



**The Danish Ministry of Defence
Environmental Strategy
2003**

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The beautiful flourishing heath at Borris shooting range.

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Preface by the Minister of Defence

In 1993 the Environmental Strategy of the Ministry of Defence was published. The Strategy established the environmental policy, the overall targets, and an action plan for the environmental effort of the ministerial area of responsibility. This meant that there was now focus on environmental issues.

The environmental strategy was revised in 1998, when a status was made of the targets, set in the Strategy of 1993, expanding these targets and adding new measures.

I am very happy to be able to establish that environmental issues are now an integrated part of my ambit, and that a wide range of positive results has been achieved at the same time as personnel at all levels have become aware of including environmental aspects into their daily routines. First and foremost, we owe this to the introduction of the environmental management system of the Ministry of Defence. With the environmental management system, the authorities are looking towards the future. With the systematic introduction of environmental management, a powerful tool has been created to ensure continual improvements in the environmental area, among other things, and to plan the future environmental effort in an economical and rational manner.

Since the revision of the Strategy in 1998, much has happened in the field of environmental and nature protection within the area of responsibility of the Ministry of Defence. The environmental effort through ten years has resulted in a continuous development of the areas of effort. Let me mention, among other things, the Waste Management Strategy of the Ministry of Defence, which was recently published, the Pollution Registry of the Ministry of Defence for the mapping of soil contamination, and that as of 2001, environmental emergency teams have been established with special competences in environmental investigations and clean-up in Danish international camps and bases.

In the area of nature protection I would like to emphasize that the establishment of nature management plans for all training grounds of the Ministry will be finished by the end of 2004, and that the access of the public to the natural assets in the areas belonging to the Ministry of Defence has been secured by a new statutory order from 2002.

The considerable experience and the progress made by the Ministry in the area of environmental and nature protection have caused much attention in international relations and liaised with many national and international collaborators.

The present Environmental Strategy renders the basis for dealing more thoroughly than before with the areas of effort, which is why a separate environmental policy is established for each individual area of effort. This means that the Environmental Strategy is subdivided into environmental policy, environmental status, environmental objectives, and concrete environmental targets. Each area of effort is treated under these headings.

The Environmental Strategy mainly addresses those who work with environmental issues on a daily basis. However, it is my hope that others will also find the Environmental Strategy to be useful reading.

It is the intention that the present Environmental Strategy, as was the case with the two former strategies, will be evaluated and revised in five years.

With the Environmental Strategy of the Ministry of Defence 2003, the framework of the further work in the area of the environment has been outlined.

It will be a great challenge for the Ministry of Defence and its pertaining authorities to implement this Environmental Strategy and achieve the targets at the same time as implementing a new defence agreement.

Considering the results and the effort made by the personnel of the Defence in the past period of time, I have no doubt that we will indeed achieve the environmental targets we have set in this Strategy.



Svend Aage Jensby

Chapter 1: The Basis

1.1. The tasks of the Ministry of Defence

The main task of the military defence has been established by the Government and the Folketing in Act No. 122 of 27. February 2001 regarding the purpose, tasks, and organisation of the Defence. From this follows that the military defence must contribute to promoting peace and security. This means that the defence must prevent conflicts and war, secure the sovereignty of Denmark, and promote a peaceful development in the world with respect for human rights. The tasks of the Home Guard are stated in Consolidated Act No. 803 of 20. August 2001 as follows: the Home Guard must participate as part of the military defence in the resolution of tasks resting with the army, navy, and air force.

Naturally, the preparations for these tasks imply a substantial educational activity and practising of individual persons and units, which to a certain extent will create a burden on the environment and nature. In this relation, though, the Ministry of Defence assumes a natural responsibility for the protection of the environment in accordance with current legislation within the area of protection of the environment and nature. However, a continuous balance must be kept between the environmental requirements and the necessity of preparing to solve the primary tasks of the authorities.

1.2. Central legislation and other initiatives

The central pieces of legislation within the present environmental legislation are the following:

- Regulations, directives etc. from the EU
- Legislation on environmental protection
- Legislation on protection of nature
- Planning legislation
- The Government's plans and initiatives

The combined environmental legislation is the basis for the protection of the national nature and environment, in order that the development of society can take place on a sustainable basis. This legislation therefore constitutes the outer framework for the Environmental Strategy of the Ministry of Defence and the efforts made in this field.

Chapter 2: Environmental policy of the Ministry of Defence

Already in the Environmental Strategy of 1993 and its following revision of 1998, the Ministry of Defence established an overall environmental policy covering all areas of effort. The effort of the Ministry in this area, together with developments over the years, has made it appropriate to continue the extension of the environmental policy and in this connection establish a separate environmental policy for each area of effort. Similarly, this Environmental Strategy establishes the environmental objectives and targets for the same areas of effort, cf. Chapters 4 and 5.

The Environmental Strategy includes all activities on land, sea, and in the air within the area of responsibility of the Ministry of Defence, whereas the tasks in relation to the monitoring and prevention of pollution of the marine environment have not been included in this strategy.

2.0. General policy

Through a positive cooperation with civilian authorities and by an active effort in accordance with the targets and intentions of the environmental legislation, the authorities of the Ministry of Defence will work to preserve, protect, and if possible restore the environment and nature.

