

Nature conservation and the military in Central and South-Eastern Europe

– An overview –



Fig. 1: Dr. Eike Biedermann.

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Abbreviations

ARM	Army of the Republic of Macedonia
BALTFNET	Baltic Air Surveillance Network
CAF	Croatian Armed Forces
CBD	Convention on Biological Diversity
CEE	Central and Eastern Europe
DBU	Deutsche Bundesstiftung Umwelt
EOD	Explosive Ordnance Disposal
EU	European Union
EUFOR	EU-led force
GDP	Gross Domestic Product
IFOR	NATO-led International Peacekeeping Force
ISAF	International Security Assistance Force
JFTC	NATO Joint Force Training Centre
KFOR	NATO-led Kosovo Force
KLA	Kosovo Liberation Army
KPC	Kosovo Protection Corps
KSF	Kosovo Security Force
MKSF	Ministry for the Kosovo Security Force
MODBF	Ministry of Defence Budapest Forestry Stock Company
MoD	Ministry of Defence
MoE	Ministry of Environment
MOND	Ministry of National Defence
MORM	Ministry of Defence of the Republic of Macedonia
MTA	Military Training Area
NATO	North Atlantic Treaty Organisation
NCO	Non-Commissioned Officer
NGO	Non-Governmental Organisation
NFR	NATO Response Forces
PEBLDS	Pan-European Biological and Landscape Diversity Strategy
PfP	Partnership for Peace
RACVIAC	Centre for Security Cooperation in South-Eastern Europe
RASCC	Regional Airspace Surveillance Coordination Centre
SCI	Site of Community Importance (Natura 2000)
SEDM	South-Eastern Europe Defence Ministerial
SEE	South-Eastern Europe
SEESIM	South-Eastern Europe Simulation Military Network
SFOR	NATO-led Stabilisation Force
SPA	Special Protected Area (Natura 2000)
TRADOC	Training and Doctrine Command
UNMIK	United Nations Interim Administration Mission in Kosovo
USSR	Ukrainian Soviet Socialist Republic

1 Summary of overview survey of CEE and SEE countries

There are some deep differences between the countries covered by this survey, as well as some remarkable parallelisms. There are two major dividing lines:

1) Between those countries (10 of the countries surveyed, Fig. 2) which are now members of the EU and those which are not. In the former, there is an obligation to designate Natura 2000 sites, which can include military areas, and to ensure that species and habitats from the Habitats and Birds Directives are kept in a 'favourable state of conservation'. In the other countries, there is no such legal and enforceable (European Court of Justice!) obligation to designate ecologically valuable military lands as conservation areas. Only the more or less voluntary international conventions such as Bern, Bonn, PEBLDS, Ramsar or CBD are applying here. Countries like Croatia which are candidates for EU accession are however already aligning their environmental and nature policies to the EU models, and the Council of Europe-sponsored Emerald network is in many ways parallel to Natura 2000 in its scientific concept and strategy.

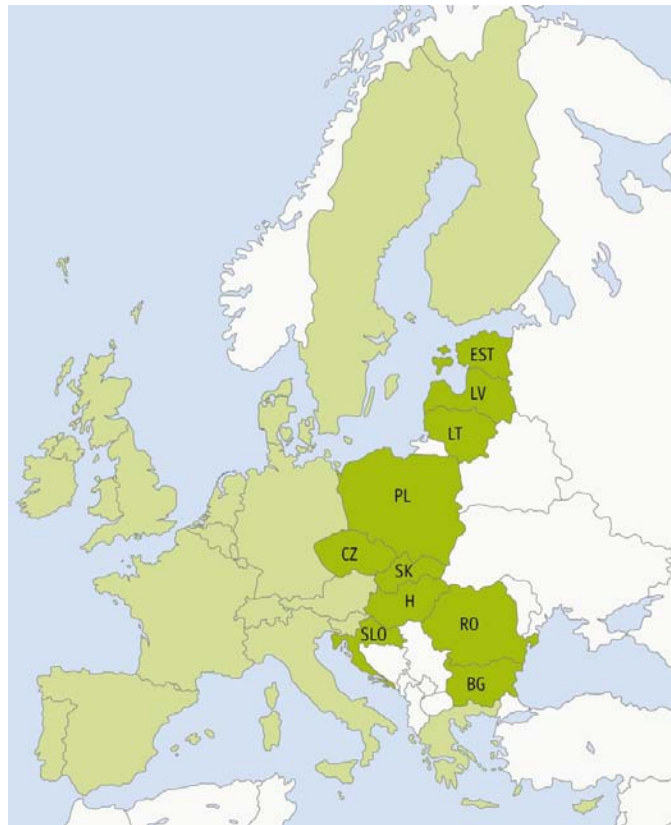


Fig. 2: Map of the EU member states. Country codes indicate those countries, which have been investigated in the survey.

2) Between those countries which have existed as independent states, with Armed Forces and all the accompanying military infrastructure, from long before 1990 (e.g. Poland, Hungary, Romania, Bulgaria, Albania) and those countries which came into being after 1990 and have had to build up their armed forces from zero or from remnants inherited from predecessor states (e.g. the Baltic states, the former Yugoslav Republics, Czech Republic, Slovakia, Ukraine, Moldova).

In those countries which existed before 1990, we see that the changes in political and strategic contexts since then (the shift from large conventional forces for Cold War land battles with massive armour deployment, to light mobile forces for rapid deployment to theatres far removed from Europe, to the increasing significance of counter-terrorism and urban warfare) have had a strong impact. The end of national military service (conscription) and the shift to professional forces, which has been taking place in all these countries, means that a significant number of barracks and training areas are redundant. The downsizing of the formerly large Armed Forces equipped with impressive arrays of vehicles, aircraft and armour, to smaller forces equipped with less (but more sophisticated) material, has also meant a major reduction in needs for training and exercise areas. Finally, in some countries (e.g. Poland, Czechoslovakia,

Latvia, Lithuania) the Soviet Armed Forces had garrisons and training areas and these were of course abandoned after 1990.

Consequently, since 1990 there has been a steady decommissioning of surplus military estates, which includes training and exercise areas of great size and natural value. The process is not ended yet – it is still slowly proceeding in the new EU member States and is now getting under way for instance in Albania, Croatia, Montenegro and Macedonia. Likewise, Ukraine has a long list of areas to be decommissioned.

Paradoxically, new training and exercise areas have also been opened, or are planned, since 1990, in new countries which have been building up their Armed Forces and which did not always inherit the right infrastructure from their predecessor state, for example Estonia and Slovenia. Others are investing in their training areas to upgrade them and make them suitable to the new requirements of their military: Croatia, Lithuania and Macedonia.

What are the trends in the training and exercise areas which remain in military use? There has, on the one hand, been a lessening and de-intensification of use. A good example is the Adazi training area in Latvia, which was intensively used in Soviet times, but after 1991 the smaller Latvian Armed Forces meant less exercises and shooting. Within a decade, the overgrowth by succession of heaths in Adazi was noticeable. This phase of less use was especially strong in the 1990s.

What has happened since then is that many of these countries have seen a re-invigoration of their Armed Forces, for several reasons. Their own political and economic situation stabilised and improved, so that new investment in the Armed Forces became feasible. In several countries the percentage of the gross domestic product (GDP) devoted to defence spending has increased since the 1990s. A large number joined NATO, which meant that the Armed Forces had to be restructured and modernised to fit NATO standards. It also meant that they received help from NATO to improve their Armed Forces, and that joint exercises with other NATO members meant an increased use of certain training areas. Even those countries which stayed outside NATO could benefit from NATO's Partnership for Peace programme.

So, what we see is that in the majority of the countries surveyed, the closure and decommissioning of surplus infrastructure has been accompanied over the past decade, by a more intensive use of at least part of the remaining infrastructure.

This is a parallel process in virtually all of them – whether NATO members or not. Across the board, there is a modernisation of the Armed Forces and a shift to professional forces focused on being able to intervene in theatres at an almost global level. Consequently, the training programmes are being revised, often quite drastically, and there is investment in upgrading key training areas. This process is far advanced in the first wave of new NATO members (e.g. Poland, Hungary, Czech Republic and the Baltic States) but is now starting up in countries like Ukraine (where there has been a spectacular increase since 2006 in the number of exercises and the number of military taking part), Macedonia (which is offering its largest training area to be used by foreign militaries) and Slovenia (very systematic programme for upgrading training infrastructure).

Insofar as this keeps the training areas in military (and not developers') hands and ensures continuation of practices which have benefited flora and fauna, this is a positive trend.

However, re-intensification does not always necessarily mean good news for ecology. On the one hand, increased disturbance of the wrong kind can be negative, e.g. breeding birds disturbed by larger-scale infantry exercises. On the other hand, less disturbance of the right kind can also be negative: if exercising tanks churned up land creating bare soil for pioneer communities, then the (currently widespread) shift from tracked to wheeled vehicles means that these pioneer communities will no longer benefit from military exercises.

To sum up, the transformation programmes affecting all the Armed Forces of the countries surveyed mean that some training areas and other facilities have been, or will be, decommissioned (and now is the time for projects targeting the areas which are going to be decommissioned), while other training areas will be modernised and the training programme itself will be changed. The shift away from a conscript army means less basic training, but the target of building up a professional army (often with additional objective of reaching NATO standards) implies more training, especially more advanced training. Wherever training

programmes are being transformed, there is an opportunity to introduce principles of ecological care into the new training schemes.

2 Baltic States

2.1 Introduction

The three Baltic States consisting of Estonia, Latvia and Lithuania (Fig. 3) are different from countries like Poland, Hungary or Romania because they did not exist as states before 1991 and have had to build up Armed Forces and Ministries of Defence from zero.

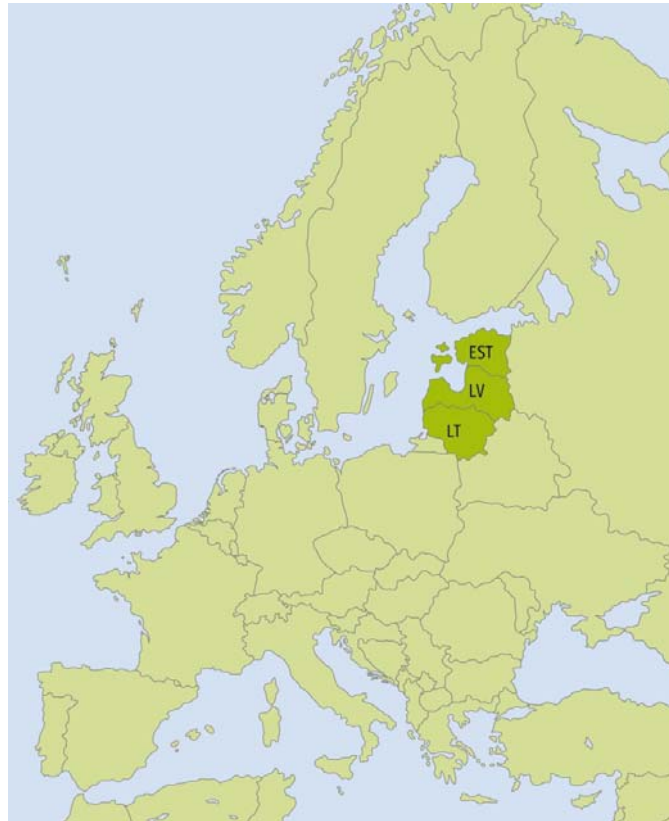


Fig. 3: Map of the three Baltic states.

The Soviet military facilities and installations were often dismantled or even more or less deliberately destroyed by the Russians when they pulled out of the Baltic States. A large proportion of these former military facilities were decommissioned and used for other purposes. In Estonia for instance, training areas were transferred to the Ministry of Environment and forest service. Afterwards, these areas were managed as nature and forest sites.

However, after this initial wave of decommissioning and reduction of the new national Armed Forces to a shrunken core of facilities and training areas, since 2000 the trend is in the opposite direction. In the 1990s the new national Armed Forces tended to have relatively small professional cores and a mix of equipment; the focus in Lithuania and Estonia was on defence of the homeland through citizen-based armies (conscription, reservists and citizens volunteering to be part of homeland defence forces supplementing the regular forces). NATO membership brought major changes of direction and defence strategy. All three countries are now upgrading and modernising their Armed Forces and integrating them into the NATO framework. This means that the remaining training areas are being used more intensely, for national and international exercises, and notably in Estonia new training areas are being constructed.

Also in the 21st century, the Ministries of Defence and military authorities of all three countries demonstrated openness to environmental protection including nature conservation. This was of course stimulated by NATO and EU membership. In all three countries, parts of the military estate were designated as Natura 2000 sites. Of the three, Latvia has gone the farthest in nature conservation action

on its military estates and in networking with other Ministries of Defence (MoDs) and Armed Forces to exchange experience on nature conservation. Its MoD gives prominent place to nature conservation matters in its official communications and publications.

Consequently, all three offer opportunities for the kind of networking and project development foreseen in the DBU project. Estonia and Latvia are indeed participating in the database of the DBU project (http://naturstiftung.de/osteuropa_test/start.php); unfortunately Lithuania never gave a positive response to invitations.

2.2 Latvia

Currently, Latvia has about 130 military objects, which are owned or leased by the Ministry of Defence and Armed Forces. For instance, the National Guard base at Jurmala is leased from a private owner and the state forestry service. However, this includes many objects such as buildings, sports facilities, military schools and academies, or sites with little or no nature conservation potential such as naval installations. Their total surface area is about 12,000 ha. These objects are gradually all being brought under the legal ownership and/or management of the State Agency of Defence Properties which since 2003, has been made responsible for the centralised management of all defence-related properties. Therefore, this agency is also responsible for any nature restoration and management on military estates in Latvia.

Besides all these smaller objects, there is one large estate: The Adazi military training area covers about 7,747 ha (2/3 of Latvia's total military estate). 6,126 ha of Adazi are within Natura 2000. It is characterised by forests, heaths and grasslands typical for dry sandy country. Inside Adazi, dry heath covers 1,000 ha (90% of Latvia's total resource) and there are 10 ha of inland dunes (both qualify as 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. The *Bufo calamita* population is also nationally significant. Lake Mazuika, inside Adazi MTA, is the best oligotrophic lake in the Baltic state and has fine stands of *Lobelia dortmanna*.

There are other, smaller firing grounds and training areas, e.g. Lielvarde Air Force base or the Baltic Naval Diving Training Centre in Liepaja.

Decommissioning

Decommissioning has been large-scale in Latvia as after independence in 1991 much of the Soviet military infrastructure was dismantled. Only about 1/3 of Soviet military areas remained property of the Republic of Latvia's new Ministry of Defence and Armed Forces; the rest were given back to the previous owners. The Latvian military did manage to hold on to the large Adazi training area. However, pockets of land inside this training area returned to private ownership, such as areas of forest round the edges of Adazi where the private owners harvest trees. There is still pressure to privatise more of Adazi. 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 this time, there seemed little need for keeping all those training areas. Now however, Adazi is used intensively by the Latvian National Armed Forces and even by the Estonian Defence Force for some of its training. There are international exercises and more space for training is even needed.

Environmental and conservation actions of the military

Latvia is the first Baltic state where the Ministry of Defence and the National Armed Forces have adopted an Environmental Protection Strategy in 1999. In response to membership of NATO and EU, this was updated as Environmental Protection Policy and Strategy Action Programme in May 2005. An Environment Management Manual was completed in June 2006. Environment management systems are in place or being developed for the various military objects (e.g. for Adazi MTA the initial system was set up in 2000), a programme for environmental training was developed jointly with Lithuania and Estonia and officers are regularly updated on new developments in environmental management.

Although much of this environmental policy and planning is aimed at waste, energy efficiency or pollution, biodiversity is also part of it. To quote the 'Environmental Protection Strategy of the Ministry of Defence and the National Armed Forces of the Republic of Latvia 2005-2009', goals include:

- Ensure observance of requirements of environmental protection, protect rare species of plants, animals and biotopes;
- Preserve the ecological systems, biological diversity and social and cultural values;
- Prevent and eliminate contamination, clean up and restore natural sites;
- Show the military sites to the public for educational purposes, as well as for purposes of protecting natural, cultural and historic environment.

The Strategy adds that land utilised for military purposes is often a place inhabited by rare species of animals, birds, reptiles, etc. of particular protection. MoD and NAF leadership must, in collaboration with the Ministry of Environment and municipal environmental protection institutions, elaborate an optimal military activity model, which would facilitate the preservation of rare species and biotypes of particular protection.

Recovery and nature protection plans for the military sites must be developed. Management plans for military sites and firing-ground of the Republic of Latvia must also include a special chapter on procedures for organising environmental protection activities. These regulations should be strictly adhered to during lessons, military exercises and other military activities.

Armed forces should get involved in the nature protection activities by taking care of both: the preservation of biological diversity, protection of species and biotypes of particular protection, persistent observance of current legislation regulating the nature protection field and protection of ecosystems of their own territories. Where possible, there must be care taken about preservation of landscapes and public availability of military sites extended by giving opportunities to the local residents and wider public to visit these territories (e.g. for sports and leisure purposes), when they are not in use for military purposes.

