

1999

# A Danish contribution to a cleaner world



Ministry of Environment and Energy

***DANCEA***

Danish Cooperation for Environment in the Arctic

***DANCED***

Danish Cooperation for Environment and Development

***DANCEE***

Danish Cooperation for Environment in Eastern Europe



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# Preface

## **Danish Environmental Assistance: Helping others -and ourselves**

Not all that long ago the received wisdom was that the earth had almost inexhaustible resources and an almost infinite ability to survive pollution. Many thought nothing, for example, of dumping waste or discharging untreated effluent into the oceans.

In the past 25-30 years public awareness of the world's environmental problems has been very much on the increase. And today we know better. Reports from national governments, international organisations like the EU and the UN and from scientists all point in the same direction: if we fail to protect our environment, it will be destroyed and, consequently, erode the basis of our own existence. Or in other words: We have to act before it is too late. But how?

The answer to this question came at the historic 1992 Earth Summit in Rio de Janeiro. At this conference, the two concepts environment and development were linked as two equally important elements – which, far from being opposites, need to go hand in hand in future developments. The 1992 Earth Summit approved a resolution urging greater international support for sustainable development.

After the 1992 Earth Summit, the Danish parliament immediately resolved to take up the challenge and lead the global battle for conservation of the environment. We have lived up to this decision. We now have a well-functioning programme of environmental assistance covering many countries the world over.

There are several reasons why we have chosen to become so involved in global environmental problems. Denmark has long been actively engaged in conservation problems. We set up the Ministry of Pollution Control – the precursor of the present Ministry of Environment and Energy – as early as 1971. This was an early initiative, seen from an international perspective. And the long experience we have gained in solving our own environmental problems has offered us valuable know-how which has become a sought-after commodity abroad.

But environmental assistance is provided not only with a view to helping others. There is another, and equally important, reason: through environmental assistance to others we are helping ourselves. Environmental problems cannot be isolated locally or nationally. They do not respect national boundaries. Environmental problems – whether we like it or not – concern us all.

There are many examples of this. Pollution of the Baltic by East European countries has a direct impact on the Danish population. Global warming has consequences for all. And the scarcity of pure water in more distant regions in the Middle East and Africa can lead to political upheaval with untold global consequences.

Environmental problems have a bearing on every one of us. It is very much in this light that this brochure should be read.

A number of ministries make substantial contributions to Danish environmental assistance. This brochure focuses on the environmental assistance programmes of the Danish Ministry of Environment and Energy, the structure of Danish assistance in this field, its results and future objectives. The brochure also provides an overview of some of the world's environmental problems and overall global efforts to protect the environment.

Svend Auken, Danish Minister for Environment and Energy

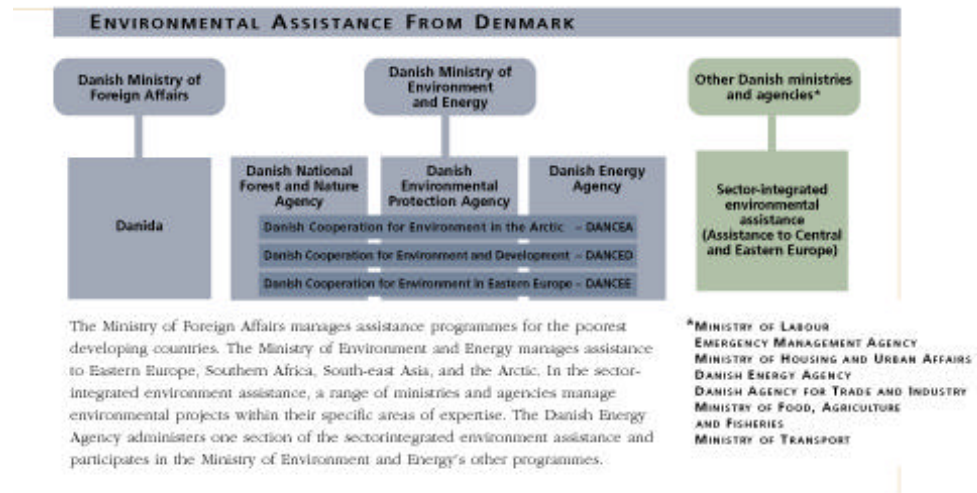
# 1 Environmental Assistance

## 1.1 The world's environment is under threat – but: Environmental assistance can turn the tide

Our global environmental problems are serious. No doubt about that. What is debatable is the extent of the threat and how to tackle it. The seriousness of the situation is underpinned by Global Environment Outlook 2000, the 1999 UN report that highlights a number of specific global environmental problems: the scarcity of clean water, the threat of global warming, the comprehensive destruction of natural and agricultural areas and increasing air pollution in the cities. But developments are not exclusively negative. There is now an increasing awareness of environmental problems at government level, in the public at large, and in the business and industrial community. There is also general agreement on how to deal with environmental problems. The solution lies in greater international emphasis on sustainable development – environmental concerns must be integrated as an equal element in development projects and in the development process generally. There are many indications that international agreements and conventions do solve environmental problems. The UN points to the significant international effort against ozone-depleting substances. Moreover, assistance from individual countries to other nations has produced tangible, positive results. Our efforts are not in vain.

### 1.1.1 Target: 0.5% of GDP

In 1993 Denmark followed up on the UN objective at Rio de Janeiro by establishing a financial facility for Danish environmental assistance, now known as the Environment, Peace and Stability Fund. It was decided that the total budget should gradually increase until – by 2005 – it reaches the target of 0.5% of the Danish GDP. The figure for 1999 is DKK 3.2bn. This money is to be distributed equally between environmental efforts and peace and stability initiatives. Denmark provides environmental assistance to a broad range of countries and project types throughout the world, each with its own needs, considerations and nuances. Consequently, our environmental assistance is managed through various programmes, agencies, and ministries each with its specialist knowledge. Programmes are closely monitored by advisory committees, which act as executive committees and comprise representatives of the business community, grassroots organisations, and the research and education communities.



### 1.1.2 Results so far

Today Danish environmental assistance is well organised, the first results are in evidence, and many new projects are in the pipeline. A large proportion of our environmental assistance is channelled through the Ministry of Environment and Energy's three programmes: Danish Cooperation for Environment in Eastern Europe (Dancee), Danish Cooperation for Environment and Development (Danced) and Danish Cooperation for Environment in the Arctic (Dancea). Some of the results of the programmes are briefly described below.

### 1.1.3 Dancee

In the period 1991-1999 Dancee implemented approx. 800 projects in Eastern Europe. The programme has helped increase environmental consciousness in this part of the world and Dancee can already show a number of concrete results. One success is that it has encouraged Eastern European countries to fund a large part of the project costs themselves which in turn has generated a basis for loans totalling DKK 6bn from international banks. Environmentally, too, there are tangible results. One example is that waste water from a population of two million people, previously pumped untreated into the Baltic, is now being treated. Eastern European sulphur dioxide emissions, too, have been markedly reduced. Efforts in Eastern Europe have also involved projects of a more strategic nature. Dancee has assisted a number of countries to set up plans for phasing out leaded petrol and has been supporting these countries' efforts to harmonise their national environmental laws with EU directives. Dancee has also helped comply with the Montreal Protocol on Substances that Deplete the Ozone Layer. This effort has paved the way for other assistance and thereby directly helped to eliminate 20% of the world's total consumption of ozone-depleting substances.

### 1.1.4 Danced

In the period 1994-1999 Danced conducted several hundred projects in Malaysia, Thailand, Botswana, Lesotho, Namibia, South Africa, and Swaziland. One result has been to help move the environment higher up the national agenda in these countries. Malaysia and Thailand, for instance, have invested more money into environmental



initiatives. In Thailand the programmes have helped strengthen environmental bodies at government and local level. Danced's involvement in South Africa is a good example of how Danish environmental assistance is not merely a matter of exporting technology in an isolated context – technology is part of the holistic approach represented by valuable Danish experience. In the first instance, assistance went to the reform process. Later Danced supported the creation of a raft of environment policies, including a forestry policy, a policy on the utilisation of water resources, and a policy for sustainable exploitation of biodiversity. In addition to supporting general, overall strategies, assistance to South Africa has also included detailed action plans, the accumulation of know-how and skills in the central government environment administration, and greater environmental awareness among the population in general.

#### 1.1.5 Dancea

In the period 1994-1999 Dancea has launched many environmental projects in the Arctic, which faces many environmental problems. For example, projects have now clearly documented that populations of marine animals in the waters around Greenland are declining. A deeper understanding has been obtained of factors that influence the habitat of marine species and of what constitutes sustainable exploitation of marine animal populations. One very significant achievement has been mapping the spread of pollutants and persistent toxic substances from the western world which find their way to the Arctic by air and sea. It has been ascertained that these substances, via the food chain, accumulate in great concentration in the Arctic populations. The male population in East Greenland, for instance, carries in the bloodstream very high concentrations of PCB, a toxin presumed to be highly carcinogenic. Dancea also aims to involve the indigenous Arctic population actively in efforts to conserve and improve the environment. Not least in order to benefit from the local, comprehensive knowledge of natural conditions in the Arctic.



## 2 Dancee

### 2.1 Danish Cooperation for Environment in Eastern Europe – Dancee: Green reconstruction

Air pollution on the increase. Inadequate treatment facilities for waste and waste water. And huge waste of resources in production. These are just a few of the many threatening environmental problems encountered in large areas of Eastern Europe under communism. But with the removal of barriers and the Berlin Wall in 1989, the environment has been placed squarely on the agenda. And a number of former communist countries have established new environment ministries and passed new, stricter environmental laws.

The changeover to a market economy, however, has given the governments and peoples of Eastern Europe new problems to face. Consequently, as early as in 1992, Denmark chose to support East European environmental efforts through targeted assistance projects.

In the 1990s alone, Denmark launched approximately 800 environmental assistance projects and donated just under DKK 2bn, making Denmark the largest provider of environmental assistance to Eastern Europe, both per capita and in relation to GDP. Environmental assistance to Eastern Europe is channelled partly through Dancee – Danish Cooperation for Environment in Eastern Europe – a body managed by the Danish Environmental Protection Agency under the Ministry of Environment and Energy, partly through the Investment Fund for Central and Eastern Europe, and partly through a number of sector programmes (see page 22). In 1999 alone, DKK 500m was allocated for Dancee purposes.

#### 2.1.1 Where does the assistance go?

Dancee provides assistance to a dozen Central and Eastern European countries from Rumania in the south to the Baltic countries in the north. The bulk of assistance is directed towards the countries on the Baltic rim, i.e. Estonia, Latvia, Lithuania, Poland and the Russian Baltic region near St. Petersburg and Kaliningrad. A lower level of assistance also goes to other Eastern European countries, Belarus, Bulgaria, Romania, Slovakia, the Czech Republic and the Ukraine.

#### 2.1.2 What are the assistance criteria?

Danish environmental assistance to Eastern Europe is provided to two basically different types of projects. One type is technical assistance – for example, the supply of plant and equipment (investment projects) – for very specific projects involving waste disposal, provision of drinking water, management of the natural habitat, treatment of waste water, control of air pollution, etc. The other type of assistance – as the pie chart illustrates – is given to projects which support administrative systems at the institutional level, which in turn will facilitate the entry of Eastern European countries into the EU.

Waste management in Eastern Europe remains a massive health and environmental problem. In many places, everything – from ordinary household waste to hazardous industrial and hospital waste – is accumulated in primitive waste dumps with no membrane linings to prevent, for instance, toxins and heavy metals from seeping into the water supply. In Sofia, the capital of Bulgaria, for example, sewage workers run a daily risk of infection from diseases in the large volumes of untreated liquid waste poured down the drain by the the city’s hospitals.

In some areas, therefore, the Danish Environmental Protection Agency is supporting information schemes aimed at educating the population and local authorities to sort, recycle, incinerate and dispose of waste in a more responsible manner.

