



Full report of proceedings, International Conference on Nature Conservation in Military Training Areas, Cēsis, June 4-7 2007

Introduction

The Conference was organised by the Ministry of Defence and the Defence Property State Agency of Latvia within the framework of LIFE-Nature project LIFE06NAT/LV/000110 "Restoration of Biological Diversity in Military Training Area and Natura 2000 site "Adazi". It was held from June 4 to 7, 2007, in the premises of the Latvian National Armed Forces' Non-Commissioned Officer School at Cēsis.

There were 52 participants at the conference, representing eleven countries (Belgium, Germany, Estonia, Latvia, Lithuania, Croatia, the Netherlands, Romania, Slovakia, USA, and Ukraine), the European Commission and its external monitoring team for LIFE projects.

During the conference plenary sessions, the following topics were discussed:

- Natura 2000 and defence from a European Union perspective
- The implementation of Natura 2000 in Latvia, Lithuania, Estonia and Germany, and how it affects defence.
- New LIFE-Nature projects involving the military as contractors to the EU or as leading partners (notably Latvia and Slovakia)
- Ensuring, through training, that results of a LIFE project will be long-lasting
- The new LIFE+ programme
- Scientific research proving that military use is indeed beneficial for certain species
- Strategies and experience in Belgium with communicating, through a LIFE project, nature management in military training areas
- Policy and practice in the Netherlands in managing recreational use of military training areas
- Using GIS methodology in Germany to prepare management plans and organise military land use

During these presentations, the following was given particular emphasis:

Defence is an important stakeholder in Natura 2000, and the currently on-going process of designating marine Natura 2000 sites is very relevant to it.

National contexts establishing who owns and manages military estates, play a significant role in how Defence is able to integrate environmental sustainability into its use of training areas.

Partnerships with environmental authorities and NGOs, and financial support from environment funds such as LIFE, provide invaluable assistance with restoration and management of nature values on Defence land.

There is a beneficial effect of military use on certain species and habitats, which is proven both by rigorous scientific research as by observing what happens when military use lessens or is stopped on specific training areas.

Third party use is a complex issue where political, legal and financial constraints may hamper Defence's ability to address the issues as fully as might be desirable. Third party use is a key part of any management planning and clear criteria and checklists are very useful to achieve consistency in awarding permits and ensuring that all relevant considerations are taken into account.

Communication, both internally as towards environmental bodies and civil society in general, is essential. Internally, it is linked with training personnel in sustainability and nature care, thereby ensuring that management plans are indeed implemented at all levels and occasions. Externally, it seeks to inform communities and stakeholders about Defence activities for nature management and to improve their perception of Defence. Communication work benefits by learning from practice and by focusing on the target audience's attitudes and expectations.

In addition to the plenary sessions, there were three parallel syndicates (working groups), covering the topics:

- 'Communication action plan for nature protection in military training areas',
- 'Use of military areas by third parties', and
- 'Sustainability of nature management in military training areas'.

On June 6, participants attended the Open Door Event (linked to the Green Week and United Nations World Environment Day) at the military training area Adazi. On this occasion, the Minister of Defence and the Minister of the Environment welcomed participants and others attending the Open Door Event. Participants also went on a fact-finding tour of Adazi, notably Lake Mazuika and French Kurgan, to study the challenges and successes of combining military use and nature conservation first-hand.

Structure and contents of the proceedings

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As well as from the discussions and conclusions of the three Syndicate Working Groups:

1. ‘Communication action plan for nature protection in military training areas’
2. ‘Sustainability of nature management in military training areas’
3. ‘Use of military areas by third parties’

The contents of the proceedings are:

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Natura 2000 and the Armed Forces

18% of EU land territory is now within the Natura 2000 Network. There are still insufficiencies in the coverage of certain habitats and species, therefore member states will have to designate more sites. Because military estates often contain much of ecological value, this additional designation may affect the Armed Forces in some countries.

For marine Special Areas of Conservation (sites protected as part of the Natura 2000 Network), the Commission Communication on Biodiversity (issued in 2006) says that member states have to submit proposals for pSCI (marine sites under the Habitats Directive) by 2008, and for SPAs (special protection areas under the Birds Directive) by 2012. The EU accepts that there is currently a delay with designating marine Natura 2000 sites because of a lack of scientific knowledge. Because it is difficult and costly to increase this knowledge, EU is supporting marine inventory projects.

One of these projects is the LIFE project 'Marine Protected Areas in the Eastern Baltic Sea' which runs from August 2005 to July 2009, with a budget of 900,000 €. Although the Baltic Environmental Forum is the contractor *vis-à-vis* the European Commission, the project is actually a very broad partnership; for Lithuania for instance, the Lithuanian Ministry of Defence, the Ministry of the Environment and the universities of Vilnius and Klaipeda participate. The Latvian Navy is another partner, providing its ships for carrying out scientific research.

Covering the coastal waters of Estonia, Latvia and Lithuania, the project's aim is to identify and designate marine protected areas according to Natura 2000 criteria. It will thus carry out inventories, select sites, draw up rules for protecting marine biodiversity and elaborate management plans.

These offshore waters are training areas for naval and anti-aircraft artillery. Military interests are taken into account through impact assessments and nature management recommendations.

From the DG ENV viewpoint, the defence sector is a big landowner and an important stakeholder, playing a significant role in achieving the objectives of Natura 2000.

However, the Commission does not have any statistics which % of the Natura 2000 network consists of military estates.

Nor are there regular contacts between DG ENV's Nature & Biodiversity Unit and the military.

Some practical examples of the Natura 2000 designation process in EU member states, and how the defence sector is affected:

Latvia

Latvia's system of protected areas, which was administered by the Forest Service, was one of the best in the USSR. However, in 1995 the accession agreement with the EU meant that conservation had to take a different route and integrate itself into the EU legislative framework.

Initially the nature authority suffered from a low capacity, consisting of only a few staff. This improved later with the establishment of the Nature Protection Department and the Nature Protection Board.

To prepare for Natura 2000, national legislation was modified. Inventories were carried out, resulting in proposals to alter the borders of existing protected areas and to add new ones.

The maps inherited from the USSR were of poor quality so there was an investment in digital maps.

70 meetings were held with stakeholders to inform them of the planned Natura 2000 areas. Problems which cropped up during the designation process (and are still facing the network today) were public distrust, even demagoguery, insufficient support from other ministries and bodies, and, on the other side, 'conservation fundamentalists' who want to protect every piece of nature.

The list of proposed Natura 2000 sites, with maps and database, were submitted to the EU in 2004. Latvia has 336 Natura 2000 sites covering a total 771,180 ha (11.9% of the national territory). After the Boreal seminar of Dec. 2005 it was required to designate two more SACs – Lake Lubana and Pavilosta – which has since been done.

116 management plans for these sites are ready, 19 are under way. Individual rules for the sites are based on the management plans and adopted by the Cabinet of Ministers. There is a principle that any restrictions should be compensated to the landowner, but the law on compensation took a long time to adopt, and there is still discussion today on how to give compensation and to whom.

More information can be obtained from the website www.vidm.gov.lv

Lithuania:

The total area of the country is 65.300 km² of which 9988 km² (15.3% of national territory) is protected under national law (444 protected areas, mainly nature reserves (373) but also national parks (5), regional parks (30) etc). Four of these national protected areas are also UNESCO sites, five are Ramsar sites and 3 are HELCOM (Helsinki Convention) sites.

The National Sustainable Development Strategy, the Landscape Policy Guidelines and the Biological Diversity Conservation Strategy were all based on the UN Convention on Biological Diversity and the European Landscape Convention (Florence Convention), with EU legislation (Natura 2000) being added at a later stage.

As a consequence of accession to the EU in 2004, 77 SPAs (Birds Directive) and 299 SCIs (Habitats Directive) have been designated by Lithuania, totalling 9276 km² (14.2% of national territory). 65% of the national protected areas are included in the Natura 2000 network, but also new areas have been added.

The Lithuanian Defence Force has six training areas, with a total area of 216 km² (21,600 ha). Within these training areas, part of the land is in "full-use zones" (land owned by the Ministry of Defence) and part is in "restricted-use zones" (land owned by local authorities).

There are five training areas within which Natura 2000 sites have been designated, namely five SCIs in restricted-use zones and one SPA and one SCI in a full-use zone.

Slovakia

Before 1990 there was no cooperation between Defence and Environment Ministries. After 1994 cooperation began between defence and environment authorities, mainly at a local level. An example of this was a project to restore the original hydrological regime in a section of the Rudava River, which flows through the Zahorie military training area, six kilometres long.

Since 2003 there has also been cooperation at a national level, with improved communication between the Ministries of Defence and the Environment within, and as a result of, the Natura 2000 preparation and designation process.

There are six military training areas in Slovakia, three of which overlap to a significant degree with Natura 2000 sites which have been designated in or near them.

Germany

In Germany, the degree to which the Armed Forces are affected by Natura 2000 depends on the type of training area.

As far as the Bundeswehr is concerned, the garrison training areas and dry and wet engineer training areas (184 sites) cover 64,000 ha, of which 36% is Natura 2000.

There are nine weapons and equipment testing areas (25,400 ha in total, with one large site at Meppen accounting for 20,000 ha). None of these are part of Natura 2000.