Implementing this strategy, internal instructions/rules of procedure for the Armed Forces had already been drawn up by 2007 to cover 'Organisation of Environmental Protection Activities during Tactical Exercises'; 'Protection of Rare and Specially Threatened Plant and Animal Species within The Territories of Military Objects' and the 'Protection of Rare and Threatened Animal and Plant Species and Other Natural Values at the Adazi Military Base'. This latter instruction specifies the measures which must be observed when planning, organising and participating in military exercises in Adazi.

Known nature conservation problems in the military areas

Adazi is an excellent example showing how military use has kept habitats in good condition. During the Soviet era so much military activity was carried out in this relatively small training area that fears this would prove ecologically disastrous seemed justified. Yet it turned out that nature adjusted and formed, in place of the forests which would naturally occur here, special biotopes such as bare sands, dry grasslands and heaths. Vehicle exercises and fires from shooting kept reversing the ecological succession, by imitating natural fires and storms, so that these sands, grasslands and heaths were constantly rejuvenated.

After 1991 the smaller Latvian Armed Forces - 5,000 professionals, considerably less than the number of Red Army troops deployed to Adazi – meant less exercises and shooting, at least until NATO membership. The expanses of heath and grassland in Adazi became dotted with shrubs or even disappearing into woodland as a result of natural succession because they were not being disturbed on such a large scale as before. Within a decade, the overgrowth of heathlands in Adazi was noticeable.

For this reason, a project was elaborated to restore these habitats. It was submitted to the EU in 2005 for LIFE funding and was approved – the first LIFE project in CEE which was led by a military authority (the State Agency for Defence Properties).

The main measures in this LIFE project, which runs from October 2006 to the end of December 2009, are:

- Elaborating a nature management plan;
- Removing Soviet ammunition from overgrowing habitats so that work to cut overgrowth can be done;
- Cutting bushes and trees, with controlled burning, to restore 1040 ha of heath;
- Cutting trees/bushes and mowing overgrowth on 206 ha of mires;

- mowing 25 ha of *Molinia* meadows and 10 ha of inland dunes;
- Purchasing mowing machinery for recurring management.

Although public access to military areas is foreseen under the Environmental Strategy, it is causing problems at Adazi. 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 Adazi headquarters itself – elsewhere the training area is open, marked only by signs on trees. Red signs indicate when and where shooting takes place. This has been causing particular problems with oligotrophic lakes inside Adazi (e.g. Lakes Mazuika and Lieluika.). These lakes are very popular with citizens for bathing and other forms of recreation, but this is causing degradation of water quality and shoreline vegetation. Earlier attempts to channel visitor use by means of barriers or designated swimming beaches have not been successful. Matters are complicated by the fact that military patrols can observe illicit users and record evidence, but cannot prosecute. Instead, they have to call environmental inspectors, who are allowed to prosecute. Military police cannot prosecute civilians, not even inside military training areas.

Other activities relevant to conservation

Besides the nature restoration project in Adazi, the Latvian military has for several years been very actively networking and exchanging experience about nature management in training areas with the military in Belgium, Netherlands, UK and the USA.

The National Armed Forces are investing considerable efforts into public information and awareness of the natural values in Adazi and the work being done to restore and preserve nature. This is being done for instance through open days, information panels and publications. Following an opinion poll of public attitudes, comprehensive guidelines to improve communication to the public were adopted in 2007.

Simultaneously, awareness-raising and training within the Armed Forces is being carried out:

- Producing a methodological guide to monitoring species and habitats, based on simple easy-to-use indicators, for the military to use;
- Elaborating a nature training programme and environmental handbook for military personnel;
- Monitoring that military training is conducted in accordance with the requirements of environmental protection.

Although beyond the scope of this DBU project, it is noteworthy that the Latvian Navy assists with the ecological monitoring of the Baltic and is an active partner in an EU-funded project to survey the eastern Baltic and identify sites suitable for designation as marine Natura 2000 areas.

A co-operation agreement between the Ministry of Defence and the Ministry of Environmental Protection and Regional Development was signed in November 2002. There is good collaboration with NGOs, notably LDF (the Latvian Fund for Nature) which has been doing inventories, helped develop the instructions for habitat and species protection during military training and the proposals to protect Lake Mazuika and which is elaborating the draft nature management plan for the Adazi MTA.

Conclusion

Although Latvia has only one large military training area, which is of regional rather than European significance in terms of its natural values, its military authorities are committed to conservation and sustainable use of their estate, collaborate well with NGOs and are in the vanguard of the CEE states' military when it comes to nature restoration, public information and communication and the awareness-raising and training of defence staff.

2.3 Lithuania

The Soviet Armed Forces, when they left Lithuania in 1993, destroyed or removed much of the pre-existing infrastructure. Unexploded munitions are still a huge problem, as in Latvia. Starting in 2008, the Lithuanian Armed Forces launched a 10-year project continuing the work to clear explosives from former Soviet military bases and elsewhere in Lithuania.

Until 2000, considerable investment was made in developing infrastructure. Modern service and living conditions were created for the units of the National Defence System. Inter alia, a modern training infrastructure was established, including the building or reconstruction of new barracks, catering facilities, training blocks and firing ranges.

Important military objects in Lithuania are:

- The army bases hosting infantry and artillery battalions at Panevezys, Alytus, Rukla and Taurage;
- The facilities for initial training of all recruits at Rukla and the five other land army training sites;
- The Air Force base at Siauliai, which is the only one in Lithuania;
- The National Airspace Control Centre, and the Regional Airspace Surveillance Coordination Centre (RASCC) in Karmėlava, both part of the Baltic Air Surveillance Network (BALTNET) which is an integral part of the NATO Integrated and Extended Air Defence System;
- Air Defence Battalion site to protect the airspace above the Ignalina nuclear power plant;
- The naval port and facilities at Klaipeda.

Lithuania's National Defence System has six training areas with a total area of 21,600 ha. Within these training areas, part of the land is a 'full-use zone' (land owned by the Ministry of Defence and used intensely for training and shooting) and part is 'restricted-use zone' (land owned by local authorities, where exercises are more limited).

Natura 2000 sites have been designated in five of these training areas: five SCIs in restricted-use zones and one SPA and one SCI in a full-use zone. This is only a small share of the 77 SPAs (Birds Directive) and 299 SCIs (Habitats Directive) which have been designated by Lithuania, totalling over 920,000 ha.

Recent trends and future plans in defence policy

In the 1990s, the focus in Lithuania was on defence of the country through citizen-based armies (conscription, an active reserve and citizens volunteering to be part of homeland defence forces such as the National Riflemen which supplement the regular forces). Military service was compulsory. This implied a lot of training, both conscripts and of volunteers.

NATO membership brought major changes of direction and defence strategy. Recently, in e.g. a White Paper, the Lithuanian government reviewed those principles of national defence (such as territorial defence, large numbers of conscript and reserve forces, a mobilisation system prepared for total war, and civic preparedness for guerrilla warfare) that were no longer considered relevant in the current security environment and not consistent with Lithuania's NATO membership. NATO membership implies collective defence, i.e. NATO allies will launch a collective defence operation in case of a large military threat to Lithuania. Within the collective defence framework, Lithuania must not build up forces and capabilities of which NATO already has enough, but should contribute what is needed to strengthen the Alliance and what it excels at.

Consequently, the Lithuanian government abandoned earlier plans to increase the Army to three infantry brigades prepared for territorial defence and reorganised the structure of the Land Forces in 2003-2004. The two previously existing Air Force bases were merged into one Air Force Base in Siauliai. In 2008 the Seimas (Parliament) decided to abandon compulsory military service and move to professional Armed Forces.

The Guidelines of the Minister of National Defence define the main goals for developing the National Defence System 2007-2012 and for the transformation of the Lithuanian Armed Forces. Some of the main points are:

- Increase the number of professional military personnel;
- Reduce the number of conscripts and active reserve personnel;
- Greatly increase the capability to participate in international operations and contribute to NATO and EU rapid reaction forces (NATO Response Forces (NRF) and European Union Battle Groups);
- Create proper conditions for the movement of NATO allied Armed Forces through the three main points of debarkation (Siauliai Airport, Klaipeda naval seaport and Sestokai Railway Terminal);

- Modernise the equipment of the Sea and Coast Surveillance Service and improve the infrastructure of Coastal Surveillance Posts;
- Bringing the Armed Forces up to NATO standards, notably by upgrading;
- Equipment and armaments, enhancing their operational effectiveness, and improving combat training.

What are the implications? According to the Guidelines and White Paper four main implications were found:

- Eliminate military units and capabilities which cannot operate as part of multinational forces and deployed abroad or carry out commitments of collective defence;
- Transfer redundant infrastructure to civilian institutions;
- Improve soldiers' training and education and review the training programmes;
- In order to use existing resources more efficiently, priority must be given to extending the life of the existing infrastructure, and renewing or modernising it.

This therefore means that some of the military estates may be decommissioned, but equally that existing estates may be upgraded or expanded. For instance, an important ongoing infrastructure project covers the reconstruction of the Siauliai Air Force base into a multi-function airport able to ensure the implementation of the NATO air policing functions over the Baltic States. Another priority is improving the infrastructure of the Central Polygon (Pabrade) live-firing and training area.

Again, for training and the future of training areas, the shift away from a conscript army means less basic training, but the target of improving the professional army so that it reaches NATO standards implies more training, especially more advanced training.

Military training and environment policy

Overall responsibility for training (and by implication, for ensuring that training is compatible with nature values) lies with the Training and Doctrine Command (TRADOC), which controls the training areas among others. TRADOC prepares combat training programmes and materials and organises courses for the officers at training areas. Its role will be strengthened further by the implementation of the Guidelines, notably it will coordinate the preparation of training programmes by others in the National Defence System (with as priority ensuring modern programmes which achieve NATO quality) and control their implementation. Commanders and staff of the training areas will act in accordance with priorities and guidelines set by TRADOC. Under TRADOC, the General Adolfas Ramanauskas Combat Training Centre organises environment protection courses.

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.

Inventories and nature management plans have now been completed for the two biggest training areas (Central Polygon-Pabrades and Kairiai, together 11,700 ha) by the Institute of Ecology and Institute of Botany. Forest management plans have been made for all six training areas by the Forest Inventory Institute. 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. The nature management plan for Central Polygon-Pabrades prescribes:

1. Maintaining open land (inland dunes and 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 prescribes:

1. Preserving grasslands on sand substrate (currently less than 10% of this habitat is bare sand) by mowing hay or grazing every three 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 three years and forbidding damaging military activities like digging or driving.

Inside the Central Polygon-Pabrade a nature restoration project was launched in 2004, covering inland dunes with grasslands (habitat for tawny pipit *Anthus campestris*). 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 of a year (bird breeding) and predators must be brought under control. The Ministry of Environment will monitor the project site's evolution.

Public communication and networking

Like in Latvia, public attitudes towards the military are being measured regularly by a consultancy. Whereas in 1996 and 1997 distrust of the Armed Forces was much greater than trust, in 1998-2001 trust and distrust held about equal proportions; since 2002 trust has steadily increased and distrust declined, according to these opinion polls.

The National Defence System states that it wants to build and foster links between the military and society, in particular involving youth organisations, local municipalities, educational institutions and non-governmental organisations. There certainly is an active public relations programme, with a strong focus on open days and civilian participation in military events, but it is not clear whether nature and environment play a role in this programme.

Interesting from the point of view of the DBU project is that the Lithuanian Armed Forces and Ministry of National Defence are interested in, and already actively engaged in, cooperation with the military of Ukraine and Belarus.

2.4 Estonia

The Army accounts for the lion's share of Estonia's military infrastructure. Training areas are a major component of the Army infrastructure. This is linked to the structure of the Estonian Defence Forces which, rather like Switzerland, work on the principle of a reserve force. Besides the permanent core forces, the main part of the defence forces consists of units in reserve which can be mobilised in moments of crisis. In peacetime, the reservists conduct normal lives and the state takes care of their training and the procurement of equipment and weapons. In crisis or wartime, the reservists are mobilised into military units. The reserve units are structured territorially, i.e. conscripts from one single area are called up at one given time to one unit and after compulsory military service they are sent to the reserve as one unit. During their 8-month training the conscripts acquire a basic military education. Afterwards reservists are called up for training every five years, to reinforce skills already acquired and practice situations resembling combat.

In addition, there is, rather like the UK's Territorial Army, a Defence League of citizens who voluntarily train and acquire skills useful to assist the regular Armed Forces and to keep internal order. Officers from the Defence Forces reserve units often act as leaders of Defence League regional units.

So, given this system, in Estonia there is a need for training areas, preferably geographically distributed over the country. The Army uses 12 training sites, of which the largest are Tapa (the Combat Support Training Centre) and Voru (Kuperjanov Infantry Battalion). Other training sites are Paldiski (Peace Operations Centre and Scouts Battalion), Johvi, Sirgala, Nursipelu, Kikepera, Klooga and Männiku. The main function of these training sites is to train conscripts for the reserve units.

The Estonian Navy has its main base in Tallinn with training facilities. The Estonian Air Force has one air base at Ämari, which also hosts the air surveillance wing. This air base is being upgraded and modernised to conform to NATO standards.

Ownership of military training areas

Until very recently the Estonian Defence Forces were in the peculiar position of being obliged to train on land which belongs to somebody else.

After 1991, Soviet military training areas in Estonia were either taken over by the Ministry of the Environment (if they had natural value) or given back to former private owners. The Ministry of Defence only obtained two small areas in direct ownership, and had to lease the rest of its training areas and other facilities, very often from the Ministry of the Environment.

Thus, the Estonian Defence Forces were in a difficult situation, as they used land owned by others, and for instance to engage in a shooting exercise had to ask permission from the landowner such as the Ministry of the Environment. This made training difficult. Moreover, because these military training areas do not legally belong to the Defence Forces, access is quite open. This was untenable: civilians turned up in training areas during exercises. The Ministry of Defence had been 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), but met with opposition from local communities and people used to visiting the sites at will. The Ministry of Defence, to solve these problems and to obtain enough land to be able to train properly, wanted the Ministry of the Environment to transfer back to it enough of the old Soviet training areas and also was considering buying back some of the privatised land. This was opposed by local inhabitants, while the Ministry of the Environment was concerned about nature protection on these lands.

Environmental activities

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).

Most of the former Soviet training areas are valuable ecologically. Hence, these areas were transferred to the Ministry of the Environment and are now included in the national Green Network, established 1999. 60% of these former training areas are under national legal protection.

Following national inventories of woodlands, grasslands, etc. in the mid-1990s and Natura 2000 inventories, some of the training areas were designated as Natura 2000 sites by the Ministry of the Environment. As the Ministry of Defence was not owner, it had to accept the designation.

Although an inventory of natural values had been made in the Tapa training area in 2001, after the management planning process for training areas began in 2003, nature inventories were made systematically, with five training areas launched in 2005/2006.

Expansion of training areas

The Ministry of Defence wanted to increase training areas and shooting ranges from the current level, which is too low for requirements. Its objective was to have six training areas for the Estonian Defence Forces and a series of shooting ranges for the Defence League. After the difficulties described above, a final decision in favour of the Ministry of Defence was taken at cabinet level by the government. In January 2009, the new Defence Development Plan for 2009-2018 was adopted. Its overall objective is to increase and improve Estonia's defence capability. This includes increasing the capacity for military training. As part of this, the Ministry of Defence in July 2009 awarded a contract to draw up a detailed

plan (by mid-2010) of the new Jägala army base. Jägala will be a new base and training area which will provide a home for four battalions currently housed in barracks in Tallinn which are no longer adequate. These battalions have difficulty training properly because there is no space in Tallinn and it is inefficient to have to travel to training areas outside the city. In addition, the Defence Development Plan will upgrade and expand the Tapa, Paldiski, Johvi and Voru Army bases and all training areas (e.g. new shooting ranges and impact areas).

For all these infrastructure projects, especially for Jägala, the biggest project, an environmental impact and risk assessment process has been designed. This process will assess the consequences of clearing forest for shooting ranges (erosion, loss of habitat) and the likely evolution of the impact areas (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. This programme will also 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 military use from February to May (this can be conflict with the timing of the spring exercises). Compensation measures for any loss of nature values include actions to create new habitats.

Conclusion

Although the existing sites appear to be more of national or regional than European significance, Estonia is interesting because here the Armed Forces are expanding their training areas over the next years. What the impact of this new infrastructure and use will be on natural values, will be monitored. The Estonian Defence Forces are implementing environmental programmes, including management plans for their sites, so this country could be interested in specific nature conservation projects.

3 Visegrád countries

The Visegrád group consists of the four countries Poland, Hungary, Slovakia and the Czech Republic (Fig. 4).