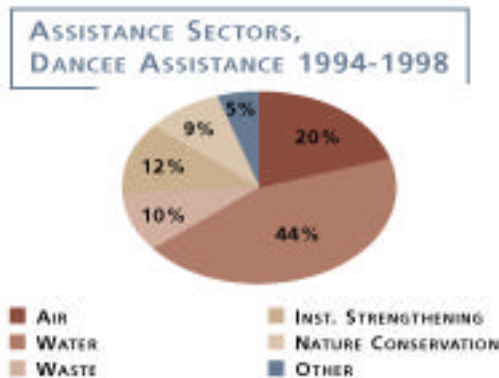
Waste-water treatment is another high priority area in the Dancee programme. In large parts of Eastern Europe drinking water does not meet international standards, in many places it is a direct health hazard. One cause is the run-down and inadequate water-supply systems which become contaminated with infected sewage. In this area, too, Dancee support has produced relative success. For example, wastewater treatment in prospective EU member countries like Poland and the Czech Republic is now on a par with that of the countries in Southern Europe.

Another focus of Dancee’s work is the adverse environmental impact on air and climate in general. Emissions of greenhouse gases, ozone-depleting substances, acidifying gases, heavy metals and particles affect human health as well as animal and plant life. Pollution is worst in those industrialised areas where energy wastage is high – and the burning of cheap lignite for heat and power compounds the problem. But smaller towns in Eastern Europe, too, can find themselves choking in a thick blanket of smog, as sulphur and coal-smoke particles hover at roof-top level.

In cooperation with the Danish Energy Agency, Dancee has supported several projects in the heating and powergenerating sector. In Poland, for instance, assistance has been granted for a geothermal plant based on hot underground springs. The plant will supply district heating for 100,000 people in Zakopane. This project alone will reduce CO2 emissions by 210,000 tons annually.

RECIPIENT COUNTRIES,  
DANCEE ASSISTANCE 1994-1998





”Man’s history shows clearly that we have always been able to find solutions to even very difficult situations. But it is a precondition that we realise the danger before the situation becomes hopeless. All authorities in this field have pointed to the fact that the world’s environment is under serious threat.”  
Stanislaw Zelichowski, Polish Environment Minister,  
at the UN General Assembly in New York, June 1997

### 2.1.3 How are projects selected?

In the selection of Dancee projects, great priority is given to the demonstration value. Environmental assistance is primarily given to projects which will demonstrate the environmental and economic benefit of the new technologies.

A second selection criterion is the requirement for self-funding. The recipient country must contribute most of the funding for the project. This is a particularly important principle in the case of countries like Poland and the Czech Republic which are best able to afford such schemes, and which often fund more than 70% of projects. In such other countries as Rumania and Bulgaria, the self-funding level is somewhat lower. On average, East European countries spend three Danish kroner on these environmental projects for every krone donated by Denmark. The principle of financial participation secures involvement in the projects by the countries in question as well as project continuity.

In projects which receive technical assistance, it is an important principle that the project must either facilitate the applicant country’s entry into the EU or must be closely linked with an investment project – by contributing to the preparatory groundwork or by way of follow-up action.

It is a basic principle in project selection that recipient countries must be involved at every stage. Environmental agreements secure close cooperation between Danish and East European environmental authorities, ensuring that the recipient country’s wishes and needs remain at the forefront. In addition, under a special arrangement, Dancee country and programme coordinators maintain frequent contact with a direct cooperation partner representing the environmental authorities in the recipient country.

### 2.1.4 How are Dancee projects set up?

Enterprises, public bodies or grassroots movements can identify potential projects and apply for funds. No project, however, can be approved by the Danish Ministry of Environment and Energy before it has been approved in

writing by the recipient country. Once this is secured, the applicant is sent confirmation. The project is then identified and approved by both the Danish Ministry of Environment and Energy and the recipient country. On completion of this stage, projects are described in a project document and then typically put out to tender.

#### 2.1.5 The Advisory Committee

The Danish Minister for Environment and Energy has set up an advisory committee to assist the Danish EPA in its environmental assistance work in Eastern Europe. The committee comprises representatives of business organisations, professional organisations, environmental and nature-conservation organisations, and the Danish Ministry of Foreign Affairs and the Ministry of Environment and Energy. The purpose of the committee is to assist the Danish EPA in preparing the objectives of the assistance scheme, the guidelines for its management and the technical prioritisation of recipient countries and project destinations.

The committee also participates in the evaluation of the finished project.

### 2.2 Expanding Polish water-treatment plants

The greater part of the catchment area of the River Narew in Poland lies within one of the country's largest and least spoiled areas of scenic beauty – the so-called "green lungs of Poland". Population density is low, and there is little agricultural or industrial production. For this reason, the water quality in the Narew is generally good.

But locally, there are serious water-quality problems around some of the larger towns in the area. This applies, for example, to Lomza where the local water-treatment plant discharges large volumes of contaminated water into the river. This creates problems both in Lomza and further down river in the large Lake Zegrynskie from which the population of Warsaw gets most of its drinking water. The Lomza waste water, contaminated with phosphorus, creates perfect growth conditions for phytoplankton and algae in the lake during the summer months. As a result, it is difficult to maintain the filters through which drinking water must pass before being piped to Warsaw.

#### 2.2.1 Action plan for waste water

Both local and central Polish authorities have wanted to solve this problem for years. For this reason, an action plan for waste water treatment was launched as early as 1992-1994 in all towns with more than 10,000 inhabitants in the area around the River Narew. Apart from improving the quality of the drinking water, the project has helped secure the large nature reserves in the area for the future.

In recent years, Danish assistance has been concentrated upon local reconstruction and extension of the water-treatment plant in Lomza. The plant was old, worn out and too small for the present volume of waste water. When modernisation is complete, this water-treatment plant will function as a complete biological plant – where phosphorus is removed chemically, and nitrogen is removed biologically.

In consequence, the plant will comply with the new specifications for the discharge of waste water that come into force in Poland some time after the year 2000, and also meet EU standards.

”We share the environmental worries of other countries, and we know that protecting the environment will require a coordinated, worldwide effort.”  
Arnold Rüttel, Presiding Officer of the Estonian parliament, at the UN 1992 Earth Summit in Rio.





## 3 Danced

### 3.1 Danish Cooperation for Environment and Development – Danced: Sustainable growth and development

In the last couple of decades a number of developing African and Asian countries have developed at a furious rate – a development which has been accompanied by great economic growth. Unfortunately, growth has led to a number of serious environmental problems. For this reason, the Danish parliament has allocated funds to help countries build up the capability of tackling these new problems themselves.

Part of these funds are managed by the environmental assistance programme Danced, Danish Cooperation for Environment and Development, under the Danish Ministry of Environment and Energy. The Danced budget for 1999 was DKK 367m.

#### 3.1.1 Where does the assistance go?

Danish environmental assistance to developing countries is concentrated on two regions comprising 12 countries in Southern Africa and five countries in South-East Asia. Danced is responsible for the Danish efforts in countries with a relatively high standard of living, while Danida at the Danish Foreign Ministry is responsible for environmental assistance to the regions' poorest developing countries, which in many cases also receive Danish development assistance. In South-East Asia Danced is active in Malaysia and Thailand, and in Southern Africa in Botswana, Namibia, South Africa, Lesotho, and Swaziland. The two latter countries are poor and have seen little or no economic growth but are within Danced's area of responsibility together with South Africa because of their close geographical and economic bonds with this country.

#### 3.1.2 What are the assistance criteria?

In 1996 and 1997 Danced and Danida jointly worked out two regional strategies for Southern Africa and South-East Asia respectively.

These strategies make up the criteria for assistance efforts to individual countries.

There are three main priorities:

- Management of natural resources
- Sustainable development of urban areas and industry
- Sustainable energy.

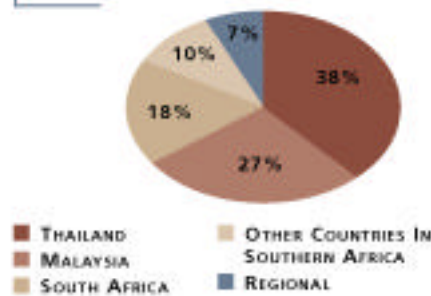
The basis for any selection process is the country's needs. This means that in Thailand, for instance, a large part of Danced's efforts are focused on urban environmental problems because industrialisation and urban development has taken place at a great pace without necessary consideration for the environment or the necessary planning. In Malaysia protection of the forests and of biodiversity are essential areas because this country – in spite of the fact that the greater part of the original forest is gone – has huge natural assets of global importance.

In South Africa the energy sector is given top priority, one reason being that the poorest population are hard hit by coal-fuel pollution.

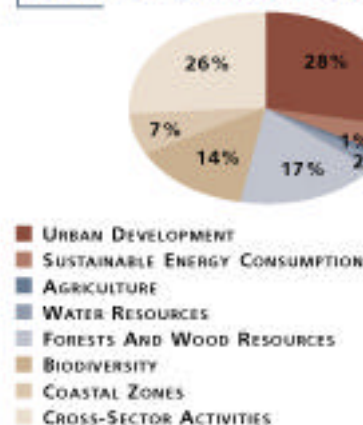
In addition to country needs, consideration is also given to whether the relevant know-how and experience are available in Denmark and whether the country concerned can generate the resources necessary to ensure that assistance efforts will have a durable effect.

The actual breakdown into assistance sectors is illustrated in the chart on page 10. In 1994-1998, 28% of funds were spent combating environmental problems pertaining to urban development and industrialisation, while 17% was spent on the conservation of forests and timber resources. Cross-sector activities, which make up 26%, include both teaching and research programmes as well as cooperation programmes between Danish universities and universities in the recipient countries. The energy sector did not become a separate assistance sector until 1996 and is still not given the emphasis many in Denmark consider politically desirable.

RECIPIENT COUNTRIES,  
DANCED ASSISTANCE 1994-1998



ASSISTANCE SECTORS,  
DANCED ASSISTANCE 1994-1998



”There can be no doubt that the fundamental environmental question is the relationship between resources and consumption. If we, particularly those of us in the rich countries, maintain our present pattern of consumption and expect our material wealth to grow year-on-year, we will build up an environmental debt for our children to pay.”

Samak Sundaravej, Thailand’s Deputy Prime Minister, at the UN General Assembly in New York in June 1997

### 3.1.3 Which projects can receive funding?

There are two overall types of projects which are given high priority. One type aims at building up professional and administrative capacity in the environmental sector in the recipient country. The other type implements demonstration or pilot projects which show how to tackle environmental problems or which test new methods. A third type of project is also supported: the establishment of partnerships, for instance, between Danish companies and companies in the partner country.

These project types can be applied to very different problems. One key problem is the balance between nature conservation on the one hand and the local population's need to benefit from natural resources on the other. Many projects in both Asia and Africa focus on this dilemma. Other central problems – particularly in urban areas – are waste management, recycling, and developing cleaner technologies.

### 3.1.4 How are the projects selected?

Danced's choice of projects is guided by a number of criteria, including the following:

- Initiatives must be implemented in cooperation with the authorities in the recipient countries, private businesses and grassroots movements. Local ownership and involvement are preconditions for the durable effect of Danish efforts.
- Initiatives must strengthen the recipient country's environmental administration, business community, educational and research institutions, for example through the concrete transfer of technology and know-how and through general education to support professional, legal, and managerial environmental capacity in the recipient countries.
- Initiatives must strengthen cooperation between the authorities and grassroots and professional organisations and businesses and thereby contribute to democratisation and decentralisation in the countries in question.

### 3.1.5 How are Danced projects set up?

The inspiration for Danced projects typically comes from authorities, agencies or enterprises in the recipient country. But in a few cases it may be a Danish initiative. If the idea is supported by the programme steering committee, the project is fleshed out in a project document describing project objectives, contents, preconditions, and funding needs. The project document is then assessed by independent experts.

If it is agreed to adopt the project, a formal agreement between Denmark and the recipient country is set up. Normally the project will involve sending Danish professionals to the target area and will therefore first be put out to tender in Denmark. Tenders under Danced are announced in the periodical, Licitation, on Danced's website, and in a quarterly newsletter. Project preparation and the tender phase normally take 12 to 18 months.