The effort in the field of protection of the environment and nature will be carried out in consideration of the tasks that the Ministry of Defence has been charged with.

The authorities of the Ministry of Defence have established a standardised environmental management system at all levels with a view to, among other things, continually registering, minimising and controlling the impacts on the environment. The system will be undergoing continuous development and adjustment.

2.1. Environmental management

An environmental management system according to the description of requirements in the international standard ISO 14001 has been introduced at all levels within the area of responsibility of the Ministry of Defence. The environmental management system is the part of the environmental policy of the Ministry of Defence that covers the methods and resources to develop, introduce, achieve, review and maintain the general environmental policy.

It is the obligation of the top management of the Ministry of Defence to ensure that the environmental management system can promote the protection of the environment and prevent pollution, balanced with socio-economic needs.

Based on for instance revision (audits) and reported results, the Ministry of Defence will update the environmental management system with a view to continuous improvement of the total environmental effort, just as the environmental management system must continually secure the mapping and evaluation of the environmental impacts of the activities, products, and services of the ministry's area of responsibility.

The top management at all levels is responsible for compliance with the requirements of the international standard ISO 14001 of the environmental policy of their respective organisations.

Through the cooperation in NATO and in other international cooperation, a high level of knowledge is secured in areas of environmental management and international standards for environmental management systems. This is done with a view to continuous improvement of the environmental management system of the Ministry of Defence, and the establishment of environmental management systems applicable for Danish forces abroad.

2.2. Energy

The authorities of the Ministry of Defence will continue to work for a decrease in energy consumption and hereby reduce total emissions of carbon dioxide (CO₂), nitrogen oxide (NO_x), and sulphur dioxide (SO₂) from the activities of the Ministry of Defence, thereby contributing to the reduction in global warming and acidification.

The reduction in energy consumption is among other things planned to take place on the basis of annual statements of the energy situation and energy plans with proposals for energy saving measures.

In construction projects, cost efficient solutions must be chosen, with the lowest possible consumption of energy and resources seen over the entire useful life of the buildings. On procurement of motor vehicles and machines, EU standards for emissions will be followed as a minimum, and also stationary motor-driven equipment will be sought adapted to the same standards.

2.3. Water

Concerning its own abstraction wells, the Ministry of Defence will ensure a satisfactory quality of the drinking water.

The Ministry of Defence will promote water saving measures, and reduce the spillage of water in the supply systems. In this connection, the Ministry will give information on water quality and measures taken in the event of exceedances.

2.4. Soil and groundwater contamination

The Ministry of Defence will continue mapping and investigating soil contamination in the establishments of its area of responsibility, and will initiate clean-up or remedial action with a view to protection of the groundwater, the health of humans and animals, as well as plants and the environment as such against the harmful effects of soil contamination.

In connection with the sale of any contaminated property of the Ministry of Defence, the level of clean-up is determined by the future use of the property. Usually, the future use by the acquirer is not fully known at the time of the sale, as the acquirer is not obliged to inform the Ministry of Defence of this. Instead of full clean-up of all property to a level that allows for sensitive purposes, the price of purchase is set at a level taking a possible contamination into account. This means that the Ministry of Defence obtains a lower sales price on selling contaminated property, and that no contamination clean-up is carried out in excess of what is needed for the future use of the property. It is thus the polluter, who carries the costs of the environmental clean-up.

2.5. Hazardous substances and materials

The use of substances and materials hazardous to health and the environment must be limited as much as possible when using existing equipment and upon new procurements. The principle of substitution of hazardous substances and materials must be followed, whenever it is technically and economically possible.

The use of halons and greenhouse gases must be limited to purposes, where substitution is not an option. On the purchase of new equipment, alternative solutions must be selected.

Pollution with heavy metals must be limited as much as possible in the selection of equipment, causing the least environmental impact.

The use of pesticides must be limited to areas, where it is imperative for reasons of security.

2.6. Environmental issues in Danish international camps and bases

Issues relating to the environment and the working environment in Danish military camps and bases abroad are generally sought adapted to Danish conditions and limit values, though in consideration of local conditions and on the condition that the operational task can be unconditionally carried out.

The camps and bases are established, run, and dismantled with the greatest possible consideration for the health and safety of the stationed forces and the surrounding environment. Harmful environmental impacts in the mission area are removed or reduced. This includes harmful impacts on the environment and the working environment caused by the installation or application of weapons systems.

2.7. Waste

In cooperation with authorities outside the defence, the authorities of the Ministry of Defence will seek to reduce the environmental impacts from the waste generation of the authorities.

This will be achieved by:

- Reducing waste arisings
- Reducing resource consumption
- Increasing the rate of recycling of materials contained in waste
- Enhancing the efficiency of waste management
- Ensuring that final disposal complies with the general Danish waste policy in the economically most advantageous way for the Ministry of Defence.

2.8. Noise

The authorities of the Ministry of Defence will cooperate with civilian authorities to protect the surroundings against noise nuisances from the activities of the defence to the extent that this is technically, economically, and educationally possible.

When changing the educational and other noisy activities, it must be sought to carry out the changes with the least possible nuisances in order to protect nature and the environment as much as possible in respect of the living conditions of humans and animals.

