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TWINNING PROJECT CZ99/IB-EN-01

Part Dangerous Substances – Final Report

Guidance for the implementation of the

Council Directive 76/464/EEC

TWINNINGT PROJECT CZ99/IB-EN-01

Part Dangerous Substances – Final Report Guidance for the implementation of the Council Directive 76/464/EEC

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List of abbreviations

AOX	Sum of absorbable chlorinated hydrocarbons
AWMA	Agricultural Water Management Authority
AWSSS or ADWSSS	Act No. 274/2001 coll. on Water Supply and Sewerage Systems for Public Use
BAT	Best available technique
BATREF	BAT reference documents
CEI	Czech Environmental Inspection
CHMI	Czech Hydrometeorological Institute
COMMPS	<u>combined monitoring-based and modelling-based priority setting scheme</u>
SCTEE	Comité Scientifique consultatif pour l'examen de la Toxicité et de l'Écotoxicité des substances chimiques of the European Commission
DDs	Daughter Directives to Council Directive 76/464/EEC
DSD	"Dangerous Substances Directive" which stands for Council Directive 76/464/EEC
ELVs	Emission Limit Values
EPER	European Pollutant Emission Register
EQSs	Environmental Quality Standards
GR 82/1999	Governmental Regulation No. 82/1999
HEIS	Hydroecological information system
IPPC	"Integrated Pollution Prevention and Control" (Council Directive 96/61/EC)
LAWA	Länder Arbeitsgruppe (working group of "Länder" in Germany)
MoA	Ministry of Agriculture
MoE	Ministry of Health
NACE-code	Standard nomenclature for economic activities
NADWSS	draft of the new Act on Drinking Water Supply and Sewerage Systems for public use (draft version of AWSSS)
IDNADWSS	draft implementing decree under the new Act on Drinking Water Supply and Sewerage Systems for public use
NGR	New Governmental Regulation intended to repeal the current Governmental Regulation No. 82/1999
NOSE-P code	Standard nomenclature of sources of emission
NWA	draft of the New Water Act

PAIS	Public administrative information system
PNEC	Predicted No Effect Concentration
SCTEE	Scientific Committee for Toxicity and Ecotoxicity
SSM	Sewerage System Manual defined in NADWSS
T.G.M. WRI	Water Research Institute
WA	Water Act No. 254/2001 Coll.
WFD	“Water Framework Directive” Council Directive 2000/60/EC
WSSS	Act on Water Supply and Sewerage Systems for Public Use No. 274/2001 Coll.

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1 Introduction

This report summarises the results of the project part of the Twinning Project CZ/99-IB-EN-01 which was concerned with the “Dangerous Substance Directive”. This project part was aimed to develop guidance for the implementation of Council Directive 76/464/EEC *on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community* and its daughter directives into Czech legislation.

The project has been carried out in four phases, starting with data collection (phase 1), and followed by a gap analysis (phase 2). Based on the analysis and assessment during phases 1 and 2, practical and detailed recommendations for the implementation of Council Directive 76/464/EEC and its daughter directives in the Czech Republic have been developed during phase 3. This report (phase 4) represents a comprehensive summary of the results obtained during phases 1 to 3 of the project.

The report is organised as follows. Section 1 provides an introduction to Council Directive 76/464/EEC and other relevant Community legislation, to the implementation progress achieved by the Czech Republic, and to the specific objectives of this project part. Section 2 provides information about the organisation of the project part, and of the progress which was made in each step. Section 3 contains the results of the project part, including the recommendations which have been developed. Section 4 summarises the conclusions (list of recommendations). Section 5 contains a list of all documents produced during the project and a list of all annexes. The annexes contain background information, technical details and an extensive database. For practical reasons, they were compiled in a separate document.

The report has been finalised on 4th April 2002, following the peer review by the Czech partners.

1.1 Provisions of the Dangerous Substance Directive 76/464/EEC and new developments of Community legislation

Council Directive 76/464/EEC was introduced in 1976 with the aim of protecting surface waters from discharges of dangerous substances. It lays down distinct strategies for two different types of substances, list 1 and list 2.

For both types of substances Member States must establish an authorisation system for all relevant point sources, controlling effluent discharges by setting emission limit values.

For list 1 substances, the emission limit values must comply with limits set at Community level (alternatively, the directive allows Member States to apply as a basis for emission limits also quality objectives which are set at Community level. It is noted, however, that this option ceased with the adoption of Council Directive 2000/60/EC).

For list 2 substances, Member States must establish emission reduction programmes which contain quality objectives. Emissions must be controlled by emission limit values which are based on these quality objectives.

For 17 substances of list 1, daughter directives have been adopted within the frame of Council Directive 76/464/EEC which lay down Community-wide emission limit values and quality objectives:

- Council Directive 82/176/EEC – Directive on the limit values and quality objectives for mercury discharges by the chlor-alkali electrolysis industry;
- Council Directive 84/156/EEC – Directive on the limit values and quality objectives for mercury discharges by sectors other than the chlor-alkali electrolysis industry;

- Council Directive 83/513/EEC – Directive on limit values and quality objectives for cadmium discharges;
- Council Directive 84/491/EEC – Directive on limit values and quality objectives of hexachlorocyclohexane;
- Council Directive 86/280/EEC – Directive on limit values and quality objectives for discharges of certain dangerous substances included in List I of the Annex to Directive 76/464/EEC;
- Council Directive 88/347/EEC – Directive amending Annex II to Directive 86/280/EEC on limit values and quality objectives for discharges of certain dangerous substances included in List I of the Annex to Directive 76/464/EEC;
- Council Directive 90/415/EEC - Directive amending Annex II to Directive 86/280/EEC on limit values and quality objectives for discharges of certain dangerous substances included in List I of the Annex to Directive 76/464/EEC;

For list 2 substances, the legal basis for emission reduction programmes is laid down in article 7 of Council Directive 76/464/EEC. Until the end of 2000 no additional guidance has been provided to Member States for the implementation of these programmes. Reports on behalf of the European Commission demonstrate that the programmes have been poorly implemented (WRC, 2001), 10 Member States are being prosecuted by the European Court for non-compliance with article 7 of Council Directive 76/464/EEC.

Following the adoption of Council Directive 76/464/EEC and its daughter directives a number of new legislative and administrative actions have been taken at Community level with some effect to the interpretation of Council Directive 76/464/EEC.

In 1991, Council Directive 91/692/EEC (reporting directive) was adopted which harmonises the reporting obligations of Member States to the European Commission on the implementation of a number of directives. Within this framework, a comprehensive questionnaire on the implementation of Council Directive 76/464/EEC and its daughter directives has been adopted under Commission Decision 95/337/EEC. It provides detailed questions on the implementation and application of the directive in Member States. A report covering the period 1993-1995 has been prepared on behalf of the Commission Services.

In 1996, Council Directive 96/61/EC (IPPC directive) was adopted which requires that large installations must be authorised by an integrated process, taking into account the protection of the environment as a whole (not just the water medium). Emission limit values must be established based on best available techniques. It also requires that a combined approach is followed, i.e. that emission limit values be made stricter if environmental quality standards at Community level so require. Council Directive 96/61/EC replaces, for large installations, the authorisation system under Council Directive 76/464/EC, with a transition period until 2007 for existing discharges.

In 2000, Council Directive 2000/60/EC (Water Framework Directive, WFD) was adopted which requires that Member States establish river-basin management plans which include controls for all significant sources of pollution. In order to protect surface waters, Member States must set environmental quality standards for all relevant pollutants in accordance with the “good surface water status” as defined in Council Directive 2000/60/EC. The programme of measures must be designed such as to achieve “good surface water status” by 2015 in all water bodies. Council Directive 2000/60/EC also establishes the combined approach for all point emission sources.

Council Directive 2000/60/EC contains transitional provisions with respect to Council Directives 76/464/EEC, in particular:

- Council Directive 76/464/EEC will be entirely repealed by 2013;

- During this period Member States may apply for the establishment of programmes pursuant to article 7 of Council Directive 76/464/EEC the principles of Council Directive 2000/60/EC on
 - a. the identification of pollution problems and the substances causing them
 - b. the establishment of quality standards
 - c. the emission reduction measures adopted

For the purpose of supporting Member States during this transition period, the Commission Services have circulated a Guidance Document on the application of programmes under article 7 of Council Directive 76/464/EEC (EC, 2000).

Article 16 of Council Directive 2000/60/EC establishes a legal basis for future Community controls for selected pollutants. It foresees, in a first step, the establishment of a list of priority substances for which, in a second step, Community-wide environmental quality standards and emission controls will be developed. In 2001, Parliament and Council Decision No. 245/2001 introduced a first priority list of 33 substances. According to article 16 of Council Directive 2000/60/EC, the European Commission must now propose quality standards and emission controls for these priority substances by the end of 2003. The preparation of these proposals is presently under way.

1.2 The approximation process and the Common Position on the implementation of the Dangerous Substance Directive 76/464/EEC into Czech legislation

Council Directive 76/464/EEC is part of chapter 22 (environment) of the *aquis communautaire*. The discussion of this chapter between the Czech Republic, the European Commission and the Member States was finalised in 2001. The results have been laid down in the European Union Common Position (EU, 2001). With regard to Council Directive 76/464/EEC and its daughter directives, the Common Position states:

“the EU welcomes the Czech Republic’s decision to withdraw its request for transitional measures. The EU invites the Czech Republic to continue its efforts for completing the inventory of discharges of list 1 substances, including other sectors than chemical industry. The EU underlines that, upon accession, not only new permits will have to be issued, but all list 1 discharges have to comply with the Directive 76/464/EEC and the daughter directives. Moreover, the EU notes that the pollution reduction programmes will be established by 1st January 2003 at the latest and agrees that these programmes will be implemented by 31st December 2009 at the latest. The EU underlines that pollution from past emissions should be addressed through specific programmes. Finally, the EU invites the Czech Republic to provide regular information on the establishment of these pollution reduction programmes in the framework of the Association Agreement.”

Following the invitation of the Common Position, the Czech Ministry of Environment has repeatedly submitted reports on the implementation progress to the European Commission, including the Implementation Plan, tables of concordance, results of current projects on monitoring and the establishment of an emission inventory, and cost estimates. These documents reflect the progress which has been made at legislative as well as administrative level in the Czech Republic to implement Council Directive 76/464/EEC and the daughter directives.

In 2001, two pieces of legislation were adopted in the Czech Republic which are of importance for the implementation of Council Directive 76/464/EEC:

- Act on Water and Amendments to Some Acts (The Water Act), No. 254/2001 coll.
- Act on public water supply systems and sewerage systems for public use and on amendments to other acts, Act No. 274/2001 coll.

These laws introduce several provisions aimed to implement specific requirements of Council Directive 76/464/EEC and they also introduce a number of provisions which empower the Government, the Ministry of Environment and/or the Ministry of Agriculture to enact secondary legislation with respect to various essential requirements. One of the most important provisions for the purpose of implementation of Council Directive 76/464/EEC is § 38 (5) of the Water Act which empowers the Government to lay down details on permits and authorisation procedures. It is planned by the Czech Ministry of Environment to replace, on the basis of this provision, the current Governmental Regulation No. 82/1999 by a new piece of legislation, hereafter called New Governmental Regulation which will contain major technical details of Council Directive 76/464/EEC and the daughter directives.

According to the present Implementation Plan for Council Directive 76/464/EEC the majority of the secondary legislation will be published between the end of 2002 and 2003. Consequently, for the purpose of the present project no drafts or only drafts in a very preliminary stages were available (one exception being the Ministerial Regulation No. 432/2001 which lays down reporting obligations of applicants for permits and which entered into force in 2002).

The responsible service of the Czech Ministry of Environment has initiated a number of projects at the TGM Water Research Institute and the Czech Hydrometeorological Institute which aim to collect and assess data and information as pre-requisites for the implementation of Council Directive 76/464/EEC. This includes, inter alia, the operation of a nation-wide monitoring system for dangerous substances, the establishment of an inventory of point source emissions, and the development of the Hydro-ecological Information System which will be linked to the public administration information system.

1.3 Objectives of the project part on the Dangerous Substances Directive 76/464/EEC

In the covenant of the project three issues have been identified as major problem areas.

- Drafting of appropriate legislative measures: The project aimed to support the Czech administration in the *„draft of secondary legislative measures (pursuant to the existing primary legislation) appropriate to ensure transposition of the directive and provide the basis for the ensuing implementation”*. Emphasis should *“be placed on the elaboration of a coherent strategy for the establishment and implementation of programmes required by the directive”*. This should include the production of a background paper on national standards (emission and quality standards) and regulatory approaches adopted by the participating Member States which *„will allow the Czech Republic to consider all the available options for the drafting of the Decree”* (the term “Decree” refers to the New Governmental Regulation based on § 38 (5) of the Water Act No. 254/2001 coll.)
- Inventory of Sources: The project aimed to develop a *“practical approach to the assessment and quantification of industrial discharges, including major discharges to sewers”*. This approach should include *“consideration of realistic options for the organisation of effluent monitoring”*, using examples from Member States.
- Establishment of a monitoring network and the identification of relevant parameters: The project aimed to develop *“modifications to the monitoring network”* which would be necessary *“to establish a comprehensive map of the presence of dangerous substances in the hydrosphere (water, sediments, biota), to identify problem areas, to identify trends”*.

In the course of the project a systematic and integrated approach to the implementation of Council Directive 76/464/EEC in view of other relevant Community legislation should be taken. Particular account should be given of the provisions of Council Directive 2000/60/EC (Water Framework Directive).

During the implementation of the project significant progress has been made by the Czech administration in solving these problem areas. Two important bodies of legislation have been adopted (see section 1.2), the establishment of an emission inventory was continued, an ambient water monitoring programme on list 1 substances was finalised, and one on list 2 substances was started. However, work in all of these problem areas is still not finalised, and the specific difficulties encountered in the course of these activities actually confirmed the good choice of the three major issues for this project part. The intermediate results obtained by the Czech administration enabled the recommendations presented in this report to focus on those aspects which require specific solutions and additional efforts.

2 Project progress

This section describes the organisation of the project as foreseen in the covenant (section 2.1) and the activities and major results which have been achieved in the different stages of the project (section 2.2).

2.1 Organisation of the project part on the Dangerous Substances Directive 76/464/EEC

In the covenant the following distinct phases and activities have been planned for the project part on Council Directive 76/464/EEC:

- **Phase 1:** Information gathering and synthesis with focus on the three target areas of the project (existing legislation, state of the source inventory, existing monitoring network). Summaries should be produced in the form of brief reports.
- **Phase 2:** Assessment of the existing information for its compliance with the directive and the identification of gaps to be filled in the three target areas. This phase should be complemented by a visit of the relevant institutions in Austria by a delegation of Czech experts. Summaries of the visiting tour and of the findings should be produced in the form of brief reports.
- **Workshop:** Subsequent to phase 2, a workshop should be held in the Czech Republic with the aim to present the findings of the first two project phases, and in particular the gaps that have been identified and to outline possible solutions using examples from Member States. Members of civil society, local authorities and industrial interest groups should be invited to voice their concerns about the implementation of this directive.
- **Background Paper:** Towards the end of phase 2 a background paper for the preparation of the relevant secondary legislation should be produced with the assistance of the Member States involved in the twinning project.
- **Phase 3:** Elaboration of recommendations for the filling of the gaps identified in phase 2. During this phase assistance should be provided by UK in the development and initial production stages of the action programmes required by the directive. Reports of the first three phases of the project should be produced.
- **Phase 4:** This phase should consist of bringing together the results of phases 1 to 3 in a final report. The recommended actions are aimed to be incorporated into the Implementation Plan for the directive by the Czech administration.

2.2 Review of the progress of the project part on the Dangerous Substances Directive 76/464/EEC

The project has been carried in the stages described in section 2.1. The progress of the project and the documentation of it is described below in more detail. It should be noted that the success of this project was largely depending on the co-operation with the Czech administration, namely the Czech Ministry of Environment, the TGM Institute of Water Research and the Czech Hydrometeorological Institute. Thanks to the enduring and excellent input of the Czech partners it was possible to follow closely the planned actions of the project without any significant delays. It is also noted that both Member State partners, UK and France, have fruitfully contributed to this project part and have made it possible to incorporate their experience with the implementation of Council Directive 76/464/EEC into the recommendations.

This section describes in detail how the phases and activities listed in section 2.1 have been carried out and presents the major results which have been achieved. The process was carefully documented. An overview of all documents produced is provided in tables 1 and 2.

Phase 1

This phase concentrated on the identification, understanding and analysis of the Czech legislation and water management in relation to the provisions of Council Directive 76/464/EEC and the daughter directives. It focused on the understanding of the functioning and organisational arrangements envisaged by the Czech legislation, especially by the Water Act No. 254/2001 coll., on the present status of the inventory of point sources of pollution (including the current system of effluent controls) and on the status of the Czech ambient water monitoring system (including the identification of relevant parameters).

A number of missions was carried out and the major findings and analysis obtained were summarised in the mission reports. At the end of this phase a summary report was produced. (table 1).