Projects implemented by grassroots organisations and professional organisations do not follow this procedure. Danced can give an organisation in one of the countries in question direct support – without governmental agreements or the project being put out to tender – or it can support cooperation between a Danish and an African or Asian organisation.

### 3.1.6 The advisory committee

The purpose of the advisory committee, which was set up in 1996, is to advise the Danish Minister for Environment and Energy and the Danish Minister for Foreign Affairs at a strategic level on environmental assistance to developing countries. The committee consists of 15 members plus a chairman and a vice-chairman. Members are appointed by the two ministers and include representatives of NGO's, the business community, and the research and education communities. In addition, the political parties represented in the Danish Parliamentary Budgets Committee can appoint observers.

### 3.1.7 Programme Steering Committees

In South Africa, Malaysia and Thailand programme steering committees have been set up to prioritise and select projects for implementation. In this way, assistance initiatives are tailored to the country's specific needs and own priorities. Programme steering committees consist of a chairman – typically from the country's Ministry of Finance – and between three and five high-ranking civil servants from the relevant sector ministries, and a representative from Danced

## 3.2 From conflict to cooperation

The upper catchment area of the River Nan in Thailand includes a mountainous, forest area inhabited by a number of mountain tribes who have lived in villages along the river for generations. In recent decades, however, the original forest has been greatly reduced by unlawful settlements, inappropriate agriculture and uncontrolled, deliberate forest fires. In addition, heavy rains running off the exhausted fields and burnt-down forests have poured massive volumes of mud into the Nan river, creating problems further downstream where mud has deposited in a water reservoir – reducing the output of the hydro power plants.

### 3.2.1 Rehabilitating the forest

In 1994 the Thai authorities set out to tackle the devastation. With financial support from Danced, a three-year project was planned to obtain an overall picture of the extent of exploitation of the area's natural resources – and at the same time involve the local population in active rehabilitation of the forest. The project was launched in 1997, and results are now in evidence.

Previously, the relationship between the Thai authorities and the local population was one of conflict. Many civil servants would have been happy to see no one live in the forests at all, and the local population therefore felt their very existence threatened. One of the primary objectives of the project has therefore been to replace the conflict between authorities and local population with cooperation. And this is exactly what happened.

### 3.2.2 Fewer forest fires

The Danced funds have been invested in building a knowledge base within the government bodies and on educating the local population. And financed

via Danced funds, local farmers have adopted new, more sustainable crops and agricultural methods, and the authorities and the local population between them are actively combating occurrences of deliberate forest fires.

This effort, which is being coordinated by a number of "Village Watershed Networks", has helped reduce the number of fires to only a 20th of their previous level. The important, practical experience gained from this project will now be utilised in other areas both in this province and other provinces in Thailand.

” The continuity in environmental assistance to South Africa makes it possible for us to handle long-term environmental problems – like what to do with our increasing household waste. Environmental assistance helps us learn from international experience but also to match this experience with our local expertise. Against this background we can develop our own systems, customised for conditions in South Africa. I hope that cooperation among all the parties involved in these environmental projects has also contributed valuable experience for environmental work in Denmark.”

Tanja Abrahamse, Deputy Head of Department at the South African Ministry of Environment and Tourism.



# 4 Dancea

## 4.1 Danish Cooperation for Environment in the Arctic – Dancea: Pollution does not respect boundaries

Limited sunlight during the winter months. Extreme sub-zero temperatures. And creatures with long lives and large fat deposits in their bodies. These are just a few of the factors which make eco-systems in the Arctic very sensitive to outside influences – including pollution.

Surveys over the past decade have shown that the Arctic receives large volumes of chemical pollutants from the industrialised countries in the northern hemisphere. These substances spread via the atmosphere and by ocean currents and accumulate in birds and fish – and through them in the local population, which is the last link in the food chain.

There is therefore every reason to be very conscious of pollution in the Arctic. That is why some Danish environmental funds go to this area. These are managed by Dancea – Danish Cooperation for Environment in the Arctic. In 1999 total funds available for Dancea's work was DKK 36.3m.

### 4.1.1 Where does the assistance go?

Greenland is the focus of Danish environmental assistance in the Arctic. Greenland's Home Rule Government is responsible for the environment on land and inside a three-mile inshore limit, while Denmark is responsible for the task of monitoring and combating cross-frontier pollution of the air and the sea – in compliance with international agreements. Dancea also supports local environmental initiatives including the building of local knowledge bases and information in Greenland – and activities in the Faroes if they are of Arctic relevance.

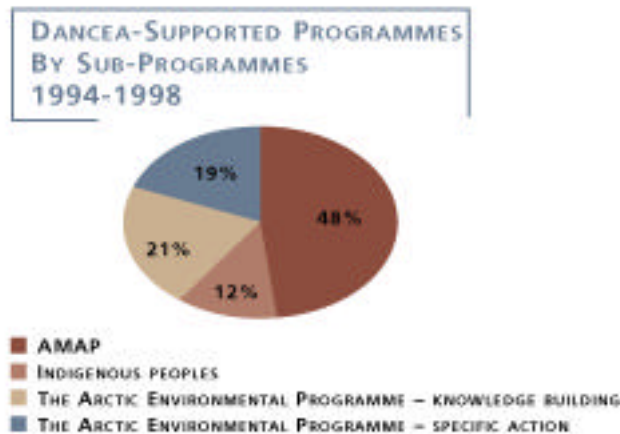
What are the assistance criteria?

Administratively, Dancea is divided into four sub-programmes each managing its part of the total Dancea budget (see the diagram below).

Each programme has its independent objective, and criteria for project selection are not the same.

- One sub-programme is AMAP – Arctic Monitoring and Assessment Programme – a cornerstone in the Arctic Environmental Protection Strategy agreed by the Nordic countries, the U.S.A., Canada and Russia in 1991. The purpose of the AMAP programme is to monitor the levels of pollution created by humans in the Arctic and to advise governments on pollution-control measures.
- The second sub-programme is the Indigenous Peoples' Programme, the purpose of which is to involve the indigenous peoples of the Arctic in the protection of the Arctic environment. Among other purposes, Dancea funds are spent on running The Indigenous Peoples' Secretariat in Copenhagen and to support the indigenous peoples' organisations in order that they may be able to participate in the Arctic Environmental Protection Strategy. Support is also given to NGOs with connections to the Arctic.

- The two last sub-programmes go under one heading: the Arctic Environmental Programme. These programmes jointly support projects which contribute to sustainable development in the Danish part of the Arctic. Among other things, the programmes support activities that contribute to the solution of local environmental problems, increase environmental awareness, and contribute to the accumulation of knowledge requisite to environmental efforts in Greenland in particular.



”The ratification of the UN-ECE agreement on limitations on the use of crop sprays like DDT came about because we can document the environmental impact in the Arctic. In the years ahead, we shall be examining the effects of crop sprays in the Arctic.”

Lars-Otto Reiersen, executive secretary of AMAP

#### 4.1.2 Which projects can receive funding?

The Arctic faces a number of urgent environmental problems which need examining and tackling over the coming years. A wide range of projects are therefore eligible for Dancea funding.

Part of the assistance is provided in compliance with international environmental agreements to which Denmark is a signatory on behalf of the Realm comprising the Kingdom of Denmark, Greenland and the Faeroe Islands. This is mostly a question of monitoring cross-boundary air and sea pollution which brings persistent toxins to the Arctic. It has been discovered that these substances accumulate via the food chain, finally being consumed by the local population. One example is that very high concentrations of PCB – considered to be highly carcinogenic – are found in the bloodstream of East Greenlandic men. And a survey of pregnant women in the Disco Bay region of West Greenland has revealed that Greenland has a serious problem with high levels of mercury pollution.

Dancea also supports projects which examine the population development of marine mammals that are traditionally hunted in the waters around Greenland. A greater knowledge of the factors that impinge on these populations is an important stepping stone on the road to more sustainable harvesting of ocean resources. It is paramount to involve the local population in Greenland in such projects because for generations they have acquired an



immense knowledge of their country's natural resources and environment – and have now acquired motorboats and snow scooters enabling them to hunt much more efficiently than from the traditional kayak.

In the selection of Dancea projects, some importance is attached to the widest possible exploitation of Danish expertise and experience of environmental protection and protection of the natural habitat in the Arctic. It is also important that the wishes and needs of the local population are considered, and that knowledge of the environment and of the natural habitat is built up in local Greenland agencies.

"The high concentration of toxins in our food is not acceptable. The international community must work towards the reduction of global pollution and stop further emissions."

Marianne Jensen, former member of the Home Rule government of Greenland, at the Alta conference in 1997

#### 4.1.3 How are Dancea projects set up?

It is usually the Danish Environmental Protection Agency that takes the initiative in launching specific Dancea projects. Many of these arise from international agreements on the environment with which Denmark is obliged to comply in the Arctic – they will often be AMAP projects. Projects under the other sub-programmes are more open to initiatives from elsewhere. Project proposals are invited via the Danish Ministry of Environment and Energy's website and in the joint newsletter on environmental assistance published by the Ministry of Environment and Energy.

#### 4.1.4 The Advisory Committee for the Arctic

The Danish Minister for Environment and Energy has set up the Advisory Committee for the Arctic to support the Danish EPA in its work in connection with the Arctic Environmental Programme. The committee comprises representatives of professional organisations, environment and nature conservation agencies, research institutions and research councils as well as the Ministry of Environment and Energy.

In addition, there is the Coordination Group for AMAP with representatives of the Danish Ministry of Foreign Affairs, the Prime Minister's Department, the Greenland and Faroe authorities, various research institutions, and the Ministry of Environment and Energy.

The Coordination Group assists the Danish EPA with the AMAP programme.

#### 4.2 The last link in the food chain

Persistent environmental toxins have never been used in the Greenland industry. And yet certain environmental toxins are found in very high concentrations in the Greenland population. This alarming fact was discovered through a Dancea-funded AMAP project which was initiated in the mid 1990s when 200 pregnant Greenland women were examined. Similar examinations were also made of a large population of marine mammals. PCB

– a suspected carcinogen – was found in the pregnant women in concentrations among the highest measured in humans in the world. A later Dancea-funded survey concluded that 60% of the East Greenland men examined had PCB concentrations exceeding the limit which – in Canada – would activate legislative action to reduce environmental deterioration.

#### 4.2.1 Toxins accumulate

The explanation for the Greenland findings lies in decades of emissions by the industrialised countries. PCB and other persistent environmental toxins have spread in Greenland with air and sea currents which tend to move towards the Arctic. Certainly, the pollution is diluted many times on its way to the Arctic, which is why the actual environmental impact is still limited.

The problem arises, however, when toxins accumulate in the food chain – from seawater to plankton to crustaceans and on to small fish which are eaten by bigger fish which are consumed by seals and whales which in their turn are served up on the dinner tables of Greenland. On account of the accumulation factor, concentration of PCB in the fish is approximately 50 million times higher than in the surrounding seawater.

Populations in industrialised countries are less exposed to this accumulation because they mainly eat meat from grazing animals. But when the Greenland man or woman eats traditional meats like seal or whale, he or she is the sixth or seventh link in the food chain – and therefore much more exposed to toxins in spite of being so much further from the source of pollution.

#### 4.2.2 Dual-sex polar bears

Another project funded by Dancea has documented signs of dual-sexuality in polar bears – similar discoveries have been made in Svalbard. It is realised that this may be caused by environmental toxins, which is alarming – particularly considering that the Greenlandic population carry just as high a level of toxins in their bloodstream as the polar bears. So far, however, the harmful effects of the high concentrations of PCB in the Greenland human population have not been documented. The explanation for this may be that the very traditional foodstuffs that contaminate the Greenlanders also work to prevent the diseases that the toxins can cause. In future years this theory will become the subject of new surveys. And the Greenland population will be tested more thoroughly for possible harmful effects.

As a result of these surveys, the Greenland Home Rule Government has set up a nutrition council to offer the Greenland population dietary advice. Survey results are part of the contribution of the Arctic region to joint international environmental efforts to reduce emissions of dangerous substances to the environment.