2.9. Environmentally correct design

In connection with construction of buildings and installations, the Ministry of Defence will ensure that the widest possible environmental considerations are integrated with a view to reducing the environmental impacts of the construction, and thereby contribute to promoting a sustainable development. This will be done on the basis of a builder's policy with affiliated principles and programmes for constructions with good environmental properties.

2.10. Protection of nature

The unique natural values of the training grounds of the Ministry of Defence must be preserved and protected for the benefit of biological diversity, the access to natural values for future generations, and the military needs for varied options for training.

2.11. Procurement activities

The authorities of the Ministry of Defence will carry out environmentally conscious procurements by including environmental issues upon the procurement of products and services on an equal footing with other considerations, such as price, quality, and terms of delivery. Upon the procurement of energy consuming appliances and equipment etc., an energy-economic evaluation must be made. The evaluation of the environmental properties of a product must include the entire life cycle of the product.

Chapter 3: Environmental status of the Ministry of Defence

3.0. Introduction

For a number of years, many different measures have been taken with a view to reducing the impact on the environment that is the result of the activities of the authorities of the Ministry of Defence.

In the process, the Ministry of Defence has given priority to the reduction of water and energy consumption, registration of and measures against soil and groundwater contamination, and also the reduction of noise from air bases, shooting ranges, and training grounds, these causing the heaviest environmental impacts on the surrounding society.

The present status of each area of effort and policy is described below.

3.1. Environmental management

The Ministry of Defence has introduced environmental management at all levels under the minister's area of responsibility. In 2000, the environmental management system of the Ministry of Defence was adapted to the international standard, ISO 14001.

At all levels within the ministerial area of responsibility, a so-called progress evaluation is carried out, that is, a registration and an assessment of the environmental impacts in connection with the implementation of the environmental management system. The progress evaluations form the basis of the environmental action plans of the authorities.

By the end of 2003, a total of approx. 325 environmental managers in the defence have been educated.

The Ministry of Defence has commissioned guidelines for the use of the authorities of the Ministry of Defence to ensure the application and maintenance of the environmental management system. Thus, a revised guideline on the establishment of procedures was published in October 2000, while a revised guideline on progress evaluation was published in 2003. A guideline on environmental auditing will be published in the course of 2004.

The Home Guard command has drawn up and implemented "Environmental Management of the Home Guard", electronic edition, at all its administrative units.

The environmental management system is accessible on the internal information website of the Defence, and consists of a guideline for establishing management procedures for environmental work, together with a database for reporting of environmental data (quantitative). 45 environmental managers have been educated within the Home Guard area.

The Danish Defence Construction Service has made a third party revision (audit) in 2002 at one of the units of the Royal Danish Administration of Navigation and Hydrography and in 2003, two third-party revisions (audits) have been carried out within the area of the Defence Command, as well as one within the area of the Home Guard.

3.2. Energy

For a number of years, the authorities of the Defence have reduced the consumption of energy in order to reduce CO₂ emissions, and thereby global warming.

The reduction in energy consumption has mainly taken place within the operation of the properties and establishments of the minister's area of responsibility.

The degree-day corrected energy consumption¹ of the Ministry of Defence for heating of buildings has been reduced since 1990, when the systematic registration of energy consumption etc. was introduced, from 500 GWh to 267 GWh in 2002, corresponding to a reduction of 47 pct. In the same period of time the consumption of electricity has been reduced from 137 GWh to 126 GWh, corresponding to a reduction of approx. 9 pct.

The indicator for energy for heating decreased from 260 kWh/m² in 1990 to 163 kWh/m² in 2002, corresponding to a reduction of 37 pct. From 1998 to 2002, the indicator decreased from 170 kWh/m² to 163 kWh/m². The indicator for the consumption of electricity has remained almost unchanged from 1990 to 2002 (a reduction from 39 kWh/m² to 38 kWh/m²). In addition to the reduction in energy consumption, a conversion of the consumption has taken place, so that district heating and natural gas in 2002 covered 90 pct. of the energy consumption compared with 80 pct. in 1990.

The general reduction in energy consumption together with the conversion to fuel types with reduced CO₂ emissions, has resulted in a decrease in CO₂ emissions from 235,000 tonnes in 1990 to approx. 130,000 tonnes in 2002, corresponding to a reduction of approx. 45 pct.

¹ The consumption of heat and water covers the consumption within the Ministry of Defence (the Department), the Danish Defence Command, the Home Guard Command, the Navigation and Hydrography Administration and the Danish Defence Construction Service.

The total floorage has been reduced in the period between 1990 and 2002 by approx. 18 pct. to approx. 2.5 million m² in 2002. The heated floorage has been proportionally reduced by approx. 14 pct. to approx. 1.65 million m².

In the period from 1994 to 2002 (a systematic registration of investments in energy savings has been made since 1994), approx. DKK 220 million have been invested in energy saving measures within the areas of heating, ventilation, lighting, climate screens, and water savings.

Annual energy labelling is carried out for those of the Ministry's buildings with a surface of more than 1,500 m². Every three years a complete overhaul of the buildings is carried out, and an energy consumption plan with proposals for energy saving measures is worked out. The plan is revised the following two years in connection with the energy labelling.

