

THE CZECH REPUBLIC

NATIONAL REPORT

on the implementation of the

United Nations Convention to Combat Desertification

in Countries Experiencing Serious Drought
and/or Desertification,
Particularly in Africa

August 2004



Ministry of the Environment of the Czech Republic

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1. Summary

Since its accession to the Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, on April 24, 2000, the Czech Republic has actively participated in activities connected to the implementation of the Convention and it also continually contributes to activities of the bodies of the Convention. The Czech Republic acceded to the Convention with understanding that it does not belong to the countries affected by desertification in the sense of the Convention. It ranks among so-called emerging donor countries. The Czech Republic provides assistance to the affected developing countries through projects concerning such areas as soil degradation, hydrogeology, hydrology and forestry, particularly within its scope for the Official Development Assistance (ODA). Research and scientific institutions, the academic sector, non-profit organizations and the private sector also contribute to the assistance to the affected countries.

In addition to financial means, which are limited, the Czech Republic can provide experts, suitable technologies, know-how and information.

The Czech Republic has at its disposal considerable experience particularly in the following areas, in which it is able to provide assistance to the affected countries:

- § soil and water sustainable management;
- § development of maps and background materials employing satellite and aerial photographs;
- § geological, hydrogeological and pedological surveys;
- § water erosion, floods and drought control and preventive measures;
- § soil type mapping and definition of indicators for soil degradation;
- § forest inventory, typology and sustainable management;
- § afforestation and re-forestation of affected areas;
- § scientific research;
- § landscape protection;
- § reclamation of lands devastated by mining.

The Czech Republic also participates in assistance to African developing countries by means of its ODA projects. A number of these projects have been implemented with a direct impact on the issue connected to desertification and soil degradation. There are currently several ongoing projects closely related to such areas as desertification, development of water resources, hydrogeology, agriculture, and improvement of education of local experts. Private companies, universities, research institutions and non-governmental organizations are also involved in the implementation. The implemented projects are of great value for recipient

countries and the Czech ODA is generally highly valued. The Czech Republic thus contributes to the addressing of global environmental issues.

2. Introduction

The Czech Republic became a party to the Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (hereinafter the “Convention”) on April 24, 2000. The accession of the Czech Republic was an expression of solidarity with affected parties, i.e. particularly developing countries, and an expression of its will to collaborate in the addressing of global environmental issues. The Czech Republic does not belong to the countries affected by desertification, but only to the group affected by moderate soil degradation (e.g. soil exhaustion due to agricultural overuse, contamination with chemicals).

The Ministry of the Environment of the Czech Republic is responsible for the implementation of the Convention and doing so it cooperates with other relevant ministries and stakeholders. On the basis of information provided by these stakeholders and institutions, the Ministry of the Environment has prepared the present report, which provides information on assistance to African countries in the framework of the implementation of the Convention.

This Report is the second report submitted by the Czech Republic and summarizes the activities of the Czech Republic that are directly or indirectly linked to the Convention and the issue of desertification and drought in Africa. Activities in this area involve a number of private companies, governmental and scientific institutions that contributed to the preparation of this Report. Annex 1 gives a summary of projects and activities in the framework of assistance to African countries.

3. Activities of the Czech Republic Directly Related to the Convention

The Czech Republic is aware of the seriousness of the issue of desertification in affected African countries and the related socio-economic aspects, which include factors such as poverty, hunger, migration and limited access to sources of drinking water, and appreciates the role of the Convention, in which it plays a role in attaining sustainable soil management in those countries affected by desertification and drought.

The Czech Republic has been involved in projects and scientific research closely related to the requirements of the Convention for a number of years, even before the year 2000 when it acceded to the Convention. Since then it has commenced new projects directly responding to needs of the Convention, successfully building on its many years of experience in these fields.

One of the successful projects that follow directly from the needs of the Convention, entitled “*Sustainable development and management of water resources on combat desertification of Dornogobi area in the South-Eastern part of Mongolia*”, is currently being implemented by a Czech company GEOMIN in Mongolia. The project is concerned with the construction of a sustainable and functioning system for the management of water resources. Amongst other things, the implementation of the project will reduce the effect of human activities to the ongoing process of desertification in the relevant territory.

Some projects implemented in African countries are closely related to the Convention and linked to the issue of desertification and management of water resources (see Annex 1). At the present time, the Czech Republic does not directly contribute to assistance in the creation of National Action Plans of African countries. The assistance provided to these countries is implemented particularly within the Czech ODA.