# 5 Energy

## 5.1 Environmental assistance from the Danish Energy Agency: Cleaner energy for Eastern Europe

Part of Denmark's environmental assistance for Eastern and Central Europe is directed via sector-integrated environmental programmes (see page 22). One of these programmes is managed by the Danish Energy Agency under the Danish Ministry of Environment and Energy. Its goal is to promote sustainable development in the energy sectors in Eastern and Central Europe and simultaneously to support economic growth in these areas. Each year approximately DKK 70m is allocated to the Danish Energy Agency's sector programme.

### 5.1.1 Where does the assistance go?

The Danish assistance goes to Estonia, Latvia, Lithuania, Poland, and Russia with special focus on the areas round St. Petersburg and Kaliningrad. These geographical priorities arise from the Danish government's wish to strengthen cooperation in the Baltic region.

### 5.1.2 What are the objectives of the assistance efforts?

The main objective is to help the countries in question develop their energy sectors and utilise their sources of energy more efficiently in order to alleviate the environmental impact.

This objective can be achieved only if the negative consequences of fossil-based – and nuclear-based – energy consumption can be reduced.

Consequently, considerable funds are invested in the development and demonstration of alternatives to the environmentally harmful burning of fossil fuels and to unsafe nuclear power plants.

### 5.1.3 What are the assistance criteria?

Danish environmental assistance is concentrated on four main areas:

- Cleaner fuels, including renewable energy
- Increased efficiency in energy production and supply
- Energy conservation at the end-user level
- Institutional development and training

Efforts towards cleaner fuel are concentrated mainly on developing economically viable and environmentally sustainable alternatives to present energy production methods – not least to unsafe nuclear plants. Raising the efficiency of energy supplies involves refurbishing heating systems, increasing combined heat and power production, and renovation of supply systems.

Efforts towards end-use energy

conservation focus both on the application of energy-conserving technology and on a shift in consumption patterns. The goal is to maximise energy conservation in the large-scale consumption sectors – particularly in buildings and industry – where the main instruments will be energy management, demonstration projects, and information.

Organisational development and training efforts are also a major element of energy-related assistance. These projects will be reevaluated at regular intervals in the light of other international initiatives – for instance, the EU PHARE programme which includes important tools for establishing legislation and for setting up new institutions and agencies.

**BREAKDOWN OF ASSISTANCE TO THE BALTIC REGION 1994-1999**

Renewable energy	12%
Natural gas	17%
District heating and CHP	32%
End-user energy conservation	21%
Other	18%
<b>Total</b>	<b>100%</b>

#### 5.1.4 How are projects set up?

Danish Energy Agency projects under the sector programme can be set up by application or by tender. Applications are received by the Danish Energy Agency – the application form is provided on the Agency’s website at [www.ens.dk](http://www.ens.dk).

It is a prerequisite that the project meets the recipient country’s own wishes and needs. Whether arranged by tender or by application, the project must carry the approval of the relevant authorities in the recipient country.

### 5.2 Environmentally friendly district heating

With Danish advisory assistance worth DKK 6m and a loan from the European Investment Bank, the Estonian town of Pärnu has improved the efficiency of its district-heating system and made it more environmentally friendly. Danish advice concentrated on assistance in obtaining international funding, including the preparation of a renovation plan for the district-heating system. In addition, the Danish Energy Agency assisted in the actual renovation process, concluding with an information campaign. Renovation included the installation of two biomass boilers designed for peat and wood chips, pumps, water treatment equipment, 4.5 km district-heating pipes, and the upgrading of numerous heat-exchanger stations.

#### 5.2.1 Environmental improvements

The immediately visible result of the project is that in the course of three years, annual consumption of sulphur-containing oil shale has been reduced from 14,000 to 8,000 tons. Instead, the system uses 26,000 tons of biomass – primarily locally sourced peat.

It would be more environmentally friendly to use wood chips but this type of fuel is still too expensive. The project has reduced sulphur emissions by 12% while CO<sub>2</sub> emissions have declined by 10%. When the system later switches to wood chips, emissions will be reduced even further.



# 6 Forest & Nature

## 6.1 Environmental assistance from the National Forest and Nature Agency: Sustainable management of natural resources

Since the Rio summit, focus has concentrated on the depletion of the world's natural resources – including the need to invest special efforts in assisting developing countries and new democracies in achieving sustainable development. Countries in the developing world and in Eastern Europe possess natural resources and biodiversity far outstripping what Denmark has to offer. But partly on account of uncontrolled development and growth, these assets are currently under threat, and the countries concerned have not yet been able to construct a political and administrative barrier against the assault on their environment.

This is where Danish environmental assistance comes in. In the period 1994-1998 an amount of DKK 528m and DKK 137m, respectively, was allocated for sustainable natural resource management in the Danced countries and Eastern Europe. This assistance package relates to projects in a number of different natural environments: forests, biodiversity, sustainable management of natural resources, and cultural environments, i.e. parts of nature cultivated or developed by humans.

### 6.1.1 Where does the assistance go?

Assistance for sustainable natural-resource management can be granted to those countries which receive support via the Ministry of Environment and Energy's assistance programme, i.e. South-East Asia, Southern Africa, Eastern Europe and the Arctic. In 1997 a special substrategy was drawn up for green environmental assistance for Eastern Europe, and in this context much emphasis was placed on the Baltic region. Western regions of Russia are also major priority areas.

### 6.1.2 What are the assistance criteria?

Environment partners in South-East Asia are currently engaged in a period of vigorous growth – and there is no doubt that the environment is paying the price. The countries of Southern Africa and Eastern Europe have also enjoyed economic growth – with the added factor of political upheaval in recent years and the dramatic social changes that have followed. Developments have imposed substantial, and in many cases brand-new, demands upon the countries' ability to manage their natural resources in a sustainable way.

Safeguarding biodiversity is a key component. Many international agreements and conventions deal with biodiversity, e.g. the Biodiversity Convention and the Convention on International Trade in Endangered Species (CITES). In Eastern Europe there have been efforts to introduce EU environmental rules on biodiversity and protection of nature as part of accession negotiations. Partner countries must make a serious effort to live up to the many international obligations, and in this respect Danish environmental assistance plays an important role.

There are many aspects to the protection and sustainable use of natural resources: protection of specially valuable nature reserves, widespread information campaigns, involving ordinary citizens in the decision-making process, teaching, legislation, policy formulation, planning and the development of methods. Another key focus is sustainable forest management, which must safeguard biodiversity and the world's forests for tomorrow. Many forests are threatened by overexploitation and clearance. Powerful economic forces want to exploit forestry resources and to clear forest land for agricultural, urban, and infrastructure purposes, etc. In Eastern Europe many forests are being privatised by sale or surrender to their former owners from the prenationalisation days of the post-War era. There are similar difficulties in Southern Africa, where the African population now has access to land from which it was expelled during the apartheid years. This has led to the current position with many new and inexperienced agricultural and forestry users, a completely new distribution of land and therefore a need for new planning, legislation and education with a view to achieving sustainable use and management. Here, too, there is a profound need for help. Sustainable natural-resource management often means developing more environmentally friendly and appropriate ways of working. As this – in the short term – can cause a temporary drop in production levels, for example, in agriculture and forestry, there is an urgent need for close collaboration with the authorities and those sections of the local population directly affected. It is vital to balance the changes by developing alternative means of income – preferably schemes based

on sustainable use of nature. One example of this is ecotourism based on amenity values – there is immense potential here in partner countries. But as tourism can also undermine local natural assets, it is clearly important that tourists enjoy them without destroying them.

### **6.1.3 How are the projects set up?**

Projects involving sustainable natural-resource management are administered by the Ministry of Environment and Energy. Selection and implementation of projects then follow the same procedure as for Dancee, Danced and Dancea (see pages 6-17). Applications are processed by the Danish Environmental Protection Agency and the National Forest and Nature Agency.

## **6.2 Development of protected areas**

Lithuania has an extremely well-developed system of natural parks, eminently worthy of preservation. The parks are not only home to an abundance of animals and plants – they also provide popular excursion sites for Lithuanians and visiting tourists. But in the wake of political change in Eastern and Central Europe, management principles for looking after the parks have changed radically – and problems have arisen. One of the root problems is privatisation: parks now have many private owners. Secondly, democratisation and the new dynamic economic growth rate have boosted interest in forestry.

### **6.2.1 Need for modern management**

This has created a need for modern, flexible and democratic planning and management of the parks system, putting the users firmly in the picture. Therefore the State Park Institutional Development Project was prepared in



1996-97 and launched in spring 1998. The sum of DKK 9m has been made available in environmental assistance for the project, which is being implemented by Hedeselskabet, the Danish Land Development Service, in conjunction with the Lithuanian Ministry of the Environment. The project supports the preparation of a national strategy for park management. The strategy will be followed up with specific activities aimed at planning and managing three regional parks and with training and information activities designed to ensure that the results of the project are maintained after the project itself concludes. The intention is that this will provide a model for park management in Lithuania which will be generally applicable in the country's remaining parks.



# 7 Sector-Integration

## 7.1 Sector-integrated environmental assistance: Integrating the environment into all corners of society

Some of Denmark's environmental assistance to Eastern Europe is targeted at particular sectors in the recipient country: for example, the energy, fisheries or transport sectors. These programmes are managed by the ministries and other agencies in Denmark which possess the most know-how on the subject – the Danish Energy Agency, for instance, manages the sector programme for energy, while the agricultural programme is managed by the Ministry of Food. In 1999 the Danish government provided a total of DKK 128m for sector-integrated environment assistance. For year 2000 the government has provided a total of DKK 176m.

### 7.1.1 The assistance objective

The objective of sector-integrated environmental assistance was drawn from the Baltic Region action plan: Baltic Agenda 21, approved by the Baltic countries in 1998. The plan – originally based on the global Agenda 21, adopted by the UN in 1992 – aims to promote environmentally sustainable development based on free-market principles in Estonia, Latvia, Lithuania, and Poland, and in St. Petersburg and Kaliningrad in Russia. Many Eastern European countries have enjoyed economic growth in recent years. If they are to avoid the environmental mistakes made earlier by western countries, it is essential that they succeed in integrating environmental efforts at all levels and in every part of society. Sector programmes are intended to ensure that environmental investment is not a matter purely for the environmental authorities of the country concerned. At the same time, sector-integrated environment assistance helps to raise the environmental standards of Eastern Europe as these countries prepare for accession to the European Union.

### 7.1.2 Leading the environmental initiative

Sector-integrated environment assistance caters for industry, fisheries, agriculture, transport, tourism, and energy. Several Danish ministries and agencies are involved in the effort: Ministry of Labour, Emergency Management Agency (on behalf of the Ministry of the Interior), Ministry of Housing and Urban Affairs, Danish Energy Agency, Danish Agency for Trade and Industry, Danish Tourism Council (on behalf of the Ministry of Business and Industry), Ministry of Food and Ministry of Transport. These work in consultation with their respective counterparts and with the environmental authorities in the recipient country on programmes and specific projects. The Danish Environmental Protection Agency coordinates overall programme activities and approves the environmental components of programmes in consultation with the Advisory Committee for Environmental Assistance to Eastern Europe.

### 7.1.3 Typical projects

Typical projects can comprise assistance for the assessment of the environmental consequences of different forms of transport, support for more efficient energy production, the use of renewable energy, support for the implementation of environmental management in Eastern European enterprises, support for environmental improvements and energy conservation in dwellings, support for the promotion of an improved working environment, support for improving safety standards at nuclear power plants, and support for minimising the use of pesticides.

# 8 Contact

## 8.1 Useful contacts

Copies of this brochure and other material on environmental assistance from the Danish Ministry of Environment and Energy are available from:

Miljøbutikken, Information and Books  
Læderstræde 1-3  
DK-1201 København K  
Phone: +45 33 95 40 00  
[www.mem.dk/butik](http://www.mem.dk/butik)

For further information on programmes and activities, please contact:

DANCEE  
Danish Environmental Protection Agency  
Danish Cooperation for Environment in  
Eastern Europe  
Strandgade 29  
DK-1401 København K  
Phone: +45 32 66 01 00  
Fax: +45 32 66 04 79  
[kt5@mst.dk](mailto:kt5@mst.dk)  
[www.mst.dk/fagomr](http://www.mst.dk/fagomr)

DANCED  
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sns@sns.dk  
[www.sns.dk/snscen/kontorer/kontor16.htm](http://www.sns.dk/snscen/kontorer/kontor16.htm)

Sector-integrated Environmental Efforts  
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kt21@mst.dk

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# Preface

## **Danish Environmental Assistance: Helping others -and ourselves**

Not all that long ago the received wisdom was that the earth had almost inexhaustible resources and an almost infinite ability to survive pollution. Many thought nothing, for example, of dumping waste or discharging untreated effluent into the oceans.