Finally it should be pointed out that the six decentralized power and heating plants of the Ministry of Defence are fuelled with natural gas, which implies a minimum of air pollution. By generating both electricity and heating from the natural gas (recovery of waste heat), the plants contribute to reducing CO₂ emissions.

The energy consumption of the Ministry of Defence for both operative and administrative transportation activities has been almost stable in the last five years and all in all amounts to approx. 65,000 tonnes of fuel.

3.3. Water

The properties and establishments of the Ministry of Defence are supplied with drinking water and water for other uses from municipal or private water supply plants, including the Ministry's own.

Due to a reduction in recent years in water consumption, a certain degree of capacity adjustment of the water supply plants is needed, in order to avoid excessive residence time of water in the supply systems.

In continuation of recent years' substantial reductions, the annual water consumption in the Ministry's area of responsibility has been reduced from 1998 to 2001, from approx. 1 million m³ to approx. 815,000 m³, or a reduction of almost 19 pct. (a systematic registration was established in 1998). The reduction in water consumption is partly due to fewer users and reductions in the Ministry's property mass, partly due to water saving measures.

In 2000 the use of the de-icing agent urea was discontinued on the runways of the air bases, thus ceasing discharge of nitrogen to the underground and surface water recipients. Because of corrosion problems, possibly due to the use of new de-icing agents, the use of urea has been reintroduced at Air Base Skrydstrup on a preliminary basis until June 2005.

3.4. Soil and groundwater contamination

Every year data on mappings, investigations, remedial action and monitoring is reported to the Danish Environmental Protection Agency's status on soil contamination. Below the data that can be extracted for the period of 1998 to 2002 are summarised.

The Soil Contamination Act entered into force on 1. January 2000. According to this act, the Ministry of Defence must map soil contamination at knowledge level 1, i.e. a preliminary historical data mapping of activities that may have contaminated the soil. The results must be entered into the Pollution Registry of the Ministry of Defence, which has been developed for this mapping. The establishment of the registry is a valuable contribution to a rapid response to inquiries regarding soil and groundwater issues in the areas under the Ministry's area of responsibility. From when the law came into force in 2000 until mid-2003, the necessary documentation basis has been procured and scrutinized for approx. 9,400 ha out of the total areas of the Ministry of Defence of approx. 27,000 ha, corresponding to approx. 35 pct.

Contamination investigations are carried out in the event of a risk of contamination of for instance drinking water supply or in connection with building and construction projects. From 1998 to 2002, 142 investigations have been carried out. Of these, 24 investigations were made in 2002.

Remedial action projects are carried out where a contamination incident after a concrete risk assessment constitutes a risk for the surrounding environment. Remedial action may include excavation of contaminated soil, pumping of contaminated groundwater, or soil ventilation. From 1998 to 2002, 76 remedial action projects were carried out, of which 12 in 2002. It should be noted that some remedial action projects have a duration of several years.

Monitoring of groundwater contamination is carried out in agreement with the civilian environmental authorities in order to follow a possible spreading and natural decomposition of a contamination. This may be the case where there is a remaining contamination after a clean-up, or where the clean-up does not measure up to the risk to drinking water abstraction. From 1998 to 2002, 60 monitorings have been carried out. Of these, seven have been finalized in 2002. It should be noted that some monitorings have a duration of several years.

In connection with sale of property of the Ministry of Defence, loyal information is given about any activities which may have caused soil contamination, as well as about any soil contamination incidents that the authorities of the Ministry of Defence know about.

3.5. Hazardous substances and materials

Halons are being phased out, as per the Defence Action Plan for the Phase-out of Halons. Thus, the halon supplies have been reduced by approx. 55 pct. from 1996.

The Ministry of Defence has a dispensation from the ban on use of halons, where substitution with other substances has not yet been possible. Used halon for subsequent recycling is stored in the halon-bank of the Ministry of Defence, which is responsible for the collection, storage, cleaning, and distribution of halon.

Ozone-depleting gases mainly consist of HFCs that are used in air conditioners of weapons systems and in mobile containers as a refrigerant. The use of the substances has been mapped. Military use has been exempt from the ban on the use of the substances, until alternative solutions have been found. In connection with procurement of new equipment, possible alternatives are examined and assessed.

Heavy metals often constitute part of the surface treatment to protect constructions against corrosion and are also a constituent in a number of chemical products. The authorities of the Ministry of Defence participate in projects dealing with the substitution of heavy metalcontaining equipment and materials. Considerations are carried out regularly regarding possible substitutions of heavy metals in batteries and construction materials.

Since 1. January 2002, it has been prohibited to use pesticides on the areas of the Ministry of Defence. The prohibition also includes rented or let areas. Exempt from the prohibition are areas, where it is imperative for reasons of security.

The amount of pesticides used has been reduced from 1999 to 2002 alone with approx. 77 pct. The main part of the total approx. 900 litres of merchandise, used in 2002, was used to combat hogweed and other dominant growths that are hard to fight with alternative methods. The use of pesticides is done in accordance with the nature management plans of the establishments and in cooperation with local environmental authorities.

