gradually introducing various measures to protect and manage these nature values. In April 1995 it concluded a protocol with the Environment Ministry to elaborate and implement joint actions to protect the environment within the framework of defence imperatives. Environment offices were set up within each branch of the armed forces, plus a central administration office to define environmental rules, and procedures to monitor their application. A second protocol between the two ministries, in July 2003, focused joint action on six strategic themes, which included Natura 2000 and sustainable management of the defence estate. A committee of representatives of the two ministries was created and at its first meeting in Oct. 2003 it chose Natura 2000 and environmental training as the two priorities for 2004. Management plans for the Natura

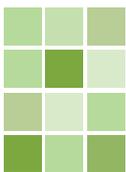
2000 sites in the French military estate will follow the 'document d'objectif' model, i.e. the target-oriented planning based on stakeholder consultation and consensus which the French Environment Ministry has developed specifically for Natura 2000. These plans are the responsibility of the local military authorities, who negotiate with their local counterparts, such as the 'Directions regionales de l'environnement' (decentralised antennae of the Environment Ministry) or the 'Parcs naturels regionaux' (nature parks, administered by a platform of municipalities). These counterparts can then assist and advise the military authorities with the daily management of the sites.

The Netherlands

The Dutch Ministry of Defence Cooperation between the Dutch Ministry of Defence and section NBLF of the Agriculture Ministry (the competent authority for nature conservation) began in 1992, in the context of the government's decision to set up a national ecological network of valuable nature areas and linking corridors (part of which was later proposed for Natura 2000). The two authorities carried out an ecological survey of the military training areas between 1996 and 2002; data from it was used by NBLF to help define the Dutch ecological network and Natura 2000. When this survey ended, the Ministry of Defence employed 7 of the survey ecologists as own staff, funded entirely from its budget. This team is now responsible for filling the few gaps left in the mapping, for drawing up management plans and for monitoring the nature aspects of the military estate. A Defence Environmental Policy Plan ('Defensie Milieubeleidsnota') was adopted in 1999; a renewed version came into force 2004. It already includes maps of every military area showing environmental aspects and where to train and where not. These maps are part of the standard training kit. The aim is to have comprehensive nature management plans ready for all relevant military sites by 2006, in order to comply with Natura 2000 requirements as transposed via the national legislation.

Germany

Inventories of natural habitats and species on the training areas of the Bundeswehr in Germany began in the late 1980s, but growing public awareness of the rich ecological heritage and undisturbed landscapes preserved there, led the German Parliament in 1994 to call for systematic inventories and conservation plans for the military estate. The Ministry of Defence decided to implement this mission through expert staff within the armed forces, assisted by the federal German forestry service (Bundesforstverwaltung) and (for specialist help) by the competent authorities for nature, NGOs and universities. 60% of German training areas' land surface is forest, for whose management the Bundesforstverwaltung is responsible. It drew up codes in 1995 laying down an extensive management integrating the requirements of species and forest habitat conservation. Military use of training areas has to take account of the directive for sustainable use of training areas (Richtlinie zur nachhaltigen Nutzung von Übungsplätzen in Deutschland, July 2002). This stipulates that for each training area a "Benutzungs- und Bodenbedeckungsplan" (a framework plan confronting the desired military use with the landscape constraints) must be drawn up, based on an analysis of the nature inventories, forestry maps, hydrology and geology etc. In particular, this analysis identifies sensitive areas where military use may need to be restricted – but also areas where habitats actually depend on military use! From this master plan, more specific nature and forest management plans, as well as zoning (which areas are closed to vehicles? to people on foot?), rules for military use, fire prevention etc, are elaborated. The management plans for those areas designated Natura 2000 site will also be based on the master plans. Finally, there are provisions for environmental impact assessments of new infrastructure plans and other modifications, with reference to Article 6 when these concern Natura 2000 sites.



Flemish military sites

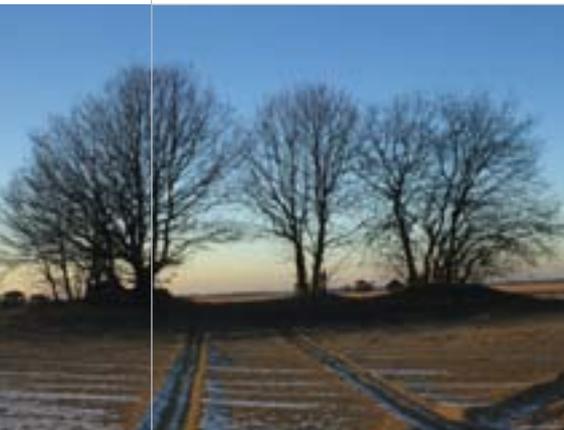


Photo © Marcel Van Waterbeke

In Belgium, the advent of Natura 2000 could almost be said to have had a shock effect. It certainly greatly accelerated the military authorities' budding conservation work. Once it was clear that designation of military sites which scientifically qualified for Natura 2000 was inescapable, the Belgian Ministry of Defence wasted no time in tackling the question of integrating conservation and military use. In May 1999 it signed protocols with the Flemish and Wallonian authorities responsible for conservation (within the two regional environment ministries, these are the departments AMINAL-Natuur and Division Nature et Forêts respectively).

All military estates proposed for Natura 2000 are covered by the protocol. Their conservation management will be the responsibility of the conservation authorities, who are best qualified to ensure that the Natura 2000 values are met, guided by joint committees between the military and conservation authorities. These committees, one for each site, will elaborate strategic concepts ('gebiedsvisies') which are then translated into detailed management plans. In this scheme, there are two objectives: military use, which has priority, and maintenance and development of nature values, which is an essential objective wherever it dovetails with military use.

Work on the management planning was however a daunting task, well in excess of available budgets and staff resources. The Ministry of Defence and the Flemish conservation authorities decided to turn to LIFE, which could provide the necessary additional funds to hire the personnel and expertise needed to do the management planning for all 12 military sites proposed for Natura 2000 in Flanders, i.e. the northern half of Belgium. A comprehensive LIFE-Nature project addressing all Natura 2000 – related issues in the Flemish military estate was indeed approved by the Commission in Sept. 2003.

Management planning is seen as the key to future reconciliation between military use and Natura 2000, and is one of the main tasks co-financed by the LIFE project.

An interesting process is envisaged:

- > *First step: inventories. Answers the question, 'Where are we?' Until recently the Ministry of Defence was reluctant to let outsiders on to its estate, so few detailed inventories have been made. Systematic surveying was launched by the 1999 protocol and LIFE will complete it.*
- > *Second step: strategic concept. Answers the question, 'Where do we want to go?' Largely completed before the beginning of the LIFE project.*
- > *Third step: a management plan for each site. Answers the question, 'What can/are we going to do?' This is a focus of the LIFE project.*

For each military area covered by the LIFE project, a 'KNOP' (Kamp/kwartier Natuur Ontwikkelingsplan) management plan will be made covering the entire site. In making a KNOP, the nature values of each part of the site are described plus what the conservation side sees as problems in terms of military use ('richtplan'), while simultaneously the military authorities describe what they want to do with the site, now and in the future. Comparing the two parallel visions shows up the bottlenecks, but also areas of high nature value which from a military perspective are hardly or not claimed for training. Thus this confrontation should then, through consensus-finding debate, lead to an integrated plan laying down the dual use of the site - military use, as priority, coupled to conservation, wherever possible. Within this framework, management and improvement of nature values can be fitted without restricting the necessary training capacity for the armed forces. The KNOP will allow the availability of the site for training to be determined, in function of the changing nature requirements during the year (breeding, vegetation cycle etc). The site commander must conform to the KNOP when setting his planning. Only for those parts of the site which the KNOP defines as having primarily a nature function, a conservation management plan in sensu strictu ('beheersplan') will also be made.

For daily implementation of the management plans, a GIS application called Natuur Tool will be set up by LIFE at each site. It translates all data inputs concerning conservation management and military use into maps, graphs, tables, photos etc. Each site user will be able to log into the system and call up info. The idea is that the commanders deciding on whether or not to authorise individual military exercises can check it first, that it can be used to verify whether particular areas are 'no go' or not during exercises and can help when deciding on applications by third parties (recreation!) to use part of a military site. The Tool, once operational, will be constantly updated as military activities and nature change over time.

The armed forces' intention is to extend KNOPs and Natuur Tool to all military sites after the LIFE project will have tried and tested them at the 12 pilot sites.



Salisbury Plain

In the United Kingdom, management planning for the natural values on the Ministry of Defence estate was a gradual process beginning early in the 1990s. An important stimulus was a high-level agreement at ministerial level (Defence, Environment); after which the Ministry of Defence took responsibility for environment and biodiversity on its own estate. It set up a dedicated Conservation Office for this task, and an annual publication on conservation work on the military estate, 'Sanctuary'. Most military sites now have a Conservation Advisory Group to assist and advise the commander with biodiversity-related matters. This internalisation within the defence administration of a policy agreed at the highest level, is significant, as it means that Defence 'owns' the policy and sets itself targets to achieve, rather than having the policy 'imposed' by another ministry.

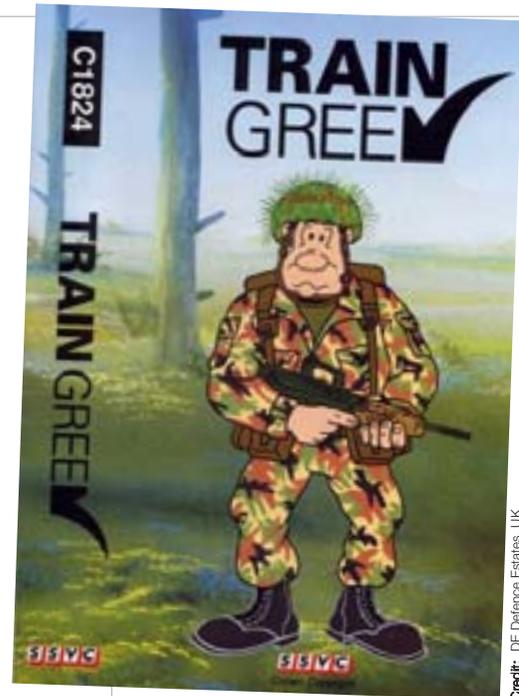
The 1998 Strategic Defence Review evaluated the changing military context, concluding that the trend is towards lighter and more mobile forces, which means more manoeuvres, use of helicopters etc. Acting on this, a Strategic Environmental Appraisal was carried out. It set sustainability targets and established environmental impact monitoring, military estates' information systems and annual stewardship reports. Full environmental impact assessments of all changes to training regimes resulting from the Strategic Defence Review, were to be carried out for all sites (this work is well under way - for instance, the assessment for Salisbury Plain was finished in 2002).

Biodiversity is a leading concern in these environmental appraisals and impact assessments. In February 2003, the Ministry of Defence entered into an agreement with other government departments to secure internationally important conservation sites on its land, i.e. sites designated

under the Habitats and Birds Directives (Natura 2000) or the Ramsar Convention. It produced practical manuals such as the Good Practice Guidance Notes for the rural military estate (April 2003) and the Coastal Management Guidance Notes (June 2003), followed in December 2003 by the Ministry of Defence Biodiversity Strategy. Favourable conservation status is to be reached on increasing percentages of the Ministry of Defence estate, with deadlines for each percentage level. By late 2004 48% of the defence land designated under Natura 2000 was considered to be in a favourable condition.

Within this context, the Salisbury Plain, the British armed forces' largest training area, has right from the start been a pioneer and flagship for integrating conservation and military use. In 1993 English Nature, the statutory conservation authority, inspired by inventories from the 1980s revealing huge resources of, and potential for, chalk grasslands, notified much of the 40,000 ha Salisbury Plain Army Training Estate as SSSI, including areas that at that time were improved grassland, ploughed land and tree plantation. Back then, this was not common practice in SSSI designation, which generally tended to be restricted to the 'pure' natural habitats.

Paul Toynton was deployed by English Nature in 1993 to draw up the management plan for this large-scale SSSI. At first he worked from outside the training area, 'commuting' in to work, but, in order to have daily contact with the military staff, eventually shifted to an office within



Credit: DE Defence Estates, UK

the training estate itself. This certainly helped to build up partnership and dialogue. He is now employed directly by the Defence Estates. Although there was initial scepticism, awareness of the conservation aspects among the military staff has risen steadily and conservation is now taken seriously. The Army Training Estate, responsible for Salisbury, appointed a liaison officer to act as Toynton's counterpart (in 2004 Lt Colonel Roger Fellowes). The two work closely together to examine which exercises can go where when, where repair or restoration work is needed, what should be off-limits because of its fragility, and so on.

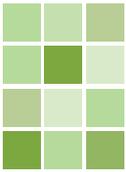


Photo © Stephen Davis, English Nature



Photo © Stephen Davis, English Nature

When parts of the Salisbury Plain were also designated a Natura 2000 site, LIFE-Nature funding became available to boost the work and deepen the partnership between the Ministry of Defence Army Training Estate and English Nature.

To prepare the habitat restoration works the LIFE-Nature project is co-financing, first an ecological assessment was made of restoration opportunities (removal of scrub from Annex I grasslands). The Army Training Estate then assessed which of the scrub areas identified for possible clearance were necessary for training purposes. The same exercise was done for tree plantations on former chalk grassland, which had been planted to provide cover for troops on manoeuvre. Possible plantations for removal were graded into 5 categories according to potential conservation value, and were then compared to training needs. These processes culminated in a series of maps showing where scrub and plantations can be cleared without any impact on military training and where they must be retained. Of course this entailed compromise between the ideal 'wish-list' of nature conservation and the requirements of the military, so that not all scrub and plantations proposed for clearance were finally removed. A good example of this is Sidbury Hill, where 40 ha conifers were felled, opening up the grassland and creating space for follow-up grazing, but the top of the hill remains wooded and will be used as cover in military exercises. One hectare of conifer plantation has been left on one slope, again as a woodland feature for military exercises.

The project also formulated and tested improved grazing management (see below) as well as a series of measures for species.

Ensuring that the restoration and improved management of the Natura 2000 values implemented by LIFE is continued long-term, was another important task of the project, which therefore fed its results into the Integrated Land Management Plan for the Salisbury Plain being elaborated as a statutory task outside the LIFE context. The Plan was completed in March 2003, following an environmental assessment of the changes to training activity arising from the Strategic Defence Review, while the Plan for Porton Down was completed Oct. 2003. Both Plans incorporate all the actions and recommendations from the LIFE project and their necessary follow-up, thereby anchoring the longer-term continuity of what LIFE has set in motion.

The collaborative effort to carry the LIFE project forward has helped cement the partnership between military and conservation agencies, who are both looking at continuing it beyond the end of the project. The project steering group is even formulating an 'exit strategy', i.e. how to continue the work after the end of LIFE.

One of the partners' activities is research to work out a methodology for weighting, i.e. calculating the amount of damage caused by different kinds of exercise under different conditions. If this is too big, then the type of exercise responsible

for it can not enter certain areas, or for no more than 24 hours etc. Wet weather for instance exacerbates impact, and this is being entered by inserting a wetness layer into a GIS and seeing which weightings then exceed the danger level. To provide

the necessary accurate data, measuring devices have been set up at various points in the Plain to gauge soil humidity.

How LIFE can help: Implementing management plans

The Danish Armed Forces took care of management planning at an early stage, but for the implementation of their plans they have inter alia turned to LIFE-Nature (through the project Danish Sand Dunes). This shows another way in which LIFE can help: not by funding the management planning, but by funding its implementation on the ground.



Photo © Ole Krudsen, Oxbel State Forest District

After the first environment strategy was elaborated by the Ministry of Defence in 1993 and a pilot project for nature management planning was carried out with the Danish Forest and Nature Agency (the competent national authority for conservation) between 1991 and 1994, an agreement with the Forest and Nature Agency was concluded in 1995 to prepare nature management plans for the 16 largest military areas, soon extended to cover all Armed Forces firing ranges and exercise areas (32,000 ha in total). The Forest and Nature Agency assigned a four-man team to this task. Each plan took about 18 months to elaborate, and the last one was completed in 2004.