In the past 25-30 years public awareness of the world's environmental problems has been very much on the increase. And today we know better. Reports from national governments, international organisations like the EU and the UN and from scientists all point in the same direction: if we fail to protect our environment, it will be destroyed and, consequently, erode the basis of our own existence. Or in other words: We have to act before it is too late. But how?

The answer to this question came at the historic 1992 Earth Summit in Rio de Janeiro. At this conference, the two concepts environment and development were linked as two equally important elements – which, far from being opposites, need to go hand in hand in future developments. The 1992 Earth Summit approved a resolution urging greater international support for sustainable development.

After the 1992 Earth Summit, the Danish parliament immediately resolved to take up the challenge and lead the global battle for conservation of the environment. We have lived up to this decision. We now have a well-functioning programme of environmental assistance covering many countries the world over.

There are several reasons why we have chosen to become so involved in global environmental problems. Denmark has long been actively engaged in conservation problems. We set up the Ministry of Pollution Control – the precursor of the present Ministry of Environment and Energy – as early as 1971. This was an early initiative, seen from an international perspective. And the long experience we have gained in solving our own environmental problems has offered us valuable know-how which has become a sought-after commodity abroad.

But environmental assistance is provided not only with a view to helping others. There is another, and equally important, reason: through environmental assistance to others we are helping ourselves. Environmental problems cannot be isolated locally or nationally. They do not respect national boundaries. Environmental problems – whether we like it or not – concern us all.

There are many examples of this. Pollution of the Baltic by East European countries has a direct impact on the Danish population. Global warming has consequences for all. And the scarcity of pure water in more distant regions in the Middle East and Africa can lead to political upheaval with untold global consequences.

Environmental problems have a bearing on every one of us. It is very much in this light that this brochure should be read.

A number of ministries make substantial contributions to Danish environmental assistance. This brochure focuses on the environmental assistance programmes of the Danish Ministry of Environment and Energy, the structure of Danish assistance in this field, its results and future objectives. The brochure also provides an overview of some of the world's environmental problems and overall global efforts to protect the environment.

Svend Auken, Danish Minister for Environment and Energy

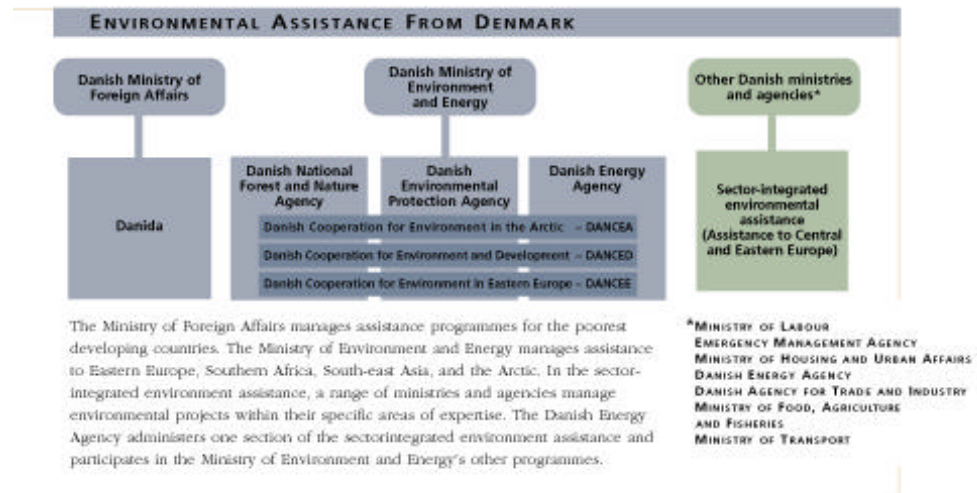
# 1 Environmental Assistance

## 1.1 The world's environment is under threat – but: Environmental assistance can turn the tide

Our global environmental problems are serious. No doubt about that. What is debatable is the extent of the threat and how to tackle it. The seriousness of the situation is underpinned by Global Environment Outlook 2000, the 1999 UN report that highlights a number of specific global environmental problems: the scarcity of clean water, the threat of global warming, the comprehensive destruction of natural and agricultural areas and increasing air pollution in the cities. But developments are not exclusively negative. There is now an increasing awareness of environmental problems at government level, in the public at large, and in the business and industrial community. There is also general agreement on how to deal with environmental problems. The solution lies in greater international emphasis on sustainable development – environmental concerns must be integrated as an equal element in development projects and in the development process generally. There are many indications that international agreements and conventions do solve environmental problems. The UN points to the significant international effort against ozone-depleting substances. Moreover, assistance from individual countries to other nations has produced tangible, positive results. Our efforts are not in vain.

### 1.1.1 Target: 0.5% of GDP

In 1993 Denmark followed up on the UN objective at Rio de Janeiro by establishing a financial facility for Danish environmental assistance, now known as the Environment, Peace and Stability Fund. It was decided that the total budget should gradually increase until – by 2005 – it reaches the target of 0.5% of the Danish GDP. The figure for 1999 is DKK 3.2bn. This money is to be distributed equally between environmental efforts and peace and stability initiatives. Denmark provides environmental assistance to a broad range of countries and project types throughout the world, each with its own needs, considerations and nuances. Consequently, our environmental assistance is managed through various programmes, agencies, and ministries each with its specialist knowledge. Programmes are closely monitored by advisory committees, which act as executive committees and comprise representatives of the business community, grassroots organisations, and the research and education communities.



### 1.1.2 Results so far

Today Danish environmental assistance is well organised, the first results are in evidence, and many new projects are in the pipeline. A large proportion of our environmental assistance is channelled through the Ministry of Environment and Energy's three programmes: Danish Cooperation for Environment in Eastern Europe (Dancee), Danish Cooperation for Environment and Development (Danced) and Danish Cooperation for Environment in the Arctic (Dancea). Some of the results of the programmes are briefly described below.

### 1.1.3 Dancee

In the period 1991-1999 Dancee implemented approx. 800 projects in Eastern Europe. The programme has helped increase environmental consciousness in this part of the world and Dancee can already show a number of concrete results. One success is that it has encouraged Eastern European countries to fund a large part of the project costs themselves which in turn has generated a basis for loans totalling DKK 6bn from international banks. Environmentally, too, there are tangible results. One example is that waste water from a population of two million people, previously pumped untreated into the Baltic, is now being treated. Eastern European sulphur dioxide emissions, too, have been markedly reduced. Efforts in Eastern Europe have also involved projects of a more strategic nature. Dancee has assisted a number of countries to set up plans for phasing out leaded petrol and has been supporting these countries' efforts to harmonise their national environmental laws with EU directives. Dancee has also helped comply with the Montreal Protocol on Substances that Deplete the Ozone Layer. This effort has paved the way for other assistance and thereby directly helped to eliminate 20% of the world's total consumption of ozone-depleting substances.

### 1.1.4 Danced

In the period 1994-1999 Danced conducted several hundred projects in Malaysia, Thailand, Botswana, Lesotho, Namibia, South Africa, and Swaziland. One result has been to help move the environment higher up the national agenda in these countries. Malaysia and Thailand, for instance, have invested more money into environmental

initiatives. In Thailand the programmes have helped strengthen environmental bodies at government and local level. Danced's involvement in South Africa is a good example of how Danish environmental assistance is not merely a matter of exporting technology in an isolated context – technology is part of the holistic approach represented by valuable Danish experience. In the first instance, assistance went to the reform process. Later Danced supported the creation of a raft of environment policies, including a forestry policy, a policy on the utilisation of water resources, and a policy for sustainable exploitation of biodiversity. In addition to supporting general, overall strategies, assistance to South Africa has also included detailed action plans, the accumulation of know-how and skills in the central government environment administration, and greater environmental awareness among the population in general.

#### 1.1.5 Dancea

In the period 1994-1999 Dancea has launched many environmental projects in the Arctic, which faces many environmental problems. For example, projects have now clearly documented that populations of marine animals in the waters around Greenland are declining. A deeper understanding has been obtained of factors that influence the habitat of marine species and of what constitutes sustainable exploitation of marine animal populations. One very significant achievement has been mapping the spread of pollutants and persistent toxic substances from the western world which find their way to the Arctic by air and sea. It has been ascertained that these substances, via the food chain, accumulate in great concentration in the Arctic populations. The male population in East Greenland, for instance, carries in the bloodstream very high concentrations of PCB, a toxin presumed to be highly carcinogenic. Dancea also aims to involve the indigenous Arctic population actively in efforts to conserve and improve the environment. Not least in order to benefit from the local, comprehensive knowledge of natural conditions in the Arctic.



## 2 Dancee

### 2.1 Danish Cooperation for Environment in Eastern Europe – Dancee: Green reconstruction

Air pollution on the increase. Inadequate treatment facilities for waste and waste water. And huge waste of resources in production. These are just a few of the many threatening environmental problems encountered in large areas of Eastern Europe under communism. But with the removal of barriers and the Berlin Wall in 1989, the environment has been placed squarely on the agenda. And a number of former communist countries have established new environment ministries and passed new, stricter environmental laws.

The changeover to a market economy, however, has given the governments and peoples of Eastern Europe new problems to face. Consequently, as early as in 1992, Denmark chose to support East European environmental efforts through targeted assistance projects.

In the 1990s alone, Denmark launched approximately 800 environmental assistance projects and donated just under DKK 2bn, making Denmark the largest provider of environmental assistance to Eastern Europe, both per capita and in relation to GDP. Environmental assistance to Eastern Europe is channelled partly through Dancee – Danish Cooperation for Environment in Eastern Europe – a body managed by the Danish Environmental Protection Agency under the Ministry of Environment and Energy, partly through the Investment Fund for Central and Eastern Europe, and partly through a number of sector programmes (see page 22). In 1999 alone, DKK 500m was allocated for Dancee purposes.

#### 2.1.1 Where does the assistance go?

Dancee provides assistance to a dozen Central and Eastern European countries from Rumania in the south to the Baltic countries in the north. The bulk of assistance is directed towards the countries on the Baltic rim, i.e. Estonia, Latvia, Lithuania, Poland and the Russian Baltic region near St. Petersburg and Kaliningrad. A lower level of assistance also goes to other Eastern European countries, Belarus, Bulgaria, Romania, Slovakia, the Czech Republic and the Ukraine.

#### 2.1.2 What are the assistance criteria?

Danish environmental assistance to Eastern Europe is provided to two basically different types of projects. One type is technical assistance – for example, the supply of plant and equipment (investment projects) – for very specific projects involving waste disposal, provision of drinking water, management of the natural habitat, treatment of waste water, control of air pollution, etc. The other type of assistance – as the pie chart illustrates – is given to projects which support administrative systems at the institutional level, which in turn will facilitate the entry of Eastern European countries into the EU.

Waste management in Eastern Europe remains a massive health and environmental problem. In many places, everything – from ordinary household waste to hazardous industrial and hospital waste – is accumulated in primitive waste dumps with no membrane linings to prevent, for instance, toxins and heavy metals from seeping into the water supply. In Sofia, the capital of Bulgaria, for example, sewage workers run a daily risk of infection from diseases in the large volumes of untreated liquid waste poured down the drain by the the city’s hospitals.

In some areas, therefore, the Danish Environmental Protection Agency is supporting information schemes aimed at educating the population and local authorities to sort, recycle, incinerate and dispose of waste in a more responsible manner.

Waste-water treatment is another high priority area in the Dancee programme. In large parts of Eastern Europe drinking water does not meet international standards, in many places it is a direct health hazard. One cause is the run-down and inadequate water-supply systems which become contaminated with infected sewage. In this area, too, Dancee support has produced relative success. For example, wastewater treatment in prospective EU member countries like Poland and the Czech Republic is now on a par with that of the countries in Southern Europe.