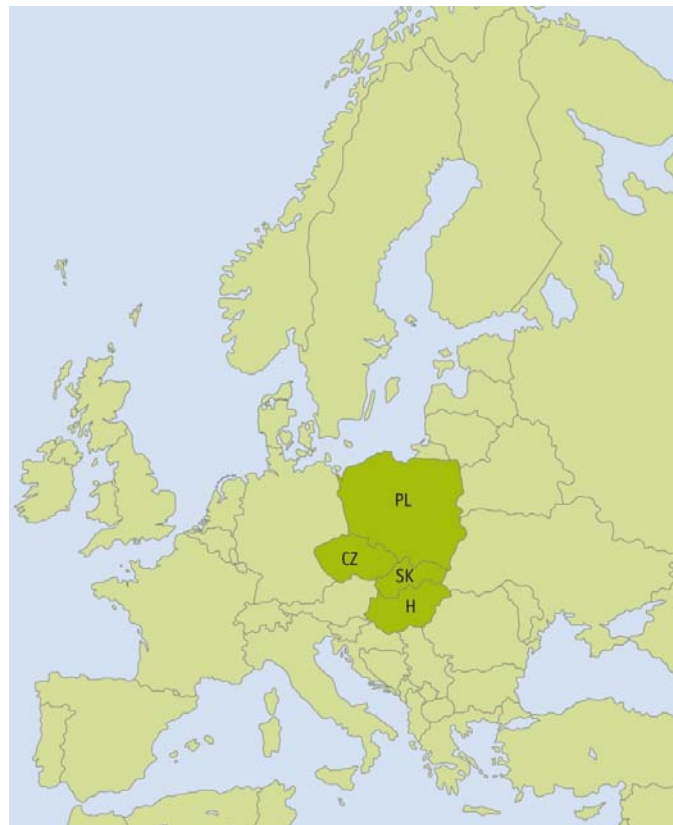


Fig. 4: Map of the four Visegrád countries.

3.1 Czech Republic

Overall context

Like Poland, the Czech Republic joined the Partnership for Peace in 1994 and became a full NATO member in 1999. During this period the Armed Forces of the Czech Republic absorbed NATO procedures in defence planning and restructured and re-equipped to achieve NATO standards. The Armed Forces are also engaged in the EU military structure, as the Czech Republic became an EU member state on May 1 2004. It participates in joint exercises and operations.

To respond to the new challenges and tasks of the 21st century, a fundamental reform of the Czech military was launched in 2002 (following NATO's Prague summit). This involves downsizing, organisational changes, modernisation of equipment and relocating of garrisons and sites within the Czech Republic. The conscription service system was abandoned and instead a career soldier system has been built up since 2005.

The first phase of the reform ended by 2007, when the first Brigade Task Force for overseas deployment was in place. The full reform and operational capabilities are scheduled to be reached in 2009-2012.

What does this mean for military training areas? On the one hand, the downsizing is quite drastic, with many objects being offered for sale. Yet at the same time many military facilities are being upgraded and expanded to meet NATO standards and to accommodate the new task forces being built up for the new challenges of the 21st century. Construction of a new base began in 2006 at Praslavice to house the new mechanised brigade for overseas deployment; it will be ready in 2010. The existing Air Force bases at Caslav, Namec and Oslavou are being expanded and upgraded to meet NATO standards.

The termination of conscription also means a reduced need for training. On the other hand, the conscription service has been replaced, in part, by an Active Reserve, in which Czech volunteer citizens sign a three-year contract with the respective Regional Military Command. An Active Reserve member takes part in an eight-week military exercise during the first year of his/her service while in the second and third year of the term the exercise duration is up to three weeks a year.

Finally, the existing large exercise areas and firing ranges are also used by Armed Forces from western and central Europe as an alternative to their own, smaller training areas.

Military facilities

There are five military exercise areas and firing ranges:

1. Boletice (21,935 ha, Fig. 5) exercises for tanks and mechanised forces;
2. Brdy (26,009 ha) firing range for artillery and aircraft, infantry shooting range and drivers' training;
3. Brezina (15,870 ha) training area for military academies and schools;
4. Hradiste (33,161 ha) all-service exercises and air defence training;
5. Libava (32,733 ha) all-service exercises and training of drivers of combat vehicles.



Fig. 5: MTA Boletice, Czech Republic, March 2008. (Dr. K. Höntsch).

Together, these come to over 129,000 ha. Because of their size, they are also used by the Armed Forces of Austria, Belgium, France, Hungary and the Netherlands for their own exercises.

All five MTAs are characterised by vast forests, which surround the open lands of the firing ranges and other training surfaces. The forests act as a shield protecting the surrounding communities from noise and keeping military activities discreet.

These five MTAs are administered each by its own Military Regional Office, which fall under the Section for Military Regions Management of the Development of Forces - Operations Division (General Staff). The infrastructure needed for the exercises and training is maintained by service centres subordinated to the Training and Doctrine Directorate (which draws up the schedules for exercises and training sessions using the MTAs).

The exploitation of the forests and other elements able to yield an economic return is done by the Military Forests and Farms of the Czech Republic, a state-owned enterprise which is responsible for managing the landscape and the environmental and ecological balance of the MTAs. The Military Forests and Farms of the Czech Republic have six regional offices (Karlovy Vary, Horovice, Horni Plana, Mimon, Plumlov and Lipnik nad Bečvou) which administer, besides the MTAs, a number of smaller objects.

Besides the large open-air training areas, there are:

- Training centres: Vyskov with the nearby Dedice training area (basic training of soldiers, training of active reserves), Prerov (aviation and air defence);
- Military schools and academies: Vyskov, Brno, Moravska Trebova and Chocerady.

These are essentially consisting of buildings, but as for example. at Prerov, there are facilities for open-air training.

Finally, a series of towns and villages in the Czech Republic host units of the Armed Forces in barracks and bases: Bechyne, Bucovice, Hlucin, Hradec Kralove, Jince, Jindrichuv Hradec, Klatov, Kutna Hora, Liberec, Olomouc, Pardubice, Prague, Prostejov, Rakovnik, Stara Boleslav, Strakonice and Zatec. Some of these are being upgraded and improved as part of the reform of the Armed Forces.

There are logistics bases at Stepanov, repair facilities for armoured vehicles at Novy Jicin and new radar sites at Nepolisy and Sokolnice.

Natura 2000 and decommissioning

Environmental and ecological policies and strategies do not appear to be very prominent within the Ministry of Defence and the Armed Forces. Czech representatives were generally absent from the international conferences on military activities and nature conservation held between 2004 and 2010.

Three of the five large military training areas have been included in the Natura 2000 designations. An agreement between the Ministries of the Environment and Defence has been concluded for maps, inventories and management plans of the Natura 2000 sites. NGOs and civilian scientists have been contracted to assist with this work and to do some of the monitoring.

The management plans will define how military training and nature conservation coexist. There will be some interesting problems to solve. For instance, the reform of the Czech Armed Forces has meant a reduction of armoured forces and consequently, fewer exercises with armoured vehicles. This in turn is making pioneer associations and the habitats of certain species, which depended on disturbance by these exercises, lose quality. An important choice will be the decision between the implementation of some form of recurring management to preserve such habitats, or to allow them to disappear through natural succession?

There were two Soviet training areas, both of which have been decommissioned years ago. The major part has been transferred to the state forest service and part has been designated Natura 2000. The former barracks areas have been privatised and redeveloped as housing.

Decommissioning is certainly well-organised within the Ministry of Defence of the Czech Republic, which has, within its Division for Assets Administration, a Surplus Assets Department. Any surplus military property, including land, is offered first to other Czech ministries and state authorities, and in case they are not interested, the property is sold to a successful (private) bidder, or it is transferred to local entities (municipalities). A number of buildings and areas of land, scattered throughout the Czech Republic, are currently for sale. The list (with photos) can be consulted (in Czech) online at www.onnm.army.cz.

Conclusion

With five large MTAs covering 129,000 ha altogether, the Czech Republic would appear to be an important partner in the project. The more so, as its military authorities have so far not been very strongly involved in the international networking on Natura 2000 and military activities. Because of their important role in the management of the landscapes and natural values of the MTAs, the Military Farms and Forests of the Czech Republic ought to be contacted. The same applies to those NGOs which have been contracted to help implement Natura 2000 in the designated MTAs.

3.2 Hungary

Overall structure

Hungary joined NATO in 1999 and has since then been reforming its Armed Forces, bringing them into line with NATO standards. This process seems to be already well advanced. The Hungarian Defence Forces no longer use conscripts, but since 2004 is a professional force with contract soldiers. As of January 1 2007, the Joint Forces Command of the Hungarian Defence Forces was established, located in Szekesfehervar, replacing the Land Force Command and the Air Force Command which were abolished.

The Ministry of Defence has 11 departments, including a Department for Operations and Training. It participates actively in the NATO environment working group and makes use of expertise at the NATO School for the environmental training of military personnel.

Immediately subordinated to the MoD is the Ministry of Defence Infrastructure Agency, which is responsible for managing the buildings and lands owned by the Ministry of Defence and the Hungarian Defence Forces. It is in charge of all necessary projects to maintain, improve, expand or reconstruct the infrastructure. The Infrastructure Agency is explicitly responsible for all tasks concerning environmental and nature protection. This particular task is done by the Agency's Department of Environmental Protection (Kornyezetvedelem) which works in accordance with the National Environmental Protection Programme 2009-2014 established by the Hungarian Parliament.

The Infrastructure Agency is supplemented by a network of MoD forestry companies, which are commercial enterprises and 100% owned by the Ministry of Defence (Hungarian State). Examples are the Ministry of Defence Budapest Forestry Stock Company (MODBF) which manages the military lands in the Budapest and Kisalföld regions and the HM Forestry Management Co. Veszprem VERGA which

manages the military land in the Bakony-Balaton region. These companies are responsible for the forests, grasslands or farmlands lying within the training areas and other lands owned by the Ministry of Defence/Hungarian Defence Forces. Their tasks are:

- Forest, pasture and game management;
- Reuse of forestry by-products;
- Promotion of tourism;
- Maintenance of public recreational facilities;
- Safekeeping and protection of areas with high geological and ecological value;
- Conservation of natural and cultural heritage.

In addition, they carry out water-, soil- and landscape-conservation related tasks. For instance, the VERGA Company has created and maintained artificial wetlands to ensure a water supply in the dry Várpalota military training area (Bakony region) and has hired a shepherd to graze the Pannonian grasslands in the section of Varpalota adjoining the village of Hajmasker. These companies are required to be financially self-sustaining, without any subsidy from the Ministry of Defence. Income is derived from the commercial exploitation of the forest timber, from trophy hunting and from renting accommodation to visitors. To achieve their objectives, their mission is to synchronise forest, farm and game management with military activity.

Infrastructure: bases and training areas

The various units of the Hungarian Defence Forces are spread over bases around the country. Often there is a link between these units' bases, which are complexes of barracks buildings and other infrastructure facilities, and a training area in the vicinity where the unit does its field training, live firing and exercises. For instance, the mechanised brigades and battalions based at Nyiregyhaza and Debrecen in the north-east of Hungary generally train at the Liget-legelő MTA, which lies exactly halfway between the two bases. The mechanised infantry brigade based at Tata in north-west Hungary generally trains in Gönyü – Györszentivan MTA.

Important barracks and bases are, besides those above, Szolnok (helicopter base), Hodmezovasarhely, Papa (airfield which is a NATO strategic airlift and air transport centre), Szentgyörgyi Dezső near Kecskemet (Air Force base), Szentendre (central facility for basic training contract soldiers, NCO school).

The largest active military training area is Bakony Combat Manoeuvre and Tactical Training Centre (north-west of Lake Balaton, near towns of Veszprem and Varpalota), which uses the Varpalota training area. The Varpalota MTA (Fig. 6) consists of three distinct sub-areas:

1. A sub-area near Bakonykut village with a size of 6,400 ha, which is suitable for exercises with live firing by artillery, anti-tank and rifle unit exercises; training in radiological and chemical protection and tactical exercises by helicopter units without live firing;
2. A sub-area near Hajmasker village, 8,700 ha, used for manoeuvre exercises without live firing for helicopter and other mobile forces; shooting ranges for firing at fixed or moving targets by missile launchers, helicopters, aircraft and artillery.

The two sites are characterised by forests (limestone oak and beech woods with ash, lime, maple, hornbeam), oak scrub, dry grasslands and karstic dolomite with rich flora including endemics.

3. A sub-area near Ujdörög (west of Veszprem) with a size of 2,400 ha, which is a former tank exercise range; now used for operations training and urban warfare training (it has a mock village) and for exercises with helicopters.



Fig. 6: MTA Varpalota, Hungary. (Dr. K. Höntsch).

Two other large active training areas are:

Taborfalva (between Budapest and Kecskemet): 9,000 ha, including extensive grasslands, used for combat exercises with live firing, helicopters, artillery, armoured vehicles and trucks.

Gönyü shooting range and Györszentiván exercise area (near Győr) have together an area of 1,072 ha. They are used for military purposes including a larger buffer zone, which is forest. The shooting range and exercise area contain one of the few remnants of Pannonic sand habitats left in the Kisalföld; protected because of the military status, others were destroyed by agriculture and settlements.

Altogether, barracks and other base facilities and buildings cover 3,400 ha, while the actual training and exercise areas with their buffer zones cover 42,000 ha.

General environment and nature policy

Within the National Environmental Protection Programme, there are Defence Thematical Action Programmes. These cover water, waste, air pollution and biodiversity. The biodiversity part includes ecological monitoring, work against erosion caused by vehicle use, landscape rehabilitation and Natura 2000 site management. These tasks all fall under the Ministry of Defence Infrastructure Agency, which in fact set up an environment department in 2004 explicitly to carry out the environmental tasks imposed by the National Environmental Protection Programme when this was voted by Parliament in 2003.

Funds for the environmental tasks come from the Defence Action Fund. Each Defence Forces base and training area has its own environment budget, which is mainly used for preventing and remedying pollution. Larger projects are funded directly by the Ministry. Moreover, funds from the 'Biodiversity and Landscape Fund' have been allocated to finance nature-oriented actions in the training areas.

EU accession in May 2004 brought the obligation to apply EU environmental and nature conservation law. After initial strong differences of opinion between the two ministries about how to apply Natura 2000 and Article 6 Habitats Directive to military lands, the Ministries of Defence and Environment agreed that sites will be designated on military land, that joint site visits would register current land use within the Natura 2000 areas and that management plans for these sites will be made.

These 'Defence-Nature Management Plans' lay down nature conservation objectives and measures, based on military use of the site. The goal is nature-friendly military task performance. Nevertheless, the Ministry of Defence and Hungarian Defence Forces feel strongly that military use is the starting point, and nature conservation fits around that, instead of starting from nature so that military use has to fit in wherever nature is not important.

The Infrastructure Agency requested the National Park Directorate under whose jurisdiction the training area in question falls (these Directorates are 'antennae' of the Ministry of the Environment; each is

responsible for a specified part of the national territory), to draw up draft plans. The plans were then discussed with the camp commander, other units and forces using the training area as well as the local forestry company. The plans prepared for the five Natura 2000-designated MTAs list the habitats and species of community interest and the military use and lay down measures and objectives for the next 5-10 years. During exercises, troops are told, on the basis of the plan, where they can go and where not and which different level of restriction applies to different parts of the areas. Similarly, the forest company responsible for the training area will cut out trees growing in open grasslands and heaths as a result of natural succession, if this is what the plan instructs.

At present, over 25,000 ha military land, divided over five military training areas (Varpalota, Taborfalva, Liget-Legelö and parts of two other MTAs), has been designated Natura 2000, mainly for habitats 1530 (Pannonic salt steppes and salt marshes), 6190 (Rupicolous Pannonic grasslands), 6260 (Pannonic sand steppes), 6240 (sub-pannonic steppe grasslands), 9110 (*Luzulo-Fagetum* beech forests) and 91M0 (Pannonian – Balkanic turkey oak – sessile – oak forests).

In all issues relating to environment and biodiversity, the Ministry of the Environment has the right to inspect and check what the military authorities are doing. Moreover, The MoE can, in the worst case, impose financial penalties if there is a serious incident caused by a fault of the military authorities.

The main problems facing nature and biodiversity within Hungarian military estates are the lack of data on species, the spread of invasive species such as *Robinia pseudoacacia*, the high density of game in some areas and the rehabilitation of abandoned infrastructure and polluted former Soviet bases.

Outdoor sports like motocross, 4x4 vehicles and citizens dumping rubbish in military lands are a widespread problem. In 2008, an interdepartmental working group was set up between the ministries responsible for defence, police and local authorities in order to deal with this matter.

Concrete nature conservation activities and decommissioning

Already before EU accession and Natura 2000, there was collaboration between the Hungarian Defence Forces and conservation bodies. For instance, the Taborfalva training area is one of only a few places in Hungary (and Europe) where the endangered snake *Vipera ursinii rakosiensis* occurs (largely because its habitats at Taborfalva have not been destroyed by agriculture thanks to the fact it was a military area). The conservation NGO MME has been leasing 1000 ha military land (Dög-hegy and Göböly-jaras) in buffer zones around the firing ranges since 1994 for monitoring vipers, creating mosaics of suitable habitat by mowing and releasing captive-bred vipers. The Defence Forces retain the right to enter and use the land at any time, giving a few days advance warning. In contrast to the buffer zones, in the central shooting ranges fires caused by shells and explosives are a risk, killing vipers outright and burning off the grass they need for cover. Recent pre-deployment training for missions abroad has increased the occurrence of fires which has resulted in a decrease of the already small population of *Vipera ursinii rakosiensis*. Taborfalva also hosts great bustards (*Otis tarda*), and here the National Park Directorate Kiskunsag has been monitoring the populations and nests.

At the moment the military authorities are successfully ‘going alone’ when it comes to nature restoration projects. They have obtained EU co-finance for two LIFE+ projects, each of which is carried out by a consortium of the Infrastructure Agency, the appropriate Ministry of Defence forestry company and a commercial engineering consultancy. A third LIFE+ project for the Taborfalva MTA was submitted by the local National Park administration in cooperation with the Ministry of Defence in 2010.