These nature management plans are binding agreements between the Forest and Nature Agency and the Armed Forces, valid for 15 years. They aim at safeguarding military areas as optimal training grounds while at the same time conserving nature. Each plan has 5 parts:

1. Inventory and status quo, of species and habitats, archaeological or geological values, current military use, current recreational activities and public access, any legal restrictions on use of the training area and national and international obligations.
2. Needs of the military and requests

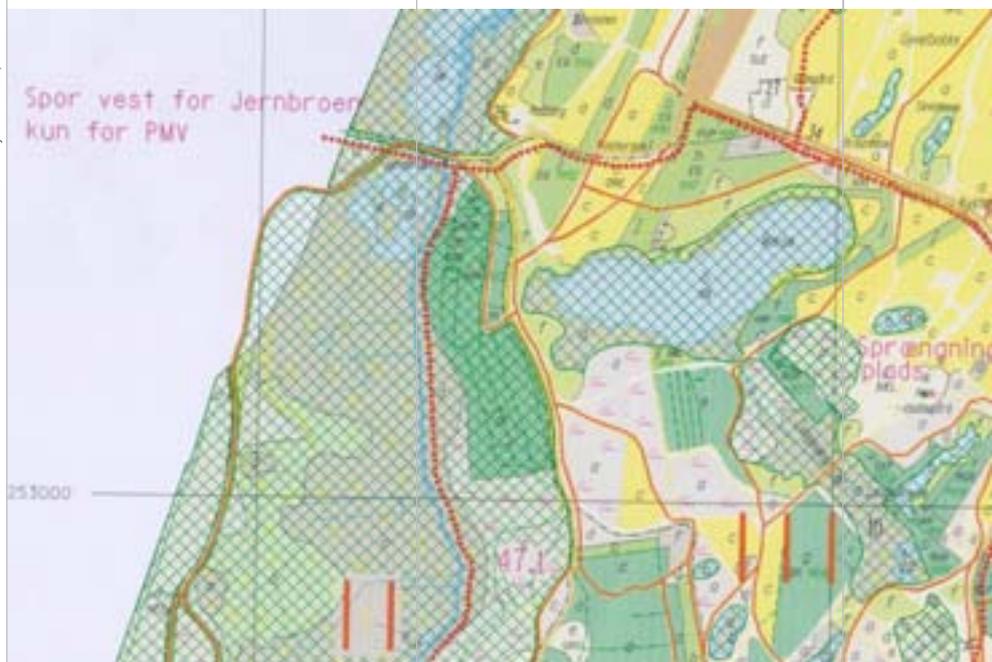
for use from others (e.g. recreation groups).

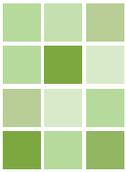
3. Mediation (i.e. between protection of site values and requests/needs for use).
4. Action plan, comprising future conservation initiatives and taking into account future exercise needs. It stipulates directives for raising water levels; clearing and planting vegetation; recurring habitat management; designating areas for new exercise facilities etc.

5. Financing.

The central output of each plan is a digital base map: “the exercise map for military use”, which lists all military installations, training grounds and vulnerable areas, the types of habitat and the way the area is currently being used. Various provisions in each management plan may call for directing exercises around sensitive areas and ensuring that the terrain is not damaged to such an extent that its conservation value and its potential for training deteriorates. The

Credit: Ministry of Defence, Denmark





exercise map will then illustrate these provisions and highlight the sensitive areas. It will mark out compulsory routes for tracked vehicles, traffic regulations, areas designated for exercises involving fire or digging or for shelling or other special activities, areas where exercises can not be held etc. Sensitive nature areas are zoned into categories:

Category I :

Natural values have greater priority than military applications. No military activities permitted apart from walking along tracks and driving along existing roads.

Category II :

All military activities are permitted in principle but with individual restrictions. Tracked vehicles have to be driven along existing routes.

Category III :

Intensive exercise area – especially for tracked vehicles. No restrictions – free movement of vehicles.

The exercise map is on GIS so that it can be printed out, written on with pens and taken along by officers on manoeuvre.

The plans specifically allow for adaptation to the Armed Forces' changing situation and any sudden need to do exercises (for instance, because of sudden deployment of a peace-keeping force). So, in contrast to traditional management plans, they are dynamic and flexible. If a relatively small change is needed (e.g. night firing instead of daytime firing) the Ministry of Defence and Nature and Forest Agency discuss it bilaterally, reach an agreement and carry on. If the change is more substantial, a more formal procedure to change the plan is launched, with public consultation. This constant possibility of adaptation makes the nature management plans a suitable instrument for the preservation of natural interests in military areas, according to the Danish Ministry of Defence. Its representatives have

stated at several recent fora, such as the July 2004 Salisbury workshop, that Natura 2000 has not yet caused any problems for the Armed Forces because military use and conservation values are governed by these nature management plans which are not written in stone but can be adapted to changing circumstances. Article 6, the reasoning goes, is satisfied on two counts: Article 6.1 by the existence of the plan itself, Article 6.3 and 6.4 by the provisions in each plan that changes can be made in consultation with the environment authorities.



Photo © Ministry of Defence, Denmark



Danish sand dunes (LIFE02NAT/DK/008584)



Photo © Henrik S. Kristensen, Thy State Forest District

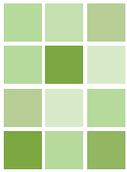
Photo © Ole Kruidsen, Oksbøl State Forest District

Besides defining sensitive areas and zoning military use, the nature management plans propose restoration activities to improve the conservation status of the military estate, such as clearing trees from heathland, excavating pools for amphibians, restoring wetlands etc. Such tasks cost money, and here LIFE can help. The Danish Armed Forces are thus involved in a LIFE-Nature project to restore sand dune habitats at 11 sites along the coast of northern and western Jutland. This means clearing encroaching trees (including non-native trees, primarily *Pinus mugo*), complemented with “mosaic burning” at some places in order to speed up the regeneration of the typical dune vegetation,

especially on land affected by ammonium depositions and nutrient enrichment.

One of the eleven project subsites, Kallesmaersk Hede, is a military training field, designated pSCI, located along the coast 30 km north of Esbjerg. The Danish Ministry of Defense is involved in the LIFE-Nature project as an active participant. The project as a whole is dealing with 5,600 ha. Almost 10% (472 ha) is Armed Forces land in the Kallesmaersk Hede subsite, which is being cleared of trees and some of it is also being burned afterwards. The Armed Forces' field training camp at Oksbøl contributes its “fleet” of various heavy construction and earth-moving machines, and staff competent to use them. They carry out, under technical guidance from the project beneficiary, the tree clearing and mosaic burning inside the Kallesmaersk Hede. As a result, 50% of the cost of the work is being borne by LIFE.

The Armed Forces have also been engaged within the LIFE-Nature project for the restoration of amphibian habitats and excavation of new ones, for the benefit of *Bufo calamita* and *Rana arvalis* (Annex IV of Habitats Directive). So here too LIFE-Nature is helping them carry out the action plans laid down in their nature management plans.



How LIFE helps: environmental training

Once a management plan reconciling military use with conservation requirements has been prepared, officers and troops must be trained in using it, otherwise it will remain a dead letter.

In Denmark, where the Armed Forces have systematically addressed management planning, personnel is trained to put the plans into effect. The armed forces organize a nature care course for everyone working on the maintenance of the environment in its estate. Persons are appointed and trained in each barracks to make sure that the nature management plan for the area in question is implemented.

In 1990 a department for environmental training was opened in the German

armed forces school in Sonthofen, which has trained thousands of officers and troops since then. Training courses in environmental protection are also given at the academy for military administration and technology in Mannheim. An educational folder with basic environmental principles and examples from military practice, with tips for simple but effective things to do, has been distributed to all units in the armed forces since 1991.



Photo © Marcel Van Waerebeke

LIFE-Nature project



Flemish military sites

In Belgium, integration of environmental concerns, in the broadest sense of the word, gathered pace in the Armed Forces during the 1990s. The Strategic Plan for the Modernisation of the Belgian Army (Plan stratégique pour la modernisation de l'Armée belge 2000-2015) devotes a chapter to environmental protection. A division Environment (headed by Lt Colonel Johan Theetaert) was set up within the Armed Forces' department for social aspects and well-being.

In Sept. 2000 the Ministry of Defence's environment charter (Milieuhandvest), which focuses on sustainability and lessening the environmental impact of military activities, launched a programme of environmental training and awareness for military staff. The Ministry of Defence established an Environmental Training Centre at Jambes, open to any officers and NCOs who voluntarily opted for sustainability training. Looking at

Photo © Marcel Van Waerebeke – VBC De Watersnip



nature in particular, when partnerships were concluded with the conservation authorities, staff from the regional environment ministries held excursions and lectures in military camps – polls had shown that the staff on the ground was often not aware of the

sites' ecological value. Joint seminars were held in 2001 (one in Flanders, one in Wallonia) about nature management in military areas.

To further lessen the cumulative impact of exercises on nature, the use

of simulators for training purposes before embarking on real-life exercises will be promoted by the Belgian Ministry of Defence, parallel to the work undertaken by the LIFE project.

The LIFE-Nature project covering all the military Natura 2000 sites in northern Belgium (Flanders), which began in Sept. 2003 and will last over 5 years, has as one of its principal tasks the preparation of management plans, followed, during the selfsame project, by training military personnel to use these plans. The idea is to instil a 'duty of care', so that the military staff know what they can and what they can not do. First, LIFE will 'train the trainers' in Natura 2000 conservation management and develop training packages for future use. Next a network of Ministry of Defence environmental advisers and coordinators, trained in conservation management, will be built up covering all twelve sites, with refresher courses every 5 years. The military staff charged with using and updating the Natuur Tool, the special GIS-based reference for nature and military data which the LIFE project will develop, will be trained in its use. As all Ministry of Defence operational staff (24,000) have to do field exercises every 2 years in order to keep skills honed, this means approximately 12,000 using the military training areas each year. LIFE will ensure that all are given a one-hour briefing on responsible nature use before each exercise. By the end of the LIFE-Nature project, conservation awareness should be part of the basic training of each military employee.

LIFE-Nature project



Salisbury Plain

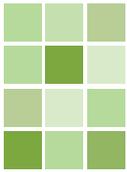
This project too has devoted attention to making sure the message filters down to the end users.

An innovative idea was a one-day Team Building Exercise, held on April 11th 2002, which involved military and conservation staff from across the project partnership. The exercise was a treasure hunt involving teams of people navigating across the Plain picking up clues and answering questions before being directed to the next rendez-vous point. At strategic points project representatives spoke about particular issues relating to conservation and military use of the site. This was a success and a second one was held in April 2004 especially for new personnel.

A 'conservation briefing pack' for all users of the military training area is planned.



Photo © Anton Glazenbeek



How LIFE helps: restoration of habitats

Because the armed forces have their own tasks and objectives, military areas have traditionally not been managed with biodiversity in mind.



Photo © R. Van Bakel, Ministry of Defence, The Netherlands

Consequently, although the natural heritage in the military areas remained shielded from economic development, dynamic habitats which spontaneously evolve towards other habitat types, sometimes of lesser conservation value, or change character if not actively managed, declined over time. For instance, heathland or species-rich grassland became covered in bushes and trees through succession. Wetlands suffered desiccation as water tables around military areas dropped as a result of drainage and hydraulic engineering. Sometimes military land had been made available to farmers

or foresters, who had converted parts to intensive production land or monocultural planted woodland.

With rising environmental awareness in the late 20th century, some military authorities began, within the means at their disposal, investing in work to restore the degraded parts of their natural heritage.

In the Netherlands, the armed forces' service Dienst Gebouwen Werken en Terreinen (DGW&T), part of the Defence Interservice Command, manages the estate, primarily for military use, but as a secondary target, for conservation

also. Drawing on its budget and staff, DGW & T has been restoring habitats, e.g. converting planted conifer monocultures to more mixed forests; restoring heaths infested by *Molinia* grasses and woody overgrowth through sod cutting, grazing and controlled burning, etc. Their publication 'Defensie in natuur en landschap' (see Annex II) gives a good overview.

The Danish Armed Forces' booklet 'Nature's Defence' (see Annex I) gives a similar overview of nature restoration work on military areas funded from own resources.

In 1994, the French Defence Ministry established an environmental action fund (Fonds d'Intervention pour l'Environnement FIE) to finance work like forest restoration, clearing overgrowth and creating wetlands. It has concluded many contracts with outside bodies specialised in conservation work, like the Conservatoires Régionaux d'Espaces Naturels or the Parc Naturels Régionaux, with the national forestry service Office National des Forêts and with individual farmers, under which they take over the management of certain sections of military land.

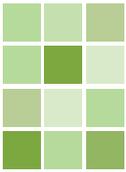
Designation of many military areas as Natura 2000 site has made restoration far more prominent. The Natura 2000 obligation to attain or maintain a favourable conservation state, if necessary by actively working against natural processes like succession from open land to woodland, means that the armed forces face massive investments to clear the backlog of benign neglect of dynamic habitats on their estate and to boost the ecological quality of degraded land. One of LIFE-Nature's core objectives is to provide co-finance for this kind of work.



Photo © Fons Bongers, Ministry of Defence, The Netherlands



Photo © M. Homman, Ministry of Defence, The Netherlands



LIFE-Nature project



Salisbury Plain

The British Armed Forces' training area Salisbury Plain contains, together with the nearby research and testing/training site DSTL Porton Down, the largest remaining block of chalk grassland left in England (14,000 ha). Elsewhere, these grasslands, which once covered the downs of southern England, have been ploughed up for arable land.

Yet, all was not perfect. The open landscape of Salisbury Plain had been planted with trees here and there to create cover for exercising troops. Furthermore, where parts of the Plain suffered from too intensive farming, other parts lost ecological value because of a lack of farming. This was a consequence of past military administrations. Before a co-ordinated governance was introduced in the 1990s, Salisbury Plain had been divided into three separate military ranges. The eastern range was used for infantry exercises with blank munitions, so, as there was no

danger, this part was rented out to farmers. Intensive farming was thus a problem for conservation here. The central range was used for artillery training: farming was kept out of the impact zone (which stayed open by burning), but the rest of the area was rented for grazing. The western range included a live firing range too, but in contrast to the central range its commanders had decided that farming would clash with the training and so grazing had petered out decades ago, so that large areas of chalk grassland were overgrown with scrub and rank grass.

Porton Down, with its rich chalk grassland habitats, junipers and unique 'antscape' of hundreds of anthills populated by *Lasius flavus* (see photos right and below), was also affected by scrub and self-seeded pine encroachment because farming was ended when the Ministry of Defence bought the site in 1916.



Photo © Stephen Davis, English Nature



Photo © Stephen Davis, English Nature



Photo © Stephen Davis, English Nature



Photo © Stephen Davis, English Nature



Photo © Stephen Davis, English Nature

The partnership which had grown since 1993 between English Nature and the Ministry of Defence had already produced inventories and management plans highlighting the loss of habitats in the western range and Porton Down. However, restoration work to reverse this would be expensive. This is where the LIFE-Nature project stepped in. In order to significantly increase the chalk grasslands and other habitats and species of European significance in the parts of Salisbury Plain and Porton Down designated under Natura 2000, LIFE-Nature is providing funds for:

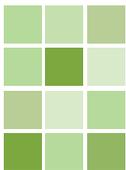
- > Removing 220 ha of scrub thickets covering former chalk grassland.
- > Treating 219 ha of scrub with non-persistent herbicides to prevent regrowth of areas cut over by the previous action, or to eliminate widely scattered young scrub in good-quality chalk grassland before it can grow too tall and dense.
- > Topping of 200 ha scrub to prevent shading out of chalk grassland and persistence of scrub in the sward.
- > Cutting down tree plantations which occupied former chalk grassland. These plantations, as described above under management planning, were selected jointly by the Army Training Estate and English Nature, looking both at conservation benefit and the importance of the plantation for training. 100 ha broadleaved and 40 ha conifer plantation is being cut down.
- > Cutting down a total of 40 ha self-sown pine in chalk grassland.
- > Removal of 53 ha scrub to give more room to stands of *Juniperus communis*, which were becoming smothered.
- > The juniper population at Porton Down comprises two even-aged stands of 40 and 110 years old. Intense grazing by rabbits prevents the establishment of new seedlings. To protect seedlings from rabbits, 8 plots of about 0.5 ha each are fenced off (exclosures). Near these regeneration trial plots, rabbits are kept down by gassing, ferreting or shooting.
- > One-off actions to improve habitats for the Annex II butterfly *Euphydryas aurinia* and the Annex I bird *Burhinus oedinenus* (scrub clearing, fencing, creation of breeding plots etc). These actions are described in detail elsewhere in this brochure.

The habitat restoration work being done by the LIFE project illustrates some of the challenges peculiar to working in a military site, but also how technical solutions can be found.

One planned project action was to remove old tanks and other military equipment from Battlesbury Bowl, the former site of a Combined Arms Firepower Display, so as to allow grazing there. Before any of the equipment which served as targets for the firepower displays could be removed, a full EOC (explosive ordnance clearance) had to be undertaken. For the LIFE project, the task of clearing the munitions fired at the targets was scoped by the Army (Royal Engineers), which discovered that a specific anti-tank round had been fired at the targets in Battlesbury Bowl. Recently, elsewhere in the UK, there had been a civilian death as a result of this type of round exploding during an ordnance clearance exercise. The Ministry of Defence had since, for health and safety considerations, banned explosive ordnance clearance being undertaken by civilian contractors. The alternative to civilian contractors is the use of specifically trained military Royal Engineer EOC teams. However, as a result of higher military operational priorities during the LIFE project (notably Iraq), this was not feasible, so that the Battlesbury Bowl action had to be postponed.