Phase 2

This phase aimed to assess the existing information for its compliance with the provisions of Council Directive 76/464/EEC and to identify the gaps to be filled in the three target areas (legislation, source inventory and monitoring).

Based on the findings of phase 1, a list of relevant Czech legislation has been produced during phase 2. An updated list of these documents is provided in annex 1 of this report. A number of missions were carried out and the major findings and analysis obtained have been summarised in the mission reports (table 1). As an important result of this phase, an in-depth gap analysis with respect to the provisions of Council Directive 76/464/EEC and of the framework daughter directive, Council Directive 86/280/EEC has been made which is provided in annex 2 of this report. At the end of this phase a summary report was produced (table 1).

Phase 2 was finalised by a study visit of a Czech delegation (Ms. Kalinová, Mr. Zelinka, Mr. Novický and Mr. Rieder) from 15th to 17th May 2001 in Austria. A number of institutions which are responsible for the implementation of Council Directive 76/464/EEC in Austria have been visited, including the responsible ministry, the Austrian Environment Agency, two Länder administrations and a municipal treatment plant. A number of presentations have been given by Austrian experts during this visit focusing on practical experiences with the implementation of Council Directive 76/464/EEC. Special emphasis was given respectively to the control of indirect discharges, to the approach for industrial effluent monitoring, to the collection of emission data for reporting, and to the system of ambient water monitoring of dangerous substances in Austria. A summary report, including all presentations, was produced (table 1, table 2).

Workshop

Following phase 2, a workshop was organised in Prague on 4th – 6th September 2001. The aim of the workshop was to present the findings of phases 1 and 2 and to discuss possible options for solving the gaps. The workshop started with a preparatory meeting on 4th September 2001, followed by a public conference on 5th September and a final meeting on 6th September. Speakers at the conference included the Czech Water Director, Mr. Kinkor, the project administrator, Mr. Hunt, the Austrian twinning team and experts from UK, France and Austria. To the conference, a number of interested parties and experts had been invited, including representatives from the ministries of environment, agriculture and industry, from regional administrations, from different responsible institutions and from water boards, from industrial organisations, NGOs and industrial companies. The presentations held at the conference

were summarised in a separate document, the results and findings of the workshop are included in the summary phase 2 report (table 1, table 2).

Background paper

During phase 2 a background paper was written by the Austrian twinning team which aimed to provide specific support of the Czech Ministry of Environment for drafting the New Government Regulation pursuant to § 38 (5) of the Water Act No. 254/2001 coll. (Table 1). The paper contains a bulk of background information and data on the implementation of Council Directive 76/464/EEC and its daughter directives in EU Member States. It covers the following issues:

- Emission limit values for substances of list 1
- Identification of relevant substances of list 2
- Environmental quality standards for substances of list 1 and list 2
- Specific programmes for substances of list 1

Phase 3

This phase aimed to elaborate recommendations for filling of gaps identified in phase 2.

A number of missions were carried out and the major findings and analysis obtained were summarised in the mission reports (table 1).

At a final discussion on 29th January 2002 with the Czech partners of the Ministry of Environment, the TGM Institute of Water Research and the Czech Hydrometeorological Institute, a recommendation paper (table 1) with possible options for solutions in the three target areas (legislation, source inventory and monitoring) was presented and thoroughly discussed. A summary report of phase 3 was produced (table 1).

During this phase assistance should be provided by UK in the development and initial production stages of the action programmes required by the directive.

Phase 4

This phase mainly built on the recommendation paper (table 1) and the conclusions of the final meeting under phase 3 (phase 3 report, table 1). The present report summarises these results together with the findings under phases 1 and 2.

The following tables provide a summary of all documents and presentations produced during the progress of the twinning project on the Dangerous Substances Directive.

Table 1: Collection of the documents produced by the project

Phase 1			
	Experts	Documents	comment
Mission 1	DS1, DS2	DS_Mission1Minutes4.12.00 v_1.1	summary of mission 1
Mission 2	DS1, DS2	DS_mission2Minutes8.1.01v2.0	summary of mission 2
Mission 3	DS1, DS2	DS_mission3Minutes29.01.01v2.0	summary of mission 3
Mission 4	DS1, DS2	DS_mission4Minutes26.02.01v1.0	summary of mission 4
Mission 5	DS2	draft_DS_report_phase1_v.0.1	draft report of phase 1
Phase 1	DS1, DS2	DS_report_phase1_v.1.1	report of phase 1
phase 2			
	experts	documents	comment
Mission 6	DS1, DS2	DS_mission6Minutes17.04.01v1.0	summary of mission 6
Mission 7	DS2	DS_mission7Minutes 29.05.01v1.0	summary of mission 7
Mission 8	DS2	DS_mission9Minutes 17.07.01v1.1	summary of mission 8
Mission 9	DS1, DS2	DS_mission9Minutes 17.07.01v1.1 discussion paper	summary of mission 9, production of the draft back ground paper (discussion paper)
Mission 10	DS1, DS2	DS_mission10Minutes 06.08.01v1.0	draft report of phase 10
Mission 11	DS2	DS_mission11Minutes 27.08.01v1.0	summary of mission 11
Workshop	DS1, DS2	DS_mission12Minutes 3.09.01v1.0 workshop conclusions	summary of mission 12/workshop summary of the discussions
Phase 2	DS1, DS2	DS_report_phase2_v.0.1 GR-BP 30.Aug.2001	report of phase 2 background paper
phase 3			
	experts	documents	comment
Mission 13	DS1, DS2	DS_mission13Minutes 3.10.01v1.0	summary of mission 13
Mission 14	DS2	DS_mission14Minutes 29.10.01v1.1	summary of mission 14
Mission 15	DS1, DS2	DS_mission15Minutes 8.11.01v1.0 draft recommendation paper	summary of mission 15 first version of recommendations
Mission 16	DS2	DS_mission16Minutes 26.11.01v1.0	summary of mission 16
Mission 17	DS1, DS2	DS_mission17Minutes 17.12.01v1.0 draft recommendation paper v1.1	summary of mission 17 updated version of recommendations
Mission 18	DS2	DS_mission18Minutes 7.01.02v1.0	summary of mission 18
Mission 19	DS1, DS2	DS_mission19Minutes 24.01.02v1.0 DS recommendation paper v1.2 presentation recommendations	summary of mission 19 2 nd version of recommendation paper powerpoint presentation to recommendations
Mission 20	DS2	DS_mission20Minutes 4.02.02v1.0	summary of mission 20
Phase 3	DS1, DS2	DS_report_phase3_v.0.1	report of phase 3
phase 4			
	experts	documents	comment
Mission 21	DS1, DS2	DS_mission21Minutes 11.02.02v1.0 draft final report	summary of mission 21
Mission 22	DS1, DS2	DS_mission22Minutes 20.03.02v1.0 final report	summary of mission 22
Mission 23	DS1, DS2	DS_mission23Minutes 2.04.02v1.0	summary of mission 23
Phase 4	DS1, DS2	final report	final report of the project part

Table 2: Presentations held during the project part

Expert	title	file
M. Wimmer (A)	Water Framework Directive - Priority Substances Presentation 6 December 2000, Prague	Twinning_06_12_00
S. Nemetz (A)	The Austrian Water Quality Monitoring System	The Austrian Water Quality Monitoring System_30_01_01
M. Rieder (CZ)	Water Quality Monitoring in the Czech Republic	Water Quality Monitoring in the Czech Republic
Rosenthaler (A)	Gemeindeabwasserverband Amstetten	Rosenthaler
M. Wimmer (A)	Control of indirect discharges of dangerous substances	Presentation Visiting Tour (Indirect discharges)
M. Wimmer (A)	Experiences with Council Directive 76/464/EEC – Implementation Report, Vienna, 15 th May 2001	Presentation Visiting Tour (Reporting)
K. Deutsch (A)	Water monitoring of dangerous substances, Vienna, 15 th May 2001	Presentation Visiting Tour Part 1 (Deutsch)
K. Schwaiger (A)	Austrian Water Administration – Major Water Policy Changes, Vienna 15 th May 2001	Presentation Visiting Tour Part 2 (Deutsch)
P. Hohenblum (A)	Austrian Research Co-Operation on Endocrine Modulators, May 15, 2001	ARCEM_hohenblum
M. Nagy (A)	Study concerning the demands of Article 7 of the Dangerous Substances Directive (76/464/EEC)	nagy_m
W. Vogel (A)	NAMEA - <u>N</u> ational <u>A</u> ccounting <u>M</u> atrix including <u>E</u> nvironmental <u>A</u> ccounts	NAMEA_Vogel_Präsentation_15_05_2001
M. Wimmer, S. Nemetz, (A)	Presentation and Introduction of gap-analysis, DS workshop	DS-presentation-introduction
D. Martin (A)	Environmental Quality Standards	EQS_DWM_(Dave Martin)
T. Mičanik (CZ)	Emission of dangerous substances from Czech industry into the aquatic environment	Presentace workshop (Micanik)
R. Braun (A)	Austrian approach to the emission control of discharges	Presentation (Braun)
T. Dubuis (F)	The French approach to effluent monitoring	Presentation (Dubuis)
A. Rauchbüchl (A)	Aquatic Monitoring of Dangerous Substances in Austria, Current Frame and Future Modifications	Presentation_Workshop_2001_09_04_v6 (Rauchbuechl)
M. Nagy (A)	Study concerning the requirements of Article 7 of the Dangerous Substances Directive (76/464/EEC) selection of relevant substances	Relevant substances (Nagy)
M. Wimmer, S. Nemetz (A)	presentation recommendations	presentation recommendations

3 Results

3.1 Introduction

This section comprises a comprehensive review of the major gaps identified in phase 2 and the recommended solutions resulting from phase 3 of the project.

The recommendations have been presented and thoroughly discussed with the Czech experts at several occasions during phase 3 of the project. In developing the recommended solutions, the relevant legal framework, especially the newly adopted Water Act No. 254/2001 coll., has been carefully considered. A major part of the recommendations will be implemented through the new Governmental Regulation, based on § 38 (3) of the Water Act No. 254/2001 coll. However, some of the recommendations may require an amendment to the Water Act itself. Even though this issue is not explicitly addressed in this report, it was attempted to elaborate sufficiently detailed recommendations which put the Czech administration in the position to decide clearly if the implementation of these recommendations can be achieved via secondary legislation or otherwise requires an amendment of the basic law.

Section 3 is organised as follows. The meaning of the terminology used by Council Directive 76/464/EEC has been repeatedly changed by other related legislation since its first introduction in 1976. To avoid confusion, section 3.2 addresses some important terms and clearly describes their meaning throughout this report. Section 3.3 presents a classification of the different regimes of authorisations, required by Community legislation for different type of pollutants (list 1 and list 2) and for different types of installations. Sections 3.4 to 3.6 summarise the recommendations given for the drafting of legislation, for effluent monitoring and the establishment of an inventory of sources, and for the establishment of a ambient water monitoring system, respectively.

3.2 Terminology

Council Directive 76/464/EEC introduced a specific terminology for discharges of waste water. Since 1976, when the directive was adopted, new terms occurred with a similar, sometimes more precise meaning. For this reason, section 3.2 discusses a number of relevant terms and their meaning throughout this report.

3.2.1 Inland surface water

According to Article 1.2 a) of Council Directive 76/464/EEC „inland surface water“ means *“all static or flowing fresh surface water situated in the territory of one or more Member States”*.

3.2.2 River basin

“River basin” means the area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta.

3.2.3 Subbasin

“Subbasin” means the area of land from which all surface run-off flows through a series of streams, rivers and, possibly, lakes to a particular point in a water course (normally a lake or a river confluence).

3.2.4 List 1 substances regulated at EU level:

Council Directive 76/464/EEC distinguishes between two lists of pollutants, list 1 and list 2, which are listed in the annex of the directive. 17 individual substances of the annex/list 1, which had been selected on the basis of their toxicity, persistence and bio-accumulation have been regulated by daughter directives of Council Directive 76/464/EEC. For these substances, and only for these, the term “list 1” is used in this report.

Among these 17 substances of list 1, 15 substances belong to the group of organohalogen compounds. For four of those, the chlorinated pesticides aldrin, dieldrin, isodrin and endrin, the term “drins” is used. . Two substances, mercury and cadmium, are heavy metals. Table 1 summarises all list 1 substances and the relevant daughter directive.

table 3: Summary of list 1 substances and relevant daughter directives.

Substance	Daughter directive
DDT	86/280/EEC
Dichloroethane, 1,2-	86/280/EEC
Drins	86/280/EEC
Hexachlorobenzene	86/280/EEC
Hexachlorobutadiene	86/280/EEC
Hexachlorocyclohexane	84/491/EEC
Pentachlorophenol	86/280/EEC
Tetrachloroethene	86/280/EEC
Tetrachloromethane	86/280/EEC
Trichlorobenzene	86/280/EEC
Trichloroethene	86/280/EEC
Trichloromethane	86/280/EEC
Cadmium	83/514/EEC
Mercury	84/156/EEC, 82/176/EEC

3.2.5 List 2 substances

All substances of the annex/list 1 of Council Directive 76/464/EEC which are not yet regulated at Community level (see section 3.2.4) as well as all substances of the annex/list 2, are by definition “list 2 substances”.

Substances of annex/list 1 which do not belong to the 17 list substances include the following families and groups of substances, selected mainly on the basis of their toxicity, persistence and bioaccumulation, with the exception of those which are biologically harmless or which are rapidly converted into substances which are biologically harmless:

- organohalogen compounds and substances which may form such compounds in the aquatic environment

- organophosphorus compounds
- organotin compounds
- substances in respect of which it has been proved that they possess carcinogenic properties in or via the aquatic environment
- persistent mineral oils and hydrocarbons of petroleum origin
- for the purposes of implementing Articles 2, 8, 9 and 14 of Council Directive 76/464/EEC: persistent synthetic substances which may float, remain in suspension or sink and which may interfere with any use of the waters.

Substances of annex/list 2 belong to the families and groups of substances listed below, which have a deleterious effect on the aquatic environment, which can, however, be confined to a given area and which depend on the characteristics and location of the water into which they are discharged.

- The following metalloids and metals and their compounds:

1. Zinc	11. Tin
2. Copper	12. Barium
3. Nickel	13. Beryllium
4. Chromium	14. Boron
5. Lead	15. Uranium
6. Selenium	16. Vanadium
7. Arsenic	17. Cobalt
8. Antimony	18. Thallium
9. Molybdenum	19. Tellurium
10. Titanium	20. Silver
- Biocides and their derivatives not appearing in list 1.
- Substances which have a deleterious effect on the taste and/or smell of the products for human consumption derived from the aquatic environment
- and compounds liable to give rise to such substances in water
- Toxic or persistent organic compounds of silicon, and substances which may give rise to such compounds in water, excluding those which are biologically harmless or are rapidly converted in water into harmless substances
- Inorganic compounds of phosphorus and elemental phosphorus
- Non persistent mineral oils and hydrocarbons of petroleum origin
- Cyanides and fluorides
- Substances which have an adverse effect on the oxygen balance, particularly: ammonia and nitrites.

It is noted that most of the substances and groups of substances listed above also appear in the (non-exhaustive) list of pollutants in annex VIII of CD 2000/60/EC.

3.2.6 Discharge

According to article 1.2 d) of Council Directive Council Directive 76/464/EEC the term „discharge“ means *“the introduction into the waters referred to in paragraph 1 of any substances in List I or List II of the Annex, with the exception of:*

- *discharges of dredgings,*
- *operational discharges from ships in territorial waters,*
- *dumping from ships in territorial waters;”*

Council Directive 76/464/EEC does not use the terms “direct discharge” or “indirect discharge”. But as these terms are used in recent Community legislation, e.g. under Council Directive 96/61/EC and under Council Directive 91/692/EEC, they are also used for this report.

“Direct discharge” shall mean the discharge of waste water containing dangerous substances directly into the receiving surface water (river, lake, reservoir) without passing a sewerage system.

“Indirect discharge” shall mean the discharge of waste water containing dangerous substances into a sewer.

It is important to note that Council Directive 80/68/EEC on groundwater applies the same term “indirect discharge” with a different meaning. Under Council Directive 80/68/EEC, it means the introduction of dangerous substances into groundwater after percolation through the ground or subsoil.

3.2.7 Industrial plant/Installation

The terms “industrial plant” or “installation” are used as synonymous terms throughout this study. Council Directive 86/280/EEC defines the term industrial plant as *“a plant at which dangerous substances of list 1, or any other substances containing them, are handled.”* Similarly, Council Directive 96/61/EC defines the term “installation” as *“a stationary technical unit where one or more activities listed in Annex I (of Council Directive 96/61/EEC) are carried out, and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution.”*

3.2.8 Pollution

According to Council Directive 76/464/EEC „pollution“ means *“the discharge by man, directly or indirectly, of substances or energy into the aquatic environment, the results of which are such as to cause hazards to human health, harm to living resources and to aquatic ecosystems, damage to amenities or interference with other legitimate uses of water.”*

3.2.9 Environmental quality standard / objective

Council Directive 76/464/EEC uses the term “quality objectives” without introducing a formal definition. A definition of a similar term “environmental quality standard (EQS)” was introduced under Council Directive 2000/60/EC and defined in article 2 as follows:

“Environmental quality standard means the concentration of a particular pollutant or group of pollutants in water, sediment or biota which should not be exceeded in order to protect human health and the environment.”