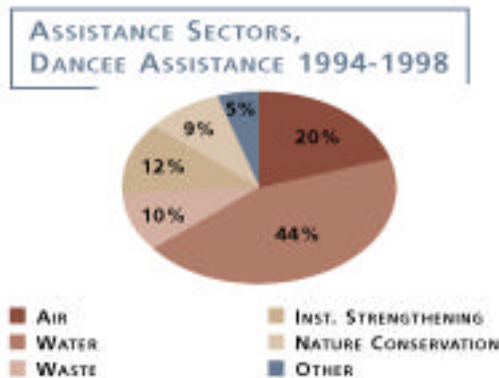
Another focus of Dancee’s work is the adverse environmental impact on air and climate in general. Emissions of greenhouse gases, ozone-depleting substances, acidifying gases, heavy metals and particles affect human health as well as animal and plant life. Pollution is worst in those industrialised areas where energy wastage is high – and the burning of cheap lignite for heat and power compounds the problem. But smaller towns in Eastern Europe, too, can find themselves choking in a thick blanket of smog, as sulphur and coal-smoke particles hover at roof-top level.

In cooperation with the Danish Energy Agency, Dancee has supported several projects in the heating and powergenerating sector. In Poland, for instance, assistance has been granted for a geothermal plant based on hot underground springs. The plant will supply district heating for 100,000 people in Zakopane. This project alone will reduce CO2 emissions by 210,000 tons annually.

RECIPIENT COUNTRIES,  
DANCEE ASSISTANCE 1994-1998







”Man’s history shows clearly that we have always been able to find solutions to even very difficult situations. But it is a precondition that we realise the danger before the situation becomes hopeless. All authorities in this field have pointed to the fact that the world’s environment is under serious threat.”  
Stanislaw Zelichowski, Polish Environment Minister,  
at the UN General Assembly in New York, June 1997

### 2.1.3 How are projects selected?

In the selection of Dancee projects, great priority is given to the demonstration value. Environmental assistance is primarily given to projects which will demonstrate the environmental and economic benefit of the new technologies.

A second selection criterion is the requirement for self-funding. The recipient country must contribute most of the funding for the project. This is a particularly important principle in the case of countries like Poland and the Czech Republic which are best able to afford such schemes, and which often fund more than 70% of projects. In such other countries as Rumania and Bulgaria, the self-funding level is somewhat lower. On average, East European countries spend three Danish kroner on these environmental projects for every krone donated by Denmark. The principle of financial participation secures involvement in the projects by the countries in question as well as project continuity.

In projects which receive technical assistance, it is an important principle that the project must either facilitate the applicant country’s entry into the EU or must be closely linked with an investment project – by contributing to the preparatory groundwork or by way of follow-up action.

It is a basic principle in project selection that recipient countries must be involved at every stage. Environmental agreements secure close cooperation between Danish and East European environmental authorities, ensuring that the recipient country’s wishes and needs remain at the forefront. In addition, under a special arrangement, Dancee country and programme coordinators maintain frequent contact with a direct cooperation partner representing the environmental authorities in the recipient country.

### 2.1.4 How are Dancee projects set up?

Enterprises, public bodies or grassroots movements can identify potential projects and apply for funds. No project, however, can be approved by the Danish Ministry of Environment and Energy before it has been approved in

writing by the recipient country. Once this is secured, the applicant is sent confirmation. The project is then identified and approved by both the Danish Ministry of Environment and Energy and the recipient country. On completion of this stage, projects are described in a project document and then typically put out to tender.

#### 2.1.5 The Advisory Committee

The Danish Minister for Environment and Energy has set up an advisory committee to assist the Danish EPA in its environmental assistance work in Eastern Europe. The committee comprises representatives of business organisations, professional organisations, environmental and nature-conservation organisations, and the Danish Ministry of Foreign Affairs and the Ministry of Environment and Energy. The purpose of the committee is to assist the Danish EPA in preparing the objectives of the assistance scheme, the guidelines for its management and the technical prioritisation of recipient countries and project destinations.

The committee also participates in the evaluation of the finished project.

### 2.2 Expanding Polish water-treatment plants

The greater part of the catchment area of the River Narew in Poland lies within one of the country's largest and least spoiled areas of scenic beauty – the so-called "green lungs of Poland". Population density is low, and there is little agricultural or industrial production. For this reason, the water quality in the Narew is generally good.

But locally, there are serious water-quality problems around some of the larger towns in the area. This applies, for example, to Lomza where the local water-treatment plant discharges large volumes of contaminated water into the river. This creates problems both in Lomza and further down river in the large Lake Zegrynskie from which the population of Warsaw gets most of its drinking water. The Lomza waste water, contaminated with phosphorus, creates perfect growth conditions for phytoplankton and algae in the lake during the summer months. As a result, it is difficult to maintain the filters through which drinking water must pass before being piped to Warsaw.

#### 2.2.1 Action plan for waste water

Both local and central Polish authorities have wanted to solve this problem for years. For this reason, an action plan for waste water treatment was launched as early as 1992-1994 in all towns with more than 10,000 inhabitants in the area around the River Narew. Apart from improving the quality of the drinking water, the project has helped secure the large nature reserves in the area for the future.

In recent years, Danish assistance has been concentrated upon local reconstruction and extension of the water-treatment plant in Lomza. The plant was old, worn out and too small for the present volume of waste water. When modernisation is complete, this water-treatment plant will function as a complete biological plant – where phosphorus is removed chemically, and nitrogen is removed biologically.

In consequence, the plant will comply with the new specifications for the discharge of waste water that come into force in Poland some time after the year 2000, and also meet EU standards.

”We share the environmental worries of other countries, and we know that protecting the environment will require a coordinated, worldwide effort.”  
Arnold Rüttel, Presiding Officer of the Estonian parliament, at the UN 1992 Earth Summit in Rio.



## 3 Danced

### 3.1 Danish Cooperation for Environment and Development – Danced: Sustainable growth and development

In the last couple of decades a number of developing African and Asian countries have developed at a furious rate – a development which has been accompanied by great economic growth. Unfortunately, growth has led to a number of serious environmental problems. For this reason, the Danish parliament has allocated funds to help countries build up the capability of tackling these new problems themselves.

Part of these funds are managed by the environmental assistance programme Danced, Danish Cooperation for Environment and Development, under the Danish Ministry of Environment and Energy. The Danced budget for 1999 was DKK 367m.

#### 3.1.1 Where does the assistance go?

Danish environmental assistance to developing countries is concentrated on two regions comprising 12 countries in Southern Africa and five countries in South-East Asia. Danced is responsible for the Danish efforts in countries with a relatively high standard of living, while Danida at the Danish Foreign Ministry is responsible for environmental assistance to the regions' poorest developing countries, which in many cases also receive Danish development assistance. In South-East Asia Danced is active in Malaysia and Thailand, and in Southern Africa in Botswana, Namibia, South Africa, Lesotho, and Swaziland. The two latter countries are poor and have seen little or no economic growth but are within Danced's area of responsibility together with South Africa because of their close geographical and economic bonds with this country.

#### 3.1.2 What are the assistance criteria?

In 1996 and 1997 Danced and Danida jointly worked out two regional strategies for Southern Africa and South-East Asia respectively.

These strategies make up the criteria for assistance efforts to individual countries.

There are three main priorities:

- Management of natural resources
- Sustainable development of urban areas and industry
- Sustainable energy.

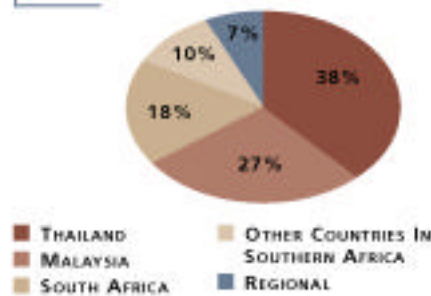
The basis for any selection process is the country's needs. This means that in Thailand, for instance, a large part of Danced's efforts are focused on urban environmental problems because industrialisation and urban development has taken place at a great pace without necessary consideration for the environment or the necessary planning. In Malaysia protection of the forests and of biodiversity are essential areas because this country – in spite of the fact that the greater part of the original forest is gone – has huge natural assets of global importance.

In South Africa the energy sector is given top priority, one reason being that the poorest population are hard hit by coal-fuel pollution.

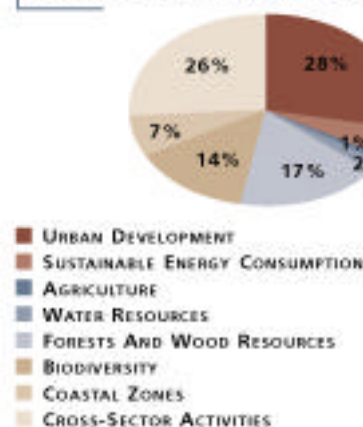
In addition to country needs, consideration is also given to whether the relevant know-how and experience are available in Denmark and whether the country concerned can generate the resources necessary to ensure that assistance efforts will have a durable effect.

The actual breakdown into assistance sectors is illustrated in the chart on page 10. In 1994-1998, 28% of funds were spent combating environmental problems pertaining to urban development and industrialisation, while 17% was spent on the conservation of forests and timber resources. Cross-sector activities, which make up 26%, include both teaching and research programmes as well as cooperation programmes between Danish universities and universities in the recipient countries. The energy sector did not become a separate assistance sector until 1996 and is still not given the emphasis many in Denmark consider politically desirable.

RECIPIENT COUNTRIES,  
DANCED ASSISTANCE 1994-1998



ASSISTANCE SECTORS,  
DANCED ASSISTANCE 1994-1998



”There can be no doubt that the fundamental environmental question is the relationship between resources and consumption. If we, particularly those of us in the rich countries, maintain our present pattern of consumption and expect our material wealth to grow year-on-year, we will build up an environmental debt for our children to pay.”

Samak Sundaravej, Thailand’s Deputy Prime Minister, at the UN General Assembly in New York in June 1997

### 3.1.3 Which projects can receive funding?

There are two overall types of projects which are given high priority. One type aims at building up professional and administrative capacity in the environmental sector in the recipient country. The other type implements demonstration or pilot projects which show how to tackle environmental problems or which test new methods. A third type of project is also supported: the establishment of partnerships, for instance, between Danish companies and companies in the partner country.

These project types can be applied to very different problems. One key problem is the balance between nature conservation on the one hand and the local population's need to benefit from natural resources on the other. Many projects in both Asia and Africa focus on this dilemma. Other central problems – particularly in urban areas – are waste management, recycling, and developing cleaner technologies.

### 3.1.4 How are the projects selected?

Danced's choice of projects is guided by a number of criteria, including the following:

- Initiatives must be implemented in cooperation with the authorities in the recipient countries, private businesses and grassroots movements. Local ownership and involvement are preconditions for the durable effect of Danish efforts.
- Initiatives must strengthen the recipient country's environmental administration, business community, educational and research institutions, for example through the concrete transfer of technology and know-how and through general education to support professional, legal, and managerial environmental capacity in the recipient countries.
- Initiatives must strengthen cooperation between the authorities and grassroots and professional organisations and businesses and thereby contribute to democratisation and decentralisation in the countries in question.

### 3.1.5 How are Danced projects set up?

The inspiration for Danced projects typically comes from authorities, agencies or enterprises in the recipient country. But in a few cases it may be a Danish initiative. If the idea is supported by the programme steering committee, the project is fleshed out in a project document describing project objectives, contents, preconditions, and funding needs. The project document is then assessed by independent experts.

If it is agreed to adopt the project, a formal agreement between Denmark and the recipient country is set up. Normally the project will involve sending Danish professionals to the target area and will therefore first be put out to tender in Denmark. Tenders under Danced are announced in the periodical, Licitation, on Danced's website, and in a quarterly newsletter. Project preparation and the tender phase normally take 12 to 18 months.