The first LIFE+ project, running from February 2009 to July 2014, takes place in the Varpalota Training Area. Its measures are:

- To counteract natural succession, it will remove shrubs and thickets from 600 ha sub-Pannonic steppe grasslands;
- It will restore 720-750 ha of habitat:
 1. Sub-Pannonic steppe grasslands and Pannonic woods with *Quercus pubescens* will be cleared of invasive species such as *Elaeagnus angustifolia*, *Ailanthus altissima* and *Robinia pseudoacacia*;
 2. Planted *Pinus nigra* forest will be transformed into Pannonic woods;
 3. Abandoned quarries and military buildings will be recultivated to recreate sub-Pannonic steppe grassland (4 to 5 ha).

- Pannonic woods with *Quercus pubescens* and medio-European calcareous scree will be protected against game damage;
- Special measures to increase populations of the rare plant *Serratula lycopifolia* and of the Saker falcon (*Falco cherrug*) and bats, will be implemented;
- An effective fast-response fire emergency system will be constructed (firebreaks, fire emergency roads, water catchment pool) to reduce the frequency and impact of wildfires caused by military activity. These suppress *Quercus pubescens* and *Quercus cerris* species whilst stimulating the spreading of invasive *Rubus* species;
- Installation of gates on inbound roads to limit unauthorised traffic, installation of information and notice boards and an educational trail.

In July 2009, a second project was approved for LIFE+ co-finance by the European Commission. This project takes place in the Gönyü shooting range and Györszentiván exercise area and will run from January 2010 to December 2013. Its measures:

- The main problems are invasive species such as *Robinia pseudoacacia*, *Ailanthus altissima*, *Asclepias syriaca*, *Solidago gigantea*, *Elaeagnus angustifolia* and *Calamagrostis epigejos*. These will be eradicated from 685 ha;
- Shrubs and thickets will be removed from sand grasslands to reverse natural succession;
- The accumulation of dead leaves and plant parts leads to nutrient accumulation, which degrades the Pannonic sand steppe habitat. Previously grass fires renewed these ecosystems, but from the early 1990s the frequency of grass fires decreased due to less intense military use. To counteract nutrient accumulation, the project will carry out deliberate grassland burning to imitate the previous military use, conducted according to a mosaic-like spatial pattern (two blocks of 50 ha each per year) which eventually leads to the renewal of the habitat and dispersion of valuable and endangered species characteristic of sand steppes;
- Because past military use had included the transformation (levelling) of natural landforms, yet the Pannonian sand ecosystems require a characteristic geomorphology, artificial sand dunes will be built and planted with endemic plant species in order to restore the unique grassland habitats;
- Finally, illegal rubbish dumps will be removed and cultivated, and earthworks carried out to make access for motorbikes difficult and unattractive. Gates will be installed on inbound roads to limit unauthorised traffic.

The conversion of the large pre-1990 Hungarian Armed Forces to a smaller professional defence force, and the departure of the Soviet forces, meant that barracks and training areas became surplus. Although this has been, to some degree, offset by the more intense training needed for the professionals, by the international exercises held under NATO aegis and by the visits of units from other western and central European Armed Forces to do exercises in Hungarian training areas.

When a facility is decommissioned, an environmental assessment is first done. The most valuable areas for biodiversity are transferred to the National Park Directorates. Other areas can be sold off.

The effects of cessation of military activity and decommissioning can be illustrated by the example of the imperial eagle (*Aquila heliaca*), a rare bird restricted to central Europe. In the still active Taborfalva military training area, because the grassland is kept short and open by the military use (such as fires) and by grazing, many sousliks (*Spermophilus citellus*) occur, which in turn support a small stable population of *Aquila heliaca*. In contrast, Markaz-Abasar, a military training area in the Matra mountains, used to have large souslik populations supporting imperial eagles, but since military use stopped in the early 1990s the grass has grown longer and the sousliks have declined. The artillery testing range in Miskolc-Kisgyör (eastern Bükk), connected to the former DIGEP armaments factory, also hosted nesting imperial eagles, but since the factory was closed in the early 1990s and the artillery range was no longer off-limits, forestry and recreation has been increasing and causing disturbance for the eagles.

Conclusion

The Hungarian military estates contain several rare habitats and species characteristic for the Pannonic biogeographic region, which have often enough been preserved on the estates because of the military status and use. Thus, Hungary provides good examples of military use being beneficial for habitats and species, and cessation or reduction of military use having negative ecological consequences. Hungary also

provides good examples of large-scale nature restoration projects in military areas. On both counts, therefore, it can be seen as a pilot for other countries, notably in the SEE.

3.3 Poland

Post-1990 policies and transformation of Armed Forces

Poland joined NATO's Partnership for Peace in February 1994. The first-ever exercises by NATO units exercising outside NATO territory were held in Biedrusko MTA in September 1994. Poland joined NATO as full member in 1999 and has been participating in all important NATO missions and stabilisation forces in Kosovo, Afghanistan or the Mediterranean Sea.

It was also an early member of European Security and Defence Policy (even before EU accession) and has taken part in three out of four EU military operations so far. Poland participates actively in research programmes of the European Defence Agency and in battle groups to enable EU rapid reaction to crisis. The Polish Armed Forces are already in a battle group with the Lithuania and Latvia, are currently building up a second battle group with France and Germany. A third battle group is planned with the other Visegrád countries.

Consequently, during the 1990s and early 21st century, Polish Armed Forces reorganisation and modernisation efforts were focused on attaining compatibility with NATO forces at all levels as well as on adapting Polish armaments and equipment to NATO standards. This process of adapting the Polish Armed Forces to NATO requirements included several sub-programmes, particularly related to communication, electronic warfare and air defence.

The disused and often polluted infrastructure left by the Soviet Armed Forces had been effectively cleaned up by 2005. The Polish Navy is however continuing to collaborate in multinational efforts to find and remove mines and other explosive devices from the two World Wars from the seabed of the Baltic.

Currently, the Polish Armed Forces are going through a further process of transformation to adapt to new challenges and threats, conform to the decisions of the NATO Summits of 2002-2006. The need for this transformation has been underlined by the experience gained in Afghanistan, where Poland is present in the NATO stabilisation force with 2,000 military. The 'Polish Security Policy and Defence Strategy' and 'Vision of the Polish Armed Forces 2030' underpin this transformation. According to the Vision, the Armed Forces should in future focus on two roles:

1. Rapid reaction forces to deal with crisis, even in places far from Poland;
2. Stabilisation forces to protect and support peace-keeping and reconstruction efforts.

This means the Land Forces should overall become highly mechanised, flexible and mobile, effectively like the current air-mobile units in the army. The Air Force will be very important. Better weaponry means less manpower, but what there is, will be more highly trained. The future composition of the Armed Forces should be 50-60% voluntary soldiers under contract, 30% NCOs (responsible for training the soldiers) and 10-15% officers.

Effects of transformation on need for training areas

The transformation under way involves phasing out compulsory military service and conscription (which process is now completed) and shifting to Armed Forces consisting of fully professional officers and NCOs, and privates under contract. The disappearance of the conscript forces means less basic training, i.e. less need for training areas. On the other hand, the professional forces will require a high level of training to meet the targets of flexibility as well as mobility and to be ready for the missions led by NATO, EU or UN. So overall, there may not be a major decommissioning of training infrastructure.

The 'Vision of the Polish Armed Forces 2030' explicitly says that training and education shall be extremely important. Training and exercises must always be adapted to lessons learned from participation of the Armed Forces in operations, and will be integrated with the NATO system of training through the adoption of uniform standards and through taking part in international exercises. There are two main pillars in the military education system: training centres for particular types of Armed Forces (these will

prepare soldiers and NCOs) and facilities of higher education (military academies, school, etc.) for officers.

For the DBU project, we are interested in those training facilities used for outdoor exercises and training, live firing, etc., as these are the sites which cover large areas of more or less natural landscape. However, it must be noted that the total training infrastructure also includes many buildings without any nature attached, such as schools, indoor firing ranges, sports facilities or simulators. Moreover, according to the Vision document the intention is to use modern IT systems and technologies in training infrastructure, notably simulators to generate virtual battlefield reality and operational situations. This will reduce the need for outdoor exercises and training. Nevertheless, although more expensive than simulators and paper exercises, live exercising in the outdoors will remain an essential part of overall training, according to the 'Vision of the Polish Armed Forces 2030'.

An additional aspect that favours the maintenance of the existing training areas and firing ranges is that units from western European NATO countries such as the UK and the Netherlands are coming to Poland because some of its training areas are large enough to permit exercises (such as live firing from Apache helicopters) which are barely possible in their own, smaller training areas.

Training infrastructure

The Polish Armed Forces are among the largest in CEE and SEE (90,000 professional personnel). Therefore, they have an extensive network of military bases and training facilities.

The Polish Ministry of National Defence (MOND) has a Military Education Department and an Infrastructure Department. Below it, at the level of the General Staff of the Polish Armed Forces, there is a Training Directorate as one of the Directorates within the General Staff. The Inspectorate for Armed Forces Support, which is under the General Staff, is responsible among other things for the infrastructure and logistics. The country is divided into 10 Military Infrastructure Directorates (Bydgoszcz, Gdynia, Krakow, Lublin, Olsztyn, Szczecin, Wrocław, Zielona Gora, Poznan and Warsaw), each of which is responsible for managing, renovating and exploiting the military infrastructure.

The Land Forces (Army) are composed of armoured and mechanised forces, air-mobile forces, missile and artillery forces and air defence forces as well as divisions for engineering, communications and IT, reconnaissance, logistics and electronic as well as chemical warfare. The Land Forces Command, located in Warsaw, is split into two departments: 1) Planning and Command 2) Training department. The Training Department is in charge of training centres and NCO Schools at Zegrze, Torun (artillery), Poznan, Wrocław, Kielce, Grudziadz and Ostroda. As explained in the previous sections, not all of these training centres include open-air sites – they may consist exclusively of buildings and barracks.

Much more relevant for the DBU project are the sites used for live exercises and as firing ranges ('polygons'): Bemowo Piskie (which includes Orzysz Natura 2000 site), Żagań-Swietoszow, Nowa Dęba near Rudnik, Wędrzyn, Biedrusko and Drawsko Pomorze.

The Polish Air Force Command, also located in Warsaw, has two major divisions. The Chief of Staff Division is responsible for planning, command & control, communications and personnel. The Training Division is responsible for the training of Air Force personnel and of all aviation personnel from the Navy and Land Forces. Like the Land Forces, the Air Force Training Division operates an Air Force academy and officer/NCO schools at Deblin and Koszalin, and (more relevant for the DBU project) two exercise and firing ranges: Ustka (near Slupsk) and Nadarzyce.

The Navy has main bases at Gdynia (Oksywie flotilla base, Babie Doly naval aviation brigade) and Swinoujscie, which both include training facilities.

Finally, the Special Forces commando regiment has its base and training facilities at Lubliniec.

For the record, there are two international military training centres in Poland: The NATO Joint Force Training Centre (JFTC) in Bydgoszcz is supporting the transformation of NATO forces by providing training (and experimenting with new forms of training), especially for ongoing operations (pre-deployment training). It targets trainers, commanders and officers. JFTC promotes NATO standards and procedures, provides observers for exercises, helps design exercises and draws lessons for future training

from past exercises and training modules. The Multinational Corps north-east Headquarters in Szczecin trains the command and staff of the corps, which includes Polish, Danish, German and the Baltic units. Both these training centres consist of buildings in an urban setting where meetings, seminars and simulations are held.

Environmental and nature policy

Environmental policies and strategies seem to occupy a less prominent place in overall defence policy and Armed Forces management than in say, Latvia or Estonia. There were no representatives of the Polish military or MOND at the conferences about nature conservation and military use held between 2004 and 2007 in Salisbury, Brussels, Cesis and Vienna. The Ministry of Defence has organised some national level discussions on the management of designated MTAs in 2009 but it is still unclear how they intend to proceed in the future. While NGOs were also invited to these discussions, in general the Ministry is not very much open for cooperation with civilians and NGOs.

However, part of the military training areas was designated Natura 2000 by the Ministry of the Environment. It seems this was done without much prior consultation of the Ministry of National Defence, which has caused uncertainty among camp commanders as to what this will mean for their task of organising and carrying out training exercises). These designated military training areas were inventoried around the year 2006 by biologists contracted by the Defence ministry resulting in a study with preliminary results¹. The inventorisation of Natura 2000 areas in the following years (for example inventorisation of forested Natura 2000 sites) has delivered more information about natural assets in Polish MTAs. The next step is to prepare management plans. The intention is to have management plans for all Natura 2000 sites within the military estate. Because the state forestry service is legally owner of the land on which the training areas for live exercises and firing are located, it will be responsible for carrying out the management plan and managing the Natura 2000 values.

Most exercise areas and firing ranges are dominated by forests and open heathlands.

Decommissioning

In general, military training areas located within urban areas were privatised and sold to investors, who carried out various investment projects there, while those located in the open countryside were transferred to the state forestry service.

Officially the forestry service was given the task of afforesting the decommissioned training areas and firing ranges, i.e. planting trees on the open heath areas which had been formed and maintained by military activity. However, it is not an easy task to grow forest on such large open areas. So, because the preservation of biodiversity is another one of the forest service's statutory tasks, NGOs were able to persuade it to leave several heath areas open. In fact, Polish NGOs have been working together with the forestry service to develop management plans for at least two decommissioned MTAs which stipulate which open areas are too valuable ecologically to afforest and must be kept open, and which areas can be planted with trees. There is also a joint project in a third decommissioned site to find economically viable ways (heather honey, mowing heath to produce brush and thatch) to keep heath open, now that the recurring management by military use is no longer there².

Conclusion

Poland is a strategically important country, because of the size of its MTAs and the relative lack of overt interest for nature conservation so far from the side of the military. Because Natura 2000 is now obliging the military to take conservation seriously, this is a good moment to involve the Polish Armed Forces and show them that it is possible to combine exercises and live firing with conservation. What is happening in decommissioned MTAs is interesting and worth following up. Therefore, contacts with the appropriate Polish NGOs and with the state forestry service (which is officially responsible for the management of all active and decommissioned MTAs) should be made, as they are clearly important partners.

¹ The inventorisation took place in late summer of 2006 over a few weeks time after an unusually dry summer. Biologists claim that the results cannot be considered complete and that inventorisation should be repeated in the main growth period of plants.

² Example described in detail in the following publication: http://www.ceeweb.org/publications/english/N2000_ES_eng.pdf

3.4 Slovakia

History and context of military

In former Czechoslovakia, 2/3 of defence property (bases, training areas) and equipment (vehicles, artillery, etc.) was, for strategic and other reasons, located in the western part of the country (the future Czech Republic). In 1992, the Czechoslovak Armed Forces were split between Czech Republic and Slovakia, which meant that large amounts of equipment were transported east to Slovakia. The new Slovak Armed Forces installed themselves in the bases and estates which were located in their territory, but had largely to build themselves up. Thus, a disused airfield was taken back into use and became the Slovak Air Force base Presov.

On January 1 1993 the Armed Forces of the Slovak Republic officially began with 53,000 staffs divided between Ground Forces and an Air Force. During the first years, there was a radical downsizing of the forces inherited from the old Czechoslovakia: from 995 to 478 tanks, from 1375 armoured personnel carriers to 683, from 1053 artillery to 350 all between 1993 and 1995.

During the 1990s the Armed Forces were focused on defending Slovak territory against any attack, so that the emphasis was on forces with large reserves, available through compulsory military service (conscription), and structured according to a network of military districts and garrisons.

With approaching NATO membership, a new Defence Strategy and Military Strategy (2001) redirected the Armed Forces towards qualitative improvements and integration with NATO allies. This transformation process did not go smoothly as there were financial and other constraints, schedules and plans could not always be kept to in practice. Slovakia joined NATO in May 2004, the same month it joined also the EU.

After a Comprehensive Defence Review (2005), a new Defence Strategy of the Slovak Republic adopted in September 2005 replaced the previous strategies, and is what is being implemented (via Long-term and Mid-term Development Plans) at present. Its main elements are:

- The former primary duty of the Armed Forces to defend the Slovak state territory is extended by an obligation, besides the defence of the Slovak Republic, to contribute to the defence of its allies (NATO) and jointly prevent conflicts and settle crisis situations in the world;
- This means the Armed Forces must be completely professional, flexible, capable of quick deployment and mobility and must be able to commit to a wide spectrum of operations in different conditions;
- Therefore, they must be well-trained, thanks to intensive training compliant to NATO standards, joint exercises of combat and support forces, participating in and using experience of international exercises, use of simulation technology, modernised training facilities, making effective use of the training areas and land provided by the state;
- This implies and entails building and maintaining an adequate defence infrastructure. Here a combination of state and private sector activity is promoted.