This is a clear definition. Therefore, the term “environmental quality standard” is used throughout this report instead of “quality objective”. The meaning of both terms is understood as synonymous, the essential point being that environmental quality standards as well as quality objectives must be laid down in the legislation as binding values.

3.2.10 Authorisation / permit

The term “authorisation” is not defined in Council Directive 76/464/EEC. Throughout this report it shall mean the procedure which an individual must follow to obtain the allowance by the competent authority

or competent organisation for the discharging, directly or indirectly, of dangerous substances into surface waters.

The term “permit” is used in this report in the sense of Council Directive 96/61/EC, article 2.9: *“Permit shall mean that part or the whole of a written decision (or several such decisions) granting authorisation to operate all or part of an installation, subject to certain conditions which guarantee that the installation complies with the requirements of the Directives. A permit may cover one or more installations or parts of installations on the same site operated by the same operator.”*

3.2.11 Emission limit value / emission standard

Council Directive 76/464/EEC does not contain any formal definition of the terms “emission limit value” and “emission standard”. It appears that, as a general rule, the term “emission limit value” is used for limit values set at Community level, whereas the term “emission standard” applies to limits established at local level.

For example, the term “emission standard” is used in article 5 and 7 of Council Directive 76/464/EEC to describe the permitted maximum concentration of a substance (or the permitted maximum quantity of a substance) as specified in the permit. The term “limit value” is used in article 6 of Council Directive 76/464/EEC which deals with limits (for emissions as well as water quality) laid down by the Council.

In contrast, Council Directive 96/61/EC, article 2.6 and Council Directive 2000/60/EC, article 2.40 introduce the term “emission limit value” as follows:

“the mass, expressed in terms of certain specific parameters, concentration and/or level of an emission, which may not be exceeded during any one or more periods of time. Emission limit values may also be laid down for certain groups, families or categories of substances. The emission limit values for substances shall normally apply at the point where the emissions leave the installation and dilution being disregarded when determining them.”

Here, the term “emission limit value” is used for both, Community as well as individual (local) limits. For the purpose of consistency with this legislation, throughout this report the term “emission limit value (ELV)” is also used for both types of limits. The term “emission standard” is not used in this report.

3.2.12 Combined approach

For the purpose of this report, the term “combined approach” shall mean the combined application of technical-based and quality-based emission controls in the sense of Article 10 of the Council Directive 96/61/EC: *“Where an environmental quality standard requires stricter conditions than those achievable by the use of the best available techniques, additional measures shall in particular be required in the permit, without prejudice to other measures which might be taken to comply with environmental quality standards.”*

3.2.13 New Governmental Regulation (NGR)

Governmental Regulation No. 82/1999 is the current instrument for sector-based emission controls under the Czech water legislation. It needs to be thoroughly modified and amended with respect to both the Water Act No. 254/2001 coll., and the fulfilment of the requirements of Community legislation. At the time when this report was finalised, a first, very preliminary and non-official draft of the revised regulation has been made available to the twinning team. The administration of the Czech Ministry of Environment plans to finalise the draft by the end of 2002, in order to set it into force by 1st January 2003. It was one of the major goals of this project part to support the drafting process.

3.3 Authorisation regimes for list 1 and list 2 substances

For the purpose of the recommendations elaborated in this report it was appropriate to make a clear distinction between different authorisation regimes required by existing EU legislation. There are three relevant regulatory frameworks which need to be considered, Council Directive 76/464/EEC, Council Directive 96/61/EC (IPPC Directive) and Council Directive 2000/60/EC (Water Framework Directive).

Both, Council Directive 76/464/EEC and Council Directive 96/61/EC establish frameworks for authorisations which require different procedures. The transitional provisions of Council Directive 96/61/EC ensure that the authorisation regime of Council Directive 96/61/EC prevails over the regime of Council Directive 76/464/EEC for new installations. For existing installations, the authorisation regime of Council Directive 76/464/EEC remains valid until the revision of the permit by the competent authority pursuant to article 5 of Council Directive 96/61/EC. This must take place within a maximum of eight years from the date on which the directive is brought into effect . i. e. before October 2007.

Both, Council Directive 76/464/EEC and Council Directive 96/61/EC cover direct discharges and discharges to sewers (indirect discharges).

Council Directive 76/464/EEC differs between the types of pollutants (list 1 and list 2 substances) and requires a different basis for the authorisation of these discharges. For list 1 substances, both, emission limit values (ELVs) and environmental quality standards (EQSs) are laid down in the daughter directives of Council Directive 76/464/EEC.

Council Directive 96/61/EC does not differentiate between different types of pollutants, but it requires for all installations listed in annex 2 of the directive that an integrated authorisation procedure is followed, taking into account the environment as a whole. Therefore, the authorisation by competent authorities must be fully co-ordinated. The emission limit values must be based on best available techniques as defined in Council Directive 96/61/EC. If Community quality standards so require, more stringent values must be set (“combined approach”).

Council Directive 2000/60/EC introduces some modifications and extensions to the regulatory regimes described above. Firstly, article 10, requires that Member States shall generally apply the combined approach, i.e. the combined application of technology-based emission limit values and environmental quality standards must be applied also for Non-IPPC installations. This means, for example, for list 1 substances, that more stringent emission limit values must be applied than required by daughter directives if the environmental quality standards set under the daughter directives so require. Secondly, according to article 11.3.g of Council Directive 2000/60/EC, the program of measures must contain for all discharges liable to cause pollution, prior regulation, such as prohibition of the entry of the pollutant into water, or prior authorisation or - at least - prior registration based on general binding rules which lay down emission controls for the pollutant concerned. The goal of these measures is to achieve the objective of good surface water status by 2015.

Taking these differences into account, it is recommended to introduce an appropriate classification of discharges. This classification should firstly make a distinction between list 1 substances (17 regulated substances) and list 2 substances (other relevant pollutants covered by Council Directive 76/464/EEC). For each of these types of substances, it is proposed to introduce a classification of discharges according to the different authorisation regimes which apply to these substances at Community level. This will be further described in section 3.3.1 for list 1 substances and section 3.3.2 for list 2 substances. The classification should be introduced in the New Governmental Regulation in order to allow for the establishing of distinct regulatory provisions and deadlines.

RECOMMENDATION No. 1: Classify discharges into emissions of list 1 substances and list 2 substances. In order to introduce distinct authorisation regimes for both types of substances this classification should be incorporated in the New Governmental Regulation.

3.3.1 Classification of discharges of list 1 substances

As there are three relevant Community regulations for list 1 substances, it is proposed to classify discharges into five distinct classes as shown below. It is recommended that these classes are introduced in the New Governmental Regulation in order to allow for the establishment of distinct regulatory provisions and deadlines.

RECOMMENDATION No. 2: Classify discharges of list 1 substances into five different classes as shown in table 4. Each class represents a different authorisation regime. It is recommended that this classification should be introduced in the New Governmental Regulation in order to allow for the establishment of distinct regulatory provisions and deadlines.

table 4: Classification for discharges of list 1 substances

①	②	③	④	⑤
DD and IPPC	DD but not IPPC	IPPC but not DD	Relevant single point sources but neither IPPC or DD	Small and multiple sources
Council Directive 2000/60/EC (WFD)				

The list of branches and threshold values as specified in the daughter directives of Council Directive 76/464/EEC and Council Directive 96/61/EC is given in annex 1 and annex 2 of this report.

Class 1: Installations which are regulated by daughter directives of Council Directive 76/464/EEC (annex 1) and which are also covered by Council Directive 96/61/EC (annex 2).

Class 2: Installations which are regulated by daughter directives of Council Directive 76/464/EEC (annex 1) but which are not covered by Council Directive 96/61/EC (annex 2).

Class 3: Installations which are not regulated by daughter directives of Council Directive 76/464/EEC (annex 1), but which are covered by Council Directive 96/61/EC (annex 2).

Class 4: Installations which are neither regulated by daughter directives of Council Directive 76/464/EEC (annex 1) nor covered by Council Directive 96/61/EC (annex 2), but which are known to be single relevant sources of emissions of list 1 substances.

The assignment of discharges to class 4 is not trivial as there is no explicit definition or criteria provided in Community legislation. The daughter directives of Council Directive 76/464/EEC contain, however, an implicit definition. For example Article 4 of Council Directive 84/156/EEC requires that a programme for mercury should be established for discharges from multiple sources which are not industrial plants and for which emission limit values cannot be applied in practice. Article 5 of Council Directive 86/280/EEC requires that discharges from multiple and diffuse sources other than those subject to emission limit values should be controlled via specific programmes (see class 5). Based on these examples class 4 should contain discharges of list 1 substances from industrial point sources which can be practically controlled by effluent emission limit values. It is proposed to make this definition operational by introducing a positive list of point sources of list 1 substances and, additionally, threshold values for list 1 substances. If a discharge of list 1 substances (not already covered by classes 1 to 3) originates from

these sources or exceeds the threshold values, it should be categorised as class 4. A proposal for an appropriate list of sources and threshold values is provided in annex 3 of this report.

RECOMMENDATION No. 3: A new class of “other single relevant point sources of list 1 substances” should be introduced as discharge of class 4.

A discharge of class 4 is defined as any discharge (direct or indirect) of a substance of list 1 which does not belong to classes 1 – 3, but which belongs to the discharges listed in annex 3, except of discharges from the following sources (which are explicitly subject to the establishment of programmes and therefore belong to class 5):

- non-industrial sources of mercury
- emissions of pentachlorophenols from wood treatment
- tetrachloromethane from industrial laundries
- DDT from any other source than those regulated
- chloroform from any other source than production
- 1,2-dichloroethane, trichloroethene, tetrachlorethane from use as chlorinated solvents below an annual emission of 30 kg/yr
- emissions of trichlorobenzenes from textile dyeing or use in transformer oils.

Class 5: This class of discharges covers multiple point and diffuse sources of list 1 substances. They are simply defined as all discharges not categorised as classes 1 to 4.

3.3.2 Classification of discharges of list 2 substances

Similarly to discharges for list 1 substances it is also proposed to introduce a classification system for discharges of list 2 substances depending on the type of Community legislation applicable. In principle, the same three directives, Council Directive 76/464/EEC, Council Directive 96/61/EC and Council Directive 2000/60/EC apply. The situation is, however, simpler, as there are no Community emission limit values and environmental quality standards applicable. Therefore, it is proposed to introduce a two class system, one class of discharges of list 2 where Council Directive 96/61/EC applies, and another one where this is not the case.

RECOMMENDATION No. 4: Introduce in the New Governmental Regulation 2 distinct classes of authorisations for list 2 substances as specified by table 5 in order to allow for the establishing of distinct regulatory provisions and deadlines.

table 5: Authorisation regimes - list 2 substances

①	②
Council Directive 76/464/EEC and IPPC	Council Directive 76/464/EEC but not IPPC
Council Directive 2000/60/EC	

The list of branches and threshold values as specified in the daughter directives of Council Directive 76/464/EEC and Council Directive 96/61/EC is given in annex 1 and annex 2 of this report.

The classes include the following:

Class 1: Installations which are regulated by daughter directives of Council Directive 76/464/EEC (annex 1) and which are also covered by Council Directive 96/61/EC (annex 2).

Class 2: Installations which are regulated by daughter directives of Council Directive 76/464/EEC (annex 1) but which are not covered by Council Directive 96/61/EC (annex 2).

3.4 Recommendations for legislation

3.4.1 Legislation and regulation for list 1 substances

3.4.1.1 Emission control

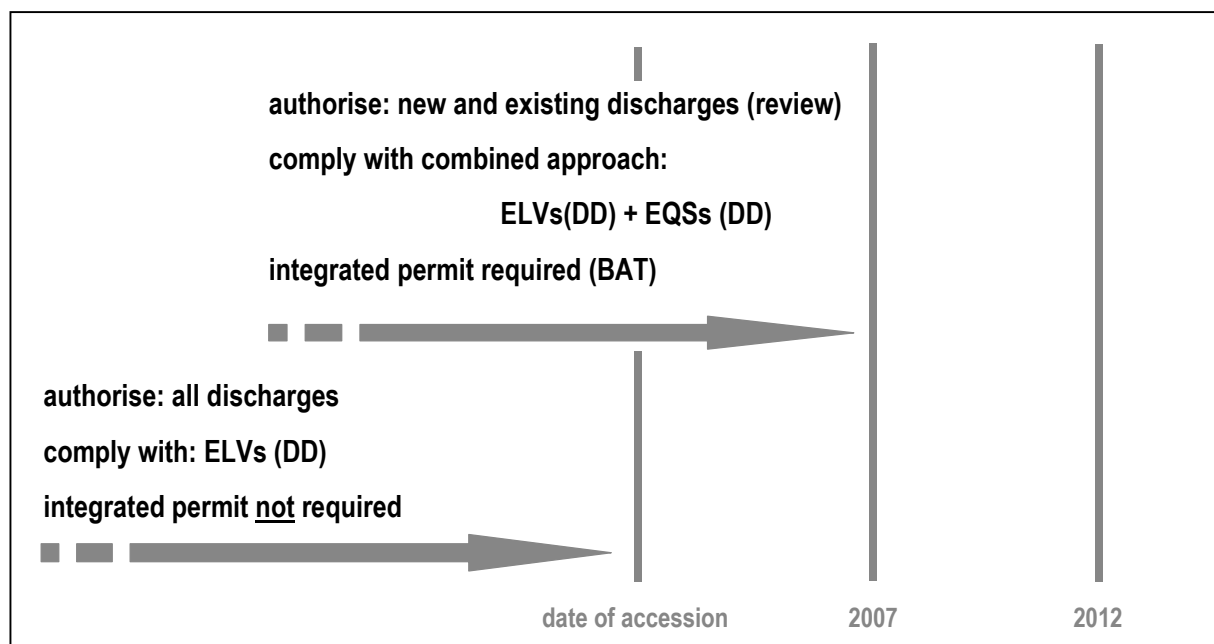
3.4.1.1.1 Authorisation procedure and deadlines for reviewing of discharges

Class 1

Requirements

The requirements for installations of class 1 are illustrated in figure 1. Essentially, two authorisation regimes apply, the regimes of Council Directive 76/464/EEC and of Council Directive 96/61/EC.

Figure 1: Authorisation regimes for discharges of class 1



Council Directive 76/464/EEC requires an authorisation of all discharges to surface waters. Emission limit values laid down in the daughter directives must be complied with. According to the Common Position to chapter 22 (CONF-CZ 84/00), compliance with daughter directives of Council Directive 76/464/EEC must be achieved by the date of entry of the Czech Republic into the Community.

Council Directive 96/61/EEC requires an integrated authorisation of all discharges, including indirect discharges. Emission limit values must be based on best available techniques (BAT) as described by the directive. As a minimum, the emission limit values laid down in the daughter directives to Council Directive 76/464/EEC must be complied with. Article 10 of Council Directive 96/61/EC requires that the combined approach is applied, i.e. if environmental quality standards so require, more stringent emission limit values must be set. This means, that the environmental quality standards established under the daughter directives of Council Directive 76/464/EEC must be applied.

For new discharges, the provisions of Council Directive 96/61/EC dominate over the regime of Council Directive 76/464/EEC by the date of entry of the Czech Republic into the Community. For existing discharges, Council Directive 96/61/EC allows for a transitional period until 2007.

Implementation in the Czech Republic

The authorisation procedure foreseen under §§ 8 and 16 of the Water Act No. 254/2001 coll. appears to be sufficient for the implementation of the required authorisation regime of Council Directive 76/464/EEC. The introduction of Community emission limit values and appropriate deadlines in the New Governmental Regulation is discussed in section 3.4.1.1.2. As the deadline for complying with (purely water-based) Community emission limit values is significantly earlier than the deadline for the compliance with the Council Directive 96/61/EC, it is recommended to implement, in a first step, the Community emission limit values by the date of entry of the Czech Republic into the Community, in accordance with the Common Position to chapter 22 (CONF-CZ 84/00).

Given the tight time schedule of the Common Position to chapter 22 (CONF-CZ 84/00), it will be necessary to introduce a practical review procedure of all existing discharges under class 1, including the technical adaptation to the Community emission limit values where necessary. In order to meet this deadline it is proposed to introduce, preferably into the New Government Regulation, a general obligation of dischargers of class 1 to report their activity to the competent authority 2 years prior to the access at the latest. This report must contain all information necessary for the competent authority to decide if the permit must be revised. If the current levels of discharge do not comply with Community emission limit values, the discharger must provide a technical project demonstrating how the emission limit values will be achieved within 2 years. A legal basis for establishing the details of the required data is provided by Water Act, § 19(2). See also, section 3.5.1.1. The competent authority must revise the permit within this period accordingly.