3.6. Environmental issues in Danish international camps and bases

Professional environmental support is called for in connection with the dispatch of force contributions to international operations, and from the part of the Defence there is an increasing amount of tasks and demand for such professional environmental advisory expertise in this field.

Since 2001, the Ministry of Defence has established an environmental emergency team consisting of environmental experts², who are capable of carrying out environmental investigations and being in charge of clean-up projects at Danish units abroad.

Upon dispatch of personnel, surveys are made to establish the environmental and healthrelated conditions, to which the personnel may be exposed in the given situation. Furthermore, the pollution situation is mapped in connection with the esta-

² The environmental experts are scientific, civilian staff.

blishment of camps and bases. The purpose is, among other things, to secure that future camp and base sites are located in respect of environmental conditions, but also to be able to bring back the camp and base sites to their original environmental condition on the withdrawal of the force.

Since November 1999, the environmental experts have turned out 18 times to the Balkans and Central Asia.

The inspections may serve various purposes³

3.7. Waste

The authorities of the Ministry of Defence collect and treat waste through approved collection schemes, among other things by the use of own, specially designed environmental centres.

In connection with the preparation of the Annual Report for 1998 of the Environmental and Nature Protection Commission of the Ministry of Defence, waste was designated as an issue of potential increasing importance to the environmental effort of the Ministry of Defence⁴.

Partly in the light of this, the Ministry of Defence has published "The Waste Management Strategy of the Ministry of Defence" in 2003 with attributed guidelines for the entire ministerial area of responsibility. The waste management strategy includes a waste policy, waste objectives, and waste targets.

As of 2003, the Ministry of Defence has directed all authorities to register their waste generation in the Waste Database of the Ministry of Defence.

3.8. Noise

Within the last ten years, a mapping has been carried out of noise issues at all air bases, shooting and training grounds, and shooting ranges.

Education of the personnel of the minister's area of responsibility is a dynamic process that is continuously being changed and adapted to new tasks of the Ministry of Defence. In connection with changes of activities, for instance as a

3 Preliminary environmental investigations in connection with the establishment of a camp in view of procuring the data basis for an assessment of the prevailing environmental conditions in the area. Exploratory environmental investigations are made when the camp has been established, and an assessment is made of environmental and health conditions that the personnel may be exposed to. A main investigation is made in cases where the exploratory investigation has established contamination, in order to provide data on the extent of the contamination. An actual clean-up is carried out to the extent that contaminating activities have taken place in the camp. In connection with the clean-up environmental supervision is made to procure and ensure documentation that the clean-up is carried out in an environmentally safe manner.

4 Annual Report 1998, Environmental and Nature Protection Commission, p. 31.

result of changes in educational structures, and the defence agreement in force at any time, new calculations of noise issues are made continuously with a view to disclosing noise consequences of planned or effected changes.

A number of concrete measures have been taken with a view to reducing noise nuisances from the activities of the authorities of the Ministry of Defence. Noise emissions from the military air bases have been reduced by environmental adaptation of flight corridors. Adaptations have been made of activities on training sites as well as on shooting and training grounds, and furthermore noise abatement measures have been established, such as screenings in a series of shooting range installations⁵.

3.9. Environmentally correct design

In connection with building and construction activities within the area of responsibility of the Ministry of Defence, environmentally correct design is carried out, covering among others an assessment of building materials, with the purpose of minimizing environmental impacts from the building activities in the ministerial area of responsibility. As part of this process, a life cycle analysis of the building materials is carried out. Since 1995, the Ministry of Defence has participated in developing a guideline for environmentally correct design and has carried out a number of projects based on the principles of environmentally correct design on a trial basis. The guideline was published in 2000.

After 2000, environmentally correct design was initiated within the area of responsibility of the Ministry of Defence. An environment programme was prepared for these projects with four to six relevant environmental targets, comprising, among other things, choice of materials, life cycle analysis with resource consumption, consumption of energy, and overall economy. On the basis of this, the design was carried out. The use of environmentally correct construction will be sought expanded to relevant projects.

3.10. Protection of nature

The training grounds of the Ministry of Defence represent in many cases characteristic and partly unspoilt natural areas, and thereby they constitute important sanctuaries for a series of rare and endangered animal and plant species. The authorities of the Ministry of Defence, in collaboration with the Danish Forest and Nature Agency, sets up 15 years' nature management plans for all training grounds with a view to preserving and protecting the natural values and securing the military needs for varied training options.

⁵ At many shooting range installations, however, it has not been possible to reduce noise nuisances for the surroundings sufficiently. As a result, around one third of the Defence's originally around 140 shooting range installations have been closed or are up for closure.

In due respect of security and educational and training activities, public access to the natural values of the areas of the Ministry of Defence is ensured by Statutory Order No. 64 of 30 January 2002. In the field of hunting, the Ministry of Defence has followed the guidelines of the Danish Forest and Nature Agency since 2002.

3.11. Procurement activities

In 2001, the Ministry of Defence published "The Procurement Policy of the Ministry of Defence". According to this, the defence must include environmental issues on an equal footing with other considerations, such as quality and price, upon procurement of products and services.