Large exercise and training areas (20 camps) cover 178,450 ha, of which 61% is designated Natura 2000.

For the United States Armed Forces in Europe, 77% of the area covered by its training estate in Germany is included in Natura 2000 – Grafenwöhr (16,000 ha) and Hohenfels (23,000 ha), lying northeast and southeast of Nuremberg respectively, account for almost all of this.

Assessing the impact of new or intensified military activity on Natura 2000 values – Article 6.3 of the Habitats Directive

Article 6.3 of the Habitats Directive applies to marine Natura 2000 values just as much as it applies to species and habitats on land. The impact of sonar on cetaceans is a well-known case, where the EU is currently discussing mitigation technology with NATO. However, if an EIA conform to Article 6.3 is carried out which shows no negative impacts, naval activities can continue as before.

In Estonia, where the Ministry of Defence wants to increase training areas and shooting ranges from the current level, which is too low for requirements, an environmental impact and risk assessment process has been worked out for the creation of a new shooting range and impact area. This process will assess the consequences of clearing forest for the range (erosion, loss of habitat) and of the impact area (change of soil composition). A monitoring programme will examine the recovery of burned and cleared woodland and any long-term changes in the impact area and the shooting ranges, will monitor birds (annually), and will carry out audits of soil and groundwater for contamination (every 3 years) and the quality of surface water (nutrient levels, biological quality).

Mitigation measures to limit any negative impacts include time limits to protect wildlife – such as no active use from February to May (which is problematical militarily, as the biggest exercises take place in spring!)

Compensation measures for any loss of nature values include actions to create new habitats.

For the Natura 2000 sites in the Dutch Defence estate, management plans will regulate all non-damaging effects. The standard exercise maps already show where one can and can not exercise. Anything which is NOT in the management plan is not allowed – so theoretically even military use which is not mentioned in the plan would be illegal.

So if Defence intensifies its use, starts new activities, or if there are damaging effects with current use, a permit will be required, to be delivered by the Dutch authority for conservation (NBLF, a section within the Agriculture Ministry). Defence hopes that every realistic possibility has been described in the management plan so that it will not often need permits to be able to change its use of Natura 2000 land.

In Belgium, since a protocol of collaboration on Natura 2000 and conservation was concluded in 1999 between the Ministry of Defence and the competent authorities for nature conservation in Flanders and Wallonia, Defence is in dialogue with the regional Ministries of Environment, through regional committees.

Concerning the question whether Article 6 Habitats Directive means a loss of autonomy, the regional committees discuss such issues. Defence explains its needs for new facilities, the regional environment ministry raises Article 6. Both sides can bring specialists to explain e.g. why Defence needs a new installation for a new weapon system. Together they examine what can be done within the military training area to compensate for the effect of the new facility, and who will pay. As it is the Environment Ministry's core task, spending X euro from its budget on nature work is straightforward, but for Defence this is not so evident. This leads to quite heated discussion.

Usually however, there is consensus at regional committee level, sometimes a vote has to be taken. If there is a deadlock, the problem goes to the ministerial level.

New LIFE projects by the military

About 915 LIFE Nature projects have been approved so far between 1992 and 2006. Only 34 contain a military element at all, even fewer take place predominantly in defence properties. Other public-sector stakeholders (water authorities, forestry services) have been involved in many times that number. So military LIFE projects are a rare species indeed, although it must be said that there has been a sudden increase in applications for military projects since 2003, so it is good news that the Latvian defence sector has seized the chance and has gained LIFE funding for the Adazi project.

Adazi joins a very select club of five LIFE projects (Salisbury Plains, DANAH in Flemish military training areas, Natura2mil in Wallonian military areas, Vattaja and Zahorie) which take place only on military property. In the other 29 LIFE projects containing a military element, a military training area or other defence estate was only one of several different sites, most of them civilian sites, where project actions took place.

With Zahorie, Adazi is the only one where Defence is the direct contractor to the European Commission (in the other four, Defence is a partner of a ministry or agency responsible for conservation, and it is this ministry or agency who is responsible towards the Commission).

Project LIFE06NAT/LV/000110 Adazi

Full title: Restoration of Biological Diversity in Military Training Area and Natura 2000 Site "Adazi". Duration Sept. 1 2006 – Dec. 31 2009, budget 905,307 €.

The Latvian Defence Property State Agency is leading the project, it is the contractor responsible towards the Commission. Together with the National Armed Forces it is providing 39% of the budget. The EU is providing 50% through LIFE-Nature and the remainder comes from the Latvian Ministry of the Environment and from the partners Latvian Fund for Nature and Nature Protection Board.

The Adazi military training area covers 7,747 ha (2/3 of Latvia's total military estate), of which 6,126 ha is within Natura 2000.

It contains 24 nationally protected plant species, 21 bird species and 8 protected invertebrate species. Dry heath covers 1,000 ha (90% of Latvia's total resource) and there is 10 ha of inland dunes (both are Habitats Directive Annex I habitats). There are 50-60 male black grouse (*Tetrao tetrix*) and there is one of the best *Anthus campestris* (tawny pipit) populations in Latvia.

Problems affecting Adazi's conservation quality:

Military and nature conservation interests are being coordinated, but not sufficiently enough;

There is insufficient awareness of conservation issues among military personnel;

Theoretically public access to military training areas is not allowed, but people enter anyway and this uncontrolled recreation causes problems;

The legacy of military activities during the Soviet period (e.g. trenches dug in the forests, unexploded munitions) has not been fully cleaned up;

There are various ecological problems: eutrophication of lakes, hydrological changes to streams, and (because of less military use than in the past!) overgrowing of heaths and sand dunes.

The objectives of the LIFE project are:

1. Integrating nature conservation and military interests;
2. Restoring the Natura 2000 area to, and maintaining it in, a favourable conservation status;
3. Educating military personnel on nature conservation;
4. Networking and disseminating information with managers of other military Natura 2000 sites.

These translate into the following groups of actions:

1. Habitat actions: remove overgrowth from heaths, meadows and mires and maintain them in a favourable status, reduce the eutrophication of oligotrophic lakes, remove residues of former military activities.
2. Restriction actions: mark the boundaries of the territory with 60 warning signs and erect barriers across roads to prevent illicit access; establish daily military 'Natura 2000 patrols' (these are additional to the normal patrols).
3. Education actions: 200 information boards on species and habitats, 10 information stands, two booklets (one was published in early 2007), annual Open Door events and three leaflets for these events, public opening event (Dec. 2006) and closing event (Dec. 2009), training military personnel.

More specifically, measures to implement the actions include:

A management plan, a hydrological study and, in collaboration with the National Armed Forces' Geospatial Information Agency, a GIS.

Removing Soviet ammunition from overgrowing habitats so that work to cut overgrowth can be done (100 ha has already been cleared)

Cutting bushes and trees, with controlled burning, to restore 1040 ha of heath.

Cutting trees/bushes and mowing overgrowth on 206 ha of mires

Purchasing mowing machinery, to be used for late mowing of 25 ha of *Molinia* meadows and 10 ha of inland dunes

Improving water flow in streams by removing beaver dams and bushes along the banks (other hydrological actions will be formulated by the hydrological study)

Cleaning up litter left by visitors seeking recreation and filling old tank trenches left in the woods

Producing a methodological guide to monitoring species and habitats, based on simple easy-to-use indicators, for the military to use.

Elaborating a training programme and environmental handbook for military personnel.

Three open door events at the Adazi base (the first one was held on June 6 2007. Because *Bufo calamita* (natterjack toad) is the Animal of the Year for 2007 the Open Door Event on June 6 was dedicated to it. Special T-shirts were printed and distributed with the natterjack toad on it.

Three study tours abroad for Latvian military personnel; three study tours to Adazi by military personnel from abroad

Two international seminars (June 4-7 2007 – which is the seminar this report is about – and Dec. 2009)

To carry out the project, a team of three staff (project manager, assistant, financial assistant) has been appointed.

Challenges encountered so far:

The legal procedures and permits needed to be able to carry out work to restore heath (if the management plan was already existing, any restoration work conform to the management plan would not require a permit)

Limited access to the site – because of security and overlaps with exercises, the conservation experts from the Latvian Fund for Nature, who will draft the management plan, can not just enter the site whenever they want to.

Removal of beaver dams is proving to be somewhat controversial

Drawing up agreements with project partners and contracts with suppliers and consultants – the internal procedures are very slow and complex. Public procurement procedures are slow too – it took 2.5 months to buy two laptop computers! Because of slow public procurement procedures, the tractor bought to mow the heaths will not arrive until Aug. 2007. The establishment of the project website www.adazinatura.lv was delayed for the same reasons.

Positive results so far are that the Latvian press is very interested – 20 media persons applied to attend the Open Day on June 6 – and that the opening event of Dec. 2006 was attended by the Minister of Defence, the Minister for the Environment and the chiefs of the Armed Forces.

LIFE06NAT/SK/000115 Zahorie Military Training Area

This Slovakian project (full title ‘Restoration and Management of Sand Dune Habitats in the Zahorie Military Training Area’) was approved for LIFE-nature co-financing together with Adazi in the 2005-2006 selection round.