RECOMMENDATION No. 5: Direct and indirect discharges of class 1 should be authorised on the basis of the Water Act No. 254/2001 coll., §§ 8(1)c) and 16, respectively. In order to meet the Community emission limit values established under Council Directive 76/464/EEC by the date of entry of the Czech Republic into the Community it is proposed to introduce, preferably in the New Government Regulation, an obligation of dischargers falling under class 1 to report to the competent authority at the latest 2 years before the accession date if the Community emission limit values are complied with. If this is not the case, the discharger should be obliged to provide a detailed plan for the technical adaptation to the required emission limit values by the date of entry. The competent authority must revise the permit within this period accordingly.

Recommendation No. 5 applies also to discharges of class 2.

The introduction of Community emission limit values is described in section 3.4.1.1.2.

Council Directive 96/61/EC adds to these obligations essentially the following:

- an integrated procedure must be followed which takes into account all environmental media, and not exclusively the water compartment
- best available techniques (BAT) as defined under Council Directive 96/61/EC must be applied. As a minimum requirement, the emission limit values set by the daughter directives of Council Directive 76/464/EEC must be complied with. However, new developments must be taken into account by the competent authorities, e.g. the recommendations for the application of BAT according to Council Directive 96/61/EC elaborated by the Joint Research Centre in Sevilla (BAT reference documents).

- article 10 of Council Directive 96/61/EC requires the application of the combined approach, i.e. if Community environmental quality standards so require, more stringent emission limit values have to be set.

It must be applied for new installations by the date of accession, and for existing installations by October of 2007. Council Directive 96/61/EC is transposed by the IPPC Act.(76/2002 Sb Coll). A new agency is being established, which is aimed to provide expertise on integrated authorisations to the competent regional authority. A twinning project has recently started with the aim of supporting the implementation of Council Directive 96/61/EC in the Czech Republic. No transition period will apply for the implementation of Council Directive 96/61/EC, so the deadline of 2007 will apply to all existing installations.

A major prerequisite for the implementation of Council Directive 96/61/EC is the introduction of binding environmental quality standards in the New Government Regulation which is discussed in section 3.2.13. It is recommended that this requirement is introduced as early as possible, preferably at the same time when Community emission limit values will be adopted (planned by begin of 2003), in order to allow the timely establishment of emission reduction programmes.

It is recommended that all permits falling under class 1 which have been authorised pursuant to the Water Act No. 254/2001 coll. should be reviewed and, where necessary, revised, in a second step until 2007.

RECOMMENDATION No. 6: It is proposed that all discharges of class 1 are reviewed by the competent authority and revised where necessary by 2007, based on the legislation implementing Council Directive 96/61/EC. As a prerequisite, binding environmental quality standards for list 1 substances must be introduced in the New Governmental Regulation, preferably at the same time when Community emission limit values will be adopted.

Recommendation No. 6 applies also to discharges of class 3.

According to article 3.3 of Council Directive 86/280/EEC, permits issued for list 1 substances must be reviewed every 4 years. § 9(2) of the Water Act No. 254/2001 Coll., ensures that the duration of a permit must not exceed 10 years. This provision is, therefore not sufficient to implement the existing Community law. It will need to be amended for discharges of list 1. This could be achieved via a reporting obligation of the holders of permits. The content of this report may be specified pursuant to the Water Act, § 115 (2). This is described in section 3.5.1.1.

RECOMMENDATION No. 7: It is recommended to introduce, for example in secondary legislation based on § 115 (2) of the Water Act No. 254/2001 coll. a general obligation for holders of permits of list 1 discharges to report to the competent authority about the compliance with national emission limit values at regular intervals of 4 years. The report must also contain an estimate of the impacts of the discharge to the receiving water (impact on the water quality with respect to list 1 substances). On the basis of this report, the competent authority must review the permit conditions and revise them if necessary (update to best available techniques or compliance with environmental quality standards).

Recommendation No. 7 applies also to discharges of class 2, class 3 and class 4.

It is noted that a reconsideration of the permit conditions must be carried out in accordance with Article 13 of Council Directive 96/61/EC¹:

- a significant exceeding of the pollution (environmental quality standards, see section 3.4.1.2)
- substantial changes in the best available techniques (BAT) make it possible to reduce the emissions significantly without imposing excessive costs
- because of the operation safety other techniques are preferable
- new provisions of the Community or national legislation have been set

It is further noted that the regime of Council Directive 76/464/EEC applies to direct discharges and, “where this is necessary for the implementation of the directive” (article 3 (2) of Council Directive 76/464/EEC), also for indirect discharges. More specifically, Council Directive 86/280/EEC, article 3 (2) states that the emission limit values of the daughter directives of Council Directive 76/464/EEC “shall normally apply at the point where waste waters leave the industrial plant”, unless the waste water is treated outside the plant at a “treatment plant intended for their removal”. Similarly, the regime of Council Directive 96/61/EC is applicable to both, direct and indirect discharges, but article 2.6 of Council Directive 96/61/EC allows that the effect of a waste water treatment plant may be taken into account when emission limit values are set, provided this does not lead to higher levels of pollution of the environment as a whole. Even if it would be possible under very specific circumstances to allow for different (relaxed) emission limit levels for indirect discharges it is not recommended to apply this possibility for discharges of list 1 substances. Because of the particular risk imposed by substances of list 1, it would be probably very difficult to prove that the specific circumstances required by the relevant Community legislation are actually fulfilled.

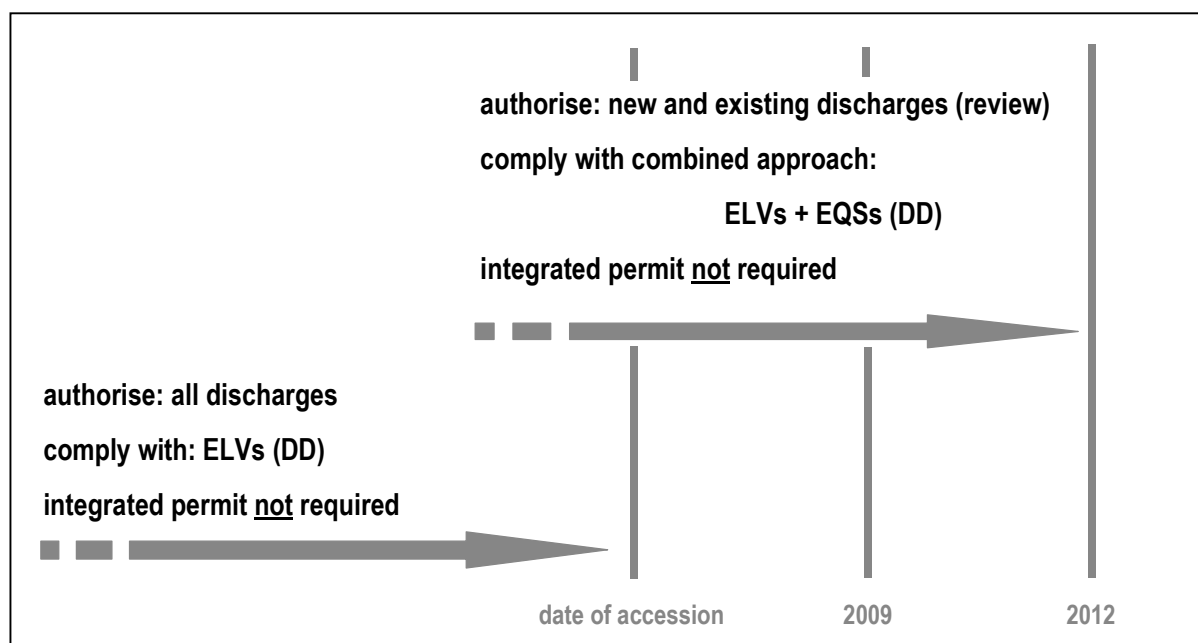
It is finally noted that Council Directive 2000/60/EC does not add any additional requirements to the regulation of discharges for class 1.

Class 2

Requirements

The requirements for discharges of class 2 are illustrated in figure 2. Council Directive 76/464/EEC lays down the relevant authorisation regime, a significant modification being introduced by Council Directive 2000/60/EC.

¹ The CR must be careful not to require dual/double authorisation in the legislation. That means e.g. if an installation has an IPPC permit controlling its discharges to water, than it should not also be required to have a permit from the water authority.

Figure 2: Authorisation regimes for discharges of class 2

Council Directive 76/464/EEC requires an authorisation of all discharges to surface waters. Emission limit values laid down in the daughter directives must be complied with. According to the Common Position to chapter 22 (CONF-CZ 84/00), compliance must be achieved by the date of entry of the Czech Republic into the Community.

An integrated authorisation is not required for discharges of class 2, the authorisation must only consider the water compartment. However, by article 10 of Council Directive 2000/60/EC, the combined approach has been introduced, i.e. if environmental quality standards of daughter directives so require, more stringent effluent limits must be set (it is noted that the environmental quality standards of daughter directives establish the “good chemical status” pursuant to article 2, point 24 of Council Directive 2000/60/EC). According to article 11.7 of Council Directive 2000/60/EC, the programmes of measures must be operational by 2012. Accordingly, environmental quality standards need to be implemented in authorisations by 2012 at the latest.

Implementation in the Czech Republic

As for the implementation of Community emission limit values and their regular review, recommendations no. 5 and 7 apply to discharges of class 2, respectively.

Recommendation No. 5 for discharges of class 1 applies also to discharges of class 2.

Recommendation No. 7 for discharges of class 1 applies also to discharges of class 2.

The introduction of Community emission limit values is described in section 3.4.1.1.2.

The implementation of the combined approach pursuant to Council Directive 2000/60/EC requires the establishing of binding environmental quality standards. This is discussed in detail in section 3.4.1.2. The implementation of environmental quality standards will probably require the review of authorised discharges of class 2, and the setting of more stringent emission limit values, where so required, by

2012. In order to meet this deadline it is recommended that all authorisations for discharges of class 2 be reviewed by the begin of the first river basin management plan under Council Directive 2000/60/EC, i.e. by 2009, and revised by 2012 at the latest. As a prerequisite, binding environmental quality standards for list 1 substances must be introduced in the New Governmental Regulation, preferably at the same time when Community emission limit values will be adopted.

RECOMMENDATION No. 8: All authorisations for discharges of class 2 should be reviewed by the competent authority by 2009, and revised where necessary by 2012, in accordance with Council Directive 2000/60/EC. As a prerequisite, binding environmental quality standards for list 1 substances must be introduced in the New Governmental Regulation, preferably at the same time when Community emission limit values will be adopted.

Recommendation No. 8 applies also to discharges of class 4.

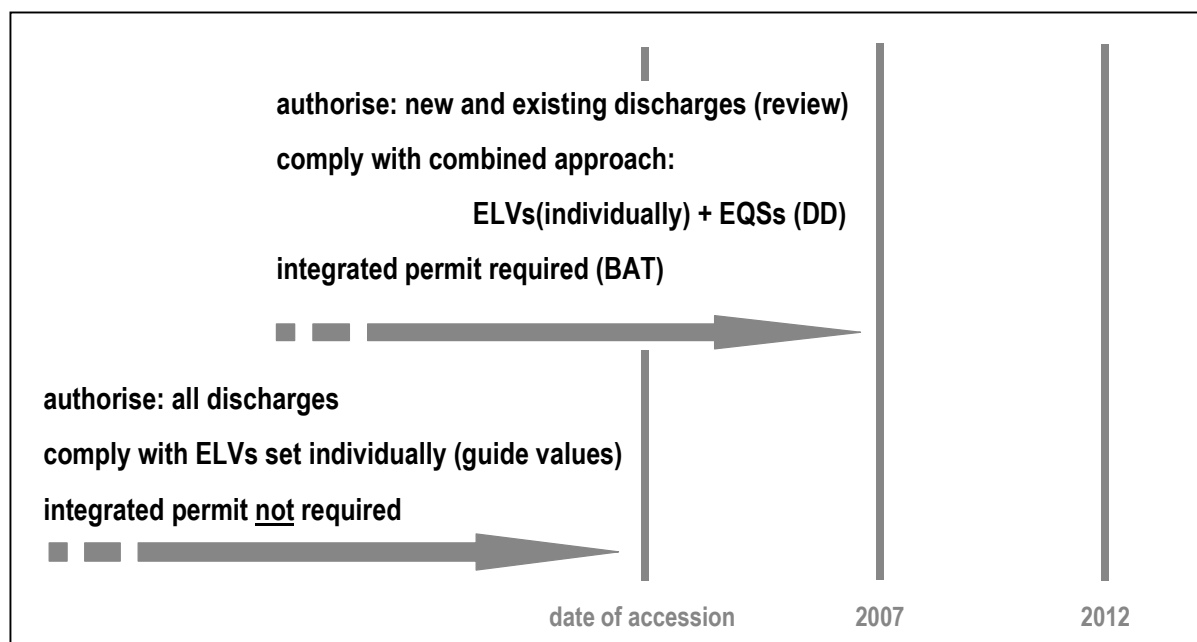
As for class 1 it is not recommended to differ emission controls between direct and indirect discharges of class 2.

Class 3

Requirements

The requirements for discharges of class 3 are illustrated in figure 3. The relevant authorisation regime is laid down by Council Directive 96/61/EC. Council Directive 76/464/EEC is of relevance only with respect to the deadline by which existing discharges must be authorised (date of accession).

Figure 3: Authorisation regimes for discharges of class 3



This class of discharges covers installations to which Council Directive 96/61/EC applies but no Community emission limit values have been established under Council Directive 76/464/EEC, so emission limit values must be set by Member States on their own. These values may be established at national or regional or local level by competent authorities. Council Directive 76/464/EEC is of relevance in so far as the Common Position to chapter 22 (CONF-CZ 84/00) requires that authorisations for all discharges of class 3 must be issued by the date of entry of the Czech Republic into the Community.

Additional requirements of Council Directive 96/61/EC are the same as described for discharges of class 1, i.e.

- an integrated procedure must be followed which takes into account all environmental media, and not only the water compartment
- best available techniques (BAT) as defined under Council Directive 96/61/EC must be applied. However, new developments must be taken into account by the competent authorities, e.g. the recommendations for the application of BAT according to Council Directive 96/61/EC elaborated by the Joint Research Centre in Sevilla (BAT reference documents).
- article 10 of Council Directive 96/61/EC requires the application of the combined approach, i.e. if Community environmental quality standards so require, more stringent emission limit values have to be set.

This authorisation regime must be applied for new installations by the date of accession, and for existing installations by the end of 2007. For the implementation of Council Directive 96/61/EC in the Czech Republic see the explanations given for class 1.

Implementation in the Czech Republic

The authorisation procedure foreseen under §§ 8 and 16 of the Water Act No. 254/2001 coll. appears to be sufficient for the implementation of purely emission controls required by Council Directive 76/464/EEC. Flexibility is given with respect to the conditions of the permits since there are no harmonised Community emission limit values. As the deadline for complying with (purely water-based) emission limit values is significantly earlier than the deadline for the compliance with the Council Directive 96/61/EC, it is recommended to introduce general non-branch-specific guide emission limit values (see annex 6.2) in the New Government Ordinance and to implement, in a first step, these emission limit values by the date of entry of the Czech Republic into the Community, in accordance with the Common Position to chapter 22 (CONF-CZ 84/00). The competent authority may accept higher emission levels unless there is a severe impact on the quality of the receiving water body. In order to facilitate this procedure, a notification system may be applied as proposed in recommendation No. 5.

RECOMMENDATION No. 9: Direct and indirect discharges of class 3 should be authorised on the basis of §§ 8 (1) c) and 16 of the Water Act No. 254/2001 coll. In order to meet the deadline for authorisations given in the Common Position to chapter 22 (CONF-CZ 28/01), it is proposed to introduce, preferably in the New Governmental Regulation, guide emission limit values (generally applicable, not branch-specific). The competent authority may accept higher emission limit values unless there is evidence from the monitoring network that the receiving water body will not meet the Community environmental quality standards for the respective substance. In order to facilitate the procedure, it is proposed to introduce, e.g. on the basis of the § 115 (2) of the Water Act No. 254/2001 coll. an obligation of dischargers of class 3 to report to the competent authority at the latest 2 years before accession the current levels of emissions of list 1 substances and the expected impact on the receiving water body.

Recommendation No. 9 applies also to discharges of class 4.

A proposal for guide emission limit values is given in annex 6.2.

In order to meet the additional requirements of Council Directive 96/61/EC; all discharges of class 3 must be reviewed and revised, where necessary, by 2007. Therefore, the corresponding recommendation No. 6 for class 1 applies also to discharges of class 3:

Recommendation No. 6 for discharges of class 1 applies also to discharges of class 3.

For reasons of consistency it is proposed to review the permits of discharges of class 3 every 4 years. Therefore recommendation no. 7 also applies to discharges of class 3:

Recommendation No. 7 for discharges of class 1 applies also to discharges of class 3.