4. Other Activities of the Czech Republic Aimed at Fight against Desertification and Drought in Africa

4.1. General Activities at International Level

On May 1, 2004, the Czech Republic acceded to the European Union (EU) and thus joined other countries in giving international development assistance. The amount of accepted assistance had already substantially decreased prior to accession to the EU and the Czech Republic is currently a so-called emerging donor country. Official Development Assistance is an integral part of Czech foreign policy and should reflect the principles of the EU development assistance. In addition to the Community development policies, the Czech Republic also intends to continue providing development assistance, both bilateral and multilateral, independently.

In relation to its membership in the Organization for Economic Cooperation and Development (OECD), the Czech Republic has provided financial resources for ODA since 1996 and thus contributed to addressing global issues and fulfilling the concept of sustainable development. The framework for the provision of ODA is based on the “*Principles for Providing Foreign Assistance*” approved by the Government of the Czech Republic in 1995. The objectives and principles for the 2002-2007 period are further specified in the medium-term “*Concept of the Czech Republic Foreign Assistance Program for the 2002-2007 Period*” approved by the Government of the Czech Republic on January 23, 2002. According to the newly approved “Principles” (of March 31, 2004), after accession of the Czech Republic to the EU, its intention is to concentrate the Czech ODA on prioritized countries for the long term. Of the countries of Africa, this assistance will be provided particularly to Angola and Zambia. However, assistance to other African countries is not excluded and, in the future, implementation of further environmental projects is anticipated.

The total amount expended in 2002 for Official Development Assistance, including also Humanitarian Assistance projects and contributions to international organizations, equalled CZK 1,485.89 million (approx. USD 57,700). The Czech Republic allocated funds for the ODA projects to the total amount of CZK 200 million (approx. USD 7,700.00 million). In 2003, the total amount provided for ODA equalled CZK 2,465.00 million (approx. USD 94,700), of which CZK 400 million (approx. USD 15,400.00 million) were allocated for implementation of development projects. An amount of CZK 500 million (approx. USD 19,200 million) is anticipated in 2004 for the ODA projects, of which the share of projects implemented in Sub-Saharan Africa equals 12.6 % and, in the countries of North Africa and Middle East, 3.0 %.

4.2. Bilateral and Multilateral Assistance to African Countries Affected by Desertification

A number of bilateral and multilateral projects to combat desertification are implemented in the framework of ODA that is coordinated by the Ministry of Foreign Affairs. This Ministry cooperates with other ministries responsible for projects in the field of their competence (Ministry of the Environment, Ministry of Agriculture, Ministry of Education). A great many other activities are also financed from the sources of universities and research institutions and, to a lesser degree, from private companies or non-governmental organizations. A summary of projects with relation to desertification in African countries implemented during the recent years is given in Annex 1.



It follows from the summary that the projects involve a number of implementing parties. Some of these projects are implemented by private companies that have been active in areas affected by desertification for a number of years and have considerable experience in this field. These companies include for example Aquatest Inc. (No. 2), Aquatis Inc. Brno (No. 1), public benefit corporation Člověk v tísní (*People in Need Foundation*), o.p.s. (No. 3), public benefit corporation Enki, o.p.s. (Nos. 4 and 11) and others.

There are two projects currently being implemented in Ethiopia (see Frame 1) in the area of hydrogeology. Development and protection of water resources is of fundamental importance in Ethiopia for the development of infrastructure and mitigating poverty (development of agriculture and maintaining of the herds of cattle during the periods of drought). Environmental protection, and in particular, prevention of soil erosion and degradation, resulting in lack of food and water, is also an important aspect of the project.

Water resources are also absolutely essential for sanitary and living conditions of the rural population. There is no tradition of accumulation of groundwater in Ethiopia; water is usually transported from surface water sources over great distances, similar to other areas of Sahel.

Technical assistance in the search for groundwater resources in the town of Toma (Burkina Faso) is provided by the Aquatis Company (No. 1).

In relation to previously implemented projects in the area of Lake Victoria, public benefit corporation ENKI o.p.s. was entrusted with developing a methodology for management of small fingerponds that are dug out in the direction from land and run like fingers into the wetlands (see Frame 2). Wetlands are the main source of nutrition in the given area. During the recent decades, these wetlands have deteriorated as a consequence of unsound agricultural and industrial interventions in the environment and particularly over fishing. Local communities have inadequate sources of nutrition during the periods of drought and thus need to increase fish production and other agricultural products. The aim of the project, which includes cooperation of universities from the Netherlands, Great Britain, Kenya, Uganda and Tanzania and being also financed from the funds of the European Commission, is to improve food supplies during the periods of drought.