Projects implemented by grassroots organisations and professional organisations do not follow this procedure. Danced can give an organisation in one of the countries in question direct support – without governmental agreements or the project being put out to tender – or it can support cooperation between a Danish and an African or Asian organisation.

### 3.1.6 The advisory committee

The purpose of the advisory committee, which was set up in 1996, is to advise the Danish Minister for Environment and Energy and the Danish Minister for Foreign Affairs at a strategic level on environmental assistance to developing countries. The committee consists of 15 members plus a chairman and a vice-chairman. Members are appointed by the two ministers and include representatives of NGO's, the business community, and the research and education communities. In addition, the political parties represented in the Danish Parliamentary Budgets Committee can appoint observers.

### 3.1.7 Programme Steering Committees

In South Africa, Malaysia and Thailand programme steering committees have been set up to prioritise and select projects for implementation. In this way, assistance initiatives are tailored to the country's specific needs and own priorities. Programme steering committees consist of a chairman – typically from the country's Ministry of Finance – and between three and five high-ranking civil servants from the relevant sector ministries, and a representative from Danced

## 3.2 From conflict to cooperation

The upper catchment area of the River Nan in Thailand includes a mountainous, forest area inhabited by a number of mountain tribes who have lived in villages along the river for generations. In recent decades, however, the original forest has been greatly reduced by unlawful settlements, inappropriate agriculture and uncontrolled, deliberate forest fires. In addition, heavy rains running off the exhausted fields and burnt-down forests have poured massive volumes of mud into the Nan river, creating problems further downstream where mud has deposited in a water reservoir – reducing the output of the hydro power plants.

### 3.2.1 Rehabilitating the forest

In 1994 the Thai authorities set out to tackle the devastation. With financial support from Danced, a three-year project was planned to obtain an overall picture of the extent of exploitation of the area's natural resources – and at the same time involve the local population in active rehabilitation of the forest. The project was launched in 1997, and results are now in evidence.

Previously, the relationship between the Thai authorities and the local population was one of conflict. Many civil servants would have been happy to see no one live in the forests at all, and the local population therefore felt their very existence threatened. One of the primary objectives of the project has therefore been to replace the conflict between authorities and local population with cooperation. And this is exactly what happened.

### 3.2.2 Fewer forest fires

The Danced funds have been invested in building a knowledge base within the government bodies and on educating the local population. And financed



via Danced funds, local farmers have adopted new, more sustainable crops and agricultural methods, and the authorities and the local population between them are actively combating occurrences of deliberate forest fires.

This effort, which is being coordinated by a number of "Village Watershed Networks", has helped reduce the number of fires to only a 20th of their previous level. The important, practical experience gained from this project will now be utilised in other areas both in this province and other provinces in Thailand.

” The continuity in environmental assistance to South Africa makes it possible for us to handle long-term environmental problems – like what to do with our increasing household waste. Environmental assistance helps us learn from international experience but also to match this experience with our local expertise. Against this background we can develop our own systems, customised for conditions in South Africa. I hope that cooperation among all the parties involved in these environmental projects has also contributed valuable experience for environmental work in Denmark.”

Tanja Abrahamse, Deputy Head of Department at the South African Ministry of Environment and Tourism.



# 4 Dancea

## 4.1 Danish Cooperation for Environment in the Arctic – Dancea: Pollution does not respect boundaries

Limited sunlight during the winter months. Extreme sub-zero temperatures. And creatures with long lives and large fat deposits in their bodies. These are just a few of the factors which make eco-systems in the Arctic very sensitive to outside influences – including pollution.

Surveys over the past decade have shown that the Arctic receives large volumes of chemical pollutants from the industrialised countries in the northern hemisphere. These substances spread via the atmosphere and by ocean currents and accumulate in birds and fish – and through them in the local population, which is the last link in the food chain.

There is therefore every reason to be very conscious of pollution in the Arctic. That is why some Danish environmental funds go to this area. These are managed by Dancea – Danish Cooperation for Environment in the Arctic. In 1999 total funds available for Dancea's work was DKK 36.3m.

### 4.1.1 Where does the assistance go?

Greenland is the focus of Danish environmental assistance in the Arctic. Greenland's Home Rule Government is responsible for the environment on land and inside a three-mile inshore limit, while Denmark is responsible for the task of monitoring and combating cross-frontier pollution of the air and the sea – in compliance with international agreements. Dancea also supports local environmental initiatives including the building of local knowledge bases and information in Greenland – and activities in the Faroes if they are of Arctic relevance.

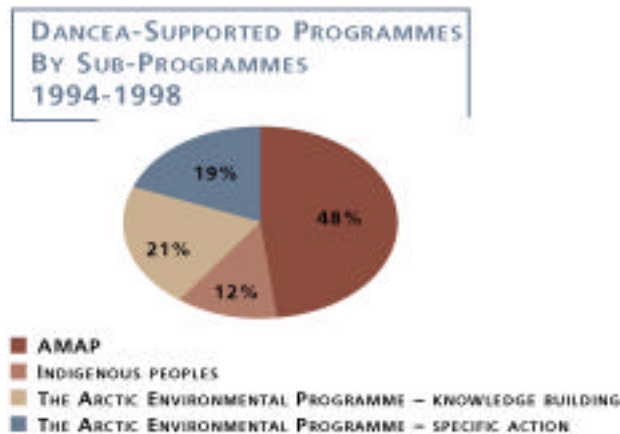
What are the assistance criteria?

Administratively, Dancea is divided into four sub-programmes each managing its part of the total Dancea budget (see the diagram below).

Each programme has its independent objective, and criteria for project selection are not the same.

- One sub-programme is AMAP – Arctic Monitoring and Assessment Programme – a cornerstone in the Arctic Environmental Protection Strategy agreed by the Nordic countries, the U.S.A., Canada and Russia in 1991. The purpose of the AMAP programme is to monitor the levels of pollution created by humans in the Arctic and to advise governments on pollution-control measures.
- The second sub-programme is the Indigenous Peoples' Programme, the purpose of which is to involve the indigenous peoples of the Arctic in the protection of the Arctic environment. Among other purposes, Dancea funds are spent on running The Indigenous Peoples' Secretariat in Copenhagen and to support the indigenous peoples' organisations in order that they may be able to participate in the Arctic Environmental Protection Strategy. Support is also given to NGOs with connections to the Arctic.

- The two last sub-programmes go under one heading: the Arctic Environmental Programme. These programmes jointly support projects which contribute to sustainable development in the Danish part of the Arctic. Among other things, the programmes support activities that contribute to the solution of local environmental problems, increase environmental awareness, and contribute to the accumulation of knowledge requisite to environmental efforts in Greenland in particular.



”The ratification of the UN-ECE agreement on limitations on the use of crop sprays like DDT came about because we can document the environmental impact in the Arctic. In the years ahead, we shall be examining the effects of crop sprays in the Arctic.”

Lars-Otto Reiersen, executive secretary of AMAP

#### 4.1.2 Which projects can receive funding?

The Arctic faces a number of urgent environmental problems which need examining and tackling over the coming years. A wide range of projects are therefore eligible for Dancea funding.

Part of the assistance is provided in compliance with international environmental agreements to which Denmark is a signatory on behalf of the Realm comprising the Kingdom of Denmark, Greenland and the Faeroe Islands. This is mostly a question of monitoring cross-boundary air and sea pollution which brings persistent toxins to the Arctic. It has been discovered that these substances accumulate via the food chain, finally being consumed by the local population. One example is that very high concentrations of PCB – considered to be highly carcinogenic – are found in the bloodstream of East Greenlandic men. And a survey of pregnant women in the Disco Bay region of West Greenland has revealed that Greenland has a serious problem with high levels of mercury pollution.

Dancea also supports projects which examine the population development of marine mammals that are traditionally hunted in the waters around Greenland. A greater knowledge of the factors that impinge on these populations is an important stepping stone on the road to more sustainable harvesting of ocean resources. It is paramount to involve the local population in Greenland in such projects because for generations they have acquired an

immense knowledge of their country's natural resources and environment – and have now acquired motorboats and snow scooters enabling them to hunt much more efficiently than from the traditional kayak.

In the selection of Dancea projects, some importance is attached to the widest possible exploitation of Danish expertise and experience of environmental protection and protection of the natural habitat in the Arctic. It is also important that the wishes and needs of the local population are considered, and that knowledge of the environment and of the natural habitat is built up in local Greenland agencies.

"The high concentration of toxins in our food is not acceptable. The international community must work towards the reduction of global pollution and stop further emissions."

Marianne Jensen, former member of the Home Rule government of Greenland, at the Alta conference in 1997

#### 4.1.3 How are Dancea projects set up?

It is usually the Danish Environmental Protection Agency that takes the initiative in launching specific Dancea projects. Many of these arise from international agreements on the environment with which Denmark is obliged to comply in the Arctic – they will often be AMAP projects. Projects under the other sub-programmes are more open to initiatives from elsewhere. Project proposals are invited via the Danish Ministry of Environment and Energy's website and in the joint newsletter on environmental assistance published by the Ministry of Environment and Energy.

#### 4.1.4 The Advisory Committee for the Arctic

The Danish Minister for Environment and Energy has set up the Advisory Committee for the Arctic to support the Danish EPA in its work in connection with the Arctic Environmental Programme. The committee comprises representatives of professional organisations, environment and nature conservation agencies, research institutions and research councils as well as the Ministry of Environment and Energy.

In addition, there is the Coordination Group for AMAP with representatives of the Danish Ministry of Foreign Affairs, the Prime Minister's Department, the Greenland and Faroe authorities, various research institutions, and the Ministry of Environment and Energy.

The Coordination Group assists the Danish EPA with the AMAP programme.

#### 4.2 The last link in the food chain

Persistent environmental toxins have never been used in the Greenland industry. And yet certain environmental toxins are found in very high concentrations in the Greenland population. This alarming fact was discovered through a Dancea-funded AMAP project which was initiated in the mid 1990s when 200 pregnant Greenland women were examined. Similar examinations were also made of a large population of marine mammals. PCB

– a suspected carcinogen – was found in the pregnant women in concentrations among the highest measured in humans in the world. A later Dancea-funded survey concluded that 60% of the East Greenland men examined had PCB concentrations exceeding the limit which – in Canada – would activate legislative action to reduce environmental deterioration.

#### 4.2.1 Toxins accumulate

The explanation for the Greenland findings lies in decades of emissions by the industrialised countries. PCB and other persistent environmental toxins have spread in Greenland with air and sea currents which tend to move towards the Arctic. Certainly, the pollution is diluted many times on its way to the Arctic, which is why the actual environmental impact is still limited.

The problem arises, however, when toxins accumulate in the food chain – from seawater to plankton to crustaceans and on to small fish which are eaten by bigger fish which are consumed by seals and whales which in their turn are served up on the dinner tables of Greenland. On account of the accumulation factor, concentration of PCB in the fish is approximately 50 million times higher than in the surrounding seawater.

Populations in industrialised countries are less exposed to this accumulation because they mainly eat meat from grazing animals. But when the Greenland man or woman eats traditional meats like seal or whale, he or she is the sixth or seventh link in the food chain – and therefore much more exposed to toxins in spite of being so much further from the source of pollution.

#### 4.2.2 Dual-sex polar bears

Another project funded by Dancea has documented signs of dual-sexuality in polar bears – similar discoveries have been made in Svalbard. It is realised that this may be caused by environmental toxins, which is alarming – particularly considering that the Greenlandic population carry just as high a level of toxins in their bloodstream as the polar bears. So far, however, the harmful effects of the high concentrations of PCB in the Greenland human population have not been documented. The explanation for this may be that the very traditional foodstuffs that contaminate the Greenlanders also work to prevent the diseases that the toxins can cause. In future years this theory will become the subject of new surveys. And the Greenland population will be tested more thoroughly for possible harmful effects.

As a result of these surveys, the Greenland Home Rule Government has set up a nutrition council to offer the Greenland population dietary advice. Survey results are part of the contribution of the Arctic region to joint international environmental efforts to reduce emissions of dangerous substances to the environment.