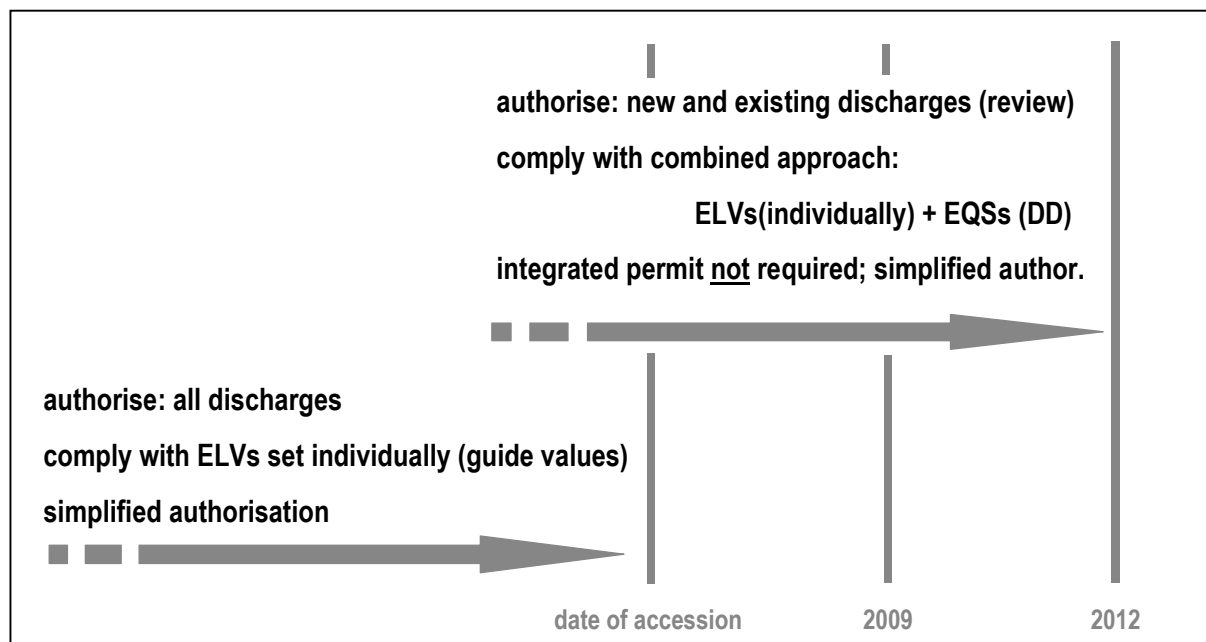
As for class 1 it is not recommended to differ emission controls between direct and indirect discharges of class 3.

Class 4

Requirements

The requirements for discharges of class 4 are illustrated in figure 4. The relevant authorisation regime is regulated by Council Directive 76/464/EEC, but no Community emission limit values have been set. A significant modification (combined approach) was introduced by Council Directive 2000/60/EC.

Figure 4 : Authorisation regimes for discharges of class 4



Council Directive 76/464/EEC is of relevance in so far as the Common Position to chapter 22 (CONF-CZ 84/00) requires that authorisations for all discharges of class 4 must be issued by the date of entry of the Czech Republic into the Community

An integrated authorisation is not required for discharges of class 4, neither are Community emission limit values applicable. However, by article 10 of Council Directive 2000/60/EC, the combined approach has been introduced, i.e. if environmental quality standards of daughter directives so require, more stringent effluent limits must be set (it is noted that the environmental quality standards of daughter directives establish the “good chemical status” pursuant to article 2, point 24 of Council Directive 2000/60/EC). According to article 11.7 of Council Directive 2000/60/EC, the programmes of measures must be operational by 2012. Accordingly, environmental quality standards need to be implemented in authorisations by 2012 at the latest.

Implementation in the Czech Republic

As there are no Community emission limit values applicable, they must be set by Member States themselves. In order to meet the tight deadline for authorisations given in the Common Position it is recommended to introduce guide emission limit values (see annex 6.2), similar as for discharges of class 3. Consequently, recommendation no. 9 applies to this class.

Recommendation No. 9 applies also to discharges of class 4.

The implementation of the combined approach pursuant to Council Directive 2000/60/EC must be achieved by 2012. Discharges of class 4 can be treated similarly to discharges of class 2. Therefore, recommendation no. 8 applies to this class.

Recommendation No. 8 applies also to discharges of class 4.

For reasons of consistency is proposed to review the permits of discharges of class 4 every 4 years. Therefore recommendation no. 7 also applies to discharges of class 4:

Recommendation No. 7 applies also to discharges of class 4.

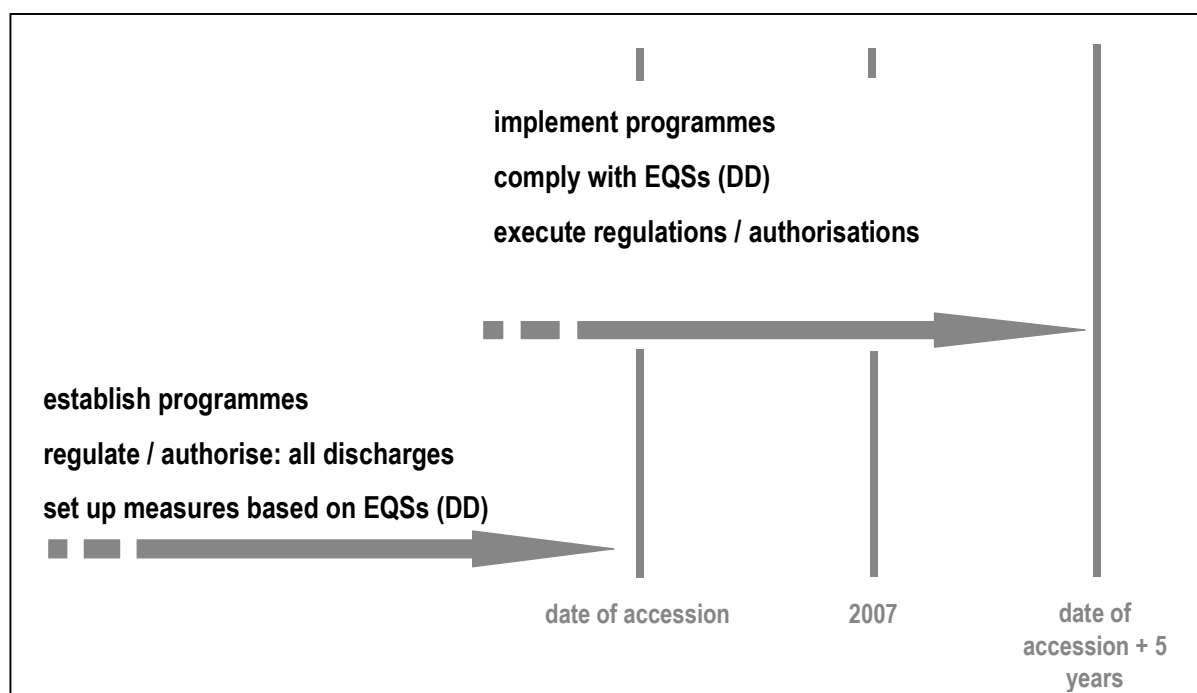
As for class 1 it is not recommended to differ emission controls between direct and indirect discharges of class 4.

Class 5

Requirements

The requirements for discharges of class 5 are illustrated in figure 5. This class contains multiple point or diffuse sources which are not explicitly regulated at Community level and which are not single relevant discharges. They may, however, sum up to a significant level of pollution for a particular body of water.

Figure 5: Authorisation regimes for discharges of class 5



Some quite general provisions have been stipulated under the daughter directives of Council Directive 76/464/EEC. For example, article 5 of Council Directive 86/280/EEC requires the establishment of “specific programmes” which includes “*the most appropriate measures for the replacement, retention and recycling of the respective list 1 substance*”. Council Directive 86/280/EEC neither requires an authorisation nor does it require the establishment of an emission limit value. A recommendation for the establishment of programmes for such discharges is given in section 3.4.1.3 unten

Apart from those provisions, the most important regulatory regime is Council Directive 2000/60/EC which requires under article 11.3g that all point and diffuse sources liable to cause pollution must be controlled by at least a registration system based on general binding rules. The major objective of these programmes is the achievement of the “good surface water status” as defined by Council Directive 2000/60/EC by 2015.

Implementation in the Czech Republic

According to the Common Position to chapter 22 (CONF-CZ 28/01), pollution reduction programmes must be established by begin of 2003 and implemented within 5 or 6 years by the end of 2009. The establishment of emission reduction programmes is dealt with in section 3.4.1.3 on emission reduction programmes.

3.4.1.1.2 Emission limit values (ELVs)

General provisions for the setting of ELVs are laid down in annex IA of the daughter directive Council Directive 86/280/EEC which was intended to establish a general framework for the setting of Community emission limit values and quality objectives.

Council Directive 86/280/EEC art. 3.2 requires that limit values shall normally apply at the point where waste waters containing the substances leave the industrial plant. In the case that waste water is treated outside the industrial plant by a waste water treatment plant the values should apply at the point where waste water leaves the waste water treatment plant. For this reason the recommended values are the same for direct and indirect discharge.

Included in annex 6 is a table with recommendations for emission limit values (ELVs) for list 1 substances from specific sectors of industry (column 1) regulated by daughter directives of Council Directive 76/464/EEC.

The proposed limit values (columns 2 and 3) have been taken from DDs or from the legislation of selected Member States.

Where available, EU limit values have been selected. If there was no EU limit value available, a limit value from Germany, France or Austria has been taken. In the case that an EU concentration limit, but no EU limit value for the specific emission related to an appropriate unit of production (e.g. g/t) was available, a value from one of the Member States was taken. Member States data for which both concentration and specific emission limit values were available have been preferred over Member States data for which only one type of limits was available, in order to ensure comparability of the selected limit values.

The German and Austrian ELVs for chlorinated hydrocarbons often refer to the AOX (sum of adsorbable chlorinated hydrocarbons). In this case, these limit values have been recommended. However, it is proposed that these data should be applied to the individual list 1 substance (a limit for the group AOX may be set, in addition to the one proposed).

RECOMMENDATION No. 10: Introduce in the New Governmental Regulation emission limit values which are in compliance with the relevant daughter directives, e.g. as given in annex 6 in this report.

3.4.1.1.3 Data flow

This section deals with the flow of information in relation to the application for authorisations as well as storing of authorisation data in the public administration information system. The data flow is essential for enabling the competent authorities or, for indirect discharges, the sewerage operators to issue permits in accordance with the provisions of Council Directive 76/464/EEC and other relevant Community legislation. Moreover, it must ensure that the Ministry of Environment is put in the position to fulfil the reporting obligations to the European Commission.

3.4.1.1.3.1 Reporting requirements by the EU legislation

Article 13/1 of Council Directive 76/464/EEC, as amended by Council Directive 91/692/EEC, states that Member States shall report to the Commission at intervals of three years on the implementation of the directive on the basis of sectoral questionnaires adopted through the procedure laid down in article 6 of Council Directive 91/692/EEC². The latest version of the questionnaire for the Council Directive 76/464/EEC has been adopted by Commission Decision 95/337/EEC.

The key information required by the questionnaire for list 1 is:

- authorisation and ELVs for direct discharges into surface waters
- authorisation and ELVs for discharges into sewers
- deadlines for authorisations and or compliance with emissions standards
- emission (loads) into surface waters
- inventory (five largest discharges for each substance)
- EQSs for surface waters
- monitoring results
- specific programmes
- costs of sewerage and waste water treatment

For discharges of classes 1 and 3, to which the IPPC regime applies, reporting requirements are laid down by Commission Decision 2000/479/EC of 17 July 2000 concerning the implementation of a European Pollutant Emission Register (EPER) according to Article 15 of the Council Directive 96/61/EC.

This document requires Member States (Article 1) to

- (1) *report to the Commission on emissions from all individual facilities with one or more activities as mentioned in Annex I of Directive 96/61/EC.*
- (2) *The report must include the emissions to air and water for all pollutants for which the threshold values are exceeded; both pollutants and threshold values are specified in Annex A1.*
- (3) *The emission data shall be reported for each facility according to the format of Annex A2, noting a description of all activities as mentioned in Annex I of Directive 96/61/EC with corresponding source categories and NOSE-P codes as specified in Annex A3.*

² OJ L 377, 31.12.1991, p.48

- (4) *Member States shall provide the Commission with an overview report, which includes the national totals of all reported emissions for each of the source categories with the main Annex I activity and the corresponding NOSE-P code as specified in Annex A3. (This Annexes of the Commission Decision is included in annex 8 of the recommendation paper)*

Article 2 requires a three years reporting period, the first report being due in June 2003 with data on emissions from 2001, if not available from 2000 or 2002. The second report shall be sent to the Commission in June 2006 with data on emission of 2004.

Under the Council Directive 2000/60/EC, article 15, Member States must send copies of their river basin management plans to the European Commission. Details of these plans are specified under Annex VII of the WFD and are summarised in annex 8 of this study.

3.4.1.1.3.2 Data flow under the relevant Czech legislation

In order to support competent authorities in issuing permits in accordance with Council Directive 76/464/EEC and other relevant Community legislation, § 115 (2) of the Water Act No. 254/2001 coll. empowers the Ministry of Environment and the Ministry of Agriculture to lay down in a decree the documents and information which must be provided by applicants of permits to the competent authorities. A draft text of this decree has been made available to the twinning team. A summary is provided in annex 10.5.1.

According to § 110 2w of the Water Act, the Ministry of Environment is responsible for submitting reports required by Community legislation to the European Commission. In order to achieve this task, the Water Act lays down a number of provisions which require individuals as well as relevant authorities to provide data to the information system. The Ministry of Environment together with the Ministry of Agriculture are responsible for the installation and maintenance of this information system (Water Act § 110 2d). The Water Act contains a number of regulations which empower the Ministry of Environment and the Ministry of Agriculture to lay down, in secondary legislation, details of the data and type of information required. An overview of the envisaged flow of information is provided by the illustrations in Annex 10, 1.6 – 1.10.

The Water Act § 19 (1) requires the competent authorities to keep records of decisions issued by them. Pursuant to Water Act § 19 (2) states that the Ministry of Agriculture and the Ministry of Environment will lay down in a decree the scope and method of maintaining the records by the water authorities, including the scope of information and method of their saving in the public administration information system but also the transformation from the existing water register into this information system. A draft of this decree has been made available to the twinning team. It contains in its annex, section 2, items B) information which must be contained in the water registers of competent authorities.

Indirect discharges represent a more difficult case: see annex 9, flow diagram - Authorisations for Indirect Discharge and effluent control of Dangerous Substances (extremely hazardous substances)): The competent water authority, which issues the authorisation according to Water Act § 16 (2) shall take into account §§ 9-13 and shall include the data to the water register by the same form as for direct discharge (Water Act § 19(2)). In this case the regime of AWSSS (Act on Water Supply and Sewerage Systems) will also apply for reporting. The indirect discharger has to report according to AWSSS § 19(2) and the operator of sewerage system and sewerage treatment plants according to AWSSS § 5 and 39 to the competent water authority on district or regional level. This data will be included in the central register of the Ministry of Agriculture (central record keeping AWSSS § 5). Through co-operation between Ministry of Agriculture and Ministry of Environment data could be collected by Ministry of Environment from this central record keeping and from the water register for the purpose of reporting to the Commission.

3.4.1.1.3.3 Recommendations

In view of the time pressure for authorisations of list 1 and 2 discharges imposed on the Czech Republic by the Common Position to chapter 22 (CONF-CZ 84/00) it is proposed to apply the legal basis of § 115(2) of the Water Act to ensure that the competent authorities receive all information from the responsible dischargers as required for permits according to Council Directive 76/464/EEC and – as far as water is concerned – Council Directive 96/61/EC. A summary of the data which should be contained in any application for permits of discharges of list 1 substances is given in annex 9, under 1.2. It is recommended that the draft decree implementing Water Act § 115 (2) is carefully reviewed in relation to these information requirements.

For reasons of consistency and coherence it is recommended to apply these requirements to all dischargers of list 1 and list 2 substances, including dischargers to sewers.

RECOMMENDATION No. 11: In order to ensure that competent authorities receive the information which is necessary to implement the provisions on authorisations under Council Directive 76/464/EEC and its daughter directives, including water-related provisions of Council Directive 96/61/EC the Ministerial Regulation pursuant to Water Act § 115 (2) should be reviewed and revised, if necessary, to ensure that it contains the complete information listed in annex 10.6.1 in this report.

The recommendation should also be applied to applicants of indirect discharges.

For reasons of consistency of the information regime it is recommended to apply recommendation No. 11 also to dischargers of list 2 substances.

In order to enable the Ministry of Environment to fulfil present reporting obligations to the European Commission it is recommended to apply the legal basis of §19 (2) of the Water Act to ensure that all relevant data are stored in the public administrative information system. For this purpose, a summary of the data which should be contained in any application for discharges of list 1 substances is given in annex 10.6.2. It is recommended that the draft regulation implementing § 19 (2) of the Water Act be carefully reviewed in relation to this information requirements. For reasons of consistency and coherence it is recommended to apply these requirements to all dischargers of list 1 and list 2 substances, including indirect dischargers.