The target is that by the end of 2010 the Armed Forces ought to be able to contribute fully to NATO collective defence and EU defence and be able to participate in two concurrent operations abroad. By the end of 2015 they ought to be able to fully contribute to multinational joint operations outside Europe. The Armed Forces of the Slovak Republic are already active, and will stay active as in Afghanistan under NATO command, in Bosnia-Herzegovina under EU command and in Cyprus under UN command, as well as in Kosovo. Therefore, although conscription has now been phased out, this does not mean that there is less need for training areas. On the contrary, the professional forces will need intensive training, and Slovakia now also hosts exercises organised in a NATO context. Some training facilities are being upgraded:

- Novaky: a NATO centre of excellence for training in Explosive Ordnance Disposal (EOD), also for use by forces from other NATO countries, was established here in 2007;
- Zemianske Kostolany: as a training and testing ground for chemical, biological and radiological matters, it too is a centre of excellence and one of only a few such facilities in Europe;

- Lest: at this military training area, a mock village (Jakub Village) was built in 2007/08 for training purposes – ranging from preparation for deployment in Afghanistan to exercises in fire-fighting and civil emergency – while the former Soviet military housing estate in Lest, with buildings up to 7 storeys tall, will be converted to a training facility for urban warfare. A new shooting range for exercises with convoys is also planned.

Nevertheless, the transformation towards relatively small but multifunctional forces able to be deployed rapidly, does mean that some of the ‘classic’ units will lose out. Moreover, in 2008 budgetary constraints (financial crisis!) and reviews of internal efficiency led to political decisions to reduce staffing levels in the Ministry of Defence and the General Staff and to make the medical and recreational departments of the Armed Forces leaner.

Military infrastructure and training areas

On January 1 2000 the Ministry of Defence and General Staff of the Armed Forces were merged together into an integrated Ministry of Defence, based in Bratislava.

The Armed Forces of the Slovak Republic are divided into Ground Forces (headquarters at Trencin), Air Force (headquarters at Zvolen) and Training and Support Forces (headquarters at Trencin). The Training and Support Forces (which only exist since 2002) are responsible among others things for logistics, training infrastructure, medical and recreational infrastructure. Within the overall structure, there is a Training Command (based at Martin) under which the training aspects fall.

The Armed Forces operate an extensive network of infrastructures across Slovakia:

- Garrisons and bases for Ground Forces units: Levice, Martin, Presov, Trebisov, Topolcany, Michalovce (mechanised battalions), Zelina (Special Forces), Bratislava, Roznava (artillery);
- Air force bases: Sliac, Presov, Kuchyna;
- Air defence bases: Nitra, Zvolen;
- Logistics facilities: Banska Bystrica, Poprad, Hlohovec, Kremnica, Cerenany, Hronsek, Nemecka, Nemsova, Nove Mesto nad Vahom, Sklene, Rasov;
- Repair facilities: Moldava nad Bodvou, Trencin, Novaky;
- Signals units: Nove Mesto nad Vahom, Ruzomberok, Vlkanova;
- Military technical testing institutes: Liptovsky Mikulas, Zahorie;
- Military hospitals: Kosice, Ruzomberok, Banska Bystrica;
- Military academy: Liptovsky Mikulas;
- Training facilities: Martin, Novaky (Explosive Ordnance Disposal), Zemianske Kostolany (chemical, biological and radiological warfare and emergencies), Kamenna Poruba (shooting range), Biela Hora, Municneho, Kuchyna (bombing range for Air Force training), Javorina, Lest, Zahorie, Valaskovce. These last four are large sites, which are covered by forests, open grasslands and dunes are suitable for a wide range of exercises. Lest is in Slovakia the most frequently used military training area for manoeuvres and exercises.

The total area of all the active training areas is over 90,000 ha. The largest is Javorina near Kezmarok in the Tatras (32,000 ha) but it is to be decommissioned. The three other large areas are Zahorie (27,500 ha) in the west near Bratislava, Lest (14,500 ha) near Zvolen and Valaskovce-Vihorlat between Kamenica nad Cirochou and Michalovce in the far east (16,000 ha).

The non-military aspects of the training areas, i.e. the management of forests, grasslands, game, etc., is carried out by the Military Forests and Estates of Slovakia, with headquarters in Pliesovce near Zvolen and three branch offices. Its task is to manage the forests and agricultural land in the military training areas ‘effectively and ecologically’, reaching ‘economic effectiveness while preserving and improving the protective and public beneficial functions of forest ecosystems’. It plans to apply for FSC certification for its forest exploitation in 2009. In order to generate revenue, the Military Forests and Estates fell timber (on the basis of forest management plans it draws up), harvest fish, rent out accommodation to visitors and sell licenses for trophy game hunting and sport fishing.

Practical conservation work, collaboration with NGOs and environment agencies

Slovakia is interesting because it appears that here the obligation to designate Natura 2000 areas as a result of Slovakia's accession to the EU in May 2004, has been a powerful catalyst in bringing together environment agencies, NGOs and military authorities to starting nature conservation work on military land.

In the 1990s, after the foundation of the Armed Forces of the Slovak Republic, cooperation began between military and environment authorities, mainly at a local level. An example of this was a project to restore the original hydrological regime in a section, six kilometres long, of the Rudava River, which flows through the Zahorie military training area.

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. Cooperation with NGOs also began: the military authorities issued entry permits to NGO experts to do inventories as part of the Natura 2000 preparation process and provided the NGOs and environment authorities' forest data or land data. Within the military training areas, two SPA (total area 11,800 ha) and 11 SCI (total area 7,800 ha) have been designated. 10 of these SCI, covering about 5,200 ha altogether, are located within the Zahorie MTA.

Zahorie has been the scene of two nature restoration and management projects, co-financed by EU-LIFE (Fig. 7). The first one, lasting from 2005 to 2009, is a partnership between the State Nature Conservancy, the NGO BROZ, the Military Forests and Estates of the Slovak Republic and the Slovak Water Management Enterprise. This project covered the Zahorie district as a whole, but part of the action took place inside the Zahorie military training area. Thus, urgent measures to improve the conservation status of eight wetlands were one of the main project actions; four of these eight wetlands were located within the military training area. The same applies to the other project actions:

- Revising forest management plans to replace practices like large clear-cuts and reforestation with pine monocultures by more ecologically-oriented measures;
- Restoring degraded floodplain meadows which lie along the eastern boundary of the MTA and ensuring regular mowing as follow-up to the restoration;
- Constructing a fish bypasses around a weir on the Rudava river near Velke Levare at the western end of the training area (this bypass will allow free migration of fish upstream into the military training area).

All these actions dealt with sites that were not directly used for military training, but lay within the buffer zone around the exercise areas.



Fig. 7: MTA Zahorie, Slovakia, May 2007. (Dr. K. Höntsch).

The second project does however deal directly with land used for military training and exercises. It lasts from September 2006 to July 2011 and exclusively targets the heaths and dunes which make up the firing ranges and exercise areas inside the Zahorie MTA (Fig. 8).

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 (felling invasive trees like *Robinia pseudoacacia*, sod cutting, controlled burning) against ecological succession;
- Build a framework for lasting recurring management after the project;
- Raise awareness amongst military staff and local communities on nature conservation.



Fig. 8: MTA Zahorie; Slovakia, May 2007. (Dr. K. Höntsch).

This project is also a partnership, between State Nature Conservancy, NGO BROZ and the Armed Forces of the Slovak Republic. Here the military authorities are the lead partner, directly responsible to the European Commission.

Outside Zahorie, an area of untouched lime-maple forest, inhabited by bears and wolves, in the Valaskovce military training area was made into a reserve in 2008 as a result of collaboration between the Armed Forces, Military Forests, Ministry of the Environment and the NGO Wolf.

In collaboration with NGOs and environment agencies, the education and training of military personnel in nature conservation matters is being continued and the nature value of the military training areas is being communicated to the general public. In 2008 an informal working group on nature conservation in military training areas was launched, involving Ministry of Defence, Ministry of the Environment, State Nature Conservancy and NGOs, in order to share information and practical experience.

Decommissioning

Acts Nrs. 172/2004 and 657/2005 stipulates how properties of the Ministry of Defence which are no longer needed can be transferred to the ownership of local authorities and municipalities. These can be buildings and facilities, but also the land surrounding these facilities. Military-used land which is state forest property or which comes under the agricultural land fund, cannot be transferred to local authorities.

The largest training area, Javorina, is a former Soviet training area, in the mountains of north-eastern Slovakia. It is the largest military estate in Slovakia (32,000 ha) and parts were infested with ammunition and dumps. These were cleared as the site, according to decisions taken back in 2005, is scheduled to be decommissioned and handed back to the former private owners (about 3,000). Since most of Javorina is forested, the private owners' main interest will be in exploiting the forests.

Conclusion

With Latvia and Hungary, Slovakia appears to be the CEE/SEE country where practical nature restoration and management work within military areas, and the collaboration between defence and environment authorities and NGOs, is most advanced. Thus, these three countries can act as role models and examples. From the viewpoint of the Naturstiftung David and the DBU, the scheduled decommissioning of the Javorina military training area could be of particular interest, making Javorina a potential location for a follow-up project.

4 SEE countries

The survey of South Eastern Europe comprises 13 countries and Transnistria (Fig. 9).



Fig. 9: Map of the 13 SEE countries.

4.1 Albania

After the regime change in 1990/91, Albania underwent a period of social and economic difficulties which included, in 1997, a crisis within the Armed Forces when barracks and stockpiles of weapons were even plundered by mobs of civilians. After 1999 Albania provided logistical assistance and transport routes for KFOR in Kosovo. A NATO Operational Headquarters was established in Durres until 2006 to supervise this logistical assistance. Albania has been participating in NATO missions and exercises since 1995 and formally joined NATO in April 2009.

In 2002, after several major re-equipment programmes, the Albanian Armed Forces launched a 10-year reform programme, sponsored and supervised by the US Department of Defence, to become technologically advanced and fully professional by 2010. This means reducing and thoroughly modernising the Armed Forces (which counted 30,000 troops in 2002) and getting rid of all obsolete and

surplus equipment. At the end of the process, the Armed Forces should consist of about 13,500-14,500 troops, trained to NATO standards.

One of the most important conditions to fulfil to achieve NATO integration was increasing the defence budget, which reached 2% of GDP in 2008.

The Ministry of Defence has several departments, of which are relevant:

- Administration and Services Directorate;
- Its responsibilities include drawing up annual infrastructure maintenance plans, implementing them, ensuring the infrastructure and equipment are used efficiently and providing appropriate working and training conditions;
- Economic and Privatisation Directorate;
- Its responsibilities include the documentation of all the Armed Forces properties and selecting the properties and objects that will serve for housing and training the Armed Forces according to the development and modernisation strategies. It also takes care of leasing, renting out or privatising Defence properties.

Under the Ministry of Defence is the General Staff of the Armed Forces of the Republic of Albania, which coordinates the Joint Forces Command, the Training and Doctrine Command as well as the Support Command. In November 2006, the structure of the Albanian Armed Forces was completely reformed, and the three Commands were introduced. The Joint Forces Command includes the Rapid Reaction Brigade (a mechanised infantry brigade), the Commando Regiment, the Navy Brigade, the Air Brigade and the Area Support Brigade. The Support Command provides support and logistical functions for all units. The Training and Doctrine Command lays down the procedures and objectives for military training and provides actual training.

Armed Forces units are based amongst others at Tirana, Kukes, Durres, Shkodër, Zall-Herr. Field training exercises are held at Qaf Molla (east of Tirana), Vau-Dejës (east of Shkodër), Zall-Herr and Pash Aliman.

Decommissioning

Concerning decommissioning, the Economic and Privatisation Directorate is responsible for disposing of premises which are no longer needed. The Ministry has decided that that part of premises which is no longer needed but is located inside urban zones, will be used preferably for housing military personnel. The main part of the unused premises is in rural areas, far away from the urban zones, and there is no real interest in them, neither for privatising nor for housing. However, that part of the premises along the sea coast is attracting interest from people and companies both inside and outside Albania. The Albanian seaside is still largely unspoilt and undeveloped, and the infrastructure of the Armed Forces is located in the most attractive areas along the Adriatic and Ionian Seas. The policy of the Economic and Privatisation Directorate is to convert some of these coastal military zones into recreation areas for the military personnel and their families. It is also interested in joint ventures and co-operation for making maximum use of these facilities for recreational purposes.

Conclusion

It is not clear whether the Ministry of Defence and the Armed Forces have any kind of environmental policy, or what nature values might occur in the military estates. However, the plans for the future use of military properties along the Albanian coast should be investigated in more detail, as there could be an impact of construction and recreational use on sites which appear to be very attractive from a landscape point of view. The reduction of the Armed Forces will lead to less training in quantitative terms, but this could be offset by more intensive training (to meet NATO standards) of the remaining forces.

4.2 Belarus

Following the dissolution of the USSR and the full independence of Belarus, the Supreme Soviet of Belarus passed resolutions in September 1991 and January 1992 on the formation and deployment of the Armed Forces of the Republic of Belarus. Practical steps followed these declarative resolutions. On March 18 1992 the parliament passed a resolution demanding that the government ‘start the formation of the

Armed Forces of the Republic of Belarus as of March 20 1992' and 'to submit to the Supreme Soviet for approval the suggested structure of the Armed Forces, their size and order of their material and technical supplies'. On November 3 1992, Belarus passed a law 'On the Armed Forces of the Republic of Belarus' defining the status, structure and guiding principles of the Armed Forces. This law was amended twice in 1996 and 1999, but on the whole retains its initial contents. All service personnel in the former Soviet units on Belarusian soil were required to either take an oath of loyalty to Belarus by January 1 1993, or leave. The Belarus Armed Forces were thus built up from these former Soviet units. The transformation of the ex-Soviet forces into the Armed Forces of Belarus was completed in 1997. The number of soldiers was reduced by 30,000 and leadership and military formations were restructured.

A new round of reform began with the Decrees of the President of the Republic of Belarus from November 2001 confirming programmes for the reform of the Armed Forces between 2001 and 2005, a plan for development of the Armed Forces until 2006 and a concept for the development of the Armed Forces until 2010. These reforms have further adapted the Belarus Armed Forces to modern security challenges and streamlined it.

Another Decree in November 2001 confirmed the 'Concept of Territorial Defence of the Republic of Belarus'. This is the military doctrine of Belarus. It shows that training is considered to be important and contains, among many other provisions, the following:

- 'Improvement of quality of the Armed Forces' operational and combat training, other troops and military formations, military education, training of personnel and reservists, all types of supply of forces';
- 'Increase of efficiency of the system of operation, repair and maintenance of armament and material'.

Belarus has participated in NATO's Partnership for Peace Programme since 1997 but has not expressed any intention to join NATO. Instead, it has a close partnership with Russia. Much of the air defence system is integrated into the Russian defence network, and in 2006 Russia and Belarus signed an agreement to create a unified air defence system.

Structure, training and decommissioning

The Ministry of Defence of the Republic of Belarus supervises the General Staff which has four elements: Army, Air Force and Air Defence Force, Logistics Elements of the Armed Forces (logistics, medical, it includes a body for the administration of military infrastructure) and Combat Support Elements of the Armed Forces (reconnaissance, engineering, signals, NBD defence, etc.).

The total personnel of the Armed Forces is 73,000 (a reduction to 60,000 is planned), of which a large share are conscripts from compulsory military service. Conscripted means 12 months service for young men with higher education and 18 months for those without. Because of declining numbers of Belarusians of conscription age, the importance of professional contract soldiers is increasing steadily.

There is also a network of Territorial Defence forces across the country.

A major reorganisation in December 2001 produced two operational-territorial commands, formed from two former corps headquarters. All Belarus air and Ground Forces are now grouped within these two commands: the Western Operational Command at Hrodna (Grodno) and the North-western Operational Command at Barysav (Borisov). Nowadays the Army consists of infantry, mechanised, artillery and missile brigades. Major bases are at Hrodna, Minsk and Slonim. The Air Force has two fighter/interceptor bases and one transport aircraft base.

For logistics, there is a network of weapons and equipment storage bases (Brest, Baranavicy, Zaslonovo). These are often the bases of Soviet tank divisions which have now left or been disbanded, so that such storage bases may adjoin former field training areas.

The Suvorov Military Academy at Minsk is the central military education facility, training officers for practically all types of service. There is also a unified field training centre.

The various reforms of the Belarus military since 1992 have led to surplus equipment and infrastructure. For instance, the base of the former Soviet 8th Guards Tank Division at Marina Gorka or the 193rd Tank Division at Babrujsk, both of which were Belarus Armed Forces storage base from 1993 onwards for a while, but are now disused. There are Decrees of the President of the Republic about the disposal of state property (May 1995, January 1996).

Conclusion

More information is needed about the active training area(s) in Belarus and about the various former Soviet bases which are no longer used (except perhaps as storage bases). Are they relevant for nature conservation? If they are, the next question would be if the Belarus MoD and Armed Forces are interested in any collaboration.

4.3 Bosnia and Herzegovina

After the combats and tragedies of the 1990s, Bosnia and Herzegovina has been gradually settling into a more stable situation, although it remains a complex country with a delicate internal structure. The Republic of Bosnia and Herzegovina, which was the original entity emerging from Yugoslavia in 1992, broke up into a Serbian part (Republika Srpska), a Croatian part (Herzeg-Bosnia) and the Bosniak (Muslim) rump of the Republic during the 1992-95 civil war. In 1994 the Croatian and Bosniak parts merged to become the Federation of Bosnia and Herzegovina, which was joined after the implementation of the Dayton Accords in 1997 by the Serbian part. Consequently, the country of Bosnia and Herzegovina now consists of two distinct political entities: the Federation of Bosnia and Herzegovina (centre and west) and the Republika Srpska (north and east, centred on Banja Luka), separated by the Inter-Entity Boundary Line.