# 5 Energy

## 5.1 Environmental assistance from the Danish Energy Agency: Cleaner energy for Eastern Europe

Part of Denmark's environmental assistance for Eastern and Central Europe is directed via sector-integrated environmental programmes (see page 22). One of these programmes is managed by the Danish Energy Agency under the Danish Ministry of Environment and Energy. Its goal is to promote sustainable development in the energy sectors in Eastern and Central Europe and simultaneously to support economic growth in these areas. Each year approximately DKK 70m is allocated to the Danish Energy Agency's sector programme.

### 5.1.1 Where does the assistance go?

The Danish assistance goes to Estonia, Latvia, Lithuania, Poland, and Russia with special focus on the areas round St. Petersburg and Kaliningrad. These geographical priorities arise from the Danish government's wish to strengthen cooperation in the Baltic region.

### 5.1.2 What are the objectives of the assistance efforts?

The main objective is to help the countries in question develop their energy sectors and utilise their sources of energy more efficiently in order to alleviate the environmental impact.

This objective can be achieved only if the negative consequences of fossil-based – and nuclear-based – energy consumption can be reduced.

Consequently, considerable funds are invested in the development and demonstration of alternatives to the environmentally harmful burning of fossil fuels and to unsafe nuclear power plants.

### 5.1.3 What are the assistance criteria?

Danish environmental assistance is concentrated on four main areas:

- Cleaner fuels, including renewable energy
- Increased efficiency in energy production and supply
- Energy conservation at the end-user level
- Institutional development and training

Efforts towards cleaner fuel are concentrated mainly on developing economically viable and environmentally sustainable alternatives to present energy production methods – not least to unsafe nuclear plants. Raising the efficiency of energy supplies involves refurbishing heating systems, increasing combined heat and power production, and renovation of supply systems.

Efforts towards end-use energy

conservation focus both on the application of energy-conserving technology and on a shift in consumption patterns. The goal is to maximise energy conservation in the large-scale consumption sectors – particularly in buildings and industry – where the main instruments will be energy management, demonstration projects, and information.

Organisational development and training efforts are also a major element of energy-related assistance. These projects will be reevaluated at regular intervals in the light of other international initiatives – for instance, the EU PHARE programme which includes important tools for establishing legislation and for setting up new institutions and agencies.

**BREAKDOWN OF ASSISTANCE TO THE BALTIC REGION 1994-1999**

Renewable energy	12%
Natural gas	17%
District heating and CHP	32%
End-user energy conservation	21%
Other	18%
<b>Total</b>	<b>100%</b>

#### 5.1.4 How are projects set up?

Danish Energy Agency projects under the sector programme can be set up by application or by tender. Applications are received by the Danish Energy Agency – the application form is provided on the Agency’s website at [www.ens.dk](http://www.ens.dk).

It is a prerequisite that the project meets the recipient country’s own wishes and needs. Whether arranged by tender or by application, the project must carry the approval of the relevant authorities in the recipient country.

### 5.2 Environmentally friendly district heating

With Danish advisory assistance worth DKK 6m and a loan from the European Investment Bank, the Estonian town of Pärnu has improved the efficiency of its district-heating system and made it more environmentally friendly. Danish advice concentrated on assistance in obtaining international funding, including the preparation of a renovation plan for the district-heating system. In addition, the Danish Energy Agency assisted in the actual renovation process, concluding with an information campaign. Renovation included the installation of two biomass boilers designed for peat and wood chips, pumps, water treatment equipment, 4.5 km district-heating pipes, and the upgrading of numerous heat-exchanger stations.

#### 5.2.1 Environmental improvements

The immediately visible result of the project is that in the course of three years, annual consumption of sulphur-containing oil shale has been reduced from 14,000 to 8,000 tons. Instead, the system uses 26,000 tons of biomass – primarily locally sourced peat.



It would be more environmentally friendly to use wood chips but this type of fuel is still too expensive. The project has reduced sulphur emissions by 12% while CO<sub>2</sub> emissions have declined by 10%. When the system later switches to wood chips, emissions will be reduced even further.



# 6 Forest & Nature

## 6.1 Environmental assistance from the National Forest and Nature Agency: Sustainable management of natural resources

Since the Rio summit, focus has concentrated on the depletion of the world's natural resources – including the need to invest special efforts in assisting developing countries and new democracies in achieving sustainable development. Countries in the developing world and in Eastern Europe possess natural resources and biodiversity far outstripping what Denmark has to offer. But partly on account of uncontrolled development and growth, these assets are currently under threat, and the countries concerned have not yet been able to construct a political and administrative barrier against the assault on their environment.

This is where Danish environmental assistance comes in. In the period 1994-1998 an amount of DKK 528m and DKK 137m, respectively, was allocated for sustainable natural resource management in the Danced countries and Eastern Europe. This assistance package relates to projects in a number of different natural environments: forests, biodiversity, sustainable management of natural resources, and cultural environments, i.e. parts of nature cultivated or developed by humans.

### 6.1.1 Where does the assistance go?

Assistance for sustainable natural-resource management can be granted to those countries which receive support via the Ministry of Environment and Energy's assistance programme, i.e. South-East Asia, Southern Africa, Eastern Europe and the Arctic. In 1997 a special substrategy was drawn up for green environmental assistance for Eastern Europe, and in this context much emphasis was placed on the Baltic region. Western regions of Russia are also major priority areas.

### 6.1.2 What are the assistance criteria?

Environment partners in South-East Asia are currently engaged in a period of vigorous growth – and there is no doubt that the environment is paying the price. The countries of Southern Africa and Eastern Europe have also enjoyed economic growth – with the added factor of political upheaval in recent years and the dramatic social changes that have followed. Developments have imposed substantial, and in many cases brand-new, demands upon the countries' ability to manage their natural resources in a sustainable way.

Safeguarding biodiversity is a key component. Many international agreements and conventions deal with biodiversity, e.g. the Biodiversity Convention and the Convention on International Trade in Endangered Species (CITES). In Eastern Europe there have been efforts to introduce EU environmental rules on biodiversity and protection of nature as part of accession negotiations. Partner countries must make a serious effort to live up to the many international obligations, and in this respect Danish environmental assistance plays an important role.

There are many aspects to the protection and sustainable use of natural resources: protection of specially valuable nature reserves, widespread information campaigns, involving ordinary citizens in the decision-making process, teaching, legislation, policy formulation, planning and the development of methods. Another key focus is sustainable forest management, which must safeguard biodiversity and the world's forests for tomorrow. Many forests are threatened by overexploitation and clearance. Powerful economic forces want to exploit forestry resources and to clear forest land for agricultural, urban, and infrastructure purposes, etc. In Eastern Europe many forests are being privatised by sale or surrender to their former owners from the prenationalisation days of the post-War era. There are similar difficulties in Southern Africa, where the African population now has access to land from which it was expelled during the apartheid years. This has led to the current position with many new and inexperienced agricultural and forestry users, a completely new distribution of land and therefore a need for new planning, legislation and education with a view to achieving sustainable use and management. Here, too, there is a profound need for help. Sustainable natural-resource management often means developing more environmentally friendly and appropriate ways of working. As this – in the short term – can cause a temporary drop in production levels, for example, in agriculture and forestry, there is an urgent need for close collaboration with the authorities and those sections of the local population directly affected. It is vital to balance the changes by developing alternative means of income – preferably schemes based

on sustainable use of nature. One example of this is ecotourism based on amenity values – there is immense potential here in partner countries. But as tourism can also undermine local natural assets, it is clearly important that tourists enjoy them without destroying them.

### **6.1.3 How are the projects set up?**

Projects involving sustainable natural-resource management are administered by the Ministry of Environment and Energy. Selection and implementation of projects then follow the same procedure as for Dancee, Danced and Dancea (see pages 6-17). Applications are processed by the Danish Environmental Protection Agency and the National Forest and Nature Agency.

## **6.2 Development of protected areas**

Lithuania has an extremely well-developed system of natural parks, eminently worthy of preservation. The parks are not only home to an abundance of animals and plants – they also provide popular excursion sites for Lithuanians and visiting tourists. But in the wake of political change in Eastern and Central Europe, management principles for looking after the parks have changed radically – and problems have arisen. One of the root problems is privatisation: parks now have many private owners. Secondly, democratisation and the new dynamic economic growth rate have boosted interest in forestry.

### **6.2.1 Need for modern management**

This has created a need for modern, flexible and democratic planning and management of the parks system, putting the users firmly in the picture. Therefore the State Park Institutional Development Project was prepared in

1996-97 and launched in spring 1998. The sum of DKK 9m has been made available in environmental assistance for the project, which is being implemented by Hedeselskabet, the Danish Land Development Service, in conjunction with the Lithuanian Ministry of the Environment. The project supports the preparation of a national strategy for park management. The strategy will be followed up with specific activities aimed at planning and managing three regional parks and with training and information activities designed to ensure that the results of the project are maintained after the project itself concludes. The intention is that this will provide a model for park management in Lithuania which will be generally applicable in the country's remaining parks.



# 7 Sector-Integration

## 7.1 Sector-integrated environmental assistance: Integrating the environment into all corners of society

Some of Denmark's environmental assistance to Eastern Europe is targeted at particular sectors in the recipient country: for example, the energy, fisheries or transport sectors. These programmes are managed by the ministries and other agencies in Denmark which possess the most know-how on the subject – the Danish Energy Agency, for instance, manages the sector programme for energy, while the agricultural programme is managed by the Ministry of Food. In 1999 the Danish government provided a total of DKK 128m for sector-integrated environment assistance. For year 2000 the government has provided a total of DKK 176m.

### 7.1.1 The assistance objective

The objective of sector-integrated environmental assistance was drawn from the Baltic Region action plan: Baltic Agenda 21, approved by the Baltic countries in 1998. The plan – originally based on the global Agenda 21, adopted by the UN in 1992 – aims to promote environmentally sustainable development based on free-market principles in Estonia, Latvia, Lithuania, and Poland, and in St. Petersburg and Kaliningrad in Russia. Many Eastern European countries have enjoyed economic growth in recent years. If they are to avoid the environmental mistakes made earlier by western countries, it is essential that they succeed in integrating environmental efforts at all levels and in every part of society. Sector programmes are intended to ensure that environmental investment is not a matter purely for the environmental authorities of the country concerned. At the same time, sector-integrated environment assistance helps to raise the environmental standards of Eastern Europe as these countries prepare for accession to the European Union.

### 7.1.2 Leading the environmental initiative

Sector-integrated environment assistance caters for industry, fisheries, agriculture, transport, tourism, and energy. Several Danish ministries and agencies are involved in the effort: Ministry of Labour, Emergency Management Agency (on behalf of the Ministry of the Interior), Ministry of Housing and Urban Affairs, Danish Energy Agency, Danish Agency for Trade and Industry, Danish Tourism Council (on behalf of the Ministry of Business and Industry), Ministry of Food and Ministry of Transport. These work in consultation with their respective counterparts and with the environmental authorities in the recipient country on programmes and specific projects. The Danish Environmental Protection Agency coordinates overall programme activities and approves the environmental components of programmes in consultation with the Advisory Committee for Environmental Assistance to Eastern Europe.

### 7.1.3 Typical projects

Typical projects can comprise assistance for the assessment of the environmental consequences of different forms of transport, support for more efficient energy production, the use of renewable energy, support for the implementation of environmental management in Eastern European enterprises, support for environmental improvements and energy conservation in dwellings, support for the promotion of an improved working environment, support for improving safety standards at nuclear power plants, and support for minimising the use of pesticides.



# 8 Contact

## 8.1 Useful contacts

Copies of this brochure and other material on environmental assistance from the Danish Ministry of Environment and Energy are available from:

Miljøbutikken, Information and Books  
Læderstræde 1-3  
DK-1201 København K  
Phone: +45 33 95 40 00  
[www.mem.dk/butik](http://www.mem.dk/butik)

For further information on programmes and activities, please contact:

DANCEE  
Danish Environmental Protection Agency  
Danish Cooperation for Environment in  
Eastern Europe  
Strandgade 29  
DK-1401 København K  
Phone: +45 32 66 01 00  
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[kt5@mst.dk](mailto:kt5@mst.dk)  
[www.mst.dk/fagomr](http://www.mst.dk/fagomr)

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