RECOMMENDATION No. 12: In order to ensure the fulfilment of reporting obligations under Council Directive 91/692/EEC and under Commission Decision 2000/479/EC of 17 July 2000 on the implementation of a European pollutant emission register (EPER), it is recommended to include in the draft Ministerial Regulation to § 19 (2) of the Water Act the information listed in annex 10.6.2.

The recommendation should also be applied to applicants of indirect discharges.

For reasons of consistency of the information regime it is recommended to apply recommendation No. 12 also to dischargers of 2 substances.

3.4.1.2 Environmental quality standards (EQSs)

For list 1 substances, daughter directives lay down environmental quality standards as well as standstill provisions for sediment and biota. These environmental quality standards are summarised in annex 7 of this report. According to article 2, point 24 of the Council Directive 2000/60/EC these environmental quality standards also define “good surface water chemical status”.

Water Act § 38 (5) introduces the combined approach into the Czech water legislation as it requires that water authorities are bound to the indicators (quality objectives) as laid down in a Government Regulation based on Water Act § 38 (5).

Accordingly, the revision of the current Governmental Regulation 82/1999 will need to include all environmental quality standards as required by Council Directive 76/464/EEC in a binding manner.

As the introduction of the combined approach is not required for all list 1 discharges by the date of entry of the Czech Republic into the EU, a stepped introduction may be considered. Compare the proposed concept described in section 3.4.1.1.1 on authorisation regimes.

It should be noted that Article 9 of Council Directive 76/464/EEC states that *„the application of the measures taken pursuant to this Directive may on no account lead, either directly or indirectly, to increased pollution of the waters referred to in Article 1„*. This requirement is interpreted to mean that emission limit values may not be „relaxed„ or made less stringent than they currently are, even if they remain below the emission limit values set in the Community legislation. It is recommended that environmental quality standards should be, where appropriate, derived for all three media referred to in the daughter directives, i.e. the water column, the sediment and the biota (primarily fish), although it may only be possible to address the water column for practical reasons (e.g. lack of toxicity data, difficulty of monitoring).

RECOMMENDATION No. 13: Introduce in the New Governmental Regulation binding environmental quality standards and stand still provisions for list 1 substances as required by the daughter directives of Council Directive 76/464/EEC, and summarised in annex 7 of this report.

3.4.1.2.1 Environmental quality standards and their use in permits (technical guidance)

Environmental quality standards for all list 1 substances have been discussed in section 3.4.1.2. A summary of these values is set out in tabular form in Annex 7.

There is no explicit requirement for these environmental quality standards to be met under the terms of Council Directive 76/464/EEC. However, these environmental quality standards need to be met under the terms of other Community legislation, especially Council Directive 96/61/EC and Council Directive 2000/60/EC. Both of these bodies of legislation introduce the so-called combined approach which require that emission limit values must be set at stricter levels if compliance with environmental quality standards so require.

Discharges of classes 1 to 4 of the authorisation regimes introduced in section 3.3.1 require the setting of emission limit values on the basis of the combined approach by a deadline ranging from 2007 to 2012, depending on the authorisation regime.

It is noted that compliance with environmental quality standards in surface waters must be achieved, according to Council Directive 2000/60/EC by 2015 at the latest.

This section provides practical recommendations for the developing of emission limit values based on environmental quality standards.

For the sake of the following discussion, some new terms shall be introduced.

Water Quality Based Emission Limit (WQBEL) means an emission limit value derived specifically in order to ensure compliance with an environmental quality standard.

This must be differentiated from a Technology Based Emission Limit Value which means an emission limit value derived on the basis of Best Available Technology, either in light of Community legislation or a BREF document or any other basis.

Under the terms of Community legislation, it is only strictly necessary to set a Water Quality Based Emission Limit Values (WQBELVs) when there is a risk of the discharge causing a breach of the environmental quality standard. Therefore it is necessary to make an assessment of the likelihood of such a breach occurring. In the case of an existing discharge such an assessment could be made on the basis of existing monitoring data. However, it is still considered valuable to conduct a check to determine whether there is any significant risk of the environmental quality standards being breached, and also to assess the remaining capacity of the receiving water to accept additional discharges. Such a check could be made using a „simplified assessment“.

In the case of a new discharge it is not possible to use monitoring data alone, and a theoretical assessment must be made. In the first instance this could also be undertaken as a „simplified assessment“.

In addition to recommendation No. 13 (inclusion of environmental quality standards of list 1 substances into the New Government Regulation), and in fulfilment of recommendation No. 6 (application of binding environmental quality standards for list 1 substances) it is recommended that the New Governmental Regulation empowers the water authorities to set emission limit values which are lower than the Community emission limit values where it is considered necessary to do so in order to ensure the achievement of the environmental quality standards, or to achieve load reduction objectives set in emission reduction programmes. A similar provision is already contained in Governmental Regulation No. 82/1999, but uses the expression „přihlíží k ukazatelům“ = „take into account the values“ (§ 3.1) of the environmental quality standards. This expression should be replaced with a more binding requirement, so that the water authorities have sufficient legal justification for setting WQBELVs where so required.

RECOMMENDATION No. 14: The New Governmental Regulation should require the water authorities to set emission limit values which are lower than the Community emission limit values where it is considered necessary to do so in order to ensure the achievement of the environmental quality standards, or to achieve load reduction objectives set in emission reduction programmes.

This recommendation applies also to discharges of list 2 substances.

For discharges of classes 1 to 4 it will be necessary that discharge permits for list 1 substances issued or reviewed after the date of accession are subject to an assessment of their impact on the receiving water. This assessment should utilise a „simplified assessment“ procedure in the first instance. If this assessment, or available monitoring data, reveals that the environmental quality standards is likely to be breached, or that it is being breached, then a more detailed assessment should be made prior to the issue of the permit.

RECOMMENDATION No. 15: All discharge permits for list 1 substances under classes 1 to 4 (see recommendation No. 2) issued or reviewed after the date of accession should be subject to an assessment of their impact on the receiving water. This assessment should utilise a „simplified assessment“ procedure in the first instance. If this assessment, or available monitoring data, reveals that the environmental quality standards is likely to be breached, or that it is being breached, then a more detailed assessment should be made prior to the issue of the permit.

Even though the final deadlines for implementing the combined approach range from 2007 to 2012, it is proposed that the competent authorities are provided with detailed guidance on the development of „Water Quality Based Emission Limit Values“ as soon as practicable, but in any event not later than the date of accession. The target deadlines for this action have been described in section 3.4.1.1.1. Existing monitoring data and additional data from the CHMI project „Dangerous Substances in the Hydrosphere“ should be used to prioritise the review of existing authorisations for IPPC installations.

Detailed guidance should be derived from existing Czech best practice and guidance, but should be amended to incorporate best practice as represented by current UK, European and United States manuals. In support of this recommendation a summary of the guidance derived from materials issued by the United States Environmental Protection Agency and the Environment Agency for England and Wales is contained in Annex 13.

RECOMMENDATION No. 16: For the purpose of authorisations for discharges of classes 1 to 4 (see recommendation No. 2) the competent authorities should be provided with detailed guidance on the development of „Water Quality Based Emission Limit Values“ as soon as practicable, but in any event not later than the date of accession. This guidance should be used to ensure that the emission limit values for list 1 substances are such as to not cause a breach of the environmental quality standards in the receiving waters.

Existing monitoring data and additional data from the project of the Czech Hydrometeorological Institute “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic“ should be used to prioritise the review of existing authorisations.

Detailed guidance should be derived from existing Czech best practice and guidance, but should be amended to incorporate best practice as represented by current UK, European and United States manuals.

This recommendation applies also to discharges of list 2 substances.

3.4.1.3 Emission reduction programmes

Emission reduction programmes are required for most of the substances of list 1. A summary of the programmes regulated by daughter directives of Council Directive 76/464/EEC is provided in annex 14 of this report.

The daughter directives are not very specific as for the type of measures which are required under those programmes. For example, article 4 of Council Directive 84/156/EEC (on mercury) states:

“The Member States shall draw up specific programmes for mercury discharges by multiple sources which are not industrial plants and for which the emission standards laid down in Article 3 cannot be applied in practice. The purpose of these programmes shall be to avoid or eliminate pollution. They shall include the most appropriate measures and techniques for the replacement, retention and recycling of mercury...”

It should be noted that the implication of article 4 of Council Directive 84/156/EEC is that the emission limit values in the directive should be applied to all discharges where it is practicable to do so, irrespective of whether these discharges are from an industrial plant (listed in annex 1 of this report). The effect of this is to suggest that discharges where this is the case (case 4 above), should be subject to Community-wide and/or technology-based emission limit values as part of the programmes of measures.

Article 5 of Council Directive 86/280/EEC contains a similar concept, however, without wording which contains the above mentioned implication:

„1. As regards substances to which specific reference is made in Annex II, the Member States shall draw up specific programmes to avoid or eliminate pollution from significant sources of these substances (including multiple and diffuse sources) other than sources of discharges subject to Community limit value rules or national emission standards.

2. *The programmes shall include the most appropriate measures and techniques for the replacement, retention and/or recycling of the substances referred to in paragraph 1.*

3. *The specific programmes must be implemented not later than five years after the date of notification of the Directive which relates specifically to the substance concerned.*“

It is noted that some daughter directives make an explicit reference to specific sources for which programmes pursuant to article 5 of Council Directive 86/280/EEC must be developed (see annex 14).

Given the lack of guidance for the development of specific programmes for list 1 substances it is proposed to apply the Guidance Document published by the Commission Services in support of the establishment of programmes under article 7 of Council Directive 76/464/EEC (annex 15).

This suggests that specific programmes do not only cover the sources which are explicitly addressed by the daughter directives but also other discharges, including also those from classes 1 to 4 (section 3.3.1), which are subject to Community or technology-based emission limit values. An example of a List I programme of measures is provided in Annex 14 (UK PCP).

The Common Position (CONF-CZ 28/01) sets a clear deadline of the date of accession for the establishment of programmes.

RECOMMENDATION No. 17: The Czech Republic should prepare programmes of measures for list 1 substances by no later than the date of accession. These programmes should be based on the procedure set out in section 3.4.1.3 of this report following the example in annex 14 and they should take full account of the Commission Guidance Document on list 2 programmes (see annex 16).

3.4.1.3.1 Legal basis

It is open to question whether a separate legal basis is needed for the production and implementation of emission reduction programmes. The Commission Guidance Document does not recommend that laws be introduced specifically for this purpose. However, this will depend on the specific circumstances. The first step in preparing a programme of measures is to identify all the possible sources of the substance. The second step is to assess the existing controls over these sources and to determine whether these controls are adequate. In cases where the existing controls are not adequate, they may need to be tightened or additional new controls imposed.

Clearly, legislation in the water sector will need to be sufficient to control direct and indirect point discharges of these substances, and the recommendations above should ensure this. However, one additional recommendation may be considered in respect of load reductions. One of the requirements of the emission reduction programmes is to set load reduction targets. These can be set as „policy“ without being made under legislation. Nevertheless, it may be worth considering the inclusion in the new Government Regulation of a provision which allows load reduction targets to be set on a legal basis, and that the requirement for the water authorities to set emission limit values to achieve these targets would then be legally binding.

However, where the sources of the substance are not from point source discharges then it is likely that they will be capable of adequate regulation under legislation in other sectors. For example, in the case of pesticides, the mechanism for control would be the tightening of the marketing and use legislation and possibly the tightening of associated waste legislation.

3.4.1.3.2 Enforcement (power of water authorities)

The success of emission reduction programmes relies on the enforcement of the measures contained in the programmes. The enforcement of some of these measures, predominantly those relating to point

source discharges, will be the responsibility of the water authorities and the Czech Environmental Inspection. The enforcement of other relevant measures will be under the responsibility of other regulatory bodies. Under §112 (1d) of the Water Act No. 254/2001 coll. the Czech Environmental Inspection is required to „co-operate with the water authorities“.

3.4.1.3.3 Recommended approach (examples)

As stated above, it is recommended that the emission reduction programmes take account of the relevant parts of the Commission Guidance Document for list 2 programmes.

The basic structure of this programme should be followed:

- An assessment of the legal obligations arising from Community legislation and international commitments in respect of the substance
- An inventory of the type of sources of the substance
- An inventory of the existing controls over these sources
- An assessment of the adequacy of these controls in meeting the obligations, preferably including reference to environmental and other monitoring data
- A list of further actions which will be taken to ensure the controls remain or become adequate – this may need to include a load reduction target for the substance

Examples for specific programmes for list 1 substances are contained in annex 14 of this report. One comprehensive programme of measures for pentachlorophenol which follows the above mentioned scheme and which was established by the U.K. is presented in detail as an illustrative example.

It should be noted that it is not considered sufficient by the Commission to simply list all the pertinent legislation for a given substance and then claim that this amounts to a programme of measures. Clearly some of the pieces of relevant legislation will have as their objectives matters which are unrelated to the protection of water quality e.g. the safety of persons handling the products or substances. Nevertheless, an assessment should be made of the adequacy of these legal provisions in achieving the protection of water quality.

As an additional support for the reader, the following table attempts to give a brief overview of the relevant provisions discussed in section 3.4.1 for list 1 substances

Table 6: Summary of recommendations for authorisations of list 1 substances

Class	① DD and IPPC		② DD but not IPPC		③ IPPC but not DD		④ Relevant single point sources but neither IPPC or DD		⑤ Small and multiple sources	
	Procedure	(integrated) ³ permit		permit (water medium only)		(integrated) ² permit		permit (water medium only)		permit as part of programmes
	direct	indirect	direct	indirect	Direct	indirect	direct	indirect	direct	indirect
							general binding rules	general binding rules:	registration and approval by authority	contract with operator (SSM)
							full permit possible	registration by authority		

³ For existing installations a water related permit is obligatory by date of entry, an integrated permit must be issued by 2007. For new installations an integrated permit is required.

Class	1 DD and IPPC		2 DD but not IPPC		3 IPPC but not DD		4 Relevant single point sources but neither IPPC or DD		5 Small and multiple sources	
	ELVs	DD combined approach (IPPC and WFD) consider EQS at latest 2007	DD combined approach (IPPC and WFD) consider EQS at latest 2007 higher ELVs possible but not recommended	DD combined approach (WFD) consider EQS at latest 2012	DD combined approach (WFD) consider EQS at latest 2012	set individually by comp. authority, according to IPPC – BAT BATREF documents consider general guide ELVs consider EQS at latest 2007	set individually by comp. authority, according to IPPC – BAT BATREF documents consider general guide ELVs consider EQS at latest 2007	general guide ELVs consider EQS at latest 2012	general guide ELVs	general guide ELVs
deadline for compliance with ELVs	date of entry ² revision based on IPPC by 2007		date of entry revision based on WFD by 2009		date of entry ² revision based on IPPC by 2007		date of entry revision based on WFD by 2009		adoption of programme by date of entry implementation until the end of 2009	
review permit	First: prior to date of entry repeated: every 4 years		First: prior to date of entry repeated: every 4 years		First: prior to date of entry repeated: every 4 years		First: prior to date of entry repeated: every 4 years		prior to the end of 2009	

Class	① DD and IPPC	② DD but not IPPC	③ IPPC but not DD	④ Relevant single point sources but neither IPPC or DD	⑤ Small and multiple sources
data flow	incorporate information as recommended (Annex 10) in draft based on Water Act § 19(2) review Min. Reg. 432/2001 as recommended (Annex 10)	incorporate information as recommended (Annex 10) in draft based on Water Act § 19(2) review Min. Reg. 432/2001 as recommended (Annex 10)	incorporate information as recommended (Annex 10) in draft based on Water Act § 19(2) review Min. Reg. 432/2001 as recommended (Annex 10)	incorporate information as recommended (Annex 10) in draft based on Water Act § 19(2) review Min. Reg. 432/2001 as recommended (Annex 10)	(incorporate information as recommended (Annex 10) in draft based on Water Act § 19(2) review Min. Reg. 432/2001 as recommended (Annex 10)

3.4.2 Legislation for the regulation for list 2 substances

3.4.2.1 Emission control

3.4.2.1.1 Authorisation procedures and deadlines for the review of discharges

As proposed by recommendation No. 4 discharges of list 2 substances should be categorised in 2 distinct classes, depending on whether they are covered by the Council Directive 96/61/EC or not.