In 1995/96, a NATO-led international peacekeeping force (IFOR) of 60,000 troops served in Bosnia to implement and monitor the military aspects of the Dayton agreement. IFOR was succeeded by a smaller, NATO-led Stabilisation Force (SFOR). The number of SFOR troops was reduced first to 12,000 and then to 7,000. SFOR was in turn succeeded in 2004 by an even smaller, EU-led force (EUFOR, operation Althea).

Initially each of the two entities had its own Armed Forces, inherited from the civil war period. After some delays, the Armed Forces of the Federation and of the Republika Srpska were integrated in January 2006 as the new Armed Forces of Bosnia and Herzegovina under a single Ministry of Defence.

In July 2001 the Presidency of Bosnia and Herzegovina announced its commitment to see the country included in the Partnership for Peace and for its integration into NATO and EU collective defence structures. This implied, as the Presidency acknowledged, the implementation of reforms in the defence system and the reorganisation of the Armed Forces. Since then, the government has been making strenuous efforts to achieve internal stability and create the conditions for a credible candidacy for NATO integration as well as launching the military reform process. As part of this effort, a Defence Reform Commission published a report in 2005 with recommendations for the reform which is now under way. The Defence Planning Guidelines steer this reform.

Bosnia and Herzegovina is since December 2006 a member of the Partnership for Peace and it is implementing guidelines and policies to make its defence forces compatible with NATO standards.

Because of the recent armed conflicts the country is littered with unexploded munitions and mines; clearing them and de-mining is still an important task for the Bosnian military.

Structure

The Ministry of Defence in Sarajevo has, among others, a Sector for Policy and Planning within which there are:

- Department for Analysis and Assessment, which analyses and assesses the defence activities and defence needs;

- Department for Planning and Programming, which develops work plans and programmes;
- Department for Structure and Organisation of the Armed Forces, which is responsible for the organisation, structure, and development of the Armed Forces of Bosnia and Herzegovina.

The MoD has also a Sector for Procurement and Logistics within which there are:

- Department for Policy, Planning, and Logistical Operations, which among others develops plans for equipping and modernisation of the Armed Forces;
- Department for Real Estate and Infrastructure, which develops policies and guidelines for management of facilities and infrastructure and manages the real estate and infrastructure owned by the Armed Forces;
- Department for Contracting, Procurement and Sale, which among others is responsible for the sale and disposal of any surplus and decommissioned military equipment and infrastructure.

Within the Joint Staff of the Armed Forces of Bosnia and Herzegovina the Operational Command for Resources and the Support Command would be the most relevant for the management of defence estates and infrastructure.

The Armed Forces of Bosnia and Herzegovina have about 10,000 active troops and 5,000 reserves. It is a professional army as conscription was abolished in 2006. It consists of Ground Forces (infantry, artillery, mechanised armour, Special Forces) and an Air Force.

The main bases are at Tuzla (infantry, armour, Air Force, air defence), Banja Luka (support command, infantry, Air Force, air defence), Sarajevo (Air Force, air defence, logistics), Dobož (logistics, artillery), Mostar (artillery) Zepce (artillery), Bugojno (de-mining battalion), Butilama (military police). Infantry bases also at Bihac, Bijeljina, Bileca, Capljina, Kiseljak, Livno, Orasje, Prijedor, Ustikolin and Zenica.

The Training and Military Education Policy of the Armed Forces is the document which lays down the fundamental rules and objectives of training. The main combat training centre is at Banja Luka; Butila is another of the field training areas. As a result of the Partnership for Peace, international exercises are now being held in Bosnia, e.g. at the Kozara Barracks in Banja Luka during summer 2009.

Conclusion

More needs to be found out about the situation with training areas and other military estates inside Bosnia and Herzegovina: it is a large country with impressive landscapes. Thus, there is a strong likelihood the military estates contain interesting natural areas. The internal situation in the country is however complicated and the Armed Forces are undergoing extensive transformation.

4.4 Bulgaria

Bulgaria joined NATO as full member in April 2004. Its Armed Forces, which had over 200,000 troops in 1989 with 1500 tanks and hundreds of artillery and missiles, have been undergoing transformation since the end of the 1990s, to align themselves to NATO and to the Common European Security and Defence Policy.

After the country became a NATO member, the Ministry of Defence began a new downsizing, modernisation, and reform programme known as PLAN 2004, formulated after a Strategic Defence Review. This programme will result in smaller Armed Forces of around 50,000 personnel, based on a rapid reaction force and two additional corps headquarters, all with subordinate brigades. Compulsory military service was ended on January 1 2008. Consequently, a transformation of the Armed Forces, conform to the NATO Membership Action Plan, has been under way since 2005. Serious structural and organisational changes have been undertaken to get the right balance between active and reserve forces and to develop NATO-standard operational capabilities, establish a flexible functional and organisational structure and modernise equipment whilst reducing superfluous equipment and armaments.

Bulgarian military units have been participating in NATO-led SFOR, KFOR and ISAF missions, in EUFOR, in UN operations and in Iraq. The Bulgarian Armed Forces participate in an EU Battle Group

with Greece, Romania and Cyprus, in the UN-sponsored Multinational Peace Force for South Eastern Europe (whose headquarters are located in Plovdiv, Bulgaria) and its military brigade SEEBRIG, and in the task force for Black Sea cooperation BLACKSEAFOR.

The Bulgarian Armed Forces are implementing programmes to exchange personnel, training, exercises with NATO and bilateral partners.

Structure and training areas

Within the Ministry of Defence, the Defence Infrastructure General Directorate is in charge of the military estates. The Defence Staff (Armed Forces) is subdivided into directorates for Operations, Logistics, Strategic Planning and Communications. The Armed Forces consist of the Land Forces, Navy and Air Force.

Land Forces bases are located at Blagoevgrad, Gorna Banya, Pleven, Stara Zagora, Karlovo, Asenovgrad, Smolyan and Plovdiv. There are two naval bases located in Varna and Atiya (near Bourgas). Bulgaria had a huge air fleet during the Cold War, and nine Air Force bases and airfields are still in operation (Graf Ignatievo near Plovdiv, Uzundzhovo, Balchik, Kamenets, Vrazhdebna, Bezmer, Krumovo, Shtraklevo, Dolna Mitropoliya). Kamenets was used for training until training was transferred to Dolna Mitropoliya, while Bezmer is becoming a joint Bulgarian-American training base. Five Air Force bases are in reserve (i.e. no longer used, except to store surplus aircraft): Dobroslavtsi, Gabrovnitsa, Ravnets, Cheshnegirovo/Sadovo and Dobrich.

The military training areas contain significant areas of good natural quality, but not much detail is available because they have traditionally been closed. Bulgaria has had to designate Natura 2000 sites on accession to the EU (January 1 2007). Considering the fact that some 34% of the country's land territory has been designated the inclusion of at least some military sites is likely. Three training areas were included in the designation. The military training areas are rich in game (hunting is a popular activity among military personnel). However, what the ecological impact of this game is, is an open question.

A large training area, with extensive open grasslands, is Novo Selo near Zimnitsa (Stara Zagora). This MTA is used for live firing, armoured vehicle exercises, infantry manoeuvres, urban warfare training. Sliven is a training centre for armoured vehicles.

As part of Joint Task Force East (Bulgaria, Romania and the USA), Bulgarian-American exercises were held during summer 2009 in Novo Selo. This is an example of how NATO membership is increasing the number of exercises, so that there are no plans to decommission any of the existing training areas.

Conclusion

Because of Natura 2000 designation, the Bulgarian Armed Forces and Ministry of Defence are compelled to take account of nature conservation (which hitherto does not appear to have been the case) so that there is a favourable opportunity to involve them in military-nature networking and exchange of experience.

4.5 Croatia

The Croatian Armed Forces came into being during the dissolution of the Yugoslav Federation in 1990/1991 and immediately faced combat in what in Croatia is called the Homeland War – the war to secure Croatia's independence and establish its present frontiers. Fighting only ended in 1995.

After that Croatia joined NATO's Partnership for Peace and became full member of NATO in April 2009. It is a candidate country for EU accession.

Croatia is taking part in several defence initiatives designed to develop neighbourly relations and stability in the region, such as the South East European Cooperation Process, the Quadrilateral Multinational Land Force, the Pact of Stability, South-East Europe Defence Ministerial and the Adriatic-Ionian Initiative. Croatia hosts the regional centre for arms control and verification RACVIAC.

Structure

Within the Ministry of Defence of the Republic of Croatia the Directorate of Material Resources, and, more in particular, within this Directorate the Development, Equipping and Modernisation Department and the Real Estate, Civil Engineering and Environmental Protection Department, are responsible for military estates and their environmental management.

The Croatian Armed Forces (CAF) have five commands under the General Staff: Army Command (in Karlovac), Navy Command (in Split), Air Force and Air Defence Command, Support Command and Joint Education and Training Command (all three in Zagreb). The Army, Air Force and Navy Commands in turn have their own Education and Training Commands. The task of the Joint Education and Training Command is to elaborate common education, training and doctrine concepts and procedures for the Armed Forces as a whole, to support and implement their restructuring and modernisation. The Support Command is charged with logistics.

There is a network of bases and facilities across Croatia. Some will be decommissioned, but those which will continue to be used and where necessary modernised:

- Osijek (engineers, river unit);
- Vinkovci (mechanised and armoured units, logistics, engineers);
- Gasinci (infantry, armoured units, air defence);
- Bjelovar (artillery, missile units);
- Zagreb (Lucko Air Force base, electronic surveillance unit, NBC unit, simulation centre);
- Veliki Gorica (Pleso Air Force base);
- Petrinja (mechanised unit);
- Karlovac (Army Command, signals unit, engineers);
- Slunj (artillery, missile unit);
- Udbina (artillery, airfield);
- Ogulin (military intelligence);
- Delnice (Special Operations Force);
- Pula (Navy base);
- Gospic (motorised unit);
- Zadar (Zemunik air base and air defence);
- Benkovac (air defence, motorised unit);
- Knin (motorised unit, engineers, signals unit);
- Split (Navy base).

In addition, coastal surveillance stations, radar sites and logistics warehouses.

Transformation and future shape of the military

Initially the Croatian Armed Forces were organised and equipped for territorial defence against a classic attack by hostile forces from the neighbourhood. NATO membership means Croatia is now included in the NATO system of collective defence, so that classic territorial defence is no longer relevant. Instead, the Croatian Armed Forces should integrate into NATO and EU rapid response forces and international missions.

The Croatian Armed Forces Long-Term Development Plan 2006-2015, adopted by Parliament in 2006, is a detailed and ambitious plan to restructure the Armed Forces and transform them to what is needed to carry out the tasks defined by the Strategic Defence Review. Besides defending the integrity of Croatia and its maritime zone, participating in crisis-response and security-building measures abroad (under NATO and UN aegis) and engaging in relief and rescue operations in case of emergencies are needed. The main points of the plan are:

- Conscription will be phased out (and the barracks and other infrastructure linked to it will be decommissioned); the Armed Forces will be fully professional with contracted reserves;
- Raise standards of personnel and unit training;
- Regroup accommodation and storage facilities;
- Modernisation of facilities and infrastructure;

- Phase out obsolete equipment or equipment (such as submarines) no longer needed in the new strategic concept; procure new equipment which does fit the new tasks and concepts. Interesting in this regard is that the Navy will get new patrol ships to control Croatia's territorial waters and 'protection ecological fishing zones in the Adriatic';
- Training will concentrate on enabling the Armed Forces to participate successfully in international operations. New training plans will be developed conform to NATO doctrines and standards and efficiency in training will be increased by using modern training methods and simulators;
- Training areas will be modernised and their use will be optimised. Completed training and exercises will be analysed and the outcome used to improve training. The final goal is to have a unified training system by 2015;
- A new NATO-standard military GIS will be made, replacing the existing cartography;
- Because 'environmental protection is the responsibility of all Ministry of Defence and Croatian Armed Forces bodies' the systems of environmental protection will be improved.

The military training areas which will be kept in use and modernised are:

In the north-east, near Osijek and Vinkovci:

- Gasinci (basic training of personnel);
- Pozega (driver and traffic training for logistics).

Near the border of north-western Bosnia:

- Eugen Kvaternik (Slunj; combat training);
- Udbina (parachute training).

On the Adriatic coast:

- Zemunik-Zadar (Air Force training);
- Kovcanja (Mali Losinj; cadet training).

A training centre for international military operations is foreseen for Rakitje, near Zagreb.

Decommissioning

The Croatian Armed Forces Long-Term Development Plan 2006-2015 foresees that of the 335 buildings and facilities used by the Armed Forces in 2005, 218 will be kept, whereas 117 buildings will be decommissioned. However, there will also be new buildings and acquisition of new land. Thus, the naval base at Ploce will be closed and replaced by a smaller naval base better adapted to the future Navy, to be built new on an area of land to be acquired on the Peljesac Peninsula. Because military land and facilities are property of the Republic of Croatia, only the Cabinet and the Cabinet Committee for Property can decide whether or not to sell or rent the land. There are essentially two routes: 'abandonment' and 'conversion'. Abandonment means the facility or property is no longer kept at all. About 30 of those facilities or properties are listed in the Development Plan for abandonment and many of them will be abandoned by 2012 or 2014. Conversion means the facility is changed to another purpose or use, in partnership with outside investors. The Ministry of Defence is elaborating a Military Property Conversion Programme, under which financial returns from property which is converted will be used to help invest in modernising the Armed Forces.

Examples of such 'conversion' are the Svetica-Kneje barracks in Slunj, which were handed over to the city of Slunj by the Ministry of Defence in August 2009. These barracks are being decommissioned. Their site is foreseen for the construction of residential buildings and sports and recreational activities, and in cooperation with the City of Slunj, for building of housing facilities for staff of the Croatian Armed Forces connected to the nearby training area (which will continue in use). The cost of building these houses for the military will be financed by the sale of flats and apartments in the remainder of the barracks site. About 20 barracks, 40 storage facilities and 15 other facilities are targeted for conversion. In addition, the military training areas Jadrtovac (near Sibenik), Dabrovica and Virovitica, and the shooting ranges Brestovica, Pazin, Viljevachi cret, Viljevo, Vojakovecko, Sesevete and Krizevaca will be converted.

Conclusion

Croatia is an interesting country, because its ambitious transformation programme will mean that three large training areas plus many smaller facilities will be decommissioned, while other training areas will be

modernised and the training programme itself will be changed. The transformation programme also includes 'environmental protection' as one of the facets to be improved within the military. Because Croatia, a candidate for EU accession, is aligning its nature conservation policies and practices with Natura 2000, this could have an impact on the military estates, too. The moment seems favourable to involve Croatia in a 'military and nature' project.

4.6 Kosovo

During the 1990s, when Kosovo was still part of Serbia, the Kosovo Liberation Army (KLA), an ethnic Albanian paramilitary organisation, fought for independence. It was opposed by the authorities and Armed Forces of the Federal Republic of Yugoslavia (i.e. Serbia and Montenegro) and by paramilitary forces from the ethnic Serbians living in Kosovo. This conflict escalated into a full-blown war where NATO air strikes were launched against Serbia in the spring of 1999. Following the Kosovo War, the United Nations Security Council in June 1999 placed Kosovo under the authority of the United Nations Interim Administration Mission in Kosovo (UNMIK), with security provided by the NATO-led Kosovo Force (KFOR). KFOR entered Kosovo in June 1999 at a moment when there was still fighting between various military and paramilitary forces. In 2007 KFOR consisted of approximately 16,000 troops, with as main operational bases Camp Bondsteel and Camp Casablanca.

The Kosovo Protection Corps (KPC) was created in September 1999 as a civilian emergency services organisation, on the basis of a UNMIK Regulation and agreement on a 'Statement of Principles' about the KPC's permitted role in Kosovo. The KPC was initially composed largely of demilitarised veterans from the Kosovo Liberation Army (KLA). It had about 5,000 members.

On February 17 2008 Kosovo declared its independence and on June 15 2008 its Constitution entered into force, together with the laws establishing the Ministry of the Kosovo Security Force. A NATO Advisory Team was formed to help this Ministry begin its work. KFOR is still present in Kosovo.

On January 21 2009 the Kosovo Security Force (KSF) itself was officially launched, replacing the Kosovo Protection Corps. The plan is for the KSF to have 2,500 soldiers and 800 reservists, lightly armed and conforming to NATO standards. The KSF is being trained by British army officers, uniforms are supplied by the United States and vehicles have been supplied by Germany, Italy, Portugal and Slovenia. In addition, other NATO members are helping with donations and training. By June 2009 the first Kosovo Security Force general officers took the oath of office and the first recruits completed their basic training. The Kosovo Security Force is 'a professional and multi-ethnic Security Force, to represent and protect all the citizens of Kosovo'. The main missions of the KSF are:

- Conduct crisis response operations in Kosovo and abroad;
- Conduct civil protection operations within Kosovo;
- Assist the civil authorities in responding to natural disasters and other emergencies.

Its duties will include search and rescue operations, explosive ordnance disposal, the control and clearance of hazardous materials, fire-fighting, and other humanitarian assistance tasks. KSF barracks are located in Pristina, Ferizaj, Prizren, Peja, Gjilan, Pomozatin, Skenderaj and Vranidoll.