Frame 1 – Exploration and building of quality drinking water resources in Ethiopia

1. Exploration of water resources in Ethiopia focused on drought-affected areas (2001-2005, implemented by the Aquatest Co.)

The main objective of the project is the transfer of know-how in developing hydrogeological and hydrochemical maps and evaluation of regional hydrogeological characteristics. The transfer of know-how is concentrated on extending the knowledge of specialists of Geological Survey of Ethiopia in the area of hydrogeology, as well as extending



this knowledge in relation to the experts of water-management organizations in the individual federative states of Ethiopia. The transfer of knowledge is effected by means of training, practical field mapping, processing of the acquired data in databases, evaluation of the acquired data within the Geographic Information System (GIS – MapInfo), and use of models (Modflow) of groundwater flow. The transfer of knowledge is supplemented by the purchase of equipment (computers, printers, plotters and other apparatus

for field measurements of water parameters) required for the performance of planned work. The methodology that was adopted and tested in the pilot territory (Western part of the map sheet Asosa – Kurmuk) is employed in the second stage of the project. Individual sheets of the 1: 250 000 map of Asosa – Kurmuk and the sheet for Abu Ramla will be completed during this stage and mapping will be extended to other areas of Ethiopia (sheets for Adi Ramets, Gulch, Gonder and West of Gonder, as well as for the area of Raya depression in Northern Ethiopia). The planned area of mapping equals approx. 75 800 km². 30 local experts have already been trained within the project in the area of processing and evaluation of hydrogeological maps.

2. Building of good-quality drinking water resources in South-Western parts of Ethiopia (2003-2004; implemented by the public benefit corporation Člověk v tísni, o.p.s.)

The goal of the project is to build a deep water well in the SNNP region (Southern Nations and Nationalities and Peoples Region) ensuring a sufficient supply of drinking water for approx. 12 000 inhabitants. The local technical personnel, which will provide for operation and effective use of the water resource, will also be trained within the project. Access to clean water resources, together with basic sanitary awareness rising, should contribute to improvement of the living conditions of the population and, on a wider scale, reduce the death rate in the target area.



Universities and research institutions also contribute to implementation of a number of projects. Cooperation includes various international organizations. For example, the Czech Hydrometeorological Institute cooperates with WMO in organization of international post-graduate hydrological courses (No. 13), including participation of specialists from Africa. UNESCO participated in several projects (Nos. 12 and 15). The Czech Geological Survey contributed to the reduction of deforestation and to the fight against desertification in the framework of its project implemented in the African country of Burkina Faso (No. 10).

Universities cooperating in the framework of research tasks or in the framework of ODA in the area of assistance to African countries to combat desertification and soil degradation include particularly the Czech University of Agriculture in Prague (the Institute of Tropical and Subtropical Agriculture; the Faculty of Agronomy), which is involved in several research projects and educational programs (Nos. 5, 6, 7, 8, 9 and 15).

In addition, the Mendel University of Agriculture and Forestry in Brno (the Faculty of Agronomy) is concerned with the issues of soil degradation and sustainable forest management. At the present time, the University is preparing a project aimed at utilization of soil organisms for increasing the resistance of plants against drought in cooperation with the University and polytechnic institute in Mali (No. 16).

The Czech Official Development Assistance to African developing countries is generally well appreciated. The implemented projects have great importance for the recipient countries, both from the viewpoint of their fight against poverty, environmental protection, economic and social development and from the viewpoint of providing education, improving the state of health of the local population and contribution to equal position of women in society.

The Institute of Forest Management in Brandýs nad Labem is one of the professional institutions involved in the study of desertification and soil degradation that can use their considerable experience with activities in African countries. The Institute deals with the subject of forest inventory and typology. It can also provide expertise in development of maps using satellite and aerial pictures, and also aridisation analyses to reduce or prevent desertification. In the 1974-1988 period, for example, the Institute carried out for example forest inventories in the Democratic Republic of Congo, studied the status of forests in Angola and Laos (1978-1980), and contributed to a number of projects and training of local experts in Cameroon. Some of these projects were directly related to desertification.

Attention to arid areas is also paid by some non-governmental organizations. The Czech Association for Nature Conservation has participated in nature conservation activities in Algeria. In 1967-1975, it organized six expeditions to the area of Sahara, resulting in the promulgation of the Tassili National Park; the making of a film on the nature of the Sahara which won an award at the Carthage festival; the development of methodology for the propagation of *Cupressus dupreziana*, which was endangered by extinction; the publication of a Czech-French picture publication "Stopy v písku – Traces sur le sable" (Traces in the sand); and valuable new findings on the Saharan fauna, particularly in the area of entomology and ichthyology. In the future, the Association plans to address the issue of conservation of the Saharan nature and contribution of anthropogenic activities to the process of desertification as a program of environmental education.