Of the six military training areas in Slovakia, Zahorie, in the west, is the oldest (established in 1929) and largest training area, covering 26,000 ha. Inside this training area are 10 pSCIs with a total area of 5,000 ha. They include semi-natural pine, oak, birch and alder forests; inland sand dunes; dry grasslands; dry heaths; meadows; wetlands and watercourses. Species include 500 higher plant species, 30 fish species (including 7 listed on Annex II Habitats Directive), 13 amphibian species, 6 reptile species, 48 bird species (all included on Annex I of the Birds Directive) and 24 mammal species (including 7 on Annex II Habitats Directive). There are no less than 13 invertebrate species listed on Annex II of the Habitats Directive.

Conservation problems which need to be dealt with:

Lack of scientific information about the biodiversity in the military training area;

Unsustainable forest management by the forestry agencies which are in charge of the woodland (large-scale clear cuts, planting of pine monocultures which increases risk of forest fires);

Past drainage of wetlands and regulation of streams;

Fish migration routes which have been interrupted by barriers across watercourses;
Unsustainable game management (overstocking with game, extinction of large predators like lynx and wolf);
Lack of awareness amongst military authorities about nature conservation issues;
Negative public perceptions of military activities in Zahorie. These perceptions are linked to limited access for the public, noise from air force training flights and historically reluctant attitudes towards the Armed Forces amongst local inhabitants;
Lack of active communication by military authorities towards the public, NGOs or nature authorities.

The new LIFE project follows on from an earlier project in the Zahorie area (LIFE05NAT/SK/000112 Restoration of Wetlands in the Zahorie Lowland). This project, lasting from 2005 to 2008, does not directly involve the military authorities. It is revising forest management plans, carrying out urgent measures to improve the conservation status of eight wetlands, constructing fish bypasses on the Rudava river and restoring degraded meadows, ensuring regular mowing as follow-up to the restoration.

The project LIFE06NAT/SK/000115 “Restoration and Management of Sand Dune Habitats in the Zahorie Military Training Area”, in which the military authorities are the lead partner, directly responsible to the European Commission, lasts from Sept. 1 2006 to June 30 2011. It will:

- Elaborate and test management planning to reconcile Natura 2000 conservation requirements with military use;
- Achieve favourable conservation status for the Pannonic inland dunes and the dry heaths, notably by carrying out restoration work against ecological succession;
- Build a framework for lasting recurring management after the project;
- Raise awareness amongst military staff and local communities on nature conservation.

Military LIFE projects in Finland and Wallonia

There are two other LIFE projects which take place entirely in military training areas and, because they were approved by the Commission for funding in 2005, do not appear in the report ‘LIFE, Natura 2000 and the military’ which was published in 2004.

LIFE05NAT/FIN/000104 Vattaja Military Area

The Vattaja military training area in Finland covers 1200 ha, stretching along 15 km of coast on the Gulf of Bothnia, north of Vaasa. 450 ha along the seafront consist of dunes. Inland are mires and wetlands, Baltic coastal meadows and Fennoscandian woodland habitats.

The LIFE project is led by Finnish public forest service Metsähallitus, with the Finnish Defence Force and the Regional Environment Centre as partners.

Vattaja is an exercise and artillery range, with 200 days of exercises a year. This intense activity is currently heavily focused on the fragile dunes and wetlands, which suffer from the effects of unrestricted shelling, digging and vehicle driving.

To prevent further damage to these nature values (which are now covered by Natura 2000 designation) during these exercises, the Defence Force will move firing stations away from sensitive dunes and guide the transit of vehicles and artillery by building roads and barriers.

Activities which do stay in the dunes will, instead of moving around all the time, be stabilised at ecologically suitable points, by constructing built-in foxholes, posts for artillery activities, trenches etc.

In the woodland, monocultural forestry has lowered the biodiversity. To get a more natural forest structure and increase the percentage of rotting wood for beetles and birds, trees will be chopped down and left to decay by forest workers or, military sappers will, as part of their training, blow up the tops of mature trees. This mimics natural storm damage and creates dead wood in the upper forest storey.

The Baltic coastal meadows will be cleared of overgrowth and then the project will start sheep grazing in collaboration with local farmers.

Vattaja is under big pressure for recreational use. This will be brought under control via restrictions on access to sensitive areas, and by improving access to suitable areas through boardwalks, information panels, observation towers and trails.

LIFE2005NAT/BE/00088 Natura2mil

This is a multi-partner project between the Wallonian nature conservation authorities, the Belgian Ministry of Defence and two NGOs. It complements the DANAH LIFE project in the Flemish training areas, covering the three military training areas in southern Belgium (Wallonia):

 Marche en Famenne, 2670 ha, used for field and vehicle training

 Elsenborn 2800 ha, used for artillery training

 Lagland 1882 ha, used for infantry and tank schooling.

This project, lasting from January 2006 to January 2011 with a budget of 3,447,000 € (50% co-financed by the European Commission), has as principal objectives:

 restore 400 ha of *Nardus* grassland and heath by felling trees, clearing scrub and removing nutrient-rich topsoil (sod cutting)

 after restoration, start grazing or burning management of grasslands

 improve the hydrology of marshes by reducing drainage through ditches and streams in order to create wetter areas and pools

 in two camps, cull wild boar which have become too numerous, causing damage to plants, amphibians and ground-nesting birds

 produce information programmes for military staff and troops coming to the camps for exercises, so that they take nature into account.

Beneficial effects of military use

How military use interacts with ecological succession

The military stakeholders in Natura 2000 have a lot to be proud of. Not only have they kept huge blocks of land safe from intensive development, as *de facto* nature areas, but their military activities can in themselves be beneficial for nature conservation.

Shelling, burning, tank exercises, etc. cause disturbance. Disturbance reverses the ecological clock, which always ticks towards 'bare land becomes grass which becomes shrub which becomes forest'.

Thus disturbance helps a range of specialised plants and animals survive which need so-called pioneer habitats like bare sand. It helps preserve unstable habitats like heaths and grasslands against overgrowing by woody plants.

Where biodiversity has lessened in military training areas, this is much more often the result of natural processes than of directly damaging military activities. The Armed Forces have traditionally managed their land for military purposes, not for conservation (which is only logical; it wasn't part of their 'job description'). Yet on any part of a military training area not disturbed intensively enough, the ecological clock ticks away and there is, just like in many civilian nature reserves, a slow loss of dynamic habitats like grasslands, transition mires, heaths etc.

This kind of habitat loss can thus speed up because military use is lessened. If an area of inland dunes, grasslands and heaths is kept in a fresh condition because it is used for armoured vehicle and artillery exercises, then, if there are budgetary restrictions meaning less training and exercises, or changes in the hardware used by the Armed Forces meaning using wheeled instead of tracked vehicles, there will be an impact on these habitats too – they will be less disturbed, and the ecological clock will tick faster.

So one could almost say, to maintain certain Annex I habitats in a favourable conservation state, the Armed Forces should not be scaled back! Maybe one should consider regular military activities like tank driving or shelling as a kind of recurring conservation management, just like farmers mowing with tractors or grazing by cattle, which are universally seen as useful instruments by conservationists.

The Adazi training area provides an example. During the Soviet era so much military activity was carried out in this relatively small training area that fears were justified that this would prove ecologically disastrous. Yet it turned out that nature adjusted and formed special biotopes in place of the forests which would naturally occur here, such as bare sands, dry grasslands and heaths. Since 1991 there has been, certainly until recently, much less activity – the Latvian Defence Force has 5,000 professionals, considerably less than the number of former Soviet Army troops deployed to Adazi – and these biotopes are overgrowing because they were not being disturbed on such a large scale as before.

In Germany, there is a good deal of research (Stiftung David, Institut für Landschaftspflege Freiburg and others) on how defence estates change ecologically after decommissioning and cessation of military exercises, and which sort of techniques like grazing, mowing, ploughing or sod cutting are needed to get the same ecological effects as formerly achieved spontaneously through the military use itself.

This is a perfect reverse proof for the beneficial effects of military use!

These beneficial effects of military use ought to be publicised more. There are still many misconceptions in civil society and the conservation world about the environmental impact of the military profession. Even more people simply have no notion of defence and conservation.

The Dutch Ministry of Defence, aware of this information gap, is considering placing panels on its training areas which are open to the public to:

inform that this is Defence land, which many hikers and cyclists are not even aware of,

explain what the Armed Forces are doing to restore and maintain the landscape they have come to enjoy.

The Dutch Ministry of Defence employs 12 ecologists who evaluate each training area every 5 years. So far their findings show that nature values are not decreasing anywhere, and even increasing in some training areas.

On a more anecdotal level, in the Veluwe (central part of the Netherlands), where military training areas adjoin national parks and other reserves, it has been noticed that deer and wild pig roam everywhere during the day to forage, but withdraw into the shooting ranges at night to rest, as there are no people there.

Vliehors, on the Wadden Sea, is used for fighter jet shooting exercises, which is opposed by some, who claim negative environmental effects, yet the site is filled with pioneer dunes, which are very rare in the North Sea coastal regions.

Scientific investigation into effects of military use on selected species

In the USA the Department of Defence (DOD) has the greatest number of threatened and endangered species on its land, more than the National Parks, which are runners-up. Because DOD has less land in total than the other Federal agencies, it has consequently by far the highest density of threatened and endangered species per hectare.