Chapter 4: Environmental objectives of the Ministry of Defence

4.1. Environmental management

Environmental management is the tool of the management to ensure that a continuous reduction of the environmental impact from the activities of the ministerial area of responsibility is ensured, that the environmental policy is complied with, and that the environmental targets are achieved. The environmental management system is maintained in order to fulfil the requirements of the international standard ISO 4001.

It is also an objective to conduct revision schemes (audits), and that the top management at all levels on a regular basis review the local maintenance of the environmental management system.

Furthermore, it is an objective to draw up environmental management guidelines for the Danish forces abroad and to make sure that environmental managers are an integral part of the forces.

4.2. Energy

Every three years, the Ministry of Defence will evaluate the existing energy management systems with a view to assessing whether the system functions appropriately, including whether monthly budgets for energy consumption are prepared, whether continuous registrations are being made of the actual consumption, and whether action is taken on substantial deviations between the budgeted and the actual consumption.

The Ministry of Defence will conduct a mapping and analysis of the energy consumption in establishments with substantially larger energy consumption for heating than comparable establishments. On the basis of such analysis a proposal will be made for possible energy saving measures.

The implementation of energy saving activities in the establishments of the Ministry of Defence is prioritized on the basis of the energy plans. Generally, energy savings with a simple repayment term of less than five years must be implemented, in case the investments can be adapted to the existing budgetary framework.

An optimized planning of the administrative transport within the ministerial area of responsibility, together with awareness-building in relation to driver's education, will ensure a better exploitation of fuel and thereby a decrease in air pollution.

4.3. Water

For own abstraction wells, the Ministry of Defence will continuously ensure that the water quality is controlled and will adapt the capacity of the water supply system to the actual consumption.

The Ministry of Defence will limit its use of groundwater for other purposes than drinking water and hygiene, and, specifically, water consumption must be restricted in areas, where water abstraction has a negative impact on nature and the environment.

The Ministry of Defence will establish groundwater protection measures to ensure the water quality.

The discharge of nitrogen with surface water to the surroundings from de-icing of air base runways is to be discontinued to the greatest extent possible.

4.4. Soil and groundwater contamination

In close cooperation with regional authorities, the Danish Defence Construction Service will map and register soil and groundwater contamination in the areas of the Ministry of Defence on knowledge level 1 in the Pollution Registry of the Ministry of Defence.

After negotiations with the civilian authorities, the Ministry of Defence will initiate clean-up or remedial action of identified contamination incidents, where this is required, and where the Ministry of Defence is responsible for the contamination. The soil contamination incidents that constitute a risk for the groundwater resources have the highest priority.

In connection with sale of property of the Ministry of Defence, loyal information is given about any activities which may have caused soil contamination, as well as about any soil contamination incidents that the authorities of the Ministry of Defence know about.

4.5. Hazardous substances and materials

It is the objective of the Ministry of Defence that its subordinate authorities phase out the use of hazardous substances and materials to the extent that it is feasible in terms of technology, economy and security⁶.

In case substitution with less hazardous substances is not possible, the use must be limited as far as possible.

The use of pesticides must be limited to an absolute minimum and take place in accordance with the local nature management plans.

⁶ Hazardous substances and materials are partly covered by the regulations of the Ministry of the Environment, limiting the use of substances, partly included in the list of undesired substances published by the Danish Environmental Protection Agency.

4.6. Environmental issues in Danish international camps and bases

The authorities responsible for the environment and health within the Ministry of Defence must seek to maintain adequate expertise within the environment, health and work medicine, which may be dispatched whenever needed with the generally prevailing notice for Danish reaction forces.

The environmental expertise must have as its target that within four weeks after a request from an operative command, environmental investigations and/or remedial action or cleanup for Danish forces in camps or bases abroad will be initiated.

On clearing of camps and bases, the environmental state of the camp/base is verified and reported with a view to initiating clean-up and remedial action.

4.7. Waste

The Waste Management Strategy of the Ministry of Defence is applicable to the entire area of responsibility of the Ministry of Defence⁷.

The Waste Management Strategy of the Ministry of Defence will be updated on a regular basis with a view to incorporating new EU and national requirements and objectives relating to waste management in the authorities of the Ministry of Defence.

The Ministry of Defence will continue and intensify the already initiated collection and recycling schemes and seek to reduce waste arisings.

4.8. Noise

It is the objective of the Ministry of Defence to minimize the noise and vibration impacts on the surroundings as a result of education and training of the armed forces at shooting and training grounds, on air bases, and during the use of the armed forces' shooting ranges, as well as by military training activities in civilian areas. It is the objective to maintain and further develop a high scientific level of knowledge in the field of calculation technique and noise abatement.

4.9. Environmentally correct design

The Ministry of Defence will continuously carry out a conversion to less polluting processes and work methods. In building and construction works, processes, environmentally correct methods and materials will be used, complying with the requirements for use of the least polluting technology.

In building and construction projects, the requirement for energy savings and environmental concerns are obeyed in the choice of materials, as are the principles

⁷ With the exception of the sites of the Defence at Greenland and the Faroe Islands, expatriate forces and the privileged areas of Christiansø and Christiania. However, the waste management strategy will apply to the extent it is possible on these sites.

stipulated in "The Procurement Policy of the Ministry of Defence" of November 2001.