The Ministry for the Kosovo Security Force (MKSF) is responsible for exercising civilian control over the Kosovo Security Force (KSF), including management and administration. Within this Ministry, under the Director of Operations is a Logistic Department with a unit for Infrastructure and Support, and an Operations and Training Department with a unit for Training and Exercises.

As part of the transition from KPC to KSF and modernisation of the latter, public auctions were held in July 2009 for the sale of surplus vehicles and movable material.

Conclusion

Kosovo has only just become independent and its Security Force is still being set up and trained. It may therefore be too early yet to involve Kosovo in a military-nature project. Information on the land owned

and/or used by the Security Force for training, would however be useful, to see if there are any nature values.

4.7 Macedonia

Macedonia declared its independence in November 1991 and in February 1992 Macedonia's Parliament passed a Defence Law setting up the Armed Forces of Macedonia. The Yugoslav Army left Macedonia, leaving very little equipment behind for the Macedonians. The new Armed Forces, made up of the Territorial Defence and officers from the Yugoslav Army, did occupy the former Yugoslav barracks and in April 1992 the training of the first conscripts began there.

In November 1995 Macedonia joined the NATO Partnership for Peace and in 1997/1998 the first multinational exercises were held, in the training areas Pepelishte and Krivolak.

From December 2000 to July 2001 there were armed clashes with Albanian separatists in north-western Macedonia, the border region with Kosovo.

In March 2004, Macedonia formally applied for EU membership and in November 2006 there was a decision from Parliament to seek NATO membership. At the moment, Macedonia still has the status of a partner country with NATO.

At the beginning of 2002, Macedonia began the transformation of the Army of the Republic of Macedonia into a more efficient military force. Following the National Security and Defence Concept of the Republic of Macedonia of May 2003 and the Policy Framework of the Strategic Defence Review of October 2003, the White Paper on Defence sets out the progress which has already been made in defence reform and the transformation still needed to achieve the two national goals of full-fledged membership of NATO and the European Union. Under this transformation, the Land Forces would be significantly reduced, to about 13,000 soldiers - 70% professional, 30% conscripts. In return, the reduction of personnel costs from 2005 onwards would allow for more expenditure on training, logistics and equipment. After the completion of the reform process, the Army of the Republic of Macedonia should be trained, equipped and prepared according to NATO standards.

Structures and training areas

The Ministry of Defence of the Republic of Macedonia (MORM), is responsible for the defence strategy, defence system, training and readiness of the Armed Forces and its equipment. Relevant within the Ministry might be the Sector for Logistics and the Sector for Services and Production.

The new structure of the Army of the Republic of Macedonia (ARM) replaced the corps structure by five subordinate commands, as well as support units. Under the immediate command of the General Staff of the Army of the Republic of Macedonia are the Land Forces Command, the Air Force and Air Defence Command, the Special Forces Command, the Logistic Command and the Training Command.

The military reform programme stresses improved training and readiness according to the NATO standards as one of its primary goals. The Training Command is responsible for formulating training directions and accomplishing interoperability with NATO forces. The Military Academy General Mihailo Apostolski in Skopje plays a key role in the formation of officers.

The main training areas in Macedonia will not only continue to be used because of the stronger emphasis on proper training of the smaller number of troops, but also because the Army is committed to participating in joint exercises with PfP and NATO forces. The training areas Pepelishte, Krivolak and Petrovec have all recently hosted such international exercises. During at least one of these exercises, a NATO evaluation team checked the operational capabilities, the interoperability and the practical application of the NATO standards by the Macedonian forces.

In February 2009 the Krivolak project was launched. Krivolak, a large training area in an empty mountainous district, is used, among others, for live firing from helicopters and for ground-to-air firing

with rockets. Under this project, the Krivolak range will be offered for use to Armed Forces from neighbouring countries, against payment of fees.

Decommissioning

The Logistic Command, which includes a Facility for Building and Maintenance, manages the materials and assets procured by the Ministry of Defence, as well as whatever is decommissioned by the General Staff.

Under the Programme for Property Conversion, which began in 2004, 13 barracks, six army homes, 16 canteens, 21 estates and farms are being decommissioned.

To improve living conditions for its personnel, the Ministry has been swapping part of its surplus real estate against residential apartments. It is a partner in a consortium to build collective residences on the site of the Goce Delcev barracks in Skopje.

The project 'Old Barracks for New Development', presented by the Minister in June 2009, is transferring decommissioned barracks in Strumica, Bitola, Ohrid, Gevgelija, Dojran, Debar and Skopje to the ownership of the municipalities. According to the Minister, the municipalities can use the barracks for overcoming the problem of shortage of building sites. Domestic and foreign investors can use them for projects which bring economic development, as the barracks cover hundreds of hectares of land, with the possibility of constructing new buildings, schools, retirement homes, malls, business and cultural centres.

By the end of 2009 an international tender will be issued for selling the land property and by then precise plans are to be made regarding the future construction. The Minister anticipates that the construction activities in all barracks will begin by the end of 2010. Most probably, there will be combinations of housing, business and office centres, light industry and public institutions for educational and health care.

By summer 2009, there was already a decision in principle by the government and the municipality to convert the 20 ha of land at the General Mihajlo Apostolski Barracks located in Ohrid into an information technology campus. In contrast, for one barracks which is no longer being used (Mirche Acev in Prilep), an attempt to pass it to the municipality as an industrial zone was not successful. In August 2009 its status was on hold, and there was a possibility it might be restored to the Armed Forces.

Conclusion

Macedonia is interesting because it both has at least three large training areas which will continue in use and may even, as for instance in Krivolak, be used more intensively, with exercises by foreign forces, and an extensive programme of decommissioning surplus sites and making these available for investment and construction projects. An assessment of the nature value of these training areas and decommissioned sites would be a logical next step.

4.8 Moldova

This former Soviet republic declared its sovereignty in 1990 and its full independence in August 1991. Its Armed Forces were established in September 1991. From 1990 to 1992 Moldova faced separatist challenges from Gagauzia on its southern frontier and Transnistria on its eastern frontier. The Gagauzia problem was successfully solved and this area is now fully part of Moldova, but Transnistria remains *de facto* outside Moldova (see report on Transnistria).

In March 1994 Moldova joined the NATO Partnership for Peace. It has an Individual Partnership Action Plan and has been working towards interoperability of its forces with NATO forces for several years.

There are official strategies for defence reform, military doctrine and national security. Since 1994 the Armed Forces have been downsized. The Moldovan Land Forces were reduced from 9800 to 5700 personnel by 2007, while the Moldovan Air Force went from 1300 to 1040 personnel in the same period, but lost 2/3 of its fighter aircraft and now mainly consists of transport planes and helicopters. Moldova still has military service. Early plans for a fully professional army were abandoned as a result of the conflict with Transnistria.

Structure

The Defence Ministry in Chisinau has, among others, a Directorate for Defence Policy and Defence Planning and a Department for Assets (Departamentul Dotari) which manages all issues concerning such as equipment, real estate, infrastructure. The General Staff, which is a department within the organisation chart of the Defence Ministry, has 11 sections. One of these is the Training Directorate. It is responsible for all training and exercises, including those with international participation, for training programmes and protocols and for developing the training grounds and training centres.

The Land Forces are stationed at Balti (infantry brigade), Ungheni (artillery brigade), Chisinau (infantry brigade, Special Forces) and Cahul (infantry brigade). The Air Force has its main air base at Marculesti. There is an Armed Forces Military Institute Alexandru cel Bun at Chisinau, which is an academy for officers. The National Training Centre at Bulboaca is the key field training area. It is also used for international exercises.

Conclusion

More needs to be known about the Bulboaca military training area, whether it has landscape and nature value, and also if there are other training areas or any decommissioned estates which are important from a conservation point of view.

4.9 Montenegro

Montenegro is one of the most recent countries to appear in south-eastern Europe. It was in a federation with Serbia, as the last remnant of Yugoslavia, until May 2006 when in a referendum the majority voted to leave the federation. Montenegro's Parliament declared the country fully independent on June 3 2006.

As the Federation's Ministry of Defence remained in Serbia, Montenegro had to build up a new Ministry of Defence in the capital city Podgorica, in 2006.

The strategic goal of Montenegro is to become a fully-fledged NATO and EU member. Consequently, Montenegro has joined the NATO Partnership for Peace Programme in December 2006 and signed the Stabilisation and Association Agreement with the EU. In November 2008 it asked a Membership Action Plan from NATO – a decision is currently pending. The draft National Security Strategy, published in September 2008, expresses this commitment and, together with the draft Defence Strategy published in October 2008, defines the essential steps needed to integrate into NATO and EU structures. The Strategy will be the basis for preparing the Military Doctrine, the Defence Plan of Montenegro, the Development and Equipment Plans of the Army and other documents concerning the development of the Armed Forces. The Ministry of Defence will submit by 2010 a long-term plan for the Armed Forces to the Government of Montenegro for consideration. The essential thrust of these plans will at any rate be:

- Modernisation of the equipment and structures;
- Achieving the level of interoperability required to participate in the collective security systems of NATO and EU;
- Capabilities to provide support to the population and civilian institutions in the event of natural or man-made disasters.

All these imply a major reform of the defence system and the Armed Forces. This reform is already under way. When Montenegro became independent in June 2006, it inherited an armed force of 6500 active personnel, the Navy of the Federation of Serbia and Montenegro and a small Air Force. Under the reform plans, the size of the Armed Forces is intended to be reduced to 2500 personnel, the navy will be drastically downsized and combat aircraft removed from the Air Force which will be restricted to transport planes and armed helicopters. On the other hand, three fire-fighting planes have been bought as a new addition to the air arm, in line with the plans to enhance the Armed Forces' support role in the event of catastrophes. Conscription ended in August 2006 and thus, from 2009 onwards the Montenegrin Armed Forces are fully professional.

Decommissioning

Because of the downsizing and modernising, the Army of Montenegro will be disposing of obsolete equipment. Surplus infrastructure and facilities is being decommissioned. In November/December 2008 the Ministry of Defence invited investors to submit tenders for:

- Leasing Lastavica Island with Mamula Fortress for 30 years and developing a 'world class resort' on it;
- Leasing Bigovo-Traste military home located in Kotor, on the coast, for 30 years and exploiting it as a resort;
- Leasing the Mediterranean military home located in Zabljak and exploiting it also as a resort.

The three arms of the military each have at least one training facility:

- The main training field for the land arm (infantry battalions, Special Forces, mountain infantry, engineers, air defence) is Danilovgrad;
- Podgorica is the main base of the air arm – prior to 2006 this airfield was a main facility for basic pilot training in the Yugoslav Air Force, and it still has a training centre;
- The naval arm has a training centre (Jadran).

Conclusion

The Armed Forces of Montenegro are being reduced and transformed quite radically. As in Albania, the military facilities along the coast being decommissioned and made available to investors merit closer examination, because of the possible loss of nature and landscape values. The army training area at Danilovgrad does not seem to be threatened with decommissioning, but should be investigated for its potential nature values.

4.10 Romania

Overall structure of ministry and Armed Forces

Romania was invited to join NATO in 2001 and became a full member in April 2004. It joined the EU on January 1 2007.

The Armed Forces were thoroughly reorganised in the opening years of the 21st century and the modernisation of equipment is still going on. The Romanian Armed Forces Strategy lays down the core tasks and objectives.

Within the Ministry of National Defence, relevant departments are:

- The Department of Parliament Liaison and Public Information, which controls the Domains and Infrastructure Directorate;
- The Control and Inspection Corps, whose task is to evaluate processes and resources and propose corrections when necessary. Under this general heading, it is, among others, responsible for coordinating the programmes concerning environmental protection. To this end, it collaborates with ministries and public agencies responsible for environmental matters.

Law 346 of July 2006 reconfirmed the General Staff's tasks, which include providing military training (basic and specialised) and providing logistics and infrastructure. Within the General Staff, two directorates are relevant:

- The Logistics Directorate is responsible for the domains and infrastructure and environmental protection and data gathering;
- The Force Making Operational, Generation and Evaluation Directorate is responsible for all training exercises.

There do not seem to be many contacts between the military authorities and NGOs.

Two training areas have been designated SPA after Romania's accession to the EU, and SCIs cover parts of the military estate.

Military facilities and training areas

The Romanian Armed Forces consist of the Land Forces, Air Force and Naval Forces. These have bases and facilities scattered throughout the country. The bases and facilities of the Land Forces are located among others in Galati, Iasi, Topraisar, Brasov (mountain battalion), Braila (artillery), Craiova, Focsani and Campulung (mountain troops). The Naval Forces are based at Constantza and Mangalia. Bases and facilities of the Air Force are located in Campia Turzii, Borcea (both fighter planes), Otopeni (helicopter and fixed-wing airlift), Mihail Kogalniceanu Air Base near Constantza, Bacau (training field for all pilots) and Vlasia (near Bucharest, missile air defence). Military academies and schools are at Boboc, Brasov, Campulung, Breaza and Alba Iulia. The field training and exercise areas include:

- Ion Bungescu Training Camp at Capu Midia is located between Constantza and Tulcea, near Corbu. This is a large military area used for live firing (ground-to-air, air-to-air, ground-to-sea, ship-to-ship, etc.), weapons testing, artillery practice and tactical exercises. It has open grasslands and coastal landscapes;
- Babadag, which is used for exercises. This MTA is also located in the Dobrocea region;
- Bucegi, in the Carpathians near Brasov, is used for mountain troops training;
- Smirdan is used for live artillery firing;
- Buzau shelters headquarters of the 2nd Operational Command, which is responsible for training military contingents participating in missions abroad (Afghanistan, Iraq, etc.).

No training areas have recently been decommissioned nor are there plans to decommission any in the future (there are no ex-Soviet facilities, as the Red Army left Romania in the 1950s). On the contrary, Romania's accession to NATO has meant an increase in international exercises, e.g. at the Ion Bungescu Camp.

Conclusion

More information and good contacts are needed for Romania. Its military training areas could be of interest. For instance, because Babadag and the Ion Bungescu Camp lie within the Steppic and Pontic biogeographic regions, which are only found in Romania and Bulgaria among the 17 member states of the EU (EU 27, Fig. 2), these training areas could be of great ecological value.

4.11 Serbia

As core of the Federal Republic of Yugoslavia, Serbia and its Armed Forces played a central role in the various conflicts which took place in the western Balkans from 1991 to 1999. When peace was restored, the Federation of Serbia and Montenegro continued as the inheritor of Yugoslavia until 2006, when Montenegro declared its independence and Serbia renamed itself Republic of Serbia.

Already in 2001 first reforms were made of the Armed Forces and national defence system. Politically, the Serbian government is now of the opinion that in the current security environment, Serbia is not able to respond all by itself to threats and security challenges posed against it, especially to threats of global and transnational nature. Consequently, following agreements signed with the UN since 2002, Serbia has sent military representatives on five peace missions, notably to Africa.

Serbia was invited to join the Partnership for Peace at the NATO Summit in Riga in December 2006. On December 14 2006 Serbia signed the Framework Document ensuring full PfP membership. In September 2007 Serbia transmitted the Presentation Document (Individual Partnership Action Plan). Unlike the presentation documents of other countries in the region, Serbia's Individual Partnership Action Plan does not envisage its membership in NATO. This in turn means Serbia will not obtain a Membership Action Plan establishing a comprehensive set of preparations for accession to NATO. The Individual Partnership Action Plan for Serbia lists eight priority cooperation fields for PfP, one of which is 'Planning and financing of the defence system and resource management' and another is 'Military education, training and doctrine'. In addition to these priority fields of cooperation, Serbia has expressed its interest in cooperating in an additional 10 fields, of which four might be relevant for our project:

- Operational, material and administrative aspects of standardisation;

- Military exercises and training;
- Public relations;
- Operational, material and administrative aspects of standardisation; Development of co-operation programmes in the field of armaments and the military.

Serbia is also participating, especially since 2007, in the South-Eastern Europe Defence Ministerial (SEDM), an initiative launched in 1996 to intensify political-military cooperation and security in the SEE region. Through full membership, Serbia is able to actively participate in all SEDM funded programmes such as Civil Military Emergency Planning or SEESIM (South-Eastern Europe Simulation Military Network).

Serbia is currently undergoing a complete reform of its system of security and defence, in line with parallel processes in other Partnership for Peace countries. This reform is quite drastic: about 1,000 Defence staffs were made redundant in 2008 alone. However, the economic crisis and a 26% smaller military budget in 2009, has impeded the process of modernisation and has stopped the process of procuring new equipment and weapons for the Serbian Armed Forces.

Structure of Ministry and Armed Forces

The Republic of Serbia Ministry of Defence in Belgrade includes a Material Resources Sector, within which there is an Infrastructure Department. This Department is a unit of the Material Resources Sector competent for material resources, management planning and organisation, and military infrastructure.

The Serbian Armed Forces General Staff has departments for Military Training and Doctrine and for Logistics, as well as for Civil-Military Cooperation. Below the General Staff, are the Army (Land Forces) with headquarters in Nis, the Air Force with headquarters in Zemun and the Training Command with headquarters in Belgrade.