Scholarships at Czech Universities are regularly provided to students from developing countries, including African countries. At the present time, the Czech Republic provides university scholarship to 140 students from African countries (e.g. Ethiopia, Egypt, Mali, Morocco, Namibia, Nigeria, Sudan), primarily in Master's and Doctor's study programs in areas which include agriculture and the environment.

It follows from the above summary of activities that the Czech Republic provides a relatively high contribution to assistance to developing countries of Africa and, as an emerging donor country, participates in the addressing of issues connected with desertification and soil degradation. However, the financial resources the Czech Republic can draw on in the framework of its ODA are limited. Nevertheless, the Czech development assistance gradually increased over recent years, which is in accordance with the role of the Czech Republic as a donor country. In addition, the Czech Republic can often offer unique knowledge, experience, information and technology.

Frame 2 – Function of small finger ponds under the conditions of Sub-Saharan Africa

“Fish Breeding and Maintenance of Ponds in Sub-Saharan Africa” (2004-2005, implemented by public benefit corporation Enki, o.p.s. in cooperation with the European Union)

The EU project entitled "Fingerponds" is based on the system of extensive agriculture – fish breeding in the wetlands of Lake Victoria – while maintaining biodiversity and environmental integrity. The objective is to verify the potential for fish breeding in flood plains in practice.

For 20 million inhabitants in the area of Lake Victoria, wetlands around the lake are their main source of nutrition. During the recent decades, these wetlands have deteriorated as a consequence of unsound agricultural and industrial interventions in the environment and particularly over-fishing. Local communities have inadequate sources of nutrition during the periods of drought and thus need to increase fish production and other agricultural products.



The ENKI o.p.s. Company was entrusted with developing a methodology for



management of small ponds, presenting draft means of management on the basis of current hydrological data, and in particular, presenting draft means of substantially increasing the natural production by the use of local fertilizers. The fingerponds are dug out in the direction from land and run like fingers into the wetlands. During periods of rain, the fingerponds are flooded and the inflowing water also brings fish from Lake Victoria. When water recedes, fish are trapped in the ponds like in pools. During the periods of drought, the ponds are enriched with

manure and fish become a source of nutrition for the local population. The land in-between is cultivated with seasonal crops, while the ponds ensure sufficient moisture for their growth.

The project should demonstrate possible ways and means of obtaining a long-term source of food without external subsidies or causing damage to the natural environment. At the same time, the project facilitates the improvement of the quality of life of local people of the Lake Victoria basin through fish production and allows for the participation of local communities.

Annex 1: Summary of Projects to Combat Desertification Implemented in Africa

Ongoing projects

No.	Country	Project name	Implemented by	Date	CR contribution	Other donors	Project scope
1.	Burkina Faso	Town of Toma – drinking water supply	Aquatis Inc.	2004-2005	CZK 12.5 mil.		Technical assistance in the search for a substantial groundwater resource for the town of Toma; the follow-up project and delivery of the construction of the public water supply system.
2.	Ethiopia	Exploration of water resources in Ethiopia with focus on drought-affected areas	Aquatest	2001-2005	CZK 9.6 mil.		Participation of CZ in the implementation of the national program of Ethiopia for water resources development; hydrological monitoring of drought-affected areas; training of local experts for groundwater sources analyses.
3.	Ethiopia	Building of good-quality drinking water resources in South-Western areas of Ethiopia	Člověk v tísni, o.p.s.	2003-2004	CZK 5.79 mil.		Enabling access to good-quality drinking water for local population (approx. 12 000 people); securing reliable administration of new water resources in the long term; training in the area of basic hygiene rules.
4.	Kenya, Tanzania, Uganda, Mali, Ethiopia	Fish breeding and maintenance of ponds in Sub-Saharan Africa	Enki, o. p. s.	2004-2005	CZK 2.08 mil.	European Union	The objective of the project is to verify the practical potential for fish breeding in flood plains and thus secure sources of food for the local population.
5.	Angola	Establishment of a center for agricultural education in the Bie province	Czech University of Agriculture, Institute of Tropical and Subtropical Agriculture	2003-2005	CZK 7 mil.		Establishment of a center for agricultural education and agricultural production. The Bie province is the most affected by civil war and lacks any institution dealing with training of agricultural experts or agricultural research. The aim of the project is supported by the current development of activities of the Czech business entities in the province.