Some explanations for this density are not hard to find. Gophers create huge soil disturbance by burrowing and were, because of this, important for the prairie ecosystem (before it got developed for agriculture). Their activities are mimicked by military vehicles and explosions. Forest fires are also important in American ecosystems but the DOD land is one of the few places in the USA where wildfires, here caused by impacting shells and bombs, are not immediately suppressed.

The two main US Army training areas in Europe, Grafenwöhr (16,000 ha) and Hohenfels (23,000 ha), together cover only 0.6% of Bavarian territory but 27% of all Bavarian flora species occur here (675 species in Grafenwöhr and 688 in Hohenfels).

Obviously the reasons cited above for the high biodiversity on American Defence land do not apply here. So why is there such a high biodiversity in these two training areas? Is there a connection to their military use and, if so, what?

The hypothesis was formulated that modern human disturbance tends to be very uniform and regular in space and time (c.q. rows of trees, lawns, rows of crops), creating conditions which lower diversity. Non-uniform disturbance, such as caused by military training and manoeuvres, creates habitat mosaics and therefore increases biodiversity.

These questions and hypothesis inspired a three-phase scientific study by the Colorado State University and the German Institute for Vegetation and Landscape Ecology, funded by IMCOM-Europe. This study in disturbance ecology examined the hypothesis that 'biodiversity is maximised when disturbance is non-uniform in duration and intensity in space and time'.

Concretely, it examined whether certain species on the German Red List depend on disturbance caused by military training activities. Phase I was completed 2003; Phase II, which identified disturbance-dependent species, is now being completed while Phase III, which will produce materials emphasizing the importance of continued military training, is planned for the second half of 2007.

The field studies during the first phases revealed that:

The plants *Gentiana cilata* and *Teesdalia nudicaulis*, showed a rather indifferent response to disturbance.

The grass *Corynephorus canescens* showed a perfect correlation to disturbance, which makes sense, as it was dominant in Europe at the beginning of the Holocene on the vast areas of glacial sand blown by winds, later losing ground as the vegetation grew denser in an improving climate.

Limosella aquatica also correlates perfectly.

The grasshopper *Oedipoda caerulescens*, associated with the early succession stages of dry grassland, and the beetle *Cicindela hybrida*, associated with bare sand, correlate very well.

Bombina variegata and *Bufo calamita* both correlated strongly. Hohenfels has the biggest Bavarian population of *Bombina variegata*, because of the ruts left by vehicles, in which it breeds. The US Armed Forces avoid training during the muddy wet period at the beginning of spring when the toads breed – mainly to spare the equipment from getting bogged down, but this has a positive secondary conservation effect!

Publication of the results has already taken place in various US journals (National Geographic has shown an interest too) and German journals are now being approached.

Further information can also be found on the site:

<http://www.cemml.colostate.edu/cemmlpub.htm>.

A study to examine the impact of military training on species which are NOT disturbance-dependent, i.e. on rare species which are sensitive to disturbance, is being considered. A military training area willing to host such a study would be welcome!

Combining military use and conservation.

“Sustainability” for a military training area can be defined as keeping training areas in good shape to be able to use them in the future too – with enough space for all kinds of exercises; cover, but not too much; the training environment must be realistic (not a park or a botanical garden); the training area must be safe to operate in.

Therefore, nature management in a military training area means creating and maintaining an environment where military training can be as realistic as possible.

While the area is used for training, negative impacts must be limited and positive impacts maximised – this is the basis of its biodiversity.

For instance, within classic manoeuvres (NATO Article 5 operations), covering tanks with tree branches as camouflage no longer makes any sense. Modern techniques will spot the tanks anyway. So please leave the leaves on the trees!

What the Armed Forces do still need, as they did previously, is a variation between open and covered spaces. This happens to be also interesting for biodiversity.

PSO operations (peace support operations within a UN context) are new for many Armed Forces and need new facilities, so does Urban Warfare. Consequently, the infrastructure for both of these new tasks needs to be planned for.

Practice in Germany

In Germany, the federal directive from the year 2002 on the sustainable use of military training areas, which is an updated version of a 1992 directive, is, for non-forested areas on the military estate, implemented through coordinated action between the camp commander, forestry service and defence estate authority.

Their task is to produce a landscape management plan.

The first step towards this is a basic investigation of the training area: landscape ecology and grassland management are done by the Bundeswehr’s experts, with contributions for woodlands from the forestry service and for the subsoil from the geological service.

These yield thematic working maps, which are evaluated according to conservation and water protection requirements, identifying sensitive areas. The maps are combined into a combined working map, which grades land according to its ecological potential (very high to very low), without taking military use into consideration.

Next the land is assessed according to military use – is this use damaging/insignificant/beneficial/necessary, ecologically speaking?

Combining the two (ecological potential and effect of military use) leads to specific measures, like prohibitions on all access, on access with vehicles, on digging or (for areas with breeding birds) access at certain times.

Forested areas are dealt with through a parallel process by the forestry service.

The Bundeswehr Geo-Information Office at Traben-Trarbach already has 10 years' experience with using GIS. Layers for a typical training area GIS might include topographic maps, aerial pictures, habitat maps, landscape analysis, forest maps, landscape management plan, military use etc.

The BB Plan (Boden und Bedeckungsplan) is a new (since 2005) GIS-supported plan, which the Geo-Information Office hopes will be applied to all military training areas. A BB Plan consists of:

- Scientific data and evaluation;

- Military use;

- Natura 2000 requirements – Natura 2000 relevance of site, description and assessment of Habitats Directive and Birds Directive values, relevance of various forms of disturbance.

For Natura 2000 implementation in military training areas, the Bundeswehr is concluding agreements with each German Land. Four such agreements have already been concluded (Hessen and Mecklenburg-Vorpommern were the first, in 2004), five more are expected to be ready in 2007 and the process should be over by 2009.

Within the framework of these agreements, the Geo-Information Office, the Forestry Service, the Land in question and others check the available data, elaborate the scientific basis and make maps of the Annex I habitats. The camp commander assesses this data *vis-à-vis* the military requirements, jointly with the Geo-Information Office and the GEJSC. Then a management plan for the Natura 2000 area is elaborated with the local forestry service, the commander, the conservation authority of the Land, the defence estate authority... The final decision on the management plan rests with the Ministry of Defence.

This represents a lot of work. Twenty management plans are needed, of which two are ready and five under way. The deadline for all of them is 2010.

The biological monitoring of the Natura 2000 areas (Article 17 Habitats Directive) will be done by the Geo-Information Office and the Forestry Service, in collaboration with the nature conservation authority of the Land in question. The results are passed on to the Ministries of Defence and Environment, who transmit them to the European Commission.

The monitoring work load also increases, as in the early 1990s the Bundeswehr had decided to survey each training area once every 10 years – this will now have to be done more frequently.

Internally, the Geo-Information Office does not have experts for all Natura 2000 values, so it subcontracts to e.g. NGOs – but the subcontractors are always accompanied during site visits, they do not go into training areas by themselves.

Practice in Lithuania

In Lithuania the Defence Environment Strategy aims ‘to strengthen the protection of nature in military territories and to create favourable conditions for flora and fauna to survive’.

The Defence Environment Programme for the country’s six military training areas foresees:

- Inventories and GIS-based mapping of protected species and habitats
- Management plans (for nature conservation and for forests)
- Compliance with the regulations of protected areas both within, and bordering on, military training areas
- Monitoring programmes for protected species and habitats

State of implementation:

Inventories and nature management plans have been completed for two training areas (Central and Kairiai, together 117 km²) by the Institute of Ecology and Institute of Botany. These inventories draw on the Red Data Book for Lithuania, the Birds Directive Annex I and the Habitats Directive Annex II, and are used to identify sites within the training area which are of great natural importance. The nature management plans are based on the inventories, on a status assessment of protected natural values in the training areas and on an impact assessment of military activities.

Forest management plans have been made for all six training areas by the Forest Inventory Institute.

The nature management plan for Central Training Area (in eastern Lithuania) prescribes:

1. maintaining open land (inland dunes, heaths) by eliminating pines every 3-4 years and periodically disturbing sandy soil; express reference is made to the beneficial effect of military use to help achieve this goal;
2. preserving the currently natural conditions of forests, watercourses and fens in the training area, by refraining from felling woods or altering hydrological regimes, by taking special measures against beaver dams and wildfires, by limiting access and by avoiding damaging military activities such as digging or driving in these areas.

The nature management plan for Kairiai (on the Lithuanian coast) prescribes:

1. preserving grasslands on sand substrate (currently less than 10% of this habitat is bare sand) by mowing hay or grazing every 3 years and periodically disturbing the soil; military use like digging or driving is beneficial to create bare sand and keep down woody plants;
2. preserving meadows by eliminating woody plants, mowing hay every 3 years and forbidding damaging military activities like digging or driving.

Inside the Central Training Area is the Pabrade recuperation plot, established in 2004. This plot consists of inland dunes with grasslands (habitat for tawny pipit *Anthus campestris*). In 2005 a restoration target was set that woody plants must be reduced to cover less than 5% of the plot but bare sand should be raised to over 2%. In terms of military activities, Pabrade will continue as shooting range and impact zone because this supports, rather than hinders, achievement of the restoration targets. Entry must be prohibited between May 20 and June 20 (bird breeding) and predators must be brought under control. The Ministry of Environment will monitor the plot’s evolution every 3-5 years.