Scrub clearance by the project has also been confronted with the risk of unexploded munitions. Several areas of dense scrub, mostly in or near live firing ranges, could not be cleared by civilian contractors before an EOC team would have fully scoped the task and passed it as safe. The solution found was using an "Armtrac" armoured tractor, normally used for clearing mines, which was fitted with flails and sent into the scrub. It was first tried in January 2003 and turned out to be effective and efficient, yet fulfilling the Army's strict health and safety criteria. This machine is now being used for scrub clearance in all high-risk areas for the remainder of the project.

The British Armed Forces Ordnance Clearance committed itself to clear some other areas so that these too can be restored – a positive example of partnership within the military.



Flemish military sites

Conservation management is long overdue in most Belgian military sites – hitherto attention was only paid to the military use. In some military areas parts are leased to farmers, who have turned them into maize fields and manured grassland, while some other parts have been afforested and are exploited for timber.

That hands-on management is the key is shown by the munitions depot at Molenheide (Zonhoven). For safety reasons, the land around the storage buildings has been kept open, and here very interesting plant and insect communities are found on the fossil dunes, while the rest of the depot has reverted to shrub and succession woodland.

In the 1990s, there were already individual, ad hoc contacts and management agreements between military commanders and nature conservation bodies, often NGOs. Thus the NGO Natuurpunt managed parts of the Helchteren training area along the Zwarte Beek, adjoining its own reserves. There were agreements with the NGO Vleermuizenwerkgroep to monitor bat hibernation in old forts. However, this was not systematic or coordinated. In the same vein, some military camps took an interest in their natural heritage. A good example is also found in Wallonia (Lagland military camp, see below LIFE-Nature project Marais calcaires Lorraine).



Photo © Marcel Van Waerebeke



Photo © Marcel Van Waerebeke



Photo © Marcel Van Waerebeke



Photo © Marcel Van Waerebeke



Photo © Marcel Van Waerebeke

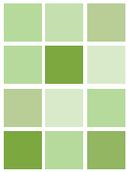
The designation of most of the Belgian military estate as Natura 2000 site brought an obligation to ensure a favorable conservation status, i.e. carry out restoration work to halt decline of dynamic habitats, but it also brought access to the LIFE fund. The Ministry of Defence and the Flemish conservation authorities decided to turn to LIFE, which could provide the necessary additional funds to give the restoration work in the military Natura 2000 sites in northern Belgium (Flanders) a major impetus and speed it up.

Contacts were laid with the Salisbury Plain LIFE-Nature project and with the Dutch Ministry of Defence to tap their experience, and an application was submitted to the Commission in Oct. 2002 for a LIFE-Nature project, which was approved in Sept. 2003.

In this project, LIFE-Nature is funding initial management in 12 military sites covering 9,400 ha. This breaks down as:

- > **tree and shrub felling over 1,266 ha to restore heaths and grasslands, and elimination of in total 855 ha of invasive *Prunus serotina* trees scattered throughout the sites.** Because these heaths and grasslands have not been managed (mowing, grazing – whether for traditional subsistence farming or for conservation purposes is immaterial), trees have been able to take hold, grow and spread. Eventually they would become woodland. Removing these trees is essential to reinvigorate the heaths and grasslands. *Prunus serotina* (black cherry) is a species native to southern and eastern North America which was introduced to Europe in the 19th century as an ornamental tree and later planted as shade-tolerant species in forest plantations, where it became a pest. The main reason for eliminating it is that it behaves as an invasive species. Birds love the seeds and aid in the distribution of *Prunus serotina*. The litter is easily composted, so this implies that the species also changes the soil characteristics.
- > **initial mowing of 255 ha heaths and grasslands.** This is needed to prevent the spread of invasive scrub species.
- > **sod-cutting 175 ha heaths and fossil dunes, including removal of topsoil from former maize fields.** As a result of lack of management and of increased nutrient influx, grasses (*Molinia*) have become dominant in the heathland as well as on the fossil dunes. To give the seeds of heather and other targeted flora lying dormant in the soil (the seed bank) a chance to germinate, sod-cutting will be carried out. Sod-cutting means that sods (plants with topsoil/root layer) are removed. This work has to be done carefully to allow the seed bank to germinate. It is therefore a relatively expensive technique and cannot take place over very large areas – the 175 ha in the LIFE project is already quite large. As the ‘original flora’ re-establishes itself from the seed bank, conservation-oriented management (grazing or mowing) will then allow the seeds produced by the restored vegetation to spread and to germinate. The removal of topsoil from former maizefields is needed because lengthy manuring has made the soil too eutrophic (phosphates) so that a restoration of heaths or oligotrophic species-rich grasslands is no longer possible. The nutrient enrichment means that ruderal species – often vigorously competitive grasses able to suppress the target species – dominate. After the enriched topsoil has been removed, the ground is often covered with plant matter raked from existing heaths, which contains enough seeds to kick-start heather growth.
- > **excavating or re-opening pools, former peat diggings and wet depressions (23 ha).** The vegetation of the early succession stages in open water is, after a number of years (20-30 – the time depends on several factors), replaced by other vegetation (reeds, brook forest, large sedge communities, etc. - depending on management and the abiotic conditions). Removing this secondary vegetation will allow the early succession stages to return. Peat diggings with dystrophic water (i.e. with a high content of humic acids from dissolved peat) are quite rare, and so is the vegetation that will establish itself in these peat diggings after re-opening them (e.g. vegetations dominated by water soldier - *Stratiotes aloides* - and quaking bogs).
- > **rolling back succession from 5 ha quaking bogs.** This is for the same reasons and to achieve the same targets as the preceding bullet point.
- > **converting 1.5 km of brooks which have been straightened and regulated, into meandering beds or shallower gradients.** These brooks used to meander through the valleys until they were canalized or straightened. A meandering stream has more “ecological niches” than a canalized stream (diverse velocities, more gradients, different associated flora and fauna) and the surrounding area is hence also better integrated into the watershed (natural flooding, higher water levels, less changes in the water level and smaller ecological amplitudes over the year,).

Interesting is a subprogramme of preventive burning – in dry summers overgrown heaths in firing ranges can catch fire, and these raging wildfires can be damaging to vegetation and species, so to avoid this happening, overgrowth will be burnt off in winter in controlled fires (which mimic traditional management and actually lead to interesting ecological processes).



How LIFE helps: recurring management

Dynamic habitats, once restored, need to be 'used' in appropriate ways if they are to be prevented from evolving into something else. This could be mowing, grazing, coppicing, controlled burning...



Photo © Camp Lagland, Ministère de la Défense Belgique

This 'recurring management' work can be done by farmers under contract, or by staff. What LIFE-Nature can do, is co-finance experiments to find the right kind of recurring management and investments in the equipment or infrastructure needed to get it off the ground.



Salisbury Plain

The UK Ministry of Defence and English Nature agreed in 1993 to draw up a management plan for the Salisbury Plain training area, with its unique species-rich chalk grasslands. It soon became apparent that the most acute threats came not so much from the military use as from the farmers. Much of the Plain is farmed (there are 43 tenant farmers). In order to boost yields, farmers were applying fertiliser, or overwintering stock on the chalk grasslands (because these are drier than the lowlands) and feeding them fodder there. These practices were bringing nutrients to the chalk grassland soil and so leading to deteriorating ecological quality of these sensitive grasslands.

This was addressed prior to the LIFE project by drawing up farm management plans for each individual farmer and requiring consents for activities like ploughing. Initially farmers complained that this would drive them out of business, but none actually stopped. Although farmers on the military lands are not eligible

for agri-environment schemes under the English interpretation of the Rural Development Regulation, they are offered low rents. According to the Salisbury Plain conservation officer, Paul Toynton, the recipe lay in working together and understanding each others' needs. An intensive liaison with the farmers was built up and sustained via monthly planning meetings, where the farmers say what they want to do. This is then looked at by the conservation officer and by the armed forces training officer and if neither has an objection, a green light is given. If there is a problem, alternative locations are looked for.

Thus before LIFE, the site manager had succeeded in stopping the degradation of the chalk grasslands. But although farming was no longer degrading the valuable environments, there was still scope for improvements in grazing to further boost the conservation status of the Salisbury Plain.

Classic grazing in fenced paddocks is restricted by the military activities,

which cannot accept miles of fences and large groups of livestock which can't be moved. Yet, because the land has to remain available for military training exercises at relatively short notice, livestock have to be kept in enclosed areas. Consequently, electric fences are used to pen the animals in mobile enclosures of about 8 ha each (photo below) which are shifted around the Plain. To make it economically worthwhile for the farmer, he has to put a minimum number of animals into an enclosure – about 60-70 cows per 8 ha block, for instance, which is quite intensive and causes overgrazing in the enclosures. This was nevertheless held to be acceptable because the Plain is so big and the enclosures keep moving, so that one ended up with a mosaic of intensive and less-intensive and recovering land, i.e. diversity in structure. A five-metre strip of tall vegetation is always left between enclosures, as refuges for invertebrates. These strips form striking grids across the landscape.



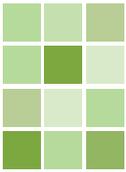


Photo © Stephen Davis, English Nature

Nevertheless, this system of mobile enclosures was not optimal. Neither for nature, because of the local overgrazing in the pens and the unnatural grid pattern, nor for the tenant farmers, who are unable to go for agri-environment funds, and who cannot achieve a critical mass in terms of grazing to guarantee long-term viability in a very precarious market.

The LIFE-Nature project gave the opportunity to invest in a trial of a new approach to grazing which aimed to both improve the economies of scale for the tenant farmers and the conservation status of the site. A mobile flock of sheep and cattle, guided by a herdsman, would be allowed to roam over larger areas of the Plain in function of the planned military manoeuvres and training schedules, rather than being confined to fenced enclosures for long periods of time (which in turn leads to local overgrazing). This would in turn increase conservation management options, providing greater flexibility and sensitivity to grazing management overall.

LIFE-Nature provided the start-up costs to employ a herdsman in June 2003, who manages 120 cows and calves (purchased by a local farmer parallel to LIFE). It is also paying for boreholes to supply water for the livestock, and a quad bike to allow the herdsman to manage the animals more effectively. The western third of the Plain had been out-of-bounds to farming for a long time, so that there had been a loss of grassland habitat to scrub succession. LIFE cleared scrub here and so reopened such land to grazing. In 2003 the herdsman began grazing an area of 1,200 ha in this western part, which had not been grazed for 60 years (photo above). There is no fencing but the cows are penned at night. After the project, the herdsman should become self-financing. If this open free-range grazing is successful it would be a major improvement and might mean that the whole Plain can be grazed by three or four such herds instead of the mobile enclosures. Both English Nature and the Army training Estate are watching the experiment with great interest.

The LIFE project did not neglect the 'normal' grazing either. It began by mapping the grazing activity on the Plain, but this proved challenging as it is widely dispersed over the huge 14,000 ha block of chalk grassland. Staff resources were insufficient to enable the use of GPS to pinpoint the exact location of each temporary enclosure. Fortunately, the army range marshals gave a helping hand by providing daily hand-drawn maps recording the location of each enclosure. These maps were then translated into a digital record on the Defence Estates GIS mapping system to provide an overall record of the year's grazing activity. The outcome was that on average 1,876 ha of grassland on Salisbury Plain is under grazing in any single month, equating to an average of 234 separate enclosures present each month.

Because grazing is essential for the management of chalk grassland – in its absence, the habitat slowly reverts to scrub – the LIFE-Nature project is investing considerable effort in maintaining grazing where it already occurs on chalk grassland (1,250 ha) and on bringing it to areas where the grazing mapping and ecological condition assessments have shown that the land is failing to meet criteria of good conservation status due to undergrazing, and of course to former scrub or plantation land which has been cleared and restored to chalk grassland (2,150 ha altogether).

Surveys have already shown that plants and invertebrates are responding positively to the grazing management introduced by LIFE.

Another action co-financed by the LIFE-Nature project concerns measures in favour of *Burhinus oedicnemus* (stone curlew, a bird on Annex I of the Birds Directive – one third of total UK population occurs here). The employment of a stone curlew project officer (Phil Sheldrake) in November 2001, thanks to LIFE funds, made it possible to systematically tackle the issues, in particular intensive monitoring of the birds and their behaviour, and promotion and management of 'breeding plots' (1-2 ha blocks where the ground is deliberately made bare or sparsely-vegetated during the breeding season, see photo below) which the curlew needs for successful reproduction.

41 plots started in the military training area prior to LIFE were taken in hand by the project officer – each plot was grid-referenced at the beginning of the LIFE project and a summary table of management actions (appropriate cultivation and clearance of seasonal vegetation) provided to the farmer. Grazing (preferably) and mowing is done around stone curlew nesting plots to provide optimal feeding habitat (1.25 to 6 ha) within close proximity (1 km) to breeding sites. Where it occurs, scrub is removed within 200 metres of breeding plots (20 ha scrub in all) to create additional foraging habitat, and stone curlew have indeed been observed feeding in these cleared areas.

Besides maintaining the existing plots, the project seeks to increase their number. Mr Sheldrake negotiated 22 new plots (average size a little over one hectare) with farmers in a space of two years, half of which were effectively used in 2003 by stone curlew, with a dozen breeding attempts.

Because stone curlew gather on the arable land on the fringes of, or outside, the military training area during autumn roost gatherings, the project also undertook action for the birds' benefit here. Curlew plots do qualify for agri-environment support outside the military training area (Countryside Stewardship Schemes, with payments for arable farming practices favourable to birds, like over-wintering stubble, stubble followed by fallow, wild bird and pollen and nectar crops...), and so the LIFE stone curlew project officer is promoting such contracts among farmers, with success. Twelve new plots had been started by farmers under the Country Stewardship Schemes by 2004.

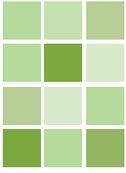
To reduce predation on stone curlew, LIFE is financing predator control measures: erection of electric fencing, shooting of foxes and crows. Vulnerable stone curlew breeding plots are marked to avoid damage by military activities (4 plots) or by recreational walkers (5 plots in the eastern Plain, where there is more public access).



Photo © RSPB Images



Photo © John Houston



Finally, **LIFE-Nature** is also funding a monitoring programme designed to provide information on the effectiveness of the techniques used in the various restoration and recurring management actions, and to develop an SPA/pSCI-wide monitoring strategy to track conservation status (in this way, LIFE-Nature is helping the Salisbury Plain Natura 2000 site managers lay the groundwork for the monitoring and reporting required under Article 17 of the Habitats Directive). This programme monitors the effect of actions such as scrub and plantation removal, grazing etc. on vegetation composition and structure of grasslands, as well as on associated indicator species. It also monitors the effects of the actions undertaken for the benefit of *Juniperus communis*, *Burhinus oedicephalus* and *Euphydryas aurinia*. A Monitoring Group was set up to plan the logistics and coordinate the work. Most of the work is planned for the period 2003-5 and full monitoring reports will be ready at the end of the LIFE-Nature project.



Photo © Stephen Davis, English Nature



Photo © Stephen Davis, English Nature



Flemish military sites

In Flanders, the training area of Beverlo (Leopoldsburg) was a pioneer in terms of recurring management – at the start of the new millennium, it already had a nature management plan (which envisaged more intensive use of the less valuable areas to spare the more valuable ones) and heath grazing projects (one was co-financed by the ERDF!). But otherwise, recurring management, like restoration of degenerating habitats, was still very much in an embryonic phase within the military areas in Flanders.



Photo © Marcel Van Waerebeke

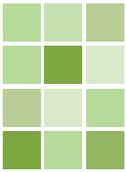
Photo © Marcel Van Waerebeke



Consequently, after its restoration work, the LIFE-Nature project for the Flemish military areas will kick off the recurring follow-up management (mowing and grazing). This involves investment in fencing, drinking troughs etc., intensive follow-up mowing of cleared areas and employment of a shepherd for grazing the largest block of restored land (in Limburg). This is all co-financed by LIFE, which also funds staff time to lay contacts with farmers or NGOs to take care of recurring management of smaller blocks.

The planned recurring management work will also help military use directly. The Ursel air base, one of the LIFE subsites, had *Nardus* grasslands around the runways right into the 1980s, but ‘improvement’ of the grassland by spreading manure has led to almost total destruction of these grasslands since. Yet, this manured grassland is attractive to corvidae, pigeons and other relatively heavy birds. Birdstrike is always a risk at airfields, but heavier birds cause greater damage when they collide with jet engines. The LIFE project will restore the natural grasslands here by reversing the past damage and installing ecologically correct management. This will both increase biodiversity and heighten aircraft safety. As already demonstrated in conservation projects (and by the Dutch Armed Forces), restoring ecologically barren intensively manured and mowed grasslands to nutrient-poor, herb-rich lands with a wide range of species is not only a win for nature. While invertebrates and small birds increase in numbers, heavier birds like crows, gulls, lapwings and pigeons which are associated with nutrient-rich, lawn-like grassland and do not like nutrient-poor grasslands with tall unmowed vegetation, decline – a win for aircraft safety.