6.	Namibia, Czech Republic	Selection of certain varieties of vegetables to be grown on saline soils in Namibia	Czech University of Agriculture in Prague, Institute of Tropical and Subtropical Agriculture - PhD. thesis				The project deals with the issues of saline soils; the author is also responsible for the cooperation with the University of Namibia in this field of education and research.
7.	Namibia, Czech Republic	Screening of tolerance to salinity in selected species of the family <i>Cucurbitaceae</i>	Czech University of Agriculture in Prague, Institute of Tropical and Subtropical Agriculture, and the University of Namibia	since 1998			Detailed analyses of soil, water, field experiments, selection of varieties of some vegetables species to be grown on saline soils under semi-arid conditions of Namibia
8.	Namibia	Support for development of secondary and university education in the area of agriculture	Czech University of Agriculture in Prague, Institute of Tropical and Subtropical Agriculture	2003-2005	CZK 3.98 mil.		The objective of the project is particularly to improve the education in agricultural fields at secondary agricultural schools and the Faculty of Agriculture and also support for development of scientific and applied research in the area of agriculture and natural resources of Namibia. A major part of teaching is carried by Czech experts.
9.	Mali	Experimental and training farm in the Republic of Mali	Czech University of Agriculture in Prague, Institute of Tropical and Subtropical Agriculture	2001-2004	CZK 5.4 mil.		A follow-up project in relation to Czech assistance for agriculture of Mali in 1997-1999. It should include introduction of methods resulting in an increase and improvement in production of selected species of animals and training of agricultural experts at secondary schools.

Completed projects

No.	Country	Project name	Implemented by	Date	CR contribution	Other donors	Project scope
10.	Burkina Faso	Evaluation of energy potential of black shale and environmental effects of their combustion	Czech Geological Survey	2001-2002	CZK 2.8 mil.		The project contributed to the addressing of the issues in a country with the highest energy prices in Africa. The objective was to contribute to reducing deforestation and related desertification.
11.	Kenya, Tanzania, Uganda	The role of wetlands in retention of water and nutrients in the landscape, i.e. in preventing aridization of the landscape, and in final treatment of wastewater	Enki, o. p. s. and the Czech National Committee of UNESCO-MAB	1999-2001	CZK 3.8 mil.	European Union	Training of experts in the use of natural resources. In Africa, the project helps to return water into the landscape, to seek alternative sources of nutrition (fish breeding), and involve both men and women of the local population.
12.	Kenya, Tanzania, Uganda	Function of small ponds built in freshwater zones of Lake Victoria	Czech Committee of UNESCO	2002	CZK 1.205 mil.	European Union	Czech contribution to the EU project entitled <i>Fingerponds</i> to support natural fish production for the needs of local population, related to previous projects in this area.
13.	Ghana, Czech Republic (Macedonia)	CLIDATA climatic database system – training and technical support to developing countries	Czech Hydrometeorological Institute	1998-2000	CZK 2.4 mil.		Assistance to the developing countries to establish an up-to-date climatological database on the basis of the ORACLE system (providing information, technology and software, training of administrators and users). In 2000, the CLIDATA system was supplied to Ghana.
14.	Various countries	Technical assistance in the fields of meteorology, hydrology, and air pollution control	Czech Hydrometeorological Institute	1997-2001	CZK 9 mil.		Assistance to the countries of Africa, Eastern and Southern Europe, Asia and South America in the fields of climatology, meteorology and hydrology in cooperation with the World Meteorological Organization
15.	Czech Republic	UNESCO/WMO international post-graduate course on hydrology “Hydrological Data for Water Resource Planning”	Czech University of Agriculture – Committee for Post-Graduate Studies in Hydrology, in cooperation with CHMI under patronage of UNESCO and WMO	1998, 2000	CZK 0.8 mil.		Training of specialists from developing countries of Africa and Eastern Europe in modern hydrology, including improvement of water management.

Projects under preparation

No.	Country	Project name	Implemented by	Date	CR contribution	Other donors	Project scope
16.	Mali, Czech Republic	Research on mycorrhiza in relation to securing water supply for plants	Mendel University of Agriculture and Forestry, Université du Mali, Institut de Polytechnique Rural de Katibougou-Koulikoro, Mali	project under preparation			Education of post-graduate students from the Univerzité du Mali at the Mendel University; expert assistance of researchers of the Mendel University in the application of mycorrhiza techniques in Mali.