Practice in Estonia

From the Estonian Defence Strategy and national environmental legislation, an Environment Protection Concept for the Defence Forces was distilled and approved by the Minister of Defence in 2001. This in turn led to an Environment Plan for the Ministry of Defence 2004-15 (approved 2003), an environment policy for the Ministry and an Environmental Action Plan 2007-12 (approved 2006) and environment management plans for training areas (under way).

Following national inventories of woodlands, grasslands etc in the mid-1990s, an inventory of natural values in Central Training Area (2001) and Natura 2000 inventories (2002), the management planning process for training areas began in 2003. As first step, inventories of natural values were made: training areas Sirgala, Nursipelu (2005), Kikepera, Klooga, Männiku (2006).

Practice in Belgium

The Belgian Ministry of Defence owns 1.2% of the country, i.e. 26,000 ha of which 18,000 is used for training.

Up to 1992 military training areas were closed to the public in Belgium. Management was functional but based on the 'good housekeeper' principle. Although some areas had already been managed previously by the public forestry services, in 1992 local initiatives for conservation management on Defence land began, all of them bottom-up, isolated cases.

Since a protocol of collaboration on Natura 2000 and conservation was concluded in 1999 between the Ministry of Defence and the competent authorities for nature conservation in Flanders and Wallonia, Defence is in dialogue with the regional Ministries of Environment, through regional committees.

The management plans being drawn up jointly for the training areas cover the following fundamental issues:

- Continuity of military activities (Ministry of Defence)
- Respect of Natura 2000 objectives, restoration of habitats (Ministry of Environment)
- Conditions for use of training areas by third parties

The Ministry of Defence has built up a structure with environment officers at each camp. In May 2007 environment was brought into the same department which is responsible for terrain management and material resources, which makes for more effective communication and collaboration.

As of 2007, one hour of nature care is included in the first week of Joint Individual Common Core Skills training (i.e. what every soldier should know, like first aid and weapons handling).

An example from Latvia

The Latvian National Armed Forces' NCO School at Cēsis trains either in the nearby Gauja National Park or in the Adazi military training area.

Environmental protection is included as one of the nine main subjects at the school, which has a detailed policy paper saying what can and can not be done during training (e.g. where and how to dig a foxhole, what to do with waste etc). A designated person at the NCO School checks that it is adhered to. There is also a special supervisor from Gauja National Park who can come unannounced to inspect the training; the School has to coordinate with him on the location and time of exercises. It is in the interest of the School to ensure good relations with the Park, otherwise the School will not be allowed back in to do exercises.

However, the director of the Gauja National Park is on record as saying that he could rely on the military more than on the general public: if the military say they will do something, they do it.

A conceptual structure for sustainability

The sustainability of nature and environmental management was discussed in the syndicate working group Sustainability. This is the overarching concept which should unite all the concrete examples of reconciling military use with natural and environmental requirements.

The syndicate working group's findings begin with '**Vision**' which is the theoretical underpinning of a sustainability programme, taking account of cultural and geographic differences.

On this foundation, **pillars** are built:

Legislation and regulations:

- Look for a bottom-up effect to influence your local legislation
- Include monitoring and checking for sustainability into your legislation
- Try to speed up the application of environmental legislation and rules
- Include environmental aspects in the procurement system

Social context:

- Find ways to communicate environmental awareness
- Look for partners like an Environment Ministry, NGOs etc
- Give information about the military programme and hold open door events
- Ensure that environmental messages are clear
- Make use of third parties to help you (one can not be expert in everything)
- Increase your visibility and transparency

Finance

- Make an inventory of financial means at your disposal (most environmental units in Ministries of Defence or Armed Forces have no budget of their own but depend on others)
- Make cost-benefit analysis, plan realistically, be creative with restrictions and budget cuts
- Communicate sustainability as a way to save money (e.g. by recycling resources), look for cheaper methods
- See if it is possible to sell produce from nature management

Methods

- Use EMS (environmental management systems) – it was originally developed in a military context. EMS makes processes measurable, it is a method to install standards for best practice, and it gives constant feedback for improvement.
- Refer to ISO 14001 (a quality standard developed by the International Standards Organisation in Geneva) – it is possible to get ISO certification for military installations and this certification has a good reputation internationally
- Consult the NATO guidelines and website

Material resources

- GIS is a tool for making an inventory of land or sea resources
- Use environmentally-friendly material
- Try to influence the purchase of resources (i.e. look for environmentally-friendly resources)
- Recycle resources
- Be aware that sustainability takes time but saves money, resources and the environment

Human resources

Educate colleagues continuously (high frequency, small loads) at all levels (vertical and horizontal)

Learn in the classroom and in the field

Look for simple tools

Look for other partnerships

These pillars are all integrated into a **strategy**, which acts like a roof arching over all of them. Example: the Belgian Army Strategy for the Environment, 2004.

Finally, never forget the KISS principle: 'Keep It Simple and Sustainable'.

Financing nature management and restoration

Practical implementation of Natura 2000 means restoring (where necessary), and maintaining habitats and species in a favourable state of conservation.

Who carries out this work?

Ministries of Defence can employ technicians and specialists directly, with maybe some of the simpler work (cutting, mowing) done by the same work teams which already look after buildings, roads and other infrastructure. I.e. using existing staff, or else hiring subcontractors. The Netherlands, Germany and the UK for instance all do this to some degree. One has full control and the ecological specialists are integrated into the defence force, which should help with mutual understanding of each others' needs and objectives. But it is an extra burden on the defence budget.

Ministries of Defence can also reach an arrangement with the conservation authorities, or even with NGOs, in which they take over much or all of the conservation management. This model turns up in Belgium, Finland and France for instance, but also in Germany, where the public forest service is responsible for all wooded parts of the defence estate.

This means a certain loss of control because part of the estate management goes to a third party (so structures for dialogue and planning become very important!) but the advantage is that the third party takes over the work and in principle funds it from its own budget.

Finally, it is possible to lease or make available parts of the military estate to farmers or foresters, who are then given clear instructions what they can and can not do. Much of the grassland on the Salisbury Plains training area is managed through farmers, with regular meetings between them, the Army training officer and the UK Defence Estates Agency ecologist.

Ministries of Defence could understandably complain that it is hard enough for them to finance their core tasks, given a social and political climate in many countries where Defence is not a big vote-winner and is always one of the first sectors where Finance Ministers save or even cut expenditure. So to have to also finance conservation work, not a core activity, is an extra burden.

Natura 2000 is a conservation programme decided by the EU, and in Article 8 of the Habitats Directive the EU commits itself to contributing towards the cost of the Natura 2000 network (very conservatively estimated at 8,000 million €/year).

How much could the EU contribute towards the costs of Natura 2000 in the defence estate?

There are three obvious routes:

The Structural Funds, LIFE+ and the Rural Development Regulation.

The **Structural Funds** have a socio-economic finality – they are supposed to boost the local economy and employment and improve infrastructure like roads. It is not immediately straightforward to see how military conservation work could qualify, unless it is part of an effort to develop nature-based tourism, or it can claim that it is, by creating new wetlands, reducing flooding downstream, to give two examples of justifications which have been used to get Structural Fund money for conservation projects.

LIFE+

The **LIFE+ Regulation** was approved by the Council on May 14 2007 and by the European Parliament on May 23; publication in the Official Journal followed soon afterwards.

It has a budget of 2143 million € for the period Jan. 1 2007-Dec. 31 2013, of which 78% will be used to co-finance ‘action grants’, i.e. projects, through 7 annual call for proposals.

The other 22% will be used to cover expenditure by DG Environment.

The overall purpose of LIFE+ is to provide support for developing and implementing EU environment policy, especially for the objectives of the Sixth Environmental Action Programme. A multi-annual strategic programme, to be drawn up by the Commission, will specify priority areas of action for funding. From 2008 onwards, member states MAY select national annual priorities from Annex II of the Regulation.

There are three compartments:

1. Nature & Biodiversity (for which 50% of the amount set aside for action grants has been earmarked)
2. Environment Policy & Governance
3. Information & Communication

Within the first compartment Nature & Biodiversity, there is a breakdown between:

LIFE+ Nature: best practice or demonstration projects for implementing the objectives of the Birds and Habitats Directives, i.e. funding sustainable long-term investments in the Natura 2000 Network or actions for species. Eligible are land purchase, not eligible are recurring conservation actions. Co-financing is 50%, up to 75% for priority species or habitats. Possible actions include developing Natura 2000 site management plans (within a larger project of concrete conservation actions), improving the ecological coherence and connectivity of the Natura 2000 Network and preparatory inventories and planning of marine Natura 2000 sites.

LIFE+ Biodiversity: innovative or demonstration projects for implementing certain objectives of Commission Communication COM(2006)216 on halting the loss of biodiversity. There is no regard to Natura 2000. Simple implementation of best practice is not enough, moreover actions must be different from and give an added value compared to those inside the Natura 2000 Network. Possible actions include preparatory inventories, drafting or reviewing biodiversity action plans at national/regional level (within a larger project of concrete conservation actions), implementing biodiversity action plans or conservation actions for species/habitats/ecosystems (but only if these are innovative, or demonstrating the feasibility of new measures). Land purchase is not eligible (only short-term lease or compensation) and durable goods can not be purchased (only depreciation is eligible)

Environment Policy & Governance seeks to develop innovative approaches in policy, methods and technology; contribute to the knowledge base and monitor environmental interactions. Within this heading, there are 13 priority objectives: climate change, water, air, soil, urban environments, noise, chemicals, environment and health, waste, forests, ‘governance’ and ‘strategic approaches’;

Each objective in turn has one or more priority areas for action (listed in Annex II of the Regulation).