Finally, LIFE-Nature will also fund establishment of a monitoring programme to assess results and trends.



How LIFE helps: communicating with the general public

Because the public often has little knowledge of the armed forces' efforts to conserve and enhance natural values on its estate, and may have misconceptions about the environmental impact of military activities, informing it is an important task.



Photo © Kerstin Sundbeith

On the other hand, there is a potential drawback. Publicising hitherto little-known natural values in a given military area may incite people to want to come and visit it, or use it for recreation. Quite apart from conservation objections (disturbance), the military is often reluctant to have an influx of visitors because of requirements for secrecy, the dangers of unexploded munitions, etc.

This means that communicating the ecological value of military areas can be a delicate balancing act.

The French armed forces give extensive information on their programmes and efforts for conservation on their website. The

Dutch and Danish armed forces have produced illustrated brochures for the general public explaining how they combine military use and nature conservation on their estate. When management plans were being prepared for Danish military sites, local authorities, conservation NGOs and recreational interest groups were involved in the process. In so doing, they became aware of the military's efforts and activities, and gained a sense of ownership and acceptance of the management plans, which thus gained wider support. Involving stakeholders in the Danish military management planning process led to a greater understanding in the local community of the Armed Forces' activities, which is a positive PR spin-off for the military.

Equally important is keeping colleagues within the armed forces informed of how conservation work is progressing and what the results are. Especially if they have been asked or trained to make special efforts for the benefit of conservation requirements, officers, troops and support staff within the military establishment should be told what this has achieved, otherwise they are unlikely to see much point to carry on making these efforts.

The UK Ministry of Defence understood this years ago, when it started the magazine 'Sanctuary' which reports on biodiversity and conservation activities on military land and is specifically aimed at Ministry of Defence staff.

LIFE-Nature project



Salisbury Plain

One of the objectives of this LIFE project is raising awareness, both among the Armed Forces using the Salisbury Plain and the local communities around the military training estates.

The project is producing high-quality newsletters, posters, panels, etc. with information on LIFE and Natura 2000 and conservation requirements for the Natura 2000 species and habitats. It has already gained good media coverage (newspapers, specialist and professional magazines and publications, radio, television).

The annual newsletters highlighting the LIFE project, the six information boards on chalk grassland habitat erected at key points, and the 18 interpretive display panels for use at public meetings and in the Porton Down Conservation Centre, help people, both within the military and the local community, to understand the importance of the Natura 2000 Network and the role of the LIFE-Nature fund.

A website for the project information was set up: www.english-nature.org.uk/salisbury/

A public conservation day was held in July 2003 to bring together the military and the public, while more targeted meetings were held with tenant farmers.

The LIFE project's experience also highlights some of the problems which can be encountered when communicating with the public. The project's major restoration action is clearing trees and scrub to restore chalk grassland, but responses from citizens in the local community surrounding the military training area have included remarks that it is wrong trying to change natural evolution from grassland to scrub and woodland, that the trees were planted by the Army with taxpayers' money, that tree planting was a good thing because it improved the landscape and reduced noise, that deer and buzzard are losing habitat... Similar comments are familiar to many conservation managers – the whys and wherefores of conservation work are not understood by all, hence constant public information is vital - but military site managers can expect them too when they undertake management actions.

LIFE-Nature project



Flemish military sites

Information to the public about military conservation work kicked off in the past few years.

The annual open door days at the Beverlo military camp, with an average of 3,000 visitors, were used as an opportunity to show, besides the military hardware, the nature values there. Guided excursions were

regularly organized into the nearby military areas by the conservation authorities' Watersnip nature information centre in central Limburg.

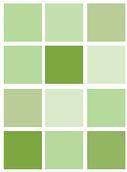
The Belgian Ministry of Defence's Environment Division published 'De natuur op de militaire domeinen' (March 2002), which summarised what was being done at that point in

time and the consequences of Natura 2000.

The Armed Forces' website www.mil.be now features several pages on defence and nature, what Natura 2000 is and the role LIFE can play.

All this work is being greatly expanded by the LIFE-Nature project, which is:

- > providing the funds to employ a dedicated communications and public relations officer (Johan Vanswijgenhoven);*
- > carrying out media work to get press, radio and TV coverage of the work being done;*
- > publishing brochures;*
- > producing and distributing a layman's report;*
- > setting up and maintaining a website dedicated to conservation work on military Natura 2000 sites, with links to the websites of the Belgian Ministry of Defence and the Flemish Environment Ministry;*
- > organising information meetings and guided excursions for the public;*
- > publishing two special issues each of the Environment Ministry's magazine and the Ministry of Defence's weekly;*
- > creating an exhibition to tour the country, which explains conservation management in a military context;*
- > erecting 24 information panels (two at each project subsite).*



How LIFE helps: public access and recreation

In many states (Germany, Italy, France, Austria ...) the military estate, including training areas, is not open to the public, for security and secrecy reasons and because of the dangers inherent in live firing, unexploded munitions etc. Others take a different approach.



Photo © Ministry of Defence, Denmark

In Denmark, the Ministry of Defence's environment strategy of 2000 says that the Armed Forces will allow public access as much as security and conservation considerations allow. In 2002 access of the public to the natural assets in the areas belonging to the Ministry of Defence was secured by a new statutory order. The public is – as a general rule – allowed to access training areas when there are no military activities (normally during weekends and

public holidays). The local military authorities have to announce 14 days in advance when training will take place in their sites. Stronger restrictions on public access are placed on certain areas, such as firing ranges, but also on sensitive nature zones.

Thus on Denmark's largest firing range and exercise area in Oksbøl, the armed forces fire live ammunition from planes, tanks, and mortars.

Outside the firing and exercise times, the public has now been given access to this terrain with its rich nature. Access is coordinated using signs and notices in the daily press. There are public rights of way (footpaths etc.) – some of which are always open, some of which are only open when the red flags are down (i.e. not during live shelling) – but some areas are permanently closed off. The Danish Forest and Nature Agency, in cooperation with the local military



Photo © Stephen Davis, English Nature

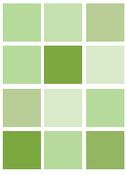
authorities, arranges tours of the training area for a number of interested organizations and the local and county authorities. The tours give the participants an overview of the area's natural and recreational facilities, providing a basis for them to make proposals and requests for future usage. Which results in many diverse proposals – from systems of riding trails to driving in off-road vehicles, from holding orienteering events to setting up nest boxes for birds.

The Dutch Ministry of Defence's policy is also to open military

areas to the public, whenever this can be squared with military use and other considerations, such as conservation or archaeological heritage. Thus firing ranges are out of bounds. Visitor use is generally moderate, but there are certain problems. Consequently, the Ministry intends to prohibit trail biking and to lay out walkways and attractive routes in order to channel visitors. There will also be more emphasis on informing visitors through panels etc. – many visitors currently are not aware they are on Ministry of Defence land or what the armed forces are doing to restore

and maintain the landscape they have come to enjoy.

Public access is usually not allowed to military areas in Portugal but there are exceptions near the coast. These estates are open to the public on weekends and holidays. The military authorities put up notice boards to prevent forest fires and other damages and some have set up waste management systems to avoid littering.



Flemish military sites

The Belgian situation is more complex. Although in principle military areas are not open to the public, the military authorities have for long pragmatically allowed recreation if it was compatible with military use. This was done through concessions to third parties (aviation clubs, hunters and anglers, youth camps, gun clubs and clay pigeon shooting clubs in particular). The outstanding nature and landscape value of the military sites within a densely-populated country - particularly Flanders has few open spaces outside the military domains - makes them very desirable to the burgeoning hordes of leisure-seekers in the post-industrial society, generating a new ecological threat. This has recently led to rapidly increasing pressure from leisure-seekers on these military areas, including new groups like 4WD, trial bike, mountain bike, horse riding and hiking enthusiasts. Excessive use is a real threat as concessions multiply. Worse, all too many do not even bother to ask permission and just go in on their own bat.

Hitherto, the armed forces only carried out sporadic actions against recreation which they had not expressly permitted – it was not considered a priority and the military simply did not have the resources. Nor did they have the formal legal powers to prosecute breaches of environment and conservation law.

The 1999 protocol between the ministries responsible for defence and the environment, hence stipulated that wardening was an important objective. To set it up however, would be a costly exercise. Hence it was included in the application for a LIFE-Nature project covering the Flemish military Natura 2000 sites, approved by the Commission in Sept. 2003.



Photo © Marc Schuermans



Photo © Chris Orhelinx – VEC De Watersnip

This LIFE project will fund the initial effort to set up a functioning surveillance system and test it during its first years. The management plans and the data bases it will produce will also serve to zone recreation in function of the carrying capacity of habitats and military requirements. The LIFE project's communications team will try to 'sell' the outcome to stakeholders and the general public. It will thus devote considerable attention to communicating with leisure stakeholder groups (which include conservation NGOs organizing excursions!), e.g. by setting up platforms with them to debate the issues, as well as the public at large (via information panels on site, a travelling exhibition, a dedicated website).

LIFE-Nature project



Salisbury Plain

The UK Ministry of Defence's overall policy towards public access is underpinned by "a presumption in favour of safe public enjoyment of its estate wherever compatible with operational and military training uses, public safety, security, conservation and the interest of its tenants." In practice, this means that designated footpaths, bridleways and trails are currently accessible to the public.

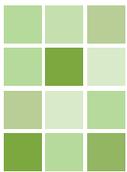
The Porton Down military research and testing area is not open to the public, for obvious reasons, but large parts of the Salisbury Plain Army Training Area are. There are public rights of way (footpaths etc.), some of which are always open, some of which are only open when the red flags are down (i.e. not during live shelling). Other areas are permanently closed off.

Photo © Stephen Davis, English Nature



The LIFE-Nature project is further managing and improving public access by signage (such as six information boards on chalk grassland habitat erected at key points on the Plain, and 18 interpretive display panels) and written material (a 'conservation briefing pack' for all users of the military training area and the local community).

These help visitors to understand the importance of the Natura 2000 network, the conservation requirements for the Natura 2000 species and habitats found on the Salisbury Plain, and the role of the LIFE-Nature fund.



How LIFE helps: dissemination and exchange of best practice

LIFE can certainly help here; in fact it is one of the instrument's prime purposes.

One aspect shared by all LIFE projects is producing documentation on best practice and lessons learned, for dissemination and 'technology transfer'.

Another aspect is bringing conservation managers, stakeholders, scientists... together to exchange experience, questions and ideas. Because there are LIFE projects across Europe, LIFE can, and does, play a unique role in bringing together people from many countries around a common conservation theme. This is usually done through workshops or seminars organized by a LIFE-Nature project which invites colleagues from other LIFE projects dealing with the issue in question, plus relevant stakeholders, authorities, etc.

These aspects can just as easily be transposed to a military context, and here the LIFE-Nature project Salisbury Plain provides an excellent template.



Photo © Ministry of Defence, Denmark



Salisbury Plain

Prior to LIFE, the Salisbury Plain military training area was already attracting attention from across Europe because of its partnership-building between military interests and conservation. Thus it was one of the excursions offered to the delegates to the 1998 Bath Conference 'Natura 2000 and People' (jointly sponsored by UK Presidency and European Commission).



Photo © Stephen Davis, English Nature

Photo © Anton Gaezenbeek

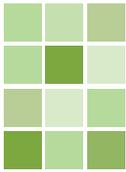


At the technical level, the LIFE-Nature project Salisbury Plain is organizing an international seminar for chalk grassland managers and practitioners to demonstrate, disseminate and share best practice (foreseen August 2005). It is producing a best practice guide to spread information about the actions undertaken by the project to chalk grassland owners and managers throughout the EU (scheduled for March 2005). Contacts are being built up with other LIFE projects (e.g. in France, Slovenia, Belgium) dealing with similar habitats and the LIFE-Nature project has attended and given presentations at international conservation workshops.

The project has an important story to tell at the policy level too. Since it began, mixed military/conservation delegations from Estonia, the Ukraine and Lithuania came to the Salisbury Plain to get first-hand impressions of the military area management. Contacts have been laid with the Belgian armed forces, and the Salisbury Plain LIFE-Nature project provided useful inspiration and input to the application for LIFE-Nature funding for a project on Flemish military sites submitted in 2002. The project was visited by Caroline Jackson MEP, the President of the European Parliament Environment Committee.

To network military and conservation at international level, an exchange-of-experience and dissemination seminar was held in July 2004 together with Eurosite. Eurosite, which has a long track record of twinning nature reserves, was involved through its work on the 'Natura 2000 Network Initiative' for DG Environment. This Initiative, based on the June 2002 El Teide Declaration by the EU Council of Environment Ministers, seeks to define examples of good Natura 2000 practice, not just in terms of conservation techniques, but also in terms of partnership building, local awareness etc.

The seminar brought together representatives of the armed forces and ministries of defence, plus conservation managers responsible for military areas, from the UK, Belgium, Netherlands, Denmark, Austria, Ireland, Latvia, Hungary, Ukraine, Italy and Portugal, as well as an observer from the USA. During two days (July 14 & 15), the participants discussed Natura 2000, LIFE-Nature, integration of conservation and military use and techniques to achieve this. Workshops delved into the challenges for the future. There were several excursions in the field to see first-hand how military use and conservation were integrated on the Salisbury Plain.



The Salisbury Plain LIFE-Nature project seminar came to a series of conclusions and recommendations, which the beneficiary has circulated. An abridged version is given here:

- > *A conservation strategy for the Ministries of Defence in all Member States is required to ensure compliance with and contribution to the favourable condition of Natura 2000 sites. Some countries are only at the start of this process of successfully combining military training with nature conservation and Natura 2000 sites. Good and direct access to ecological advice and expertise is essential. Greatest success has been achieved where this has been developed in-house and/or where professional ecologists are directly employed by Ministries of Defence. Help, support and advice is particularly needed by some old and new Member States.*
- > *It is essential to have the highest level agreement at the ministerial and departmental level between the Ministries of Defence and Environment.*
- > *Partners should have objectives which they all share, and understand each others' constraints and opportunities. They should deal with each other with the right attitude, with respect and understanding for each others' positions, in a spirit of cooperation. There should be an equality of decision-making. Partners should not impose ideas, but explore ways of achieving objectives together. Needed is a preparedness to work through and resolve conflicts and to accept and know what the limits of compromise are. All parties should be prepared to compromise. Successful partnerships respect and hold a wide range of views. Patience and understanding will build strong relationships. Partnerships bring a shared accountability, responsibility and mutual respect.*
- > *Two different areas of important issues can be distinguished: 1) awareness raising 2) conservation management in practice. A common solution is the adoption of integrated planning systems. Planning and managing military training activities should be informed by knowledge of the distribution of habitats and species. This requires information gathering, of biological data and of training requirements and activities. Modern IT technologies such as GIS-based mapping tools are very effectively used to this end in some countries.*
- > *Understand the ecological carrying capacity of the land. There are good examples of weighting factors (e.g. the effect on the land of different types of vehicles) applied to military training activities.*
- > *Conservationists need to be very clear in explaining reasons and rationale behind objectives, while accepting that in certain cases constraints will exist that do not allow the realization of all 'ideal' objectives. They should appreciate that in fact some military training has a direct positive impact on maintaining habitat features and species.*
- > *Develop practical solutions, not theoretical models which would never be realized; also allow scope for experimentation and risk-taking. Risks may need to be taken to demonstrate that things are possible – one should not be afraid of failing in the first instance.*
- > *Military sites can accommodate large-scale management (not 'conservation gardening'!) involving ambitious objectives and targets. These sites are sufficiently large and can cater for relatively large dynamic changes in management of habitats. Recreational access could be zoned and managed, allowing access but directing recreational pressure where the site manager wants it to go.*
- > *There is a need to establish debate forums combining military and conservation personnel, and involving a wider network of military personnel.*
- > *Participation in meetings such as the Salisbury workshop has to have the consent and agreement of national policy makers (departments and ministers). Positive and constructive outcomes of such workshops are a good way of influencing policy makers.*
- > *In states like Belgium and Denmark, a high proportion of the country's total resource in certain semi-natural Annex I habitats (e.g. heaths) is under military management, so that the military authorities have a particular responsibility for safeguarding these Natura 2000 values. Whereas for some semi-natural habitats it is possible to work together with farmers, such economic use is not so obvious for some other habitats so that their maintenance in a favourable conservation status requires constant input of funds by the military site managers.*

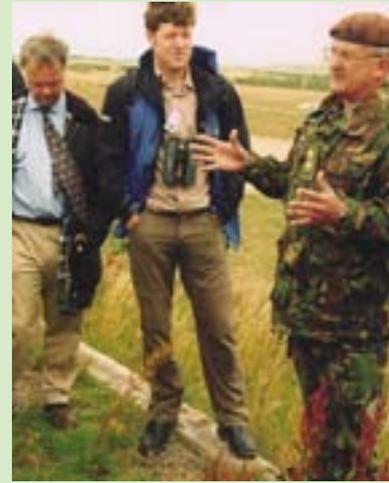


Photo © Anton Glazenbeek

FOOTNOTE: Full text can be obtained from Stephen.davis@english-nature.org.uk

There is no question that the LIFE Salisbury Plain seminar was favourably received by its participants: one of its official conclusions reads 'The fact that representatives from 12 countries (military and civilian) were represented at the workshop demonstrates that there is a need to, and an interest in, sharing best practice... A variety of ways to maintain contact and share best practice was proposed.'