In connection with the design of building and construction activities, an environmental programme is prepared and presented with the purpose of a subsequent documenting of the environmental mappings, general assessments, and priorities.

The results of the development of knowledge of the environmental properties of building activities must be continuously registered and implemented, and there must furthermore be a focus on international standards and methods.

4.10 Protection of nature

The Ministry of Defence will continue the effort of preparing nature management plans for all training grounds. Nature management plans are consecutive over a period of 15 years. The first plan was prepared in 1993, which is why the work of revising the oldest nature management plans is now being initiated. As part of the revision of the nature management plans, an evaluation of the implemented management activities will be made in order to document the biological effect. In this manner the Ministry of Defence will secure that a natural condition is maintained in the areas of the Ministry, creating the best conditions for the preservation of the natural flora and fauna. Already in 2005, the objective of the Government and the EU of a halt to the deterioration of biodiversity will thus be achieved, as far as the areas of the Ministry of Defence are concerned.

To the extent possible the public must be given access to the areas of the Ministry of Defence, whereas the access due to educational and training activities may be limited in certain periods of time and for certain areas. Furthermore, particularly sensitive natural areas may be kept free from both training activities and public access.

4.11. Procurement activities

Upon the procurement of items of equipment, products and services, the authorities of the Ministry of Defence will evaluate the consequences to the environment and the working environment of type selection, material selection, production processes, technology, and work methods, based on a general assessment of purpose, needs, pattern of application, technology, economy etc.

Chapter 5: Environmental targets of the Ministry of Defence

5.1. Environmental management

The Ministry of Defence and the management at all levels pertaining to the Ministry's area of responsibility determine and stipulate their own environmental policy and make sure to prevent harmful environmental impacts and pollution from the activities, products, and services of the individual organisations.

At all levels within the ministerial area of responsibility, an environmental management guideline must be prepared before the end of 2005, according to the description of requirements in ISO 14001, covering environmental objectives, environmental targets, and environmental action programmes to fulfil the environmental policy.

The environmental management system at all levels within the ministerial area of responsibility is secured, partly by establishment of responsibility by the management, allocation of resources, and fulfilment of necessary needs for education, partly by defining and maintaining procedures for internal communication and communication with external stakeholders within the environmental field.

All levels within the ministerial area of responsibility must define and maintain the stipulated procedures and systematically monitor and measure indicators for activities that may have a significant impact on the environment.

Third party audits of the environmental management system are carried out at all levels under the ministerial area of responsibility in a three-year cycle.

At all levels in the organisation of the ministerial area of responsibility, the managements annually review the audit results of the environmental management system with a view to establishing, whether the environmental objectives and targets have been fulfilled, and whether there is a need for corrective action or changes of the environmental management system of the organisation. The result of the management review must be recorded.

At dispatched Danish units environmental managers must be included. At the latest by the end of 2004, an environmental management guideline must be prepared for the use of the dispatched Danish units.

5.2. Energy

It is the target of the Ministry of Defence to reduce air pollution from the energy consumption in connection with operative activities and transportation by converting to use of environmentally benign fuels and propellants, as the technical and economic options become available.

At the same time it is the target of the Ministry of Defence to reduce air pollution from energy consuming equipment by systematic maintenance.

It is furthermore the target of the Ministry of Defence to reduce the consumption of fuels and propellants by education in energy and environment-friendly driving, including any use of simulators in the education.

The indicator for energy consumption for heating will be reduced from 163 kWh/m² in 2002 to 156 kWh/m² in 2007, corresponding to a reduction of approx. 4 pct.

The indicator for the consumption of electricity will be reduced from 38 kWh/m² in 2002 to 35 kWh/m² in 2007, corresponding to a reduction of approx. 8 pct.

By the use of CTS installations and intelligent automation components, the Ministry of Defence will control energy consumption in the buildings.

5.3. Water

The Ministry of Defence is commissioning programmes for quality control of own water supplies, taking into account possible occurrences of xenobiotics in the catchment area.

A state assessment of the water supply systems⁸, including own water abstractions and waterworks, will be carried out before the end of 2006.

Emergency plans and procedures for remediating water quality problems will be prepared before the end of 2006.

Protective zones will be established to prevent contamination of own water abstraction wells concurrently with the planning of efforts by regional authorities.

A guideline will be prepared to secure a system that on a current basis will keep water consumers informed. The guideline is to be implemented before the end of 2005.

Before June 2005, the Ministry of Defence will carry out investigations of corrosion problems caused by environment-friendly runway de-icing agents and assess which agents may be used in the future to minimize the impacts on surface water.

⁸ From abstraction well to building.

5.4. Soil and groundwater contamination

On an annual basis, ten establishments must be mapped and registered within the ministerial area of responsibility, corresponding to knowledge level 1.

In connection with each mapping, the relevant responsible authority for the property or the establishment will be informed within two weeks of the mapping of its possible duties to act on the conclusions of the mapping.

A status on knowledge level 1 mappings is forwarded annually to the regional authorities. Clean-up or remedial action will be carried out in case a concrete risk assessment has shown that the soil contamination constitutes a threat to the groundwater (drinking water interests) or land use.

The Ministry of Defence will commission historical data mapping of any property which is up for sale. The historical data mapping will be part of the tender documents for the property, in order to ensure the fulfilment of Ministry's obligation of loyal information in connection with the sale of property.