Projects under Environment Policy & Governance can receive up to 50% cofinance.

Information & Communication supports projects to disseminate information and raise awareness on environmental issues, notably forest fires. Actions could be communication campaigns, training and provision of accessible information to citizens on the state of the environment and trends.

Guidelines and forms for project applications scheduled to be published Sept. 15 2007; applications to be submitted to the national authorities Nov. 30 and to the Commission Dec. 31. The selection and revision process is scheduled to run until July 15 2008, with the LIFE Committee deciding on July 31 2008 which projects will be funded in the first LIFE+ round. Agreements between the Commission and these successful projects scheduled to be signed in Oct-Nov. 2008.

The Rural Development Regulation

Whereas LIFE is meant for restoration, in other words, one –off actions to invest in improving nature or repair damage, recurring management, the permanent work of looking after dynamic habitats which need constant care (mowing, grazing etc) is, in the EU view, above all to be financed from the second pillar of the Common Agricultural Policy, the Rural Development Regulation (Regulation 1698/2005/EC).

Within this Regulation, Art. 39 (agri-environment) and Art 47 (forest environment) offer payments to farmers or foresters who make voluntary commitments towards achieving environmental and conservation targets beyond compulsory standards imposed by legislation. Articles 37, 38 and 46 pay compensations to farmers and foresters for ‘disadvantages’. These disadvantages can be natural handicaps (mountain farms, farms in northern Scandinavia), Natura 2000 or the Water Framework Directive.

The Regulation is translated into Community strategic guidelines, from which each member state prepares a National Strategy Plan and, once this is approved by the Commission, national rural development programmes which are valid from 2007 to 2013. Thus within the overall framework of the Regulation, there is a decentralised approach: each member state makes its own programmes and concrete actions which can be funded. So there are big differences between states.

However, the agri-environment and forest environment programmes are widely used to subsidise farmers and foresters in support of Natura 2000, both compensating them for the restrictions they face by working in a Natura 2000 area where conservation comes before economic profit, and rewarding them when they do positive things like mowing late (after plants have flowered) or only cutting down selected trees in a forest and allowing dead wood to remain.

Unfortunately, Defence is not likely to get such payments for when its own staff does such conservation actions. The forest-environment rules are very clear about this. Art 42 says that only private and municipal owners are eligible for forest environment payments.

However, in Article 39.2 the agri-environment rules do mention ‘other land managers’ as being eligible ‘if fully justified’. In the past NGOs have qualified under this heading in countries like Austria, but whether it now extends to public bodies like a Defence Property Agency is an open question.

So this leaves the option of making defence land available to private farmers and foresters, who then manage it for conservation under instruction from the military authorities. These farmers and foresters should get agri/forest environment payments, which would be an incentive for them.

Or can they? Again, there is room for interpretation. In the period before 2007, farmers working military estates could get agri-environment in France, but not in England. Making public land available at zero rent was often seen in the past, e.g. Bavaria, as a reason to not allow agri-environment payments. Leasing it against a rent payment would thus seem safer. The best policy would be to first carefully check with the national agricultural authorities what the national rules are.

Possibilities and problems concerning direct sources of income from nature management

In principle, there are ways to generate some income from the defence estate by using it ecologically.

Timber from woodlands which are managed in a conservation-friendly manner could be sold as a 'green timber' (FSC label), or rough wood from restoration work and regular coppicing could be sold as carbon-neutral firewood.

Semi-wild grazers (megaherbivores) like bison, Galloway or Heck cattle, or red deer could be stocked (as is already done in some civilian nature reserves) and the meat from culled animals sold as a delicacy.

Apart from heather honey (charging beekeepers for the privilege of putting hives), heath itself offers possibilities. The military training area Camp de Montmorillon (southwest France), 1650 ha, has extensive heaths which are cut every 5 years, in rotating slices of 110 ha each – the cut heather is used for brooms, as fencing, for industrial bio-filters.

Licences could be issued to hunters, as is done in several French military estates: local hunters pay the camp for the exclusive right to hunt, but do have to respect constraints and achieve defined hunting targets (to keep game within levels which don't damage the ecosystem).

It would even be possible to lease, against payment, parts of the military estate to recreational groups (anything from paintball and survival courses to horse riding events) at times when the estate is not needed for exercises.

The problem is that Defence is often not allowed to keep such income and re-cycle it into nature management.

In Latvia for instance, all money from third party use (e.g. contracts with farmers or beekeepers) goes to the Treasury. In Belgium, the Ministry of Defence in principle also passes on all its income to the Treasury, but there are occasional exceptions (e.g. a special derogation was given for the sale of surplus equipment to the public).

Yet it could be argued that if it is the Defence Ministry's responsibility to manage nature areas and Natura 2000, it should be given the extra budget to do it. If the Treasury on the one hand collects any income Defence may get from its nature and recreation management, and on the other expects defence to fund new tasks like Natura 2000 from its existing budget, this means that it becomes a choice between, say, improving the quality of heaths or flying more jet fighter training missions.

Recreational and other third party use

The definition of what is a third party varies from state to state:

Dutch Ministry of Defence, for instance, distinguishes between the Ministry of Defence itself, then as 'first party' all other government departments and local authorities, as 'second party' police, fire brigade and medical personnel, and as 'third party' farmers and people looking for recreation.

For the Belgian Ministry of Defence, third party covers all those who are not military or are not one of the Ministry of Defence's partners. In practice this means people looking for recreation, farmers and forestry workers; but also companies subcontracted by partners of the Ministry of Defence to do work on the military estate.

Third party use in the Netherlands

All military training areas in the Netherlands are 'open access', except shooting ranges. Training areas are never fenced – they are all open to the public and only signposts mark the borders. Even shooting ranges are only surrounded by a low fence and signs warning of the danger. Shooting ranges are sometimes opened for guided excursions. The only areas truly out of bounds are air bases, barracks, hangars for equipment, ammunition depots and areas with unexploded munitions.

Defence is in favour of recreational use of its land – it has nothing to hide and it is proud of what it can show. This also has a goodwill effect – people enjoying access will tend to say that it is not so bad after all to have a training area near their homes. However, third party use may not hinder military use.

The Policy Paper on Third Party Use was issued in 2005 and was designed to replace the former *ad hoc* situation where each commander made up his own rules. It would bring transparency – these are the criteria, so each potential user can assess whether it is likely to get a permit. It would also define regulations, consisting of standard rules (keep to the paths, dogs on a leash, no disturbing military exercises or wildlife, no entry at night) and specific rules (formulated in a permit). The regulations would help Defence, through the permits delivered, to know who is using its land – it is not good to have no idea at all of what and how many users there are.

Consultation on the Policy Paper was internal at first, then it was published and distributed by Defence's regional departments, becoming a public document.

It proved possible to make regulations covering all military training areas together, i.e. standard rules, for recurring forms of recreation like cycling, horse riding etc. In fact, walking, cycling and horse riding are not considered a problem, but even encouraged. For them, no permit is needed and only the standard rules apply. For legal purposes, there are signposts at the edge of defence lands, saying that this is defence land where entry is prohibited UNLESS one complies with the standard rules. Currently Defence is working on new signs which give more information and are friendlier in tone.

Drawing up standard rules for more incidental forms of recreation and for commercial activities proved impossible, because of the many different groups and the wide range of local situations. So instead of such general rules, the Dutch Ministry of Defence is now making guidelines which the camp commander can use. I.e. a checklist 'Have I thought of a, b, c, d when evaluating the request for a permit?'

Belgium already has such decision grids for dealing with requests: for instance, Didier Steyaert, the environment officer at Kamp Beverlo, has a list in his office of all possible forms of recreation, with for each type a checklist showing whether it is possible to permit it or whether it is always forbidden, how often it can be allowed to happen (once a year, once a week, every day), where it can be allowed, etc.

On Dutch Ministry of Defence land, all the incidental and commercial activities require a permit, whose specific rules always impose three conditions:

- No damage to nature

- No hindrance for walkers, cyclists etc

- No alternative available elsewhere (this is to filter out the users who come only because the Defence land is nearby and they expect it to be cheaper to use it instead of going to proper facilities)

The regional commander receives the request for a permit. After consulting the local base commander (e.g. will there be an exercise during that time?), the request goes to the Defence Infrastructure Agency for its advice. The regional commander finally decides, and if he is in favour of the permit, the Ministry of Finance issues the permit and collects the fees etc paid for the permits. The money thus goes not to Defence, but to the Ministry of Finance.

Motorbikes, off road vehicles, clay pigeon shooting etc all cause noise, which the Dutch Ministry of Defence does not want to encourage. Of course military activities cause noise, but in the weekends there are no such activities and the training areas are very quiet, which is just what many citizens are looking for. They would be upset by noisy recreation! So, besides the requirement for a permit with its specific rules, Defence tries to prevent such activities in area where they were not already taking place.