Flemish military sites



Photo © Marcell Van Wāerebeke – VBC De Watersnip

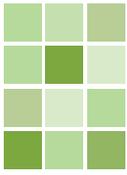


Credit: LIFE Military Areas Flanders

Two large international seminars (planned for 2005 and 2008), to which other LIFE-Nature projects will be invited, are part of the project and will be occasions to examine progress and draw conclusions/recommendations.

The first seminar is now set for Sept. 19-23 2005 and will try to build on the Salisbury Plain seminar, carrying its dynamic forward. The topic of the seminar is 'Nature in Defence – Sustainable Nature Management on Military Areas in the Natura 2000 Network'. It specifically targets personnel directly involved in nature management on military areas. The state of progress within four main themes (ecology, partnership, public support, sustainable development) will be assessed and local solutions for addressing military and nature conservation needs debated.

FOOTNOTE: for more information and attendance, contact: johan.vanswijghenhoven@lin.vlaanderen.be



Conclusions

Some ministries of defence and armed forces have been coming to grips with integrating nature conservation in their work long before Natura 2000 came on to the horizon, others have been jolted into accelerated action by Natura 2000, and others again have still to start the process.

The two LIFE-Nature projects, 'Salisbury Plain' and 'Flemish Military Sites', are flagships for the partnership between military sites and conservation under the Natura 2000 banner.

LIFE-Nature can co-finance the task of preparing management plans for Natura 2000 sites in the military estate. Most of the activities taking place in military areas and some of the conservation problems encountered there are quite different from the classic forms of land use and the technical problems conservation managers encounter on civilian sites. So new technical solutions have to be found, which makes management planning for military sites innovative. LIFE-Nature projects such as the one for the Flemish military sites, which elaborates and tests management plans for a range of military sites and natural habitats in one comprehensive effort, have great demonstration potential for armed forces across Europe.

LIFE-Nature can provide the critical funding mass to allow a backlog of inappropriate management or no conservation management at all, to be cleared away in a military site, and correct recurring management to be kicked off. In this sense LIFE projects in a military Natura 2000 site are of the same variety as their "civilian" counterparts where LIFE also funds investment in one-off activities to get a site back to a favourable conservation status realizing its full potential.

LIFE can test and launch conservation-oriented recurring management of



Photo © Kerstin Sundseth

semi-natural habitats in military areas, but its long-term continuation can be a problem if there is no interest from farmers or foresters. For some semi-natural Annex I habitats, such as the calcareous grasslands on the Salisbury Plain, it is possible to work together with farmers. Where this is not so obvious (heaths and similar habitats), recurring management might require constant input of funds by the military site managers, a considerable burden on the armed forces – "must we have to budget for that as well when costing military exercises?", it was said during the July 2004 Salisbury workshop.

In some countries recreation can be a third factor – it can exert considerable social pressure to open up military sites. This can threaten the nature values of the sites. Zoning and careful planning of entries and routes (to direct people away from sensitive areas) – guiding but not restricting – can help solve this dilemma, and LIFE can fund the personnel and infrastructure needed to bring this about.

Increasing awareness is vital, starting with the troops and moving up through the hierarchy, but also the public at large – military site managers have been criticised by the public for cutting trees, for instance. The community outside the military areas must not be neglected – it must see "its" military range as valuable (even if access is limited) – if this is not the case, the future of the range is not assured long-term (cases exist where local opposition forced the political authorities to close ranges). This means that military sites must reach out to their neighbours. LIFE can support activities covering all levels of information and awareness-raising.



SECTION THREE

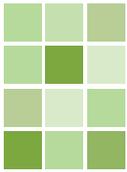
CO-OPERATION BETWEEN LIFE PROJECTS AND THE MILITARY

Multi-site projects

Many LIFE projects cover more than one site. Multi-site projects often target a particular habitat type or species at national or regional level, implementing actions in a series of Natura 2000 areas where the habitat or species occurs.

In several such projects, the Natura 2000 sites included military areas. Two different routes were taken:

- > **Active military participation:** the military authorities became partners in the project, responsible for carrying out conservation actions on their own land.
- > **Passive military participation:** the military authorities left the conservation work to the specialists, but gave permission for the NGO or agency running the LIFE-Nature project to enter the military area and do what was needed.



Active military participation in the project

LIFE-Nature project



Restoring boreal forests and mires in south and west Finland

(LIFE03/NAT/FIN/000034)

Only a small part of the boreal forests in the southern half of Finland are in truly 'natural' or favourable condition. This is because over time the forests have succumbed to a range of pressures from commercial forestry. As a result, they have not only shrunk in terms of their surface area but their structure and function has also been dramatically altered. A natural forest will have trees of different ages, a lot of decaying wood on the ground, and the occasional openings in the forest canopy as a result of storms. This creates ideal micro-habitats for a wide number of species. Commercially used forests on the other hand are uniform, have very little dead wood or forest clearings and are consequently relatively uninhabitable for most species.

The LIFE-Nature project targets 33 Natura 2000 forest sites in all. At each one of them it is improving forest structure by creating small openings

in the canopy, increasing the amount of dead and decaying wood and carrying out controlled burnings. Almost 5,000 ha of boreal forests will have its conservation status improved; 350 ha of bog woodlands will be improved by stopping drainage.

One of the sites is the 4,080 ha Natura 2000 area Repovesi, the eastern half of which is a forested state-owned area used as buffer zone around a military training area and firing range. Because of the danger from shells and ammunition, visitors can not enter this area; even the national park personnel (Repovesi was designated national park in 2003) must ask permission from the Finnish Armed Forces to enter the area. The forests in the military area buffer zone did not qualify for the boreal forest Annex I habitat type when the LIFE project application was being drafted. They were nearer to economically used forests lacking decayed wood with too monotonous a structure, but they had the potential to develop towards boreal forests if restoration work was undertaken.

Metsähallitus, the state agency responsible for forests and parks in Finland and project beneficiary, saw that the Armed Forces would be an interesting partner in this area, so it contacted the Armed Forces during the preparation of the LIFE application. The Army's Karjala Brigade agreed to become an official partner in the LIFE-Nature project, responsible for the conservation actions on the buffer zone land, with a right to receive LIFE co-financing for its project costs.



Photo © Anneli Suikki

Under the LIFE-Nature project as approved by the Commission, in the Repovesi buffer zone 180 ha of small openings are being cleared, controlled burning done over 16 ha and decayed wood increased over 50 ha. The beneficiary, Metsähallitus, is training the people in the Karjala Brigade doing their military service, on the ecological reasons for the restoration and its aims. The Karjala Brigade carries out the work, but Metsähallitus is supervising it. Interesting is that the Finnish army uses the buffer zone for its guerrilla warfare training and the LIFE restoration measures are now included in this training. The Karjala Brigade will fell trees, blow up trees with explosive to increase decayed timber and damage trees with a "forest tractor" (to slowly kill the tree in order to have a different kind of decayed wood). All these measures aim at making these currently non-qualifying Annex I forests priority boreal forests in the long run – maybe within 50-100 years.



Photo © Tommi Päävinen

LIFE-Nature project



Border Mires

(LIFE98/NAT/UK/5432)



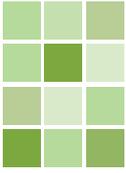
Photo © Northumberland Wildlife Trust

The Border Mires LIFE project was led by a partnership of Northumberland Wildlife Trust (beneficiary), English Nature and Forest Enterprise. The project sites in northern England are a series of active blanket mires within the Border Mires: Kielder-Butterburn pSCI. Large-scale afforestation to create Kielder Forest between 1945 and 1960 resulted in many of these mires being partially drained and planted with trees. Since 1986 five bodies, the core of the future LIFE project, had worked together to promote the conservation of the mires. At the start of the LIFE project

they were joined by the Royal Air Force at Spadeadam.

The Royal Air Force became involved because one of the fifteen sub-sites identified for action by the project application, RAF Spadeadam, was a military testing site. Military staff not only carried out mire restoration work here, but also hosted the beneficiary's mid-project seminar. Moreover, in a cooperative gesture, Belgian military staff on training exercise at nearby Otterburn Army Camp helped transfer by helicopter plastic piling needed for the dams to raise water levels in the

mire. RAF Spadeadam won first prize in The UK Ministry of Defence's annual Sanctuary Award for this effort; this prize was presented by the Under Secretary of State for Defence.



Restoration of Scottish raised bogs

(LIFE00/NAT/UK/7078)



Photo © Scottish Wildlife Trust



Photo © Scottish Wildlife Trust

Since the start of the 19th century the extent of active lowland raised bog in the UK was reduced from 95,000ha to 8,100ha, a decline of 85%. Two thirds of the remaining area is found in Scotland. A multi-site LIFE project to improve the conservation status of these bogs was launched, coordinated by the Scottish Raised Bog Partnership and administered by Scottish Wildlife Trust. Eleven sites were targeted for restoration actions, including the 32 ha Bankhead Moss pSCI which lies in the centre of a Ministry of Defence munitions site.

The LIFE project action at this subsite was to improve grazing management by installing 390 metres of fencing. The Ministry of Defence took on the task of finding and supervising fencing contractors and ensuring the

job was done. This it did successfully. Working on military land, with risk factors like unexploded munitions, implied additional safety precautions compared to a normal site, so that the unit cost for fencing at Bankhead Moss was significantly more than at the 'civilian' subsites, and higher than originally anticipated in the LIFE application. The Ministry of Defence would only allow either their own contractors to be used or civilian contractors with the extra cost of supervision. This is a good example of how conditions and context for conservation work can be quite different on a military site compared to a classic nature reserve. It also shows that in planning for the costs of Natura 2000 actions on restricted areas such as military sites or transport infrastructure, additional costs must be considered.

LIFE-Nature project



Sefton coast

(LIFE95NAT/UK/000818)

Photo © John Houston



Photo © D. E. Simpson



The Sefton coast, Merseyside, northwest England, boasts one of the largest sand dune systems in the UK (2000ha), but its integrity was at risk through fragmented ownership, recreation pressures and the lack of coordinated conservation management. A management scheme was established in 1978 and, through this mechanism, partners secured funding from the LIFE-Nature programme for a project to develop a conservation strategy for the Sefton Coast pSCI. The LIFE project ran from 1995-99 and involved three main partners, Sefton Council (the local authority and beneficiary), the statutory conservation authority English Nature and the NGO National Trust.

The overall aim of the project, which operated along a 17km length of dunes, was to develop a strategic plan to manage the whole of the pSCI by consolidating management planning, improving conditions for key species and carrying out land purchase and management actions to protect duneland habitats whilst also raising awareness and support amongst visitors and local people (e.g. through educational and informational nature trails). To do this, a whole-system approach was

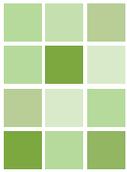
adopted and contacts were developed with other land-owning interests such as golf courses and military sites.

Vital to the success of the project was indeed the support it gained from key landowners such as the Ministry of Defence, the Reserve Forces and Cadets Association and golf courses. Together this broader network of partners, supported by specialists, produced a 'Conservation Strategy for the Sefton Coast candidate SAC', a basis for future management of the Natura 2000 area. At the end of the project the responsibility for the strategy has been taken on by the Sefton Coast Partnership, with close links to local Biodiversity Action Plans and Forest Plans.

One of the project sites was the 208 ha Altcar Rifle Range estate (photo above), an area of beaches, dunes, fields and small woods. The site, owned and managed by the Reserve Forces and Cadets Association (part of the Territorial Army), contains priority dune habitats and rare species such as the natterjack toad *Bufo calamita* and the sand lizard *Lacerta agilis*. Work on a current management plan was completed and a new plan prepared setting out

tasks for the next five years. Practical actions included revised mowing regimes to maintain orchid-rich grasslands, the management of a series of shallow pools for *Bufo calamita*, the mowing of dune slack vegetation and the creation of areas of new wet slack. At the end of the project the areas covered by the actions were added to the Sefton Coast pSCI. All the work at Altcar was carried out by the Reserve Forces and Cadets Association, supported by its Conservation Advisory Group (such groups exist on most UK military sites) and the LIFE project team. The Reserve Forces and Cadets Association were awarded second place in the annual Ministry of Defence Sanctuary Award (second only to another LIFE project at Spadeadam, Border Mires, see above) for the completion of the conservation management work.

The LIFE-Nature project recognised the value of working with private and military landowners in developing a Natura 2000 management plan. At an international conference held within the framework of the project in 1999, there was a presentation from the Ministry of Defence Conservation Officer and the work at Altcar was included in field visits.



Passive military participation in the project

These are multi-site LIFE projects where some subsites are military estate and the military authorities allow the project beneficiary to do restoration work on their land, collaborating with it in planning and supervising the work.

LIFE-Nature project



Flora Menorca

(LIFE00/NAT/E/007355)



This multi-site project targets the conservation of threatened flora on the island of Menorca (Balearics), targeting 8 Annex II species, of which 4 are priority under the Habitats Directive. Main threat to these coastal plants is an exotic plant (*Carpobrotus edilis*) which escaped from gardens on Menorca, and trampling /vehicle use by tourists.

The eradication of *Carpobrotus* is the main measure of the project. As the pSCI hosting the threatened Annex II plants are largely privately-owned, contacts with and permission from the owners is vitally important.

Three subsites were military land. When approached by the LIFE project beneficiary, the Spanish Defence Authorities were one of the first to give permission to enter their land. Private owners were generally more hesitant. So *Carpobrotus* removal – done by cutting and uprooting the plants manually (see photos left) – on these military properties (s'Enclusa, Mola de Mao and San Felip) has thus already been completed, while negotiations with private owners are still continuing – a feather in the military's cap.

The Coastguard is also cooperating with the project and has dedicated a work brigade to help remove *Carpobrotus* from public lands.

Both Defence Authorities and Coastguard are represented in the project's steering committee.



Photo © Consell Insular de Menorca

LIFE-Nature project



Conservation of Andalusian flora

(LIFE94/E/001203)



Photo © Junta de Andalucía

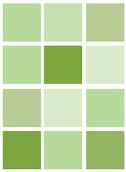


Photo © Junta de Andalucía

Under this multi-site LIFE-Nature project to conserve endangered and endemic flora, actions were carried out on Alboran Island, a strategic military territory located between Spain and Morocco. The purpose was to reintroduce the priority Annex II species *Diploaxis siettiana*, endemic to the island. During a first survey of the island under the LIFE project, it was confirmed that the species was extinct in the wild. Fortunately *Diploaxis* was growing in the Botanical Garden in Cordoba, from which seeds were brought and grown in plots and then reintroduced during the LIFE project.

The military personnel stationed on the island helped by regularly watering the reintroduced plants and keeping an eye on their growth.

After the end of the LIFE project, the beneficiary, the Regional Government of Andalusia, and the Ministry of Defence continued to work together. They collaborate in monitoring the success of the conservation measures for *Diploaxis* - there is currently a population of more than 400 individuals on Alboran Island - and carrying out surveys of another endangered species, the seagull *Larus audouini*.



LIFE-Nature project



Atlantische Heide

(LIFE99NAT/B/6298)



Photo © Geert Raeymakers



This project by a Belgian conservation NGO, Natuurpunt (which is active in Flanders), targeted remnants of a heathland type intermediate between Atlantic and Continental heathlands, largely restricted to west Belgium. These remnants were fragmented and in poor shape.

One of the subsites targeted by the project was Gulke Putten. It contains radio transmission towers and buildings (photo above) which once belonged to the telephone company Belgacom but were transferred to the military authorities.