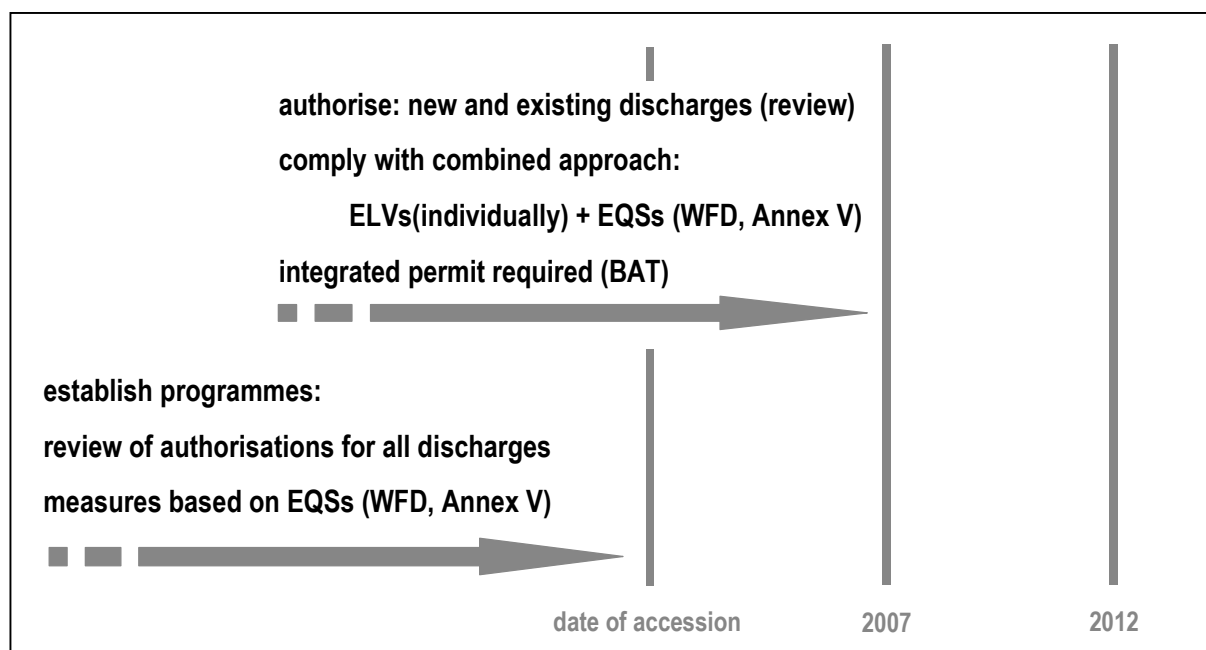
Class 1

Requirements

The requirements for discharges of class 1 are illustrated in Figure 6. This class covers discharges of list 2 substances which are regulated by Council Directive 96/61/EC. The deadline for implementing this directive for existing discharges is 2007. Article 10 of Council Directive 96/61/EC requires that authorisations for direct and indirect discharges are based on the combined approach, i.e. more stringent emission limit values must be set if Community environmental quality standards so require. Council Directive 2000/60/EC is of relevance in so far as it obliges Member States to set environmental quality standards for all relevant list 2 substances and specifies the methodology how they must be set, but it has no direct impact on the authorisation requirements.

According to the Common Position to chapter 22 (CONF-CZ 28/01), emission reduction programmes for list 2 substances required by article 7 of Council Directive 76/464/EEC must be implemented by the end of 2009. By that time all discharges must comply with Council Directive 96/61/EC, so this regime is the relevant one. Consequently, the timely implementation of Council Directive 96/61/EC (by 2007) as a part of the emission reduction programme would fulfil at the same time the legal requirements for Council Directive 76/464/EEC.

Figure 6: Requirements for discharges of list 2 substances of class 1



Implementation in the Czech Republic

In order to meet the requirements for all directives of class 1, it is proposed to establish by the date of accession environmental quality standards for all list 2 substances relevant to the Czech Republic and to ensure that these are applied in a binding manner in permits according to Council Directive 96/61/EC by 2007 at the latest. See also section 3.4.1.3 on emission reduction programmes.

RECOMMENDATION No. 18: Measures undertaken for the implementation of Council Directive 96/61/EC for direct and indirect discharges of list 2 substances of class 1 by the final deadline of 2007 should be incorporated as integral parts of the emission reduction programmes described in section 3.4.2.3. A necessary prerequisite is the identification of relevant list 2 substances and the establishment of environmental quality standards as recommended in this report. It is recommended that this exercise should be finalised by the date of entry of the Czech Republic in the Community.

Class 2

Requirements

The requirements for discharges of class 2 are illustrated in Figure 7. This case covers discharges of list 2 substances which are not governed by the Council Directive 96/61/EC. Article 7 of Council Directive 76/464/EEC requires that such discharges must be authorised. Emission limit values must be based on environmental quality standards to be established by Member States. The authorisation must be part of the emission reduction programme. For indirect discharges, Council Directive 76/464/EEC does not contain specific provisions.

Council Directive 2000/60/EC requires that the combined approach must be applied and obliges Member States to set environmental quality standards for all relevant list 2 substances and specifies the methodology how they must be set, but it has no direct impact on the authorisation requirements.

According to the Common Position to chapter 22 (CONF-CZ 28/01), emission reduction programmes for list 2 substances as required by article 7 of Council Directive 76/464/EEC must be established by the date of accession and implemented by the end of 2009.

Implementation in the Czech Republic

Following the Common Position, emission reduction programmes must be implemented by 2009 at the latest. This suggests that all direct discharges of list 2 must be authorised by 2009.

For indirect discharges, there are two basic options:

- All indirect discharges of list 2 substances under class 2 will be authorised.
- Only indirect discharges of list 2 substances under class 2 which originate from “relevant installations” will be authorised, others will be only governed by the Act on Water Supply and Sewerage Systems No. 274/2001 coll. “Relevant installations” would probably include installations of annex III of Council Directive 91/271/EEC (urban waste water treatment).

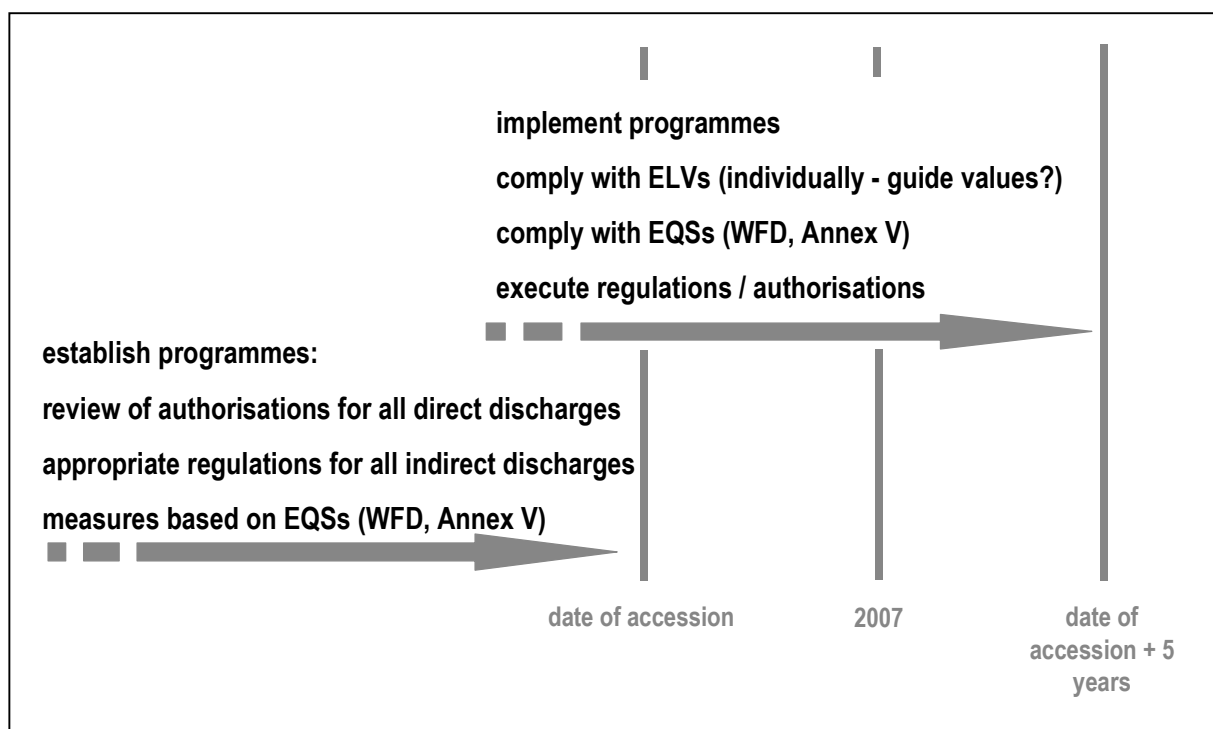
It is an important task of the Czech Republic to decide about the option to be taken, to identify “relevant installations” and to elaborate the corresponding legislation. This may involve a revision of the Water Act No. 254/2001 coll. More detailed recommendations are provided in the section “emission reduction programmes”.

The emission limit values must be set on the basis of environmental quality standards. For recommendations to incorporate environmental quality standards in permits see section 3.4.2.2.

RECOMMENDATION No. 19: All direct discharges of relevant substances of list 2 under class 2 should be authorised by 2009 at the latest. These measures should be incorporated as integral parts of the emission reduction programmes described in section 3.4.2.3. A necessary prerequisite is the identification of relevant list 2 substances and the establishment of environmental quality standards as recommended in this report. It is recommended that this exercise should be finalised by the date of entry of the Czech Republic in the Community.

RECOMMENDATION No. 20: For indirect discharges of list 2 substances under class 2 it is recommended that the Czech Republic should make a decision about those installations to which an authorisation pursuant to the Water Act No. 254/2001 coll. should apply and those which should be governed by the Act on Water Supply and Sewerage Systems No. 274/2001 coll. This decision may require a revision of these bodies of legislation which should be completed by the date of entry of the Czech Republic in the Community at the latest. All measures following this decision should be implemented as a part of the emission reduction programmes by the end of 2009 at the latest.

Figure 7: Requirements for discharges of list 2 substances of class 2



3.4.2.1.2 Emission limit values (ELVs)

At present, there are no uniform Community emission limit values applicable to discharges of list 2 substances.

For discharges of class 1, Council Directive 96/61/EC requires an integrated authorisation, considering the environment as a whole. The combined approach must be implemented, for existing installations by 2007. It requires that emission limit values are based on both, technology-basis and quality-basis, the more stringent actually determining the level of emission control.

As the implementation of Council Directive 96/61/EC is not the subject of this project, it should only be noted that the competent authorities which will be responsible for issuing integrated authorisations in the Czech Republic should apply the BAT reference documents produced pursuant to article 16 (2) of Council Directive 96/61/EC. In addition, and more relevant with respect to Council Directive 76/64/EEC, they must be required to apply the environmental quality standards set for relevant substances of list 2 in the New Governmental Regulation (see recommendation No. 22). It is recommended to review the legislation implementing Council Directive 96/61/EC at national level, so to ensure that the competent authorities apply national environmental quality standards in a binding manner.

RECOMMENDATION No. 21: For discharges of list 2 substances under class 1, the existing body of legislation implementing Council Directive 96/61/EC should be reviewed and if necessary, revised, to ensure that the competent authorities responsible for the authorisation of such discharges in the Czech Republic will be bound in their decision to the environmental quality standards set for list 2 substances in the New Governmental Regulation as proposed in recommendation No. 22.

For list 2 discharges under class 2, the only relevant authorisation regime is article 7 of Council Directive 76/464/EEC, which requires Water Quality Based Emission Limit Values. According to the Common Position to chapter 22 the deadline for setting these emission limit values in permits is 2009 at the latest. Guidance on the methodology to set emission limit values on that bases, is provided in section 3.4.2.1.

RECOMMENDATION No. 22: For discharges of list 2 substances under class 2, the emission limit values laid down in permits must be set on the bases of environmental quality standards by 2009 at the latest. This deadline should be incorporated into the New Governmental Regulation together with binding quality standards for all relevant list 2 substances.

3.4.2.1.3 Data flow

A thorough explanation of this issue has been already given under 3.4.1.1.3. Therefore, in this section reference is made to the respective sub-sections.

3.4.2.1.3.1 Requirements of the EU legislation

See point 3.4.1.1.3.1

3.4.2.1.3.2 Data flow under the relevant Czech legislation

See point 3.4.1.1.3.2

3.4.2.1.3.3 Recommendations

For reasons of consistency of the information system it is recommended to include in decrees under WA §§ 19 and 115 the same information details for list 2 substances as proposed for list 1 substances.

Recommendation No.11 applies also for discharges of list 2 substances.

Recommendation No. 12 applies also for discharges of list 2 substances.

Information requirements on programmes pursuant to article 7 of Council Directive 76/464/EEC will be considered in section 3.2.3 on emission reduction programmes for list 2 substances.

3.4.2.2 Environmental quality standards

Article 7 of Council Directive 76/464/EEC requires that environmental quality standards must be established within the emission reduction programmes and applied as a basis for emission limit values.

Council Directive 2000/60/EC obliges Member States to establish river basin management plans with the aim to achieve a good ecological surface water status for all surface waters within a certain period. According to annex V of Council Directive 2000/60/EC, Member States must establish environmental quality standards for all relevant chemical components of the ecological status, i.e. for priority substances which are discharged and for other chemical pollutants which are discharged in significant amounts into surface waters. The environmental quality standards must be set according to Annex V, 1.2.6 of Council Directive 2000/60/EC. Article 21 of Council Directive 2000/60/EC contains in article 22 transitional provisions which allow Member States to apply for the purpose of programmes under article 7 of Council Directive 76/464/EEC.

- the principles of the Council Directive 2000/60/EC for identifying relevant pollutants and
- the procedure of Annex V, 1,2,6 for the establishing of environmental quality standards.

The Guidance Document of the European Commission (see Annex 16) recommends Member States to apply these provisions when they draw up their emission reduction programmes.

For priority substances, the European Commission has contracted a consultant (Frauenhofer Institute) which is developing a proposal for a methodology of identifying environmental quality standards pursuant to Council Directive 2000/60/EC.

The Water Act No. 254/2001 § 38 (5) introduces the combined approach into the Czech water legislation as it requires that water authorities are bound to the indicators (quality objectives) as laid down in a Government Regulation based on the Water Act § 38 (5).

Following the guidance of the European Commission, it is proposed to carry out, in a first step, an identification of relevant list 2 substances.

A concrete proposal for an approach to identify relevant pollutants is provided under section 3.4.2.3.1.

In a second step, environmental quality standards should be introduced into the New Government Regulation. In this step, the results of the current discussions on priority substances at EU level should be taken into account.

Clearly, the establishment of environmental quality standards is in the responsibility of the Ministry of Environment. Environmental quality standards must be established under the consideration of cost efficiency and proportionality of measures. The public will have to be involved in this process. It is obviously not within the scope of this project to establish a proposal for environmental quality standards. However, as a means of supporting the Czech administration, Annex 9 contains a summary of environmental quality standards established by different Member States and the SCTEE (Scientific Committee for Toxicity and Ecotoxicity) for a number of selected list 2 substances. Most of these environmental quality standards have

been based on procedures which are equal or similar to the provisions of the Annex V, 1.2.6 of the Council Directive 2000/60/EC. It is, therefore recommended to take account of these values when environmental quality standards are developed.

RECOMMENDATION No. 23: Environmental quality standards should be derived for all relevant list 2 substances (see recommendation No. 25) and included into the New Government Regulation. The approach of deriving environmental quality standards should follow, as much as possible, the procedure laid down under Annex V, 1.2.6 of Council Directive 2000/60/EEC and should take into account the results of the ongoing discussion of environmental quality standards for priority substances at European level. This paper contains in annex 9 a collection of environmental quality standards from literature which were partially derived by a procedure similar to the one required by Council Directive 2000/60/EEC. It is, therefore, proposed that these environmental quality standards should be taken into consideration when environmental quality standards will be developed.

As the introduction of the combined approach is connected with the implementation of emission reduction programmes, a stepped introduction may be considered.

3.4.2.2.1 Use of environmental quality standards in permits (technical guidance)

The establishment of environmental quality standards has been discussed in section 3.4.2.2. A summary of environmental quality standards for selected list 2 substances is provided in annex 9.

Article 7 of Council Directive 76/464/EEC requires Member States to base emission limit values on environmental quality standards. According to the Common Position (CONF-CZ 28/01), programmes under article 7 need to be implemented by 2009. This means that up to that time all discharges of list 2 must obtain a permit with emission limit values based on environmental quality standards. For discharges covered by Council Directive 96/61/EC, the combined approach must be implemented even earlier, by 2007.

It is noted that compliance with environmental quality standards in surface waters must be achieved, according to Council Directive 2000/60/EC by 2015 at the latest. This demonstrates that compliance of permits with environmental quality standards must be achieved for list 2 substances at even an earlier date than for list 1 substances.

From a technical point of view, the derivation of Water Quality Based Emission Limit (WQBEL) for list 2 substances is the same as for list 1 substances. For this reason, similar recommendations can be given as for list 1 substances in section 3.4.1.2.1, especially with regard to the tighter time limits for list 2 substances.

Recommendation No.14 for discharges of list 1 substances applies also to discharges of list 2.

Recommendation No.15 for discharges of list 1 substances applies also to discharges of list 2.

Recommendation No.16 for discharges of list 1 substances applies also to discharges of list 2.