Experience so far has been that people do look for loopholes, claiming that their club has been coming to the training area for years, or that the off-road driving event they are organising is to support charity, or even a case where two military motorcyclists wanted to use the terrain with a large number of guests, claiming that this could lead to new recruits for the Armed Forces.

Mountain bikers are a problem because they tend to go across country, damaging vegetation. To counter this, special mountain bike routes were laid out in some training areas and these worked well – off-road mountain biking ceased in these areas.

The few ponds and pools on Defence land are much sought after by people who want to fish and swim in them – another problem.

Recently, Defence ruled that there would be no pleasure hunting on its land (game is culled professionally). This caused considerable outcry from parts of civil society.

Bee-keeping is forbidden on Defence land because domestic bees might hybridise with wild bees.

There is very little commercial forestry in Dutch training areas, which do not contain production forests. Only nature-oriented interventions take place in the woods.

The military training areas contact adjoining landowners, to try to get a coherent attitude towards use by third parties.

Defence has already noticed that when it was too strict on third party use, illicit use proliferated, especially as the risk of getting caught was low. When it relaxed and allowed some mountain biking, for instance, there was a reduction in illicit mountain biking.

Security is an important issue. No less than 600 persons not connected to Defence had passes to enter an air force base which was also used by a glider club!

Using this acquired experience, the Policy Paper on Third Party Use is currently being reviewed to better deal with the problems still left.

Conclusions:

- Give military activity first priority
- Accommodate other activities as much as possible
- Be transparent (nothing to hide, much to be proud of)

Doing that will turn military training areas into a goodwill tool for the whole Ministry of Defence.

Third party use in other countries

In **Germany** training areas are closed, though open door days are held occasionally. Even the conservation NGOs agree with this policy of keeping the training areas closed – the Bundeswehr does not have the manpower to control public access and so prevent disturbance and damage.

Latvia: In Soviet times there were fences around all military areas, but these disappeared in the 1990s and it is no longer possible to physically keep people out. People enter at will. There are only fences around the actual base itself – elsewhere the estate is open, marked only by signs on trees. Red signs indicate when and where shooting takes place.

Adazi has a base management plan (the environment and nature management plan is part of this plan) to which any proposed third party use is to conform. Requests for use either go to the base commander or directly to the ministry. In both cases the request will be copied to the other; decisions are always taken jointly by the ministry and the base commander. The latter issues the permit.

In **Croatia** one military training area is open, four are closed and the sixth, Opura, is open via permit when it is not being used for exercises. Opura is a large coastal training area which is ideal for combined air-sea-land exercises but is also under huge pressure from tourists.

Special case of Armed Forces using land belonging to third parties

A very special case is where the Armed Forces themselves are ‘third party’, using land which belongs to somebody else, for training. Estonia is a striking example.

After 1991, Soviet military training areas in Estonia were either taken over by the Ministry of the Environment or given back to former private owners. The Ministry of Defence only obtained two small areas in direct ownership, and has to lease the rest of its estate.

Thus the Estonian Ministry of Defence is itself a third party, as it uses other people’s land, and for instance to engage in a shooting exercise has to ask permission from the landowner, such as the Ministry of the Environment. This makes training difficult.

The Ministry of Defence’s objective is to have 6 training areas for the National Defence Force and a series of shooting ranges for the National Defence League. Defence wants the Ministry of the Environment to transfer back sufficient of the old Soviet training areas to satisfy this objective; it would also buy back some of the privatised land. However, this is proving difficult – opposition from local people who fear noise, and from the Ministry of the Environment which is concerned about nature protection on these lands, because most of the former Soviet training areas are valuable ecologically (they are included in the national Green Network, established 1999, and 60% is under legal protection). The final decision will have to be taken at cabinet level.

Because in Estonia most military training areas thus currently belong to third parties, access is quite open. In this special situation, it is not possible to speak of ‘allowing’ use by others, as defence is just one of the third parties renting or using the land.

The Ministry of Defence is trying to close these training areas up again to some degree, e.g. just during certain times (when shooting takes place) or for certain areas (unexploded munitions) as the current situation is untenable: people turn up in training areas during exercises. Its request to restrict access is currently going through the planning procedure, but is not well received – already there are complaints and opposition from other bodies.

Somewhat similar situations also occur elsewhere. For instance, the Latvian National Armed Forces’ NCO School at Cēsis does not have its own training area, and must train either in the nearby Gauja National Park (which poses difficulties, as one can only dig at certain designated spots) or (for live firing) go to Adazi military training area.

After independence in 1991 the Armed Forces were initially not very popular, and although the Republic of Latvia’s new Ministry of Defence managed to hold on to Adazi, pockets of land inside this training area returned to private ownership. This includes areas of forest round the edges of Adazi, where the private owners harvest trees – they have permits from the State Forest Service and can access by road. There is still considerable pressure to privatise more of the Adazi land, and in this sense Natura 2000 and the LIFE project are helpful because they provide arguments to resist such pressure.

Also, in 1991 no-one could foresee that Latvia would one day be a NATO member. At the time, there seemed little need for extensive training areas. Now however, Adazi is used by the Estonian Defence Force for some of its training, there are international exercises and more space for training is even needed.

Checking third party behaviour and dealing with infringements

The German situation shows that if the military estate is closed and people are used to that, one has the freedom to stay closed or to decide to open up. However, where the estate is already open (by law as in the Netherlands or *de facto* as in Latvia), it is very hard to reverse that and close it again. This is especially true in former Warsaw Pact countries where people are sensitive about prohibiting access and fencing. The Estonian example proves this – defence is making only a very moderate move towards closing access, yet people are complaining.

But, where there is access, how do the military authorities check whether people are obeying the rules and not damaging or disturbing natural values or military objects? What can they do when they spot people who are causing a nuisance?

In Adazi training area (**Latvia**), special military patrols can observe illicit users and stop them or photograph them and their car number plate, but can not prosecute. Instead, they have to call environmental inspectors, who can come and prosecute. The patrols thus have the right to gather evidence and report, but must leave prosecution to state environmental inspectors. Military police can not prosecute civilians, not even inside military training areas.

In **Croatia** Ministry of Defence environmental inspectors (who monitor noise levels, water quality etc – with own instruments – they report to ministry if thresholds are exceeded) can issue fines to military staff (the inspectors report directly to the minister, bypassing the hierarchy) but not to civilians, who can however be prosecuted by environment ministry inspectors (there is mutual collaboration).

In the **Netherlands**, because of the many complaints, noise is monitored in and around bases. Every installation with an environmental permit has zones around within which noise, smell etc is monitored. This technical monitoring is outsourced to a technological institute.

Patrols by the military police enforce the rules on recreational use by third parties. This is relatively easy on open land but much more difficult in wooded areas. Also, the military police does not operate on weekends. Therefore, security guards from private companies are also used to keep an eye on activities by third party users of training areas, but they can only report infractions and must call the military police, which can prosecute civilians inside military training areas. There is a course for 'special detection official' which allows one to carry a weapon and to write up official reports for the public prosecutor naming people and situations in breach of rules and laws, but not to arrest a person. Some Dutch Ministry of Defence staff have completed this course, which is also used by forest guards and nature reserve/national park rangers.

In **Belgium**, camp environment officers sometimes issue a phone number to neighbours where they can send messages if there is trespassing or excessive noise (this is often done when a permit has just been given to, say, a motorbike event). If the neighbours do call, camp staff go out with forest guards (who in Belgium have powers to prosecute) to deal with the matter. In weekends there are three staff at the military camp Beverlo who circulate with cameras and photograph any irregularities.

In **Germany**, the federal forestry service has inspectors who can prosecute people entering a military training area.

A widespread problem in civilian nature conservation is that courts do not always take infringements against nature reserve rules seriously, and tend to shelve them.

Conclusions

The conclusions of the syndicate working group Third Party Use:

There is no unified definition of what third parties are – this varies from country to country.

The status of a military training area (open, closed, partially open) is a political choice. Closing an already open area is difficult.

Sometimes third party use is even imposed by law (as in Germany where the public forest service is in charge of all woodland on the training areas).

Clear prescriptions ought to be formulated for giving permits for third party use, which sometimes must be agreed with other authorities (e.g. in protected nature areas).

Use by third parties should be considered a significant criteria for management plans (to ensure a balance between use, military exercises and conservation).

There is no direct financial interest in third party use – it implies costs for Defence but any money made goes to the Ministry of Finance.

Control systems include military environment inspectors; military patrols. A clear description/regulation of the control system is necessary, with training of personnel. Evidence ought to be recorded (e.g. with digital cameras). Prosecutions/complaints ought to be monitored. A problem is that military staff often can not directly prosecute or fine civilians, so must report infringements to Environment Ministry inspectors/forest guards etc.

Practical case study: Lake Mazuika (Adazi military training area)

Lake Mazuika is the best oligotrophic lake in the Baltic (it has fine stands of *Lobelia dortmannia*), because no streams run into it (so no pollution can be brought in from outside) and it was totally closed to the public in the Soviet era. Since 1999 it is a total nature reserve –the lake is not needed for military exercises so this was not a problem for the Armed Forces.

The lake lies barely 100 metres inside the western boundary road of the military training area – across this road is municipal land covered in forest. The forest is used commercially (clear cuts) and there is always the risk the municipal land along the road might be converted to residential building land (which would aggravate the problem of people using the lake). The Latvian Ministry of Defence is trying to obtain a rule that there will be up to 600 metres of safety zone around military training areas, but the municipal and private owners are opposing it, arguing that such a safety zone should lie entirely within existing military land.