5.5. Hazardous substances and materials

The defence authorities will cease using halons entirely, as the technical options become available, cf. "Defence Action Plan for the Phase-out of Halons".

The use of other chemical substances and materials that present a hazard to human health and the environment, such as greenhouse gases and heavy metals, must be limited as much as possible, both in existing equipment and in new procurements. The principle of substitution must be followed.

Before the end of 2006, the use of hazardous substances and materials in the Defence will be mapped with a view to complete phase-out before the end of 2008⁹. Such products must not be purchased locally after the end of 2004.

The use of pesticides must be limited to an absolute minimum and must, if possible, continuously be reduced concurrently with the revision of the local nature management plans.

5.6. Environmental issues in Danish international camps and bases

Environmental issues must be included in the initial study of the area, which is the basis of the location of new camps and bases.

To the extent the conditions in the future operation area allow, the environmental experts of the Ministry of Defence will be part of reconnaissance teams with the

⁹ Hazardous substances and materials are partly covered by the regulations of the Ministry of the Environment, limiting the use of substances, partly included in the list of undesired substances published by the Danish Environmental Protection Agency.

purpose of contributing to an appropriate location of Danish military camps and bases abroad.

Preliminary environmental investigations must be carried out within the first month after the establishment of a camp or base for Danish forces abroad.

Furthermore, annual exploratory environmental investigations must be carried out in established camps and bases for Danish forces abroad.

Main environmental investigations will be carried out and any ensuing environmental supervision in connection with clean-up must take place in connection with the clearing of camps and bases by Danish forces abroad.

Before each dispatch, and the first time in 2004, an environment management guideline must be prepared for the use of Danish peacekeeping forces during their stay in Danish military camps/bases abroad.

A competent environmental manager must be part of the peacekeeping forces that are dispatched to Danish military camps/bases abroad.

5.7. Waste

The Waste Management Strategy of the Ministry of Defence will be updated/ revised every two years, and the first time before the end of 2005. In connection with the update/revision, policy, objectives, and targets will be considered.

Every year and the first time by the end of 2003, an overall statement is prepared to the Ministry of Defence on the status of the implementation of the Waste Management Strategy of the Ministry of Defence.

Every year and the first time in the second quarter of 2004, a report is made to the Ministry of Defence on the status of waste generation of the pertaining authorities, based on the reports in the waste registration database.

5.8. Noise

Noise impacts from the shooting ranges are reduced to the extent needed according to the conditions in the environmental approvals, and, among other measures, further noise abatement measures will be taken in the shooting ranges. Noise will also be sought reduced by further use of simulators in the shooting training.

The emission rate of the noise sources used by the defence must currently be updated and recorded.

The use of digital calculation and visualisation programmes is to be expanded and made more efficient, including in relation to the actual mapping process. The competences in the noise field will be strengthened by participation in national and international cooperation.

5.9. Environmentally correct design

The Danish Defence Construction Service, which is in charge of building and construction activities, carries out an assessment on a regular basis of the requirements for environmentally correct construction, and ensures that the principles for environmental policy, objectives, and targets are complied with.

All building and construction projects will be adapted to the environmental objectives, which are sought achieved by type selection, choice of materials, production processes, technology, work methods, and landscape considerations.

Before the end of 2004, a general instruction will be prepared about the inclusion of environmental issues in tendering, including which parameters can be included.

The Builder's Manual of March 2000 on Environmentally Correct Design will be revised before the end of 2006.

The Ministry of Defence will arrange that before the end of 2008, trials will be carried out with alternative, including ecological, building materials, and with a classification of building activities into climatic zones for minimization of the supply of energy.

5.10. Protection of nature

By the end of 2004, nature management plans must be prepared for all training grounds of the Ministry of Defence.

Furthermore, before the end of 2004, a time schedule must be in place for the revision of all existing nature management plans for the training grounds of the Ministry of Defence.

The preservation of game in the areas of the Ministry of Defence is part of the nature management plans, and it is primarily achieved by creating sound conditions for shelter, hideouts, and foraging for the game, in order that the establishment of game fields and feeding may be kept at a minimum.

5.11. Procurement activities

In connection with new procurements, the environmental efforts of the suppliers are assessed, including their certified environmental management systems, and the information is included in the purchase evaluation. The authorities of the Ministry of Defence will encourage suppliers to produce environment-friendly products in an environment-friendly production. Upon large purchases the environmental policy and reference basis of suppliers, producers, and consultants will be assessed.

Chapter 6: Information strategy

It is the strategy of the Ministry of Defence to inform the public on developments in the area of the environment within its area of responsibility. For example, the present Environmental Strategy, the Waste Management Strategy of the Ministry of Defence, and the Annual Statement of the Minister of Defence, which every year comprises one or more environmental topics, will be available on the homepage.

The authorities of the Ministry of Defence cooperate with and inform among others the environmental authorities on the efforts in connection with the reduction of environmental impacts from the implementation of activities under the authorities pertaining to the Ministry of Defence.

Further, the environmental authorities are kept informed of the current evaluation of environmental impacts and mitigating measures.



DANISH MINISTRY OF DEFENCE