As in the other project sites, a management plan was drawn up under LIFE and it covers the 68 ha area owned by the military authorities plus 30 ha of the adjoining Predikherenbossen, bought by Natuurpunt during this LIFE project. A good relationship with the military authorities in Gulke Putten was achieved quite early on in the project and allowed the plan to be drafted quite smoothly. The military have no objections that the NGO manages this radio-communication site for the conservation of wet heathlands and related habitats, and agreed to this in writing (the contract with Natuurpunt is an integral part of the management plan Gulke Putten).

With the military's blessing, the NGO used LIFE funding to restore 12 ha of degraded heathland inside the military terrain (photo top left) and kilometres of fencing were installed to start recurring management by grazing with Galloway cattle.



Photo © Geert Raeymakers



Photo © Geert Raeymakers



Marais calcaires en Lorraine

(LIFE99/NAT/B/006285)

This is another NGO multi-site project, but with RNOB, a conservation NGO active in southern (French-speaking) Belgium, as beneficiary. The project restored and did management planning for a series of calcareous mires in southeast Belgium.

One of the largest mires, Marais de Landsbruch (photo right), lay within the military training area of Lagland near Arlon. Thanks to the personal naturalist interest of its commander, Lagland was managed through the 1990s with an eye to conserving and enhancing its rich nature values (alkaline fens). Maps were produced showing the troops which areas to avoid during exercises.

RNOB was awarded a management contract for the Marais de Landbruch, core of the Lagland site. Because succession was threatening its status, the Lagland military authority sought and obtained assistance from RNOB and the Wallonian environment authorities to begin restoration works, and so the Landsbruch mire became one of the 'Marais calcaires en Lorraine' LIFE-Nature project sites.

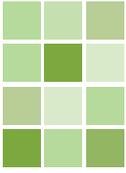
15 ha in the Landsbruch were cleared of trees by contractors hired by RNOB and cofinanced by LIFE, permitting the natural restoration of the fen vegetation and the hydrology of the site (photos below, right).



Photo © Camp Lagland, Ministère de la Défense, Belgique

Photo © Camp Lagland, Ministère de la Défense, Belgique

Photo © Camp Lagland, Ministère de la Défense, Belgique



Protection of the Posidonia beds in the Balearic Islands

(LIFE00/NAT/E/7303)

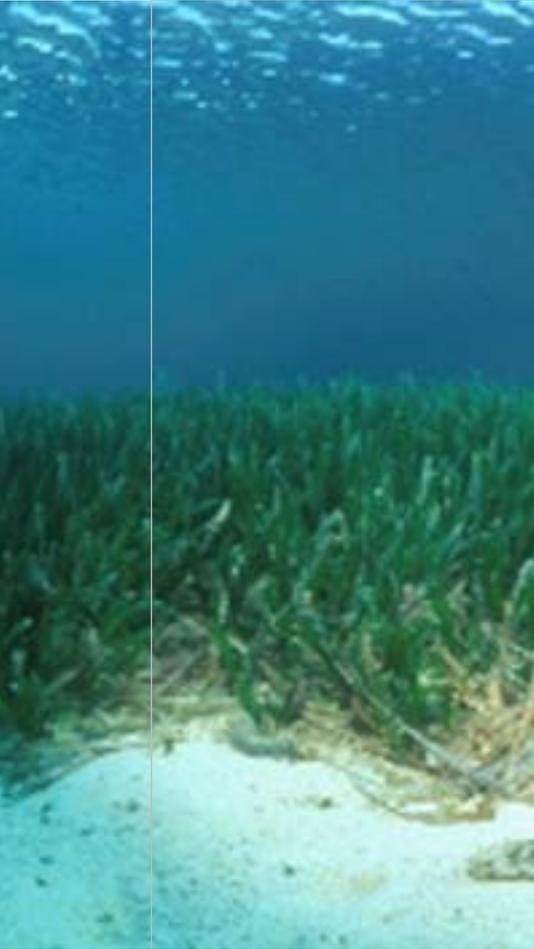


Photo © Kike Ballesteros



Photo © Conselleria de medi Ambient, Govern Balear, España



Photo © Kike Ballesteros

Posidonia oceanica is a marine plant, occurring only in the Mediterranean, which forms dense expanses of 'seagrass' on the bottom of the sea, harbouring a rich ecosystem. Unfortunately it has declined dramatically in recent decades. There are still good *Posidonia* beds around the Balearic Islands, and this LIFE project set out to preserve them. It covers 17 offshore sites and the main measures are management planning, monitoring of trends, actions to deal with the damage caused by anchoring yachts (5,000 yachts on average frequent the islands every summer) and by fishing, surveillance and information work.

One of the 17 sites is Cabrera Island, which is owned by the Spanish Armed Forces but lies within a national park which extends over a marine reserve offshore. So de facto it is managed by the national parks administration.

At Cabrera, the project is monitoring the *Posidonia* beds by laying out underwater plots and carrying out special actions for the benefit of the endangered seabird *Larus audouinii* which is associated with the local *Posidonia* ecosystem. The national park administration controls mooring by yachts (no-go areas for anchorage coupled to permitted mooring points).

Military expertise helping Natura 2000 through LIFE projects

A number of LIFE-Nature projects have received technical assistance from the Armed Forces, even though not one of the sites was a military area. In these cases, the military provides manpower, machinery or specialist knowledge towards solving a challenge facing the project on the ground. Not dissimilar to, though of course on a very much lower scale, the Armed Forces pitching in when there are floods or storm damage.

LIFE-Nature project



Restoration of mire and bog ecosystems in North Savo

(LIFE02NAT/FIN/8470)

This project restores boreal forests and their associated mires in the North Savo region of Finland. The targeted forests are no longer in truly 'natural' or favourable condition, because over time they have been affected by a range of pressures from commercial forestry which have altered their structure and function. A natural forest will have trees of different ages, a lot of decaying wood on the ground, and the occasional openings in the forest canopy as a result of storms. This creates ideal micro-habitats for a wide number of species. Commercially used forests on the other hand are more uniform and have very little dead wood or forest clearings.

At one of the sites covered by the project, Rautuvaara, explosives would be used to blow up 180-200 trees at 14 points on state-owned land, in order to increase decayed wood. This is a technique which has been used before in Finland, but is nevertheless still quite innovative.

The LIFE project coordinator, seeking expert assistance, contacted the Regional Army Corps, which advised him to talk to the Kainuu Brigade, based at Kajaani, not too far from the Rautuvaara site. The Brigade was sent a description of the task and information about the project, and after some negotiations agreed to



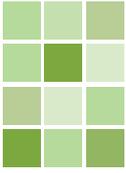
Photo © North Savo Regional Environment, Finland

assist. Its sappers would undertake the work as part of their explosives training – in fact, it would be an excellent combination. Normally the sappers train with 'artificial trees' – timber they put up straight in the ground – as there are not enough trees left on their training ground, so an opportunity to train in a real-life setting was a bonus.

The combined explosives training – nature restoration work began quite soon after the LIFE project commencement and is continuing through its duration.



Photo © North Savo Regional Environment, Finland



LIFE-Nature project



Trockenrasen in Rheinland-Pfalz

(LIFE02NAT/D/8461)

This project, a partnership between the foundation Stiftung Natur und Umwelt Rheinland-Pfalz and the regional statutory conservation authority, covers a series of subsites in the German Rhineland where dry grasslands with rich populations of rare plants and invertebrates are being restored by cutting overgrowth and then bringing them under appropriate recurring management.

At the Mauerchenberg-Hierenberg-Pinnert subsite (near Lissendorf), large coherent blocks of pine were cut down in the dry grasslands on the steep hills here. The Bundeswehr (4. Kompanie des Fernmeldebataillons 281) helped do this work with its men and machines (see photos) in Feb – March 2003 – the battalion is stationed nearby at Gerolstein and has often provided assistance to local activities as part of its ‘good neighbour’ policy. The clearing work was coordinated by the LIFE-Nature project’s staff and the district forestry service. The soldiers’ work attracted considerable attention from the local press and TV. Inhabitants of the village Gönnersdorf came and brought the troops hot drinks and cake to fortify them against the cold weather.



Photo © Gerd Ostermann



Photo © Gerd Ostermann



Photo © Gerd Ostermann

LIFE-Nature project



Dijlevallei

(B4-3200/98/434)



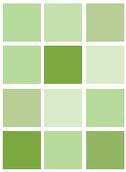
Photo © Natuurpunt, Belgium

The focus of this Belgian project was the wet grasslands and alder woods (photo above) along the Dijle River near the cities of Leuven and Brussels. It tackled the results of past neglect and restored land lost to poplar plantations and fish ponds.

One of this project's actions was to improve, and simultaneously guide, visitor access to the floodplain meadows, ponds and woodlands of the site. A former tramway crossed the site on an embankment, but its bridge across a stream had long collapsed. If the bridge could be restored, the tramway would make an ideal visitor route. The sappers of the Belgian Army (Corps de Genie, based in Namur) offered to put up a new bridge, free of charge. For them it was a good exercise in bridge building in difficult terrain. The bridge was erected in a few days in summer 2003 (photos right and above).



Photo © Natuurpunt, Belgium



LIFE-Nature project



Kuusamo

(LIFE96NAT/FIN/3026)

In northeast Finland, close to the Russian border, the Kuusamo district had some of the largest remaining remnants of old-growth forest in Finland. To preserve these privately-owned forests for posterity in their virgin state, this LIFE project's target was to compensate owners for taking the forests out of economic use for ever.

Because the local community was not unanimously in favour of ending economic exploitation, information and public relations were an important part of this project. Besides the local community, the general public was targeted, to make it aware of the natural treasures in the Kuusamo region. This could also help underpin another aspect, namely to support local community initiatives to

Photo © Keijo Taskinen



Photo © Keijo Taskinen

material that would do justice to the splendour of the forests was from the air – but chartering aircraft could easily run to 2,000 € per hour.

Here the Finnish Border Defence Force stepped in. It had a detachment responsible for the border with Russia along the eastern side of Kuusamo, and this detachment offered its patrol helicopter to carry the film crew over the forests. Free of charge, as a good neighbour gesture to help the LIFE project. The filming was done in the summer of 1999 and an excellent video was produced.

launch sustainable nature-based tourism as an alternative to forestry. One of the communication tools used by the project was a video film about the virgin forests called 'The thousand-year tale of the taiga forest'. The problem was, filming the video would be no easy task. The forests spread over some 14,000 hectares of wild and roadless terrain, cut by mires and lakes. The only way to get film

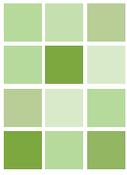
A conclusion that can be drawn from these examples of the military helping conservation projects: the armed forces carry out many training exercises, and usually these have as sole purpose the training of the troops. However, in the cases mentioned above, such as in the LIFE-Nature projects Dijlevallei and North Savo, the military exercise has a dual purpose: training the troops, but also achieving a conservation goal. For the armed forces, combining an exercise with a task for the public good is not only intrinsically satisfying, it also raises the profile of the military within the wider community. Conservation operators should therefore not hesitate to contact the military when they face tasks which the armed forces potentially have the capacity to deal with.



SECTION FOUR

LIFE ON FORMER MILITARY SITES





LIFE on former military sites

Besides active military sites, there are former military sites which kept or acquired great natural value thanks to their military status, but began losing this value after their decommitment from military use.

Where the ecological value came from regular disturbance by military activities which kept creating and re-creating pioneer habitats, decommitment meant that these habitats and the species which depend on them began disappearing. Where the ecological value stemmed from a lack of disturbance because the site was closed to the public, decommitment meant an influx of visitors, or possibly even plans to commercially exploit the site. Examples of decommitment are described below as they illustrate a common problem for conservation.

The events of 1989 and following years brought a completely new strategic environment and this has been reflected through major changes to military infrastructure in Europe. Many military bases and training areas were closed, especially in central and eastern Europe.

The process is not yet ended – armed forces are still restructuring themselves to become lighter and more mobile, in response to current security issues.

In 1985 the Netherlands still had 50,000 ha of military estate, but the end of the Cold War brought a shift towards a smaller and more professional armed force. The end of compulsory national service alone meant less room was needed for training. By 2000 the estate had been reduced to 30,000 ha, and was set to shed another 5,000 ha. The Ministry of Defence National Military Training Grounds Structure Plan (a spatial planning document for the military areas issued in 2001) examines the consequences of the reduced need for training areas. The fifth Town and Country Planning Policy Document, covering the period up to 2020, was elaborated in 2002



Photo © P. van der Wijngaart, Ministry of Defence, The Netherlands

by the various ministries concerned. It emphasizes the potential for natural values and for housing/industry parks in the military areas to be decommissioned.

The French armed forces agreed to transfer coastal sites which they decommissioned to the Conservatoire de l'espace littoral et des rivages lacustres, an agency responsible for managing coastal land as public heritage. In December 1994 19 sites covering 250 ha were transferred. For inland decommissioned sites, the Ministry of Defence examines the possibility of transferring them to another public body on a case-by-case basis with the Ministry for Land Use Planning. For instance, 220

ha was transferred to the parks authority of the Ile de France region. Sites which are not transferred are sold on the real estate market.

LIFE-Nature projects have already shown how decommissioned military sites can be given a new lease of life as nature conservation areas. How important this work is, is shown by the following two cases where the military withdrew from sites, and because of that, their conservation value plummeted. LIFE funding was needed for 'ambulance projects' to establish a new system of appropriate management which recreated the disturbance-free refuges for rare and vulnerable species hitherto provided by the military site users.



Conservation of *Larus audouini*

(LIFE03/NAT/E/000061)

Isla Grosa is an island off the Spanish coast near Murcia which hosts a colony of 1,100 pairs of the endangered seabird Audouin's gull (*Larus audouini*). The existence of this exceptionally large colony can be attributed to the fact that human activities in the island were restricted until January 2000 to military use. The island was occupied by the Spanish Navy and a Military Diving Centre was operating there. Access was restricted to the military personnel, or scientists with a valid permit from the Ministry.

As soon as the military stopped using the diving centre in 2000, decay and vandal destruction of the infrastructures began, as well as illegal visits to the island and damages to the fauna (mainly to the nesting birds).

Faced with this dire threat to a population of European significance of a rare bird species, considered a priority for EU attention under Natura 2000, emergency action had to be taken. A protocol was signed by the Ministry of Defence and the President of the Regional Government of Murcia on 2/05/01 in which they agreed that:

- > Isla Grosa still belongs to the Ministry of Defence.
- > The island could be used for studies on environment and nature. To this end, the infrastructures could be used and rehabilitated by the regional government with prior authorization of the Ministry of Defence.
- > The surveillance and the security of the island will be ensured by the regional government.

To carry out this protocol, funds were needed, and here LIFE came to the rescue. The LIFE-Nature project began in January 2004. It will restore the abandoned military installation on the island as a surveillance and research centre for *Larus audouini*. Other actions will also be undertaken

on the island like an initial survey of the ecological situation, monitoring, management planning, predator control, clearing vegetation from breeding areas, artificial nests, etc.

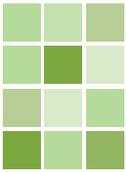
The current situation is that an architect has prepared a blueprint which the Ministry of Defence is now checking for approval. Once this is done, the works can begin (scheduled to be done during early 2005).

Photo © Conselleria de Medio Ambiente, Valencia



Photo © Conselleria de Medio Ambiente, Valencia





LIFE-Nature project



Orford Ness

(LIFE94NAT/UK/000850) – (LIFE97NAT/UK/4245)

Photo © National Trust, UK



Photo © National Trust, UK



Photo © National Trust, UK



Orford Ness National Nature Reserve is the largest vegetated shingle spit in Europe. The 16 km long spit, on the Suffolk coast, includes, on its landward side, salt marshes, lagoons and grassland. It is now classified as a pSCI for its coastal lagoons, drift lines and shingle and is part of the larger Alde-Ore Estuary SPA which is especially important for the avocet, *Recurvirostra avosetta*.

Orford Ness was acquired by the UK Ministry of Defence in 1913 and was a secret military test site until the mid-1980s (bomb ballistics, firing trials). It was a good example of the

‘disturbance on military sites’ paradox mentioned in Section I: despite the military presence and violent and noisy tests, bird numbers had flourished. 37 bird species were breeding or wintering here in the 1980s.

Problems soon arose after the withdrawal of the military presence in the second half of the 1980s. Unlawful access and activities spread unchecked. This in turn resulted in a decline of the resident birds.

Orford Ness was purchased by the National Trust in 1994 to save it. Besides preserving many of the buildings as part of military history, the new owner also wanted to bring access and use of the site under control. This would protect both the birds and the buildings. Furthermore, the former military use had left a legacy of damage to the habitats found on the site, and this needed to be repaired.

For the nature conservation aspects, the National Trust turned to LIFE-Nature. Through two projects the National Trust was able to improve grassland habitats through grazing, protect the shingle flora, improve water control on the marshes and control damaging activities such as illegal shooting. Much of the work of the first project was aimed at enhancing the populations of waders and ground-nesting birds within the

SPA. The second LIFE project completed the restoration work by opening up two lagoons for waders, creating reedbeds (to benefit the marsh harrier *Circus aeruginosus*), investigating factors holding back successful reproduction of ground-nesting birds and rare shingle flora, finalising a long-term management plan and promoting sustainable nature tourism.