People from around Adazi take no notice of the total reserve status and bathe in the lake or picnic on the beaches, leaving litter. The eutrophication which this causes is threatening the water quality of the lake, allowing the reed *Phragmites australis* to expand and smother the plants typical for oligotrophic lakes.

A compromise was attempted in which a swimming beach was laid out in one corner of lake Mazuika, but as was witnessed during the excursion on June 6, people still bathe and use the shores in the rest of the lake.

Responding to questions whether, besides providing a special beach, flanking measures were taken such as closing paths to other beaches, putting up signposts and installing rubbish tins, it was said that barriers were erected in 2002 to control movements, but these were smashed. Also, Latvians tend to like privacy and prefer to scatter around the place instead of congregating on one small beach.

Hence the decision has been taken in principle to close the lake entirely (and the users can be told that they ruined it for themselves) and direct people to a nearby lake which is environmentally less sensitive.

Concerning Lake Mazuika, the syndicate working group Third Party Use recommended working on two levels simultaneously:

- 1) carrying out direct site management actions such as zoning, channelling the public, increasing patrols, closing the access road, and ultimately fencing off the lake;
- 2) communicating to the public about the lake, pointing out that it is a very special object (oligotrophic lakes are rare), which must be closed so as not to lose its unique nature values, but simultaneously informing the public on alternative possibilities for recreation (neighbouring lakes).

Communication

Experience with communication in Belgium

The LIFE project DANAH, which is working on 12 military training areas in Flanders, has developed and implemented a Communication Action Plan.

Communication is vital to prevent false interpretations. Projects (such as DANAH) which fell many trees or burn much heather can give rise to false interpretation in the public (why cut trees if there is a greenhouse gas problem and woods are small and threatened in Flanders?). Exaggerated press reports that the whole military estate will be opened to the public without restriction, can raise false expectations among the public (which happened during the DANAH project).

When communicating, it is important to realise there are three different visions on military estates:

1. Military use
2. Nature
3. Third party use (recreation etc)

It is better to put all three into a single integrated vision instead of having three different stories.

Implementation of the Communication Action Plan has taught the DANAH project staff the following:

Spread facts! This means saying what, where, why, who.

Choose the right moment – if the plan is to fell trees in October, say so, not in May, but in September.

Sensitise the audience for your message – this takes much longer and is much less certain than simply informing (=giving facts). But if one gets it right, it breeds good reputation, correct understanding, positive attitudes and good image for Defence.

Messages must be consistent in content AND in form (logo, colours, ‘corporate identity’) so that each one is instantly recognisable.

Surprise people – for most people, the military and nature don’t go together, so there is plenty of scope for surprise.

Be positive – don’t start with ‘don’ts’, but explain: ‘area X is fragile and full of rare species’ – maybe people will then spontaneously keep out.

DANAH aimed for a bottom-up effect: local people know their training area, communication starts with them and the message percolates up.

Similarly, it started with the internal media of the ministries of Defence and the environment, and only later approached external media.

Better is ‘often less’ information than ‘sometimes a lot’ – the latter overwhelms the recipients. DANAH informs the local authorities (municipalities) first of any actions, especially sensitive ones like felling trees, as they are the first point of contact for local people (who generally do not ring up the camp commander when they notice something). Local papers are next – they are distributed free to all households, so one is sure reaching a wide audience.

These communication events for local authorities and journalists are always followed up by a terrain visit – i.e. a short presentation, then practical demonstration.

When planning such events, it is essential to check the agenda of the local camp commander for best timing – DANAH always used the camp commander as host for the press, local authorities and local stakeholders when an action was announced.

For leaflets, existing distribution networks are best used. But for many people, leaflets with text are not very attractive. Hence DANAH designed a yoyo, with the project logo and website on it, which children loved and which proved very effective.

The DANAH project used ‘camouflage’ as a *leitmotiv*, as soldiers and animals both use camouflage. Thus children were asked to look for the fox hidden somewhere in the project exhibition – this enthused them to look at the rest of the exhibits.

While working with this travelling exhibition, it was noticed that an aquarium with live fish and frogs was very attractive to children AND to adults, so much so that all one had to do is stand beside the aquarium and hand out promotional material – people come crowding around. At one training area DANAH staff handed out free Gageleer beer instead of using the aquarium, as ‘gagel’ (the herb, *Myrica gale*, which is used to flavour this beer) grows wild in that particular training area. This proved equally effective at drawing in the crowds.

The lesson: basically, people are not automatically interested in panels – they must be drawn with other methods. People are never attracted by text, more likely repelled, so even the panels should be highly visual with little text. DANAH did not just use big photos with text, but also designed panels with pixel structures and chessboard patterns of pictures.

The DANAH project website gets very difficult, even politically charged, questions from the public, especially after open door events. Much of this feedback comes from the ‘involved public’ (nature guides, stakeholders etc) and some of it is even an attempt to use the project for other purposes. However, the ‘uninvolved public’ stays out of reach, in the dark.

It is possible to measure the number of hits on the website, which increase after open door events, but impossible to gauge what the impact is, i.e. whether people have been sensitised.

When it came to communicating internally with military personnel, DANAH’s objectives were integrated into the course for environmental adviser at the Ministry of Defence’s School for Environmental Education (Centre de Formation Environment/Vormingscentrum Leefmilieu), and a DANAH T-shirt was given to those who completed this course.

A ministry of environment training centre in Flanders gave a nature and forest management course to one staff from each of the 12 camps covered by DANAH.

DANAH carried out local briefings, where personnel from the ministry of environment and ministry of defence were able to meet.

A DVD, comparable to the UK Ministry of Defence’s ‘Train Green’, was made, as well as a T-shirt, ‘Forces in Nature’, and a deck of cards, ‘Forces of Nature’, with cartoons bearing environmental messages on the flip side (this idea came from US Armed Forces).

Experience with communication in the Netherlands

The biggest Dutch military training area is only 1400 ha in size, so exercises often take place outside, using farmland for low-flying exercises, or villages for urban warfare (so that shopping civilians are confronted outside the supermarket by troops pretending to be in Bosnia!). The dense population of the country means that people live right around training areas, so that everywhere Defence is confronted by complaints about noise and even complaints that it is destroying nature.

The Dutch Ministry of Defence therefore started a campaign in 2001 to show the public that military use and conservation are a good combination. First responses were often negative – ‘this is a lie, the military is destroying nature’ – so the public was invited to come into the training areas and see for itself. People and conservationists did, and were impressed by what they saw. Currently Defence enjoys a positive media presentation of nature in training areas.

Experience with communication in Latvia

The Latvian National Armed Forces and the Ministry of Defence communicate with the mass media via environment officers and press officers. The Ministry Public Relations Division and the National Armed Forces commander's press representatives evaluate and coordinate information conform to the Defence Sector Communication Plans.

In 2006 the main public relations activities connected to nature were:

- International wetland protection day in Camp Adazi (Feb 2006)

- International environment protection day, Adazi, with presentation of international environment handbook to the Camp (June 2006)

- Third international seminar on maritime environmental protection (July 2006)

- Cleaning up litter from lakes Lieluika and Mazuika (Adazi) (Sept 2006)

- Visit to Adazi by Belgian environment experts (Oct. 2006)

- Public launch of Adazi LIFE project (Dec 2006)

The National Armed Forces contracted a consultancy to carry out opinion polls in 2004, 2005 and 2006 about public perceptions. The number of people who thought that the National Armed Forces take care of environmental protection was rather constant (35% in 2004, 33% in 2005 and 38% in 2006). The number of people who considered that the Armed Forces neglected environmental protection was 19% in 2004, down to 14% in 2005 and back to 17% in 2006. Finally, the number who thought it was difficult to say whether the Armed Forces protected the environment rose from 45.8% in 2004 to 47% in 2005 and 49.6% in 2006.

The conclusion made was that in spite of all the National Armed Forces' media activities, the percentage of people who were not sure of what the Armed Forces were doing for the environment remained high, almost 50%. The question is therefore, why is this so, and what can be done to change this? How can the Adazi LIFE project be used to improve communication about the environment?

The reasons that were identified for the disappointing efficacy of communications were that:

- communications on the environment were not systematic but 'case by case',

- the Armed Forces tended to consider that they had more important issues to deal with, such as international operations or soldiers' pay and social security,

- because the National Armed Forces became professional on Jan. 1 2007 the image of a professional soldier is still being shaped,

- civil society tends to take National Armed Forces' environmental work, such as maintaining training areas, destroying explosives or helping with rescue operations, for granted.

This led to guidelines, formulated in spring of 2007, to improve communications. They are:

- environmental information campaigns directed towards civil society will be defined properly and systematically (instead of case-by-case),

- civil society will be informed constantly about the Armed Forces' activities (with weekly/monthly/annual planning),

- environmental experts will be involved in communications,

- the LIFE project in Adazi will be used to develop long-term information campaigns towards civil society, with special reference towards communicating with different target audiences and paying special attention to local residents

Follow-up to Conference

As one of the actions foreseen as part of the further development of the Adazi LIFE project, an international seminar will be organised at the end of the project, i.e. at the end of 2009.