The current structure of the Forces was created in 2006/2007 by merging older units. The Land Forces now consist of four brigades, each made up of infantry, armoured-mechanised, artillery and air defence (missile) units, engineering and signal units. The headquarters of the brigades are in Novi Sad, Kraljevo, Nis and Vranje, while units are also stationed in Novi Pazar, Raska, Valjevo, Prokuplje, Zajecar Kursumlijaere, Leskovac and Bujanovac. The Special Brigade (anti-terrorist, reconnaissance, paratrooper and diving units) is based in Pancevo and Nis. A mixed artillery brigade consisting of combined arms, artillery and logistics is also stationed in Nis. Moreover, there is a river flotilla for the river Danube. The Air Force has air bases at Batajnica, Ladjevci and also in Nis.

Training infrastructure

Training Command was established in April 2007 by merging parts of the Land Forces and Air Force units. Its headquarters is in Belgrade. Training Command has seven territorial centres for basic training and five centres for specialist training of all members of the military arms, branches and services. The seven territorial centres for training are Sombor, Pancevo, Jacevo, Valjevo, Zajecar, Krusevac and Leskovac. These are equipped with e.g. field shooting ranges. They provide uniform basic training for conscripts and recruits and individual training. The five centres for specialist training are Pozarevac (infantry training), Kragujevac (artillery training), Pancevo (training for armoured and mechanised units), Vrsac (training for combat vehicle drivers) and Batajnica (Air Force training). There is also a logistics training centre with units at Krusevac, Nis and Kraljevo (transport driver training) and a centre for training NBC protection specialists at Krusevac.

In addition to the training centres, the Training Command also manages field training areas and live-firing ranges. The most important is the combined arms training ground Pasuljanske Livade at Cuprija, which is used by all forces as a common exercise and field training area.

Finally, besides the troop training areas, there is also the Technical Test Centre, created as a unified entity in August 2008 with as mission to test and evaluate all military material produced domestically (Serbia has an armaments industry) or abroad, which is going to be used by the Serbian Armed Forces. Besides laboratories in Belgrade and Batajnica, it has testing grounds at Nikinci near Sabac.

Conclusion

The Individual Partnership Action Plan, which Serbia presented in 2007 might offer some opportunities to raise issues of environmentally sustainable management of training areas. The existence of a unit for Civil-Military Cooperation inside the General Staff also seems promising. Of the training facilities, Pasuljanske Livade at Cuprija seems to be the largest. Information about landscapes and nature values at Cuprija, and other training facilities among the ones listed above, is needed.

4.12 Slovenia

The current Slovenian Armed Forces came into being in October 1990 and after the war of independence against the Yugoslav People's Army peacetime training of conscripts began in May 1991 on the training fields Ig near Ljubljana and Pekre near Maribor. This new armed force was based on conscription and the concept civil defence.

Defence spending as percentage of GDP declined from year to year between 1992 and 2000, but approaching NATO membership led to a transformation of the Armed Forces and to new tasks. The Slovenian Armed Forces took part in missions and deployments abroad, with a focus on Bosnia, Kosovo and Afghanistan. Defence spending as part of GDP rose steadily after 2000, especially after 2005.

In March 2004 Slovenia joined NATO and on May 1 2004 it joined the EU.

The Ministry of Defence's key objectives, at present, are:

- Successful integration into NATO;
- Achieving higher standards and greater cohesion in key areas for the operational capacity of the Armed Forces such as command and control, deployability and mobility, combat effectiveness and logistics;
- Continuing towards fully professional Armed Forces based on permanent service personnel and contractual reservists.

Given that national security and defence will be ensured within the framework of EU and NATO membership, civil defence as hitherto applied will be re-oriented towards crisis management. Developing a comprehensive system of protection from natural and other disasters as well as disaster relief and rehabilitation, together with other ministries and local communities will be done. The Armed Forces will provide support to disaster prevention and rehabilitation efforts.

Within the Ministry of Defence, the Logistics Directorate's Defence Estate Management Agency is responsible for infrastructure such as training areas. The 'Real Estate Sale & Lease Plan 2006-2010' and the 'Investment and Maintenance Plan 2006-2010' provide the framework.

The Armed Forces and Ministry have an active policy of collaboration and support towards civil society, but primarily with organisations whose activities relate to Armed Forces' goals and interests.

Structure of Armed Forces and training areas

The Slovenian Armed Forces are organised as Unitary Armed Forces and are not divided into separate forces like Army, Air Force and Navy. The Unitary Armed Forces are organised at strategic (General Staff), operational (Commands like the 'Doctrine, Development, Education and Training Command') and tactical (Brigades, such as the Aviation and Air Defence Brigade) levels. The active part is composed of professional Slovenian Armed Forces members, while the reserve component includes citizens who have signed a contract for service in the contracted reserve and members of the compulsory reserve component.

There are currently 18 military posts in total across the national territory of Slovenia. Commands and brigade headquarters are located at e.g. Ljubljana, Maribor, Kranj and Cerklje ob Krki.

At the level of units, the Slovenian Armed Forces are organised according to one of the four components below:

- Combat forces: three motorised battalions (based at Ljubljana, Celje; Maribor); one mountain battalion (based at Bohinjska bela), one armoured battalion (based at Pivka) and a special operations unit (based at Kocevski Reka);
- Combat support forces: artillery battalion, engineer battalion, naval division, air defence (e.g. Hocko Phorje), military police and the NBC defence;
- Combat service support forces: two logistics battalions, helicopter battalion, air bases (e.g. Cerklje ob Krki, Brnik) and the medical unit;
- Command support forces: surveillance, signals and reconnaissance.

As part of the modernisation and improvement of the Slovenian Armed Forces, the training system is being completely renovated and the quality of training is being raised. The Centre for Combat Training, which defines the conditions for real-life training on training fields, in Postojna is being developed further. The Mountain Training School in Bohinjska Bela is being made in to a centre of excellence within NATO for training in mountain warfare. Nearby Pokljuka is also used for mountain training.

Another important site is Vipava, which provides basic military professional training for the members of the active and reserve components, and specialist parts of the training programmes e.g. for NCOs and officers.

There is investment under way at present to upgrade training areas. One example is the Mlake pri Vipavi infantry weapons firing range, which was reopened 2007 after reconstruction. In Addition, tenders were called in 2007 for more investment projects in the Vipava weapons range. There are also plans to invest in the Apace and Skrilj weapons ranges.

In line with the attention given to the Slovenian Armed Forces' role in disaster prevention and relief, the sites Ig (near Ljubljana) and Sezana are used for training in protection and rescue against natural and other disasters, such as wildfires.

Other military sites are located in Pivka (armoured forces), Vrhnika and Borovnica (ammunitions maintenance centre and disposal of surplus ammunition).

Sales of surplus Defence Property take place, but in recent years concerned barracks buildings, workshops and technical repair facilities.

Conclusion

Slovenia's main training areas are located in the Alpine regions of the north-west (Bohinjska Bela, Pokljuka) or in the Karst region of the south-west (Vipava, Pivka, Vrhnika). Because of this, they are likely to contain natural values. Parts may even be included in Natura 2000, which has to be investigated. The training areas are not being decommissioned; instead there is a policy to invest in improving training facilities. It might be an opportune moment to suggest that this could extend to improving the ecological impact of training.

4.13 Transnistria

Transnistria, or the Pridnestrovian Moldavian Republic (Pridnestrovie for short) as it is called by the authorities in the capital city Tiraspol, is a narrow strip of territory between Moldova and Ukraine, east of the river Dniestr. Before 1990 it was part of the Moldavian SSR in the Soviet Union. It has a non-Moldavian majority (mainly of Russians). As a result of rising inter-ethnic tensions and radically pro-Moldavian policies inside the SSR, an *ad hoc* assembly in Tiraspol declared the Transnistrian republic in September 1990. Armed clashes followed which escalated into a full conflict (the Transnistrian War) by 1992. Soviet Armed Forces units which were still in Moldova intervened in support of the Transnistrians and the Moldovan authorities were unable to regain effective control of the territory.

A ceasefire was agreed on July 21 1992. There is a demilitarised zone along the Dniestr River, separating the Moldovan and Transnistrian forces. A Joint Control Commission, consisting of Moldova, Russia and Transnistria, supervises the security arrangements in this zone. Apart from regularly occurring incidents along the ceasefire line and around disputed villages, the ceasefire has held since 1992.

The Transnistrian Republic has been functioning as a *de facto* state since 1992, though it is not officially recognised by any other country. Moldova considers Transnistria integral part of its territory. Russia has consistently supported Transnistria in practice and the Soviet Armed Forces units which originally helped the Transnistrians in 1992 are still there under the name 'Operational Group of Russian Forces in Moldova', albeit in much reduced numbers (about 1500 now).

Structure

The Ministry of Defence of Transnistria in Tiraspol supervises the Armed Forces, which currently have 4,500 regular troops, plus about 15,000 which can be called up from the reserves. There are four motorised infantry brigades with armoured carriers and artillery. These are based at Tiraspol, Bender/Tighina, Rybnitsa/Ribnita and Dubossary/Dubasari. There is also a small Air Force equipped with helicopters and transport planes.

Finally, the People's Militia, about 2,000 strong, is a home guard or territorial army composed of volunteer citizens.

Conclusion

There is no information on whether there are separate field training areas or whether any of the military estate has nature value. There are local environmental NGOs active in Transnistria which might be contacted if needed.

4.14 Ukraine

After the dissolution of the USSR in 1991, Ukraine inherited one of the strongest Armed Forces in Europe, as the Soviet Union had concentrated military power in this strategic area. Ukraine's new military had 780,000 personnel, 6500 tanks, 7000 combat armoured vehicles, 1500 combat aircraft, 350 Navy vessels, 1272 strategic nuclear warheads on intercontinental ballistic missiles and 2500 tactical nuclear weapons.

On August 24 1991 the Verkhovna Rada (Parliament) of Ukraine adopted a resolution taking under its jurisdiction all the military units of the former Soviet Armed Forces in the territory of Ukraine and establishing a Ministry of Defence. On December 6 1991 the Verkhovna Rada adopted a law 'On Armed Forces of Ukraine', which created the Armed Forces of independent Ukraine and the General Staff.

The Concept for Defence and Organisation of the Armed Forces of Ukraine was adopted in 1992 by the Parliament, which also approved international treaties such as the Tashkent Agreement which set limits on the sizes of the Armed Forces of the former Soviet republics. One of the most striking decisions was the decision to eliminate the nuclear weapons from Ukrainian territory. Therefore, they were relocated to Russia. This process was complete by June 1 1996.

During these first years, all effort went into forming the legal basis of the Armed Forces, reorganising its structures and reducing its size. Therefore, many military facilities were closed, hundreds of combat aircraft, tanks and armoured vehicles were decommissioned and personnel numbers dropped.

A very specific problem, which caused great difficulties and delayed the process of reconstructing the Ukrainian Armed Forces, was that many officers and staff in the Ukraine during the Soviet period were natives of other USSR republics, while, in reverse, Ukrainians were serving across the Soviet Union. Between 1991 and 1994 12,000 personnel left Ukraine and 33,000 personnel came back to Ukraine from other ex-Soviet republics. The Ukrainian Armed Forces continued to shrink and by 2000 were down to 310,000 military and 90,000 civilians. The budget assigned to defence declined to only half its 1992 levels by 1996, then levelled off.

Bilateral agreements for cooperation had already been signed with the USA in 1993 and Ukraine developed relationships with NATO and with neighbouring CEE countries like Poland and Slovakia. Ukraine is in the NATO Partnership for Peace and is the only PfP country participating in all NATO

operations abroad. It has an Individual NATO-Ukraine Partnership Programme and a Membership Action Plan. In April 2008 the NATO summit formally endorsed and supported Ukraine's objective of joining NATO.

In 2009 work plans for cooperation between the Ukraine Armed Forces and the EU's security pillar and defence agency, were signed.

In April 2001 Black Sea nations signed the Agreement on Black Sea Naval Cooperation BLACKSEAFOR. Ukraine's Navy is participating in the BLACKSEAFOR task group, whose mission includes supervision of shipping, search and rescue, de-mining and 'environment protection'.

The international cooperation strengthened the process of reforming the Ukrainian military to render it more adapted to the present challenges and security situation. A 'State Programme of Development and Reforming of the Armed Forces of Ukraine' was implemented for the period between 2001 and 2005 (followed by a programme for 2006 to 2011) and in 2003 a Ukraine-NATO pilot project formulated 'Plans of defensive reform and future structure of the Armed Forces of Ukraine'. Around that time work began on an analysis of potential threats to the security of the Ukraine and long-term planning of budgets and resources until 2015.

Current situation

In 2008 the Ministry of Defence and Armed Forces together counted 149,000 military and 51,000 civilians. The number of tanks is down to 700, combat aircraft are 200 and naval combat ships number 26. However, there will be no further decline. Instead, the State Programme of Development of Armed Forces 2006-2011 plans to raise the number of military to 162,000 by 2012, plus 50,000 civilians. Recruitment campaigns to find these new personnel are under way and measures are being taken to improve the socio-economic conditions of military staff. For instance, 5,000 new houses have been provided for military personnel (housing was a big problem since 1991).

Military service is being shifted to professional service – at the moment about half the forces are conscript, half are contract soldiers. The target is to come to professional and highly mobile forces which can integrate with NATO and other rapid reaction forces. Hence, there is a strong emphasis on active and targeted training, live firing exercises and international exercises. In 2008 14,000 troops and officers and 3,000 weapons and items of equipment took part in exercises, compared to only 4,000 persons and 215 weapons/equipment in 2006. Special Operations Forces combat training intensity increased – their live firing activity went up by no less than 30% in 2008.

Implementation of the State Programme of Development of Armed Forces 2006-2011 is however being hindered by a chronic lack of funds allocated by the government to defence. As a result, the interim targets for training NCOs or buying new equipment were not achieved in 2008. Meanwhile, work has already started on a second Strategic Defence Review coupled to a 'Strategic Defence Bulletin until 2025', planned to be adopted end of 2009 by the government. These will then be used for the post-2011 planning of Armed Forces development.

Structure of MoD and Armed Forces, training facilities

The Ministry of Defence of the Ukraine has, among others, the following departments which appear to be relevant for the project:

- State Department of Surplus Funds and Land;
- State Department of Conversion of Former Military Bases;
- State Acquisition and Resource Supply Department;
- Economic and Administrative Activities Department;
- Environmental Protection Section.

An important objective is to reduce costs for the defence budget and increase efficiency (by focusing the military on its core tasks), by charging a state enterprise with the management of military real estate, and by outsourcing many auxiliary tasks.

The General Staff of the Armed Forces of Ukraine includes an Armed Forces Training Directorate and a Garrison Service Directorate. Under it are the:

- Land Forces Command;
- Naval Forces Command;
- Air Force Command;
- Support Forces Command;
- And various autonomous units like Special Operations Forces.

There are currently 13 Armed Forces training centres, where enlisted troops and NCOs are trained, located in the following places (some places have more than one training centre): Kharkiv, Desna, Kamianets-Podilskyi, Mykolayiv, Poltava, Zhitomir, Shepetivka, Sevastopol (Navy) and Vasylkiv (Air Force). For higher officers there is a national military academy in Kyiv, an Air Force academy in Kharkiv and a naval academy in Sevastopol.

For field training, exercises and live firing, the following training areas are in use:

- Land Forces: Rivno, Zhitomir, Novomoskovsk, Shyroky Lan (between Odessa and Mykolayiv);
- Air Force: Kyiv-Olexandrivka (near Mykolayiv), Chauda (eastern Crimea);
- Naval Force: Opuk and Starykrymski (both are in east Crimea and include coastal firing ranges).

Finally, Yavoriv is used as a combined-arms training ground; many international exercises are held there.

Decommissioning

The enormous reduction of the Armed Forces since 1991 has left them with a vast number of surplus facilities. At the end of 2008 there were 1905 surplus facilities with 40,700 buildings covering 515,000 ha. Guarding and maintaining this surplus infrastructure is a massive financial drain on an already insufficient defence budget. In October 2007 Cabinet approved a list of Armed Forces real estate that can be alienated, but implementation is going slowly. Only 422 facilities are completely freed up and ready to dispose of. In 2008 only three facilities were effectively transferred. Military infrastructure can be transferred to local or national authorities if they are interested. For instance, a base at Horenynchi near Kyiv was transferred to the Sports Ministry to convert it into a national Olympic sports centre. The Armed Forces are also permitted to rent out land and facilities.

The reorganisation of training areas is continuing. In 2008, a brigade training area was decommissioned. But at the same time the intensity and efficiency of training is being increased and models are being investigated to improve training even further. Decommissioned firing ranges have to be cleared of munitions first before they can be transferred to local authorities or privatised. This is a huge task. A five-year programme 2009-2014 has been established for clearing munitions. In 2008 de-mining focused on priority areas holding the most dangerous explosives. At the moment 18 decommissioned firing ranges (covering from 65 ha to 19,550 ha) need to be de-mined before being alienated. Their total area is 91,200 ha.

Conclusion

Ukraine is obviously interesting. Its MoD is one of the few to have a separate, dedicated environmental department. There is a huge amount of military land which is being decommissioned (18 firing ranges covering 91,200 ha, among others) but at the same time training is being intensified and the Armed Forces are going to be increased. This will have effects on the training areas which are in use.

The project is funded by