Orford Ness is now open to visitors and nature conservation is presented alongside military history. The only access to the site is by ferry and this helps to control visitor pressure.

During the 1990s, when the Natura 2000 network was still being built up, military areas which could become pSCI and/or SPA because of their great natural values, were being decommissioned. There were often other candidates to take over and use these military sites (recreation, housing, afforestation.....). Here LIFE played a significant role by providing the funds to secure such areas and begin conservation management, so that they could be integrated into the Natura 2000 network.



Photo © National Trust, UK

LIFE-Nature project



Grindenschwarzwald

(LIFE01NAT/D/7039)



causing damage to the mountain heath and the mire on the Hornisgrinde peak. There were too many visitors (50,000 a year) and there was no control over where they walked. To stop the deterioration, the LIFE-Nature project laid out a trail 2 km long, part of it a boardwalk, to bring people to the observation tower and back again, through the heaths and mires which will no longer be trampled if visitors keep to the path. Panels (photo top right) along the path inform visitors of the natural values; one of the panels also tells the story of the military use.

Work in parallel by the municipalities to renovate the observation tower and demolish the military installations to develop nature-based tourism, is thus nicely complemented: tourists are channelled through the LIFE trail, maintaining undisturbed areas to either side, and simultaneously are provided with information about nature conservation. One of the military hangars has even been given a new lease of life as a stable for the sheep which are used for the grazing management of the mountain heath.

Photo © Regierungspräsidium Freiburg, Referat Naturschutz und Landschaftspflege

This project is restoring mountain heaths and mires on the high plateaux and peaks of the northern Black Forest in Germany.

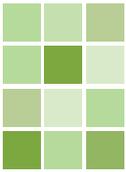
The highest peak in the project area is the Hornisgrinde. Views from it are magnificent; on clear days Strasbourg can even be seen. By the early 20th century, the Hornisgrinde was a popular destination for walking tours and ski-ing and an observation tower was built on its summit in 1910. Glider enthusiasts discovered it, building a hangar which was used by the Luftwaffe in World War II and confiscated by the French Air Force in 1945. For decades it was crowned by a radar and radio post with staff buildings (photo top left), and closed to the public. Even the observation tower was out of bounds.

This did have one advantage: the Hornisgrinde peak is covered by mountain heath and mire, and the

termination of visitor access meant that these Annex I habitats stayed in a better condition than at some other sites in the Black Forest. The Feldberg, the highest peak in the southern Black Forest, has a similar landscape to the Hornisgrinde, but was open to the public throughout the second half of the 20th century. Hundreds of thousands of people visit the Feldberg each year, and this has caused considerable erosion and a criss-crossing of trails.

When the French Air Force left in 1996-1999 the military installations were decommissioned and handed over to the local municipalities, who naturally wanted to exploit the tourism potential of this viewpoint. The site was, because of its Annex I habitats, proposed for Natura 2000.

It soon became clear that the renewed influx of visitors, after so many years of tranquillity, was



Vorpommersche Boddenlandschaft and Müritz

(LIFE91NAT/D/8194)



Photo © Ulrich Messner – National Park Müritz

The two project subsites (Vorpommersche Boddenlandschaft and Müritz) were large areas in Mecklenburg-Vorpommern, of outstanding natural value, where LIFE helped establish functioning national parks in the early 1990s.

The project was a success – the parks have been established and have become important economic factors in their districts, attracting hundreds of thousands of tourists a year and directly employing over 150 people. Military areas inside the sites, abandoned after the collapse of the GDR, were integrated into the new national parks.

In the Boddenlandschaft, besides demolishing and removing watch-

towers and other Iron Curtain infrastructure, the former naval base Darßer Ort on the Baltic was to be restored to a natural state. There was conflict with the yachting lobby, which wanted to use the base as a harbour for pleasure sailing. In the end a compromise was reached in which the port is kept as a refuge for emergencies, but is otherwise out of bounds to all but authorised traffic, while the installations on shore were almost all removed and the land given back to nature.

The Müritz national park inherited a large expanse of land where constant exercising had created and kept open acres of bare sand and herbaceous vegetation, locally dubbed 'the Sahara'. The national park administration, as LIFE

beneficiary, faced a choice: preserve this pioneer habitat, or not? To keep this expanse open would have required constant management input against natural succession, which would be technical and costly. Therefore, the choice was made to let natural succession take its course and study the process (i.e. an open-air laboratory/giant vegetation monitoring plot). Such choices arise constantly in conservation work, not only in former military sites: maintain dynamic open habitats or let a natural climax forest arise? Whereas military use, at no cost to conservation budgets, can create and maintain interesting open habitats, when it ends these habitats come under pressure unless an alternative form of land management is deployed which has the same effect.



Hainich

(LIFE95/NAT/D/000086)



Photo © Archiv Nationalparkverwaltung

(who did not think tourists would like to see beeches being cut down). Low-key selective logging elsewhere in the Hainich by a commons association (photo below) was more in line with Natura 2000.

Part of the beech forest had been razed by the Red Army to make a training area for armoured vehicles – as in the Müritz, there was a choice between maintaining this area as open land or to let it grow back to beech naturally. Because the Hainich's European significance lay first and foremost in its large unbroken Annex I beech forest habitats, the choice was made for a return of beech.

Photo © Archiv Nationalparkverwaltung

The Hainich in Thuringia is one of the EU's largest beech forests, much of which was a Red Army training ground. When the Soviets withdrew after 1990, the Hainich's future was up for grabs. Various competing and mutually antagonistic ideas popped up. The regional government's environment authorities wanted to make it a national park and Natura 2000 area, and applied for a LIFE project to help them do this. The project did inventories, drew up a management plan, paid compensations to reinstated private owners and laid the groundwork for visitor guidance and information (it was hoped that this beech national park would become a magnet for nature tourists,

bringing revenue and employment to this depressed district).

Protection as national park and Natura 2000 site eventually succeeded, but there were many problems to overcome first. Apart from the boundaries of the protected area, an issue was management – the former military area was under the control of the Federal Government, whose federal forestry service was managing the woods. It was under instruction from the finance ministry to generate revenue. The ensuing exploitation of beech timber caused conflict with the regional authorities (who wanted a nature reserve with no human intervention) and local authorities

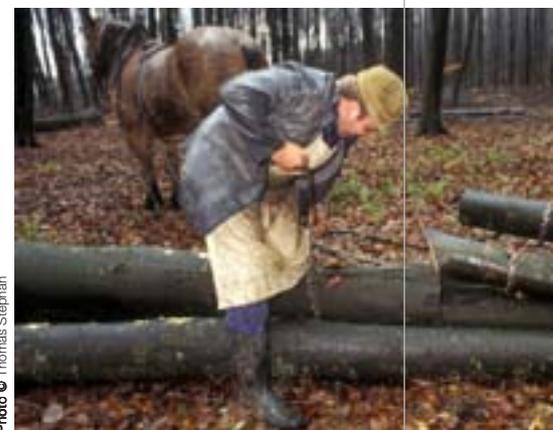
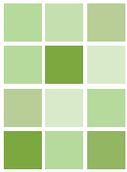


Photo © Thomas Stephan



LIFE-Nature project



Integral Coastal Conservation Initiative

(LIFE96NAT/B/3032)

One of main actions of this Belgian project to restore coastal habitats along the North Sea was to demolish a naval station at the estuary of the IJzer (photo right), decommissioned as part of the 'peace dividend' after 1989, and reconvert the land to salt marshes (photo below). This action was carried out successfully, but the project had to be prolonged as the technical work could not start until the naval base ownership had been transferred from the Defence Ministry to the Environment Ministry, which took time (administrative procedures, but also the requirement that funds be transferred from one ministry's budget line to another).

This is an important issue: when former military land passes to a different public body, must the recipient pay for the land, if so, how



Photos © AMINAL, Afdeling, Natuur, België



is the value determined? This depends on national budgetary policies, but can be a major problem for conservation. In Germany the former GDR and Red Army areas raised this problem (plus the problem of eventual former private owners who had a claim) which eventually led to an agreement between federal and regional governments that land of high conservation value would be transferred to ownership of the Länder free of charge, up to a certain ceiling in terms of hectares.

LIFE-Nature project



Habitat restoration and conservation of Ardeidae on Lago Trasimeno (LIFE02/NAT/IT/008556)



Photo © Riccardo Scallera

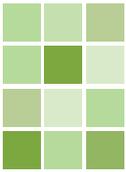


Photo © Riccardo Scallera



Photo © Riccardo Scallera

The main objective of the project Habitat restoration and conservation of Ardeidae on Lago Trasimeno, which takes place around the largest lake of peninsular Italy, is to restore the ash (*Fraxinus excelsior*) and alder (*Alnus glutinosa*) woods, an Annex I habitat that has virtually disappeared in this area, over approximately 12 hectares of the lakeshore. Part of this restoration area is being leased by the Air Force (it was a military airport until recently). This is a good example of a decommissioned military site which is being recovered for purposes of nature conservation, thus saving it from the risk of being built up or otherwise exploited.



Transnational programme for the conservation of bats in west-central Europe (LIFE95/NAT/D/000045)

A considerable proportion of the bat species listed on Annex II and IV of the Habitats Directive are native to the great swathe of territory from the Marne to the Rhine and Meuse, now shared between four states (France, Belgium, Luxembourg and Germany). Like all bats, they need to hibernate in dark and sheltered places, absolutely free from disturbance, with constant temperatures and humidity. The massive changes to the landscape of northwestern Europe caused by intensifying agriculture and forestry and spreading urbanisation, affected this area too. The bats lost ever more of their normal hibernating sites: hollow trees, natural cavities...

Yet in this particular area, military history left behind a whole set of new hibernation quarters: underground galleries, fortifications and bunkers from the First World War (around Verdun) or from the lead-up to the Second World War (the Siegfried and Maginot lines along the German-French border), from the second war itself (air-raid shelters in Rheinland-Pfalz) and even from earlier military history (the 17th century fortifications of Luxembourg city and Montmedy in Lorraine), as well as objects in military camps still in use at the end of 20th century. All these had the right temperature, darkness and freedom from disturbance to become superb wintering sites for bats, who did not take long to move in. Consequently, populations of some bat species in this region were much healthier than in the districts to the north or west, which did not have anything like these substitute wintering quarters to stand in for the natural thing, now often scarce.

The LIFE-Nature project set out to make sure that these military objects (and similar artificial hibernating spots like abandoned mines and railway tunnels) would remain secure for the



Photo © François Schwab

bats. It first inventoried them and their resident populations, then took appropriate action to make sure that the bats could never be disturbed – usually by installing gates and doors at the entrances with slits through which bats could fly. Of the 143 individual sites secured by the project between 1995 and 1998, 46 were military objects! Although many of these sites were no longer actively managed by the military, but were just general public property of the state or local authorities, there were some cases in France where the Ministry of Defence was selling them under instructions from the Ministry of Finance to raise revenue. Because buyers might turn up who wanted to use these objects for purposes not compatible with bats, such as projects to open discos or warehouses or tourism attractions, the LIFE project beneficiary was obliged to buy such objects – Fort Domgermain and Fort Vacheraville (where no less than 145 *Rhinolophus ferrumequinum* were hibernating, see photos) in the Lorraine were bought



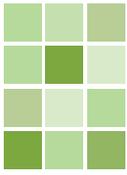
Photo © François Schwab

by the beneficiary. In other cases conventions were signed with the military authorities that they would leave the bat protection constructions intact. Finally, in Wallonia the Belgian Armed Forces carried out extensive works to secure the Fort de Dave for bats, applying technical blueprints supplied by the LIFE beneficiary, but paying for it themselves parallel to the LIFE project.



SUMMARY





Summary

Having completed this tour of LIFE projects with a military dimension, the following points stand out:

So far there are 28 on-going or completed LIFE-Nature projects with a military dimension.

Two projects (Salisbury Plain and the Belgian project covering all Flemish training areas) are large-scale projects by and for the military. They are flagship demonstration projects for dovetailing military use of Natura 2000 sites with the requirements of the Birds and Habitats Directives and building up or deepening partnership with the conservation authorities.

Besides projects focusing exclusively on military land in which the military authorities are in a leading role, there are broad, multi-site projects in which the military authorities are one of the partners. In six LIFE projects, the military were active partners, responsible for carrying out conservation work on certain sites (namely their own military domains) under the guidance of the main beneficiary (a conservation body).

In eight, the military reached agreements with conservation agents under which the latter carried out practical habitat restoration or management work on sites owned by the military (passive or reverse partnership).

In four projects, no military sites were involved but the military assisted the project by providing expertise and practical help. Example: using explosives to produce dead wood for species dependent on it, or Army sappers building a bridge across a stream for the benefit of visitors to a nature reserve.

Finally, in eight projects LIFE provided the investment funds to secure areas which were decommissioned from military use (bases and training areas made redundant by the end of the Cold War) and to carry out the

necessary restoration (removal of old infrastructure, repair of damaged habitats, measures to keep visitors and leisure-seekers out of sensitive areas). Without this, these areas could well have been lost to forms of development or land use incompatible with their nature value.

The military are important stakeholders in Natura 2000.

The military estate covers large areas in most member states (over 100,000 ha in some states) and much of this has a high nature value. This is not surprising: military areas have by their nature been shielded from the sorts of development and changes to land use (residential building, agricultural intensification) which have had such a negative impact on biodiversity across so much of Europe. This protection of heritage by the military, even if it was unintended, ought to be acknowledged. Sites like Orford Ness or the Isla Grosa off the Murcia coast show how rapidly biodiversity can decline once the de facto protection given by the military status is removed, because of decommissioning. In countries like Denmark and the Netherlands, the only sizeable examples left of the heath and shifting sands landscapes which were so widespread in the 19th century, are precisely those in the military training areas. A considerable percentage of the military estates (in some countries over half) has consequently been included into the Natura 2000 network.

Military use can be beneficial for nature values

In a general manner, by keeping out unfettered recreational use, military sites are often refuges for species

sensitive to disturbance - even in a firing range, there are large tracts which are rarely, if ever, used for practice. More specifically, bombing, shelling and armoured vehicle manoeuvres can create/maintain pioneer habitats against natural succession. Fires and vehicle movement thus can mimic the ancient rural practices of burning heath and creating bare ground through tracks - practices which have been abandoned, so that heath in northwest Europe is everywhere threatened by the growth of shrubs and trees. Holes from exploding shells or tank treads can fill with water and become ideal breeding habitat for amphibians.

In turn, this means that where such military use ends, there is a risk that the nature values decline.

Natura 2000 = partnership and multifunctional land use

Summing up, the armed forces are already important stakeholders in Natura 2000 by the very fact that military areas have been proposed for the network, but they are also potential partners. Natura 2000 has much to gain from a partnership with the military owners and managers of pSCI and SPAs.

Natura 2000 is by no means intended to be a system of totally closed reserves and multifunctional use (including military activities) of the sites is one of the essential characteristics of the network.

Integrating Natura 2000 requirements and military use

Like many stakeholders, the military have been concerned about what Natura 2000 would mean in practice,

especially in view of the unique circumstances under which the military has to operate (emergency training in crisis events, need for secrecy, damage is unavoidable when using tanks or artillery). There is even a network, DEFNET, between European ministries of defence to monitor Natura 2000 and other EU environment policies.

The core question is: how can future use by the armed forces of their own sites, particularly changes to use, be integrated with the obligation to maintain a favourable conservation state under Natura 2000? How can military site managers best and most smoothly work together with the national and EU competent nature authorities on complying with the Natura 2000 requirements?

The LIFE programme can help address these questions and concerns, by financing management planning work to reconcile, for one or more particular sites, conservation and military use, developing a model which can be transposed to other military areas. Partnership projects between the military and environment authorities, cofinanced by LIFE, are excellent laboratories to learn to work together and gain mutual trust and a professional working relationship.

LIFE-Nature projects are already funding management planning which is quite different from classic plans. A Belgian LIFE project, for instance, is developing an innovative and comprehensive approach to management planning, with built-in flexibility. The projects are also funding the establishment of training programmes for daily use of the plans, and general awareness-raising among the military staff. Measures to reconcile access and sustainable use for recreation with nature conservation and military requirements are also being supported.

Because each project is targeting a clearly defined site or set of sites, national differences in terms of context and of military policies

vis-à-vis public access, planning procedures, etc., are naturally taken into account.

LIFE helps with each aspect of Natura 2000 implementation at site level

The different tasks which together constitute a complete scenario for taking care of a Natura 2000 site can be summarised as follows:

- > management planning (including preliminary inventories);
- > training and other measures to ensure correct application of the plans;
- > restoration of degraded habitats to a good conservation status;
- > recurring management to keep habitats in a favourable conservation status (including monitoring);
- > communication with stakeholders and the public;
- > controlling and guiding visitor access (tourism and recreation);
- > dissemination of results and exchange of experience with peers.

Because the military have other tasks and objectives, military areas have often not been managed with biodiversity in mind. Consequently, some habitats have become degraded because of succession, desiccation or other processes.

LIFE is providing cofinance from the EU for the, sometimes massive, investments needed to clear this backlog and boost these areas back to a favourable conservation state, as well as to start up the other necessary activities listed under the preceding bullet points. An example: the Belgian LIFE military project is clearing 1,266 ha of heathlands from overgrowth and removing 855 ha of invading alien trees. On the Salisbury Plain, LIFE is restoring chalk grasslands by cutting 140 ha of trees and dealing with over 400 ha of invading scrub. It is also helping to install appropriate grazing management on over 2,000 ha chalk downs, experimenting through a pilot scheme.

In fact, given the complete spectrum of practical work to implement Natura 2000 at site level which LIFE cofinances, it is remarkable that there are but 28 projects with a military dimension among the 800 LIFE-Nature projects so far. Other prominent stakeholders (farmers, forestry, hunting ...) are involved in much greater numbers of LIFE projects.

LIFE supports the exchange of experience

The LIFE fund supports producing documentation on best practice and lessons learned, for dissemination and 'technology transfer'. Another aspect supported by LIFE-Nature is bringing conservation managers, stakeholders, scientists, etc. together to exchange experience, questions and ideas. Because there are LIFE projects across Europe, LIFE can, and does, play a unique role in bringing together people from many countries around a common conservation theme. This is usually done through workshops or seminars organized by a LIFE-Nature project which invites colleagues from other LIFE projects dealing with the issue in question, plus relevant stakeholders, authorities, etc.

LIFE projects are supporting the exchange of experience and best practice between military sites, by cofunding dissemination activities like the July 2004 workshop on managing military Natura 2000 areas, held in Salisbury. A similar conference is planned for Sept. 2005 in Belgium.

Dual use of military expertise: armed forces helping Natura 2000

A number of LIFE-Nature projects have received technical assistance from the Armed Forces, even though not one of the sites was a military area. In these cases, the military provides manpower, machinery or specialist knowledge towards solving a challenge facing the project on the ground. Not dissimilar to, though of course on a very much

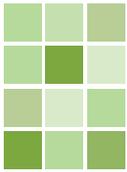


Photo © R. Van Bakel, Ministry of Defence, The Netherlands

lower scale, the Armed Forces pitching in when there are floods or storm damage.

In the LIFE cases, the military provides its help free of charge – it is considered a useful exercise and is good for PR ('good neighbour' policy).

The armed forces carry out many training exercises, and usually these have as sole purpose the training of the troops. However, in cases like the LIFE-Nature projects Dijlevallei and North Savo, the military exercise has a dual purpose: training the troops, but also achieving a conservation goal. For the armed forces, combining an exercise with a task for the public good is not only intrinsically satisfying, it also raises the profile of the military within the wider

community. Conservation operators could do worse than think of the military when they face tasks which the armed forces potentially have the capacity to deal with.

Looking to the future: military training trends and Natura 2000

Training exercises are increasingly being shared within a European network of NATO partners (which has grown significantly since 1990). For instance, the Dutch armed forces, hampered by the relatively small size of their training areas, are training more often on large sites abroad – Salisbury Plain, but also in Poland and Denmark. Even the UK Forces are heading to large training areas in

Poland because no UK site, not even Salisbury Plain, is big enough to live-fire Apache attack helicopters. So a "division of labour" between European military training sites, spreading the load more equitably, could gradually come into being. This may pose interesting new challenges for the conservation management of those sites which are also part of the Natura 2000 network.

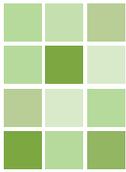
Read More

For more information on the individual LIFE projects discussed in this brochure, or for background reading on military conservation policies and achievements, please consult the two annexes which follow in the next pages.



ANNEXES





ANNEX I Read more

Brochures

The Danish Ministry of Defence Environmental Strategy 2003
Ministry of Defence, Holmens Kanal, 42- DK- 1060, Copenhagen K
Tel.: + 45 33 92 33 20
Email: fmn@fmn.dk
<http://www.fmn.dk>

Nature's Defence : nature management plans for the Danish Armed Forces' training areas
Ministry of Defence and Ministry of Environment
Ministry of Defence:
Holmens Kanal, 42 -DK 1060, Copenhagen K
Tel.: + 45 33 92 33 20
Email: fmn@fmn.dk
<http://www.fmn.dk>

Ministry of Environment:
Haraldsgade 53 – DK 2100
Copenhagen Ø
Tel.: + 45 39 47 20 00
Email: sns@sns.dk
<http://www.skovognatur.dk>

Respecting the environment: Conservation on the Defence estate and the role of the MOD Conservation Office
MOD Conservation Office,
Blandford House,
Farnborough Road, Aldershot,
Hampshire GU11 2HA
Tel: +44 1252 34 89 89
<http://www.defence-estates.mod.uk>

Sanctuary, the Ministry of Defence Conservation Magazine
DE Conservation,
Blandford House,
Farnborough Road, Aldershot,
Hampshire GU11 2HA
Tel: +44 1252 34 89 89
Email: sanctuary@de.mod.uk
<http://www.mod.uk/policy/conservation/sanctuary>

The living landscape, Dstl Porton Down
Conservation Officer,
Dstl Porton Down
Tel: + 44 1980 61 33 73
Email: sjcorbett@dstl.gov.uk

Defensie in natuur en landschap
DGW&T, Ministerie van Defensie,
P.O box 20701,
2500 ES The Hague,
The Netherlands
Tel: + 31 70 318 8459
<http://www.dgwt.nl>

Defence Environmental Policy Plan 2004
Coordinator of spatial planning and environment, Netherlands
Ministry of Defence
P.O box 20701,
2500 ES The Hague,
The Netherlands
Tel.: + 31 70 318 8459
<http://www.mindef.nl>

De natuur op de militaire domeinen
Lt Kol Theetaert, Divisie Leefmilieu
Stafdepartement Welzijn,
Generale Staf van Defensie,
Koningin Astrid Kwartier,
Bruynstraat – B-1120 Brussel
Email: Johan.theetaert@mil.be

Richtlinie zur nachhaltigen Nutzung von Übungsplätzen in Deutschland

Natur auf Übungsplätzen
Bundesministerium der Verteidigung
Presse- und Informationsstab
Referat Öffentlichkeitsarbeit
Postfach 13 28, D-53003 Bonn
Email: Ulrich1Velte@bmvg.bund400.de

Défense et protection de la Nature
Ministère de la Défense,
Délégation à l'information et à la communication de la Défense.
14 rue St Dominique
F- 00450 ARMEES
Tel. : + 33 1 44 42 30 11
<http://www.defense.gouv.fr>

Esercito e ambiente. Istituto geografico De Agostini. Stato Maggiore dell' Esercito italiano.
240 pag. Editor: Mancini F., 1998

Le 'oasi' militari. Protette per caso: Modus Vivendi, 0:18-29
Editor: Mondino L., 1999

NATO, Science, Society, Security News
<http://www.nato.int/science>

Selected websites

Ministerie van Landsverdediging/ Ministère de la Défense nationale, Belgium
<http://www.mil.be>

Ministry of Defence, Denmark
<http://www.fmn.dk>

Ministry of Defence, UK
http://www.defence-estates.mod.uk/conservation_enviro/conservation/index.htm

Ministère de la Défense, France
<http://www.defense.gouv.fr>

Bundesministerium der Verteidigung, Germany
<http://www.bundeswehr.de>

Ministerie van Defensie, The Netherlands
<http://www.mindef.nl>

NATO
<http://www.nato.int/ccms>

European Commission
<http://europa.eu.int/comm/environment/nature/home.htm>

LIFE home page
<http://www.europa.eu.int/comm/environment/life/home.htm>

Natura 2000 newsletter
Subscription: http://europa.eu.int/comm/environment/news/natura/index_en.htm

LIFE Nature Focus brochures:
<http://europa.eu.int/comm/environment/life/infoproducts/lifenaturepublications.htm>

LIFE for NATURA 2000: 10 years implementing the regulation

LIFE and agri-environment supporting Natura 2000 – Experience from the LIFE programme

LIFE-Nature: communicating with stakeholders and the general public – Best practice examples for Natura 2000

LIFE for Birds : 25 years of the birds directive : the contribution of LIFE-Nature projects

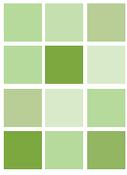
Alien species and nature conservation in the EU – the role of the LIFE programme

ANNEX II LIFE-Nature project contacts

Short descriptions of each of these projects plus (for some) summaries of their main results can be consulted and downloaded from <http://www.europa.eu.int/comm.environment> (LIFE website)

List of projects mentioned

Acronym	Full name and title	Contact
Dorset heaths	LIFE92/NAT/UK/013300 Protection and Management of lowland heathland in Dorset	Mr. Dante Munns dante.munns@rspb.org.uk
Salisbury Plain	LIFE 00/NAT/UK/7071, Improving management of Salisbury Plain Natura 2000 sites	Mr. Stephen Davis Stephen.davis@english-nature.org.uk
Hungarian meadow viper	LIFE04/NAT/HU/0116, Establishing the background of saving the Hungarian meadow viper (<i>Vipera ursinii rakosiensis</i>) from extinction	Dr. Balint Halpern balint.halpeen@axelero.hu
<i>Otis tarda</i> in Hungary	LIFE04/NAT/HU/0109, Conservation of <i>Otis tarda</i> in Hungary	Mr. Andras Bankovics Bankovics@knp.hu
Imperial eagle <i>Aquila heliaca</i>	LIFE02/NAT/HU/8627, Conservation of <i>Aquila heliaca</i> in the Carpathian basin	Mr. Marton Horvath mhorvath@nhmus.hu
Flemish military sites	LIFE03/NAT/B/0024, Geïntegreerd natuurherstel op militaire domeinen in Natura 2000	Mr. Hans Jochems Hansjochems@yahoo.co.uk
Danish sand dunes	LIFE 02/NAT/DK/008584, Restoration of dune habitats along the Danish West Coast	Mrs. Hanne Stadsgaard Jensen hsj@sns.dk
Marais calcaires en Lorraine	LIFE99/NAT/B/006285, Restauration de complexes marécageux en Lorraine belge	Mme. Joelle Huysecom Joelle.huysecom@mob.be
Boreal forests Finland	LIFE03/NAT/FIN/000034, Boreaalisten metsien ja puustoisten soiden ennallistaminen	Mr. Jorma Koivurinne Jorma.koivurinne@metsa.fi
Border mires	LIFE98/NAT/UK/5432, Active blanket bog rehabilitation project	Mr. Duncan Hutt Duncan.hutt@northwt.org.uk
Scottish raised bogs	LIFE00/NAT/UK/7078, Restoration of Scottish raised bogs	Mr. S. Brooks sbrooks@swt.org.uk
Sefton coast	LIFE95/NAT/000818, A conservation strategy for the sand dunes of the Sefton coast north-west England	Mr. Ceri Jones ceri.jones@planning.sefton.gov.uk



Flora Menorca	LIFE 00/NAT/E/007355, Conservación de áreas con flora amenazada en las isla de Menorca	Mr. Juan Juaneda Franco Mamb.cime@silme.es
Andalusian flora	LIFE94/E/001203, Recuperación, conservación y manejo de las especies amenazadas de la flora silvestre andaluza	Mr. Guillermo Ceballos guillermo.cebaldos.ext@juntadeandalucia.es
Atlantische Heide	LIFE99/NAT/B/006298, Intermediair Atlantische Heide in Vlaanderen	Mr. Joost Dewyspelaere joost.dewyspelaere@natuurpunt.be
Posidonia beds	LIFE00/NAT/E/007303, Protección de las praderas de Posidonia en las LICs Baleares	Mr. Pere Bonet cmassuti@dgmambie.caib.es
North Savo	LIFE 02/NAT/FIN/008470, Restoration of mire and bog ecosystems in North Savo with reference to environmental education	Mr. Kalle Ruokolainen Kalle.ruokolainen@ymparisto.fi
Trockenrasen in Rheinland-Pfalz	LIFE 02/NAT/D/8461, Wiederherstellung und Erhalt von Trockenrasen in Rheinland-Pfalz	Mr. Moritz Smitt Moritz.Smitt@umweltstiftung.rlp.de
Dijlevallei	LIFE/98/NAT/B/005171, Dijlevallei	Mr. Joost Dewyspelaere joost.dewyspelaere@natuurpunt.be
Kuusamo	LIFE96/NAT/3026, Protection of old growth forests in the Kuusamo area	Mr. Eero Kaakinen Eero.kaakinen@ymparisto.fi
<i>Larus audouini</i>	LIFE03/NAT/E/000061, Conservación de <i>Larus audouini</i> en España (Isla Grosa), Murcia	Mr. Matias Garcia Matias.garcia@carm.es
Orford Ness	LIFE94/NAT/000850 and LIFE97NAT/UK/4245, Conservation of Orford Ness	Mr Grant Lahoar Grant.lahoar@nationaltrust.org.uk
Grindenschwarzwald	LIFE00/NAT/D/7039, Grindenschwarzwald	Mr. Daniel Brandt daniel.brandt@rpk.bwl.de
Boddenlandschaft and Murtiz	LIFE91/NAT/D/8194, Aufbau und Sicherung des Nationalparkes Vorpommersche Boddenlandschaft und des Müritz Nationalparkes	Dr. Konow poststelle@nlp-vbl.de
Hainich	LIFE95/D/000086, Managementplan für den Nationalpark Hainich	Mr. Manfred Großman Grossman.Manfred@forst.thueringen.de
Integral Coastal Conservation Initiative	LIFE96/NAT/B/3032, Integral Coastal Conservation Initiative	Mr. Jean-Louis Herrier Jeanlouis.herrier@lin.vlaanderen.be
Bats in central Europe	LIFE95/NAT/D/000045 Grenzüberschreitendes Programm zum Schutz der Fledermäuse im westlichen Mitteleuropa	Dr. Christine Harbusch prochirop@aol.com
Lago Trasimeno	LIFE02/NAT/IT/008556, Ripristino habitat e conservazione ardeidi sul Lago Trasimeno	Mr. Luis Montagnoli Uff.programmi@montitrasimeno.umbria.it

Name LIFE (“L’Instrument Financier pour l’Environnement” / The financing instrument for the environment)

Type of intervention co-financing of actions in favour of the environment in the twenty-five Member States of the European Union, in the candidate countries who are associated to LIFE and in certain third countries bordering the Mediterranean and the Baltic Sea.

LIFE is made up of three branches: “LIFE-Nature”, “LIFE-Environment” and “LIFE – Third countries”.

Objectives

- > with a view to sustainable development in the European Union, contribute to the drawing up, implementation and updating of Community policy and legislation in the area of the environment;
- > explore new solutions to environmental problems on a Community scale.

Projects any natural or legal person, provided that the projects financed meet the following general criteria:

- > they are of Community interest and make a significant contribution to the general objectives;
- > they are carried out by technically and financially sound participants;
- > they are feasible in terms of technical proposals, timetable, budget and value for money.

Types of project

- > Eligible for LIFE-Environment are innovative pilot and demonstration projects which bring environment-related and sustainable development considerations together in land management, which promote sustainable water and waste management or which minimise the environmental impact of economic activities, products and services. LIFE-Environment also finances preparatory projects aiming at the development or updating of Community environmental actions, instruments, legislation or policies.
- > Eligible for LIFE-Nature are nature conservation projects which contribute to maintaining or restoring natural habitats and/or populations of species in a favourable state of conservation within the meaning of the « Birds » (79/409/EEC) and « Habitats » (92/43/EEC) Community Directives and which contribute to the establishment of the European network of protected areas – NATURA 2000. LIFE-Nature also finances “co-op” projects aiming to develop the exchange of experiences between projects.
- > Eligible for LIFE-Third countries are projects which contribute to the establishment of capacities and administrative structures needed in the environmental sector and in the development of environmental policy and action programmes in some countries bordering the Mediterranean and the Baltic Sea.

Implementation National authorities in the Member States or third countries send the Commission the proposals of projects to be co-financed (for LIFE-Environment preparatory projects, the applicants send their proposals directly to the Commission). The Commission sets the date for sending the proposals annually. It monitors the projects financed and supports the dissemination of their results. Accompanying measures enable the projects to be monitored on the ground.

Period covered (LIFE III) 2000 to 2006.

Funds approximately 638 million for 2000-2004 and 317 million for 2005-2006.

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