3.4.2.3 Emission reduction programmes

As far as emission reduction programmes for list 2 substances are concerned, there is no difference in principle to list 1 substances as described in section 3.4.1.3. Therefore, similar recommendations can be given. It is emphasised again that the programmes should comprise a consistent, logical system of

measures. Therefore, it is recommended to follow the example presented in annex 15. The programmes should take full account of the European Commission Guidance Document for the implementation of article 7 of Council Directive 76/464/EEC. A summary of this document is provided in annex 16 of this report.

Note that the deadline for establishing these emission reduction programmes is the date of accession of the Czech Republic, the deadline for implementing the programmes is 2009, according to the Common Position.

RECOMMENDATION No. 24: The Czech Republic should prepare programmes of measures for relevant list 2 substances by no later than the date of accession. These programmes should be based on the procedure set out in this report following the example in annex 15 and should take full account of the Commission Guidance Document on list 2 programmes as set out in annex 16.

3.4.2.3.1 Identification of relevant substances

Because of the fact that Council Directive 76/464/EEC covers an infinite number of individual substances including:

- Annex/list 2 of Council Directive 76/464/EEC
- ‘candidate list 1’ substances not regulated in ‘Daughter’ Directives (132 ‘candidates’ – 18 list I),
- all individual substances of annex/list 1 groups and families not on the ‘candidate list I’ and

it is up to the Member States to establish an appropriate list of candidate substances to be checked for their relevance. The definition of list 2 substances is explained in section 3.2.5 under the heading “List 2 substances “. The EU Guidance Document on elements for pollution reduction programmes under Article 7 of Council Directive 76/464/EEC recommends to include in the assessment of relevance at least substances belonging to:

- metals and metal compounds (in particular Cr, Zn, Cu, Ni, Pb, As, Ag)
- aromates (benzene, xylene, toluene)
- phenols
- hydrocarbons of petroleum origin
- cyanides
- ammonia
- nitrites
- sulphides
- phosphorous compounds
- other biocides/pesticides (see, for example, 14th National Expert Meeting 31.01.-01.02.1989 and the explanatory note to the questionnaire 95/337/EEC).
- Furthermore, it is recommended to also examine the substances that have been evaluated in the context of the selection of the list of priority substances under the Water Framework Directive (COM(2001) 2454 final and COMMPS study) and the three existing and fourth upcoming priority list under Council Regulation (EEC) No. 793/93.

There is no guidance under Council Directive 76/464/EEC provided for the methodology of identifying relevant substances. In the Guidance document of the Commission it is stated that several approaches will be acceptable, which should be chosen on practical grounds, one possible approach being screening monitoring at representative sampling stations. In addition, other approaches may be used such as emission inventories, proxy indicators or exposure models.

It is proposed that a combination of different initiatives currently being undertaken by the Czech Republic (screening monitoring and an assessment of emissions data) should be used to identify the relevant substances of list 2. A first selection of about 80 candidate substances and an assessment of their relevance in the Czech surface waters has been carried out under this project. This assessment is described in detail in annex 8. It should be continued and improved on the basis of the ongoing research projects.

RECOMMENDATION No. 25: The selection of relevant substances/pollutants of list 2 substances should be achieved by a combination of screening monitoring of candidate substances and the assessment of emissions data (including information from production volumes). Both activities should be continued with much effort to identify the relevant list 2 substances significantly prior to the date of accession, as these substances will form the basis for the New Governmental Regulation.

It is noted that a list of 99 substances of list 2 substances adopted by the Commission in 1982 has been used in Court cases against some Member States. They were prosecuted for not having adopted programmes for these substances. Consequently, most of these Member States have formally adopted quality standards for all of these substances. According to article 22 of CD 2000/60/EC, the list of priority substances replaces the 1982 list. Consequently, it is unlikely that this list will be used by the European Commission in the future. However, Member States will be probably required to argue which of the 1982 substances be of relevance for their surface waters. Therefore, it is recommended, that in addition to the list of candidate substances mentioned above, an assessment of the 1982 list of substances be carried out in order to put the Czech administration in the position to argue clearly if these substances are of relevance or not.

3.4.2.3.2 Legal basis

The same comments apply as for list 1 substances, therefore refer to section 3.4.1.3.1.

3.4.2.3.3 Enforcement (power of water authorities)

The same comments apply as for list 1 substances, therefore refer to section 3.4.1.3.2.

3.4.2.3.4 Recommended approach

The same comments apply as for list 1 substances, therefore refer to section 3.4.1.3.3.

An example for an emission reduction programme for a list 2 substance (toluene) is provided in annex 15 of this report.

RECOMMENDATION No. 26: Programmes of measures for list 2 substances should be based on the procedure set out in section 3.4.1.3 of this report following the example in annex 15 of this report. They should take full account of the Commission Guidance Document on list 2 programmes as set out in annex 16 of this report.

table 7: Authorisation regime for list 2 substances

	1		2	
Class	Council Directive 76/464/EEC and IPPC		Council Directive 76/464/EEC but not IPPC	
Procedure	integrated ⁴ permit as part of the programme		permit as part of programmes	
	direct	indirect	direct	indirect
ELVs	set individually by comp. authority, according to IPPC – BAT BATREF documents consider	set individually by comp. authority, according to IPPC – BAT BATREF documents consider	ELVs set individually based on EQSs	general binding rules: contract with operator (SSM) registration by authority ELVs for discharge from sewerage treatment plants based on EQSs
deadline for compliance with ELVs	adoption of programme by date of entry in the process of implementation all existing installations ⁵ must be reviewed and revised according to the IPPC directive, by the end of 2007.		adoption of programme by date of entry implementation until the end 2009	

⁵ An integrated permit must be issued by 2007. For new installations an integrated permit is required.

	1	2
Class	Council Directive 76/464/EEC and IPPC	Council Directive 76/464/EEC but not IPPC
review of permit	prior to the date of entry	prior to the end of 2009
data flow	incorporate information as recommended (Annex 10) in draft based on Water Act § 19(2) revise Min. Reg. 432/2001 as recommended (Annex 10)	incorporate information as recommended (Annex 10) in draft based on Water Act § 19(2) revise Min. Reg. 432/2001 as recommended (Annex 10)

3.5 Recommendations for effluent monitoring and emission inventory

3.5.1 Effluent monitoring and inventory for list 1 substances

3.5.1.1 Community provisions

This section deals with two issues which are, in practice strongly linked, i.e. monitoring of effluents and the establishment of an emission inventory. After a description of the relevant Community provisions and the legal frame of the current Czech legislation, a number of recommendations is given at the end of this section.

3.5.1.1.1 Council Directive 76/464/EEC

Article 11 requires Member States to draw up an inventory of the discharges into surface waters which may contain substances of list 1 to which emission standards are applicable.

3.5.1.1.2 Council Directive 86/280/EEC and other daughter directives

In annex I of Council Directive 86/280/EEC under the subchapter “general provisions” of heading A general provisions for the setting of emission limit values are given. Annex 11.1 provides a summary of these provisions together with information on the application of these provisions in Austria and France.

The following items are addressed by the “general provisions” on emission limit values:

- Definition of emission limit value in an individual permit
- Prohibition to achieve emission limit values (concentrations) by dilution
- An effluent monitoring procedure must be instituted which provides the taking and analysis of samples, measurement of the discharge and other parameters if needed to quantify the load of pollutants
- Sampling must be representative over a period of one day
- Location of sampling must normally take place at the same point where the emission limit value applies (for exceptions see annex I.A.7 of the directive)
- Sampling frequency is not specified but it is stated that monthly emission values must be calculated on the basis of daily emission values. A simplified procedure may be applied if threshold values given for individual substances in the daughter directives are not exceeded
- All data must comply with daily emission limit values as well as monthly emission limit values

In addition, all daughter directives of Council Directive 76/464/EEC contain analytical requirements for the effluent monitoring of the substances which they regulate. A summary of these requirements is given in annex 11.4 of this report.

3.5.1.1.3 Council Directive 96/61/EC

Article 9 of Council Directive 96/61/EC specifies the conditions for granting a permit including obligations regarding effluent control. As for emission limit values it states in article 9.3:

“The permit shall include emission limit values for pollutants, in particular, those listed in Annex III (see annex 11, 2.1), likely to be emitted from the installation concerned in significant quantities, having regard to their nature and their potential to transfer pollution from one medium to another (water, air and land). If necessary, the permit shall include appropriate requirements ensuring protection of the soil and ground water and measures concerning the management of waste generated by the installation. Where appropriate, limit values may be supplemented or replaced by equivalent parameters or technical measures.”

Effluent monitoring must be specified in the permit pursuant to article 9.5:

“The permit shall contain suitable release monitoring requirements, specifying measurement methodology and frequency, evaluation procedure and an obligation to supply the competent authority with data required for checking compliance with the permit.”

Article 15 of Council Directive 96/61/EC states that the results of effluent monitoring must be held by the competent authority and must be made available to the public. It is noted that a BAT-reference document on effluent monitoring is currently in progress at the IPPC bureau in Seville.

Article 16.3 of Council Directive 96/61/EC requires Member States to report in regular 3-yearly intervals to the European Commission about the implementation of the directive. A questionnaire, based on the Council Directive 91/692/EEC has been published by the Decision of the Commission 391/1999/EC. The questionnaire is provided in annex 10.4 of this report.

3.5.1.1.4 European pollutant emission register (EPER)

Article 15.3 obliges the European Commission to publish every three years an European Pollutants Emission Register (EPER) on the basis of data from Member States:

“An inventory of the principal emissions and sources responsible shall be published every three years by the Commission on the basis of the data supplied by the Member States. The Commission shall establish the format and particulars needed for the transmission of information in accordance with the procedure laid down in Article 19.”

On this basis was stipulated Commission Decision 2000/479/EC of 17 July 2000 on the data required for the EPER. Annex A1 of this decision contains threshold values for discharge loads of a number of pollutants. Emissions from installations for which these values are exceeded must be reported to the Commission. Annex 10, 1.2 of this report provides a summary of these requirements.

3.5.1.1.5 Commission Decision 95/337/EEC concerning questionnaires in the water sector

Based on Council Directive 91/692/EEC, a questionnaire for the water sector has been published by Commission Decision 95/337/EEC. The questionnaire is reprinted in annex 10, 1.1 of this report.

It requires to report the following data on emissions, including the following:

- Number of authorisations for list 1 and list 2 substances
- Emission limit values and deadlines of authorisations for list 1 and list 2 substances
- Authorised loads of list 1 and list 2 substances

- An inventory of the five biggest discharges for each list 1 substances including information on the conditions of the authorisations (industrial process, year of permit, load and concentration limits, period of validity)

3.5.1.1.6 Council Directive 2000/60/EC

Council Directive 2000/60/EC (Water Framework Directive) obliges Member States under article 5.1 to carry out for each river basin district of its territory:

- an analysis of its characteristics
- a review of the impact of human activity on the status of surface waters and on groundwater, and
- an economic analysis of water use.

The impact assessment must be first carried by the end of 2004, and reviewed in 2013, and thereafter every six years.

Details of the impact assessment are laid down in the annex II of the directive. Annex II.1.4 requires the collection of emission data from anthropogenic sources, with particular reference being given to existing obligations under Community legislation (including the one described above), annex II.1.5 requires to carry out an impact assessment on the basis of this data in order to identify the surface water bodies which are likely to breach the good status objective as defined in the directive.

3.5.1.2 Czech legislation

Emission inventory

The establishment of an emission inventory by water authorities is regulated by the Water Act No. 254/2001 Coll. for direct discharges and for indirect discharges which are “*especially dangerous*” (§ 39 (3) of the Water Act). For indirect discharges, in particular those which are not “*especially dangerous*”, the obligation for establishing an emission inventory is ruled by the Act on Water Supply and Sewerage Systems No. 274/2001 Coll.

Details for the implementation of a Czech emission inventory need to be specified by secondary legislation which is currently in progress. Obviously, the implementation of this legislation will take some transition period, and, therefore, the Ministry of Environment has started, in response to the accession meetings with the European Commission, a number of projects which aim to establish a solid data-base on emission sources.

At the T.G.M. Water Research Institute the Hydro-ecological Information System (HEIS-WRI) was established which comprises the data and results from the following initiatives.

Establishment of a register of industrial sources of pollution: Collection of data on industrial sources of pollution and substances discharged into water relating EU legislative (76/464/EEC, 82/280/EEC, 88/347/EEC, 90/415/EEC, 84/491/EEC, 82/176/EEC, 84/156/EEC, 83/513/EEC). The project was launched in 1998. Data collection during 1999 focused on following substances: mercury, cadmium, carbon tetrachloride, DDT, PCP, aldrin, dieldrin, endrin, isodrin, HCB, HCBd, chloroform, EDC, TRI, PER, TCB. In 2000 the list of substances was enlarged. The data were mainly provided by polluters and further by the Water Catchment Boards, Water Authorities, Czech Environmental Inspection and others.

Inventory by the case study to the implementation of the Dangerous Substances Directive (2000-2001): In 2000, a project “Case study to the implementation of the Dangerous Substances Directive” has been

started at the T.G.M. Water Research Institute which is aimed to continue the previous activity and to complete the emission inventory. In 2001 about 1700 companies which had been pre-selected as possible dischargers of list 1 and selected list 2 substances. Approximately 1100 companies have responded and provided detailed information on the type and amount of discharges. Additional data were also provided by the River Basin Authorities (Povodí). The elaborated data-base comprises the basis of the present emission inventory. The research was continued during 2001, and is still ongoing.

Inventory of water abstractions and effluent returns: an inventory of permitted as well as real abstraction and effluent returns (with respect to quantity and quality) was established. Data were collected for sources exceeding an abstraction of 15.000 m³ per year. The data are from the year 1977 and have been provided by the River Basin Authorities (Povodí). The following parameters have been assessed (as annual average): Abstraction/discharge of quantity (flow) and quality (BOD5, COD, suspended solids, dissolved solids, NH4, P-tot.).

Register of Municipal Sources of Pollution: Data about municipalities with more than 1000 inhabitants (or parts of them divided from water management point of view) are the basic units of the Register of Municipal Sources of Pollution. The collected data include: administrative data, water-related data such as drainage basin, waste water discharge site (river, etc), protected areas and technical data such as information on the sewerage system (yes/no/under construction), the waste water treatment plant (yes/no/under construction), the number of connected inhabitants, and the wastewater treatment method. The data are regularly updated, starting from the year 1995. The data were provided by the River Basin Authorities (Povodí).

Effluent monitoring

Effluent compliance monitoring for dangerous substances under the Water Act is conceptually based on self-monitoring (monitoring by the polluters). § 38 (3) of the Water Act allows the competent authority to stipulate in the permit an obligation of the polluter to monitor the effluent (quality and quantity) and requires that these data must be submitted to the authority by the polluter (it does not, however, oblige the authority to lay down such provisions). Detailed provisions on authorisations may be issued by the New Governmental Regulation based on § 38 (5) of the Water Act. (which will replace or amend Governmental Regulation No. 82/1999). It is not clear whether the scope of § 38 (5) actually allows for the implementation of self-monitoring obligations such as frequency of measurements. In addition, the Water Act introduces in §§ 91 and 92 an obligatory self-monitoring regime which is linked to the payment of pollution fees and, therefore, limited to discharges of some parameters which exceed certain threshold values laid down in annex 2 of the Water Act.

In practice, the actual situation is that self-monitoring is currently required by only few permits and does usually not include relevant dangerous substances unless they have been subject to payments pursuant to the former Water Act.

The Water Act does not clearly specify how the self-monitoring system is validated by state authorities. § 112 (1) empowers the Czech Environmental Inspectorate, and § 110 (2) empowers the water authority to carry out compliance monitoring. However, the Czech Environmental Inspectorate is currently not sufficiently equipped to carry out systematic effluent monitoring. It may, in cases of environment accidents, act to identify the pollution source, sometimes by subcontracting a technical consultant, but it does not carry out continuous surveillance of waste water effluents. Water authorities are normally not equipped with laboratories and personnel, but sometimes contract laboratories to carry out investigation in individual cases. River Basin Authorities (Povodí) carry out some effluent monitoring. Occasionally, e.g. if a water pollution problem has been identified by the River Basin Authorities (Povodí), they may request the Czech Environmental Inspectorate or the water authority to monitor effluents at the polluting site in order to identify necessary measures for remediation and/or to set fines. T.G.M. Water Research

Institute carries out effluent monitoring incidentally (e.g. within a particular project), but is not equipped for continuous inspections.

Public Administration Information System (PAIS)

The Water Act requires under § 19 the water authorities to keep records of decisions issued by them pursuant to the Water Act. The scope and method of maintaining the records will be regulated by a decree. The Water Act § 19 (2) states that this decree will contain a “*method of its saving in the public administration information system (PAIS), and the method of information transfer from the existing water-management records and the summary water-management records into this information system*”. So far, only non-official preliminary drafts of this decree exist. The latest version provided to the twinning team contained a system of codes for the different types and ways of use of waters, etc., but no description of any methods of record keeping or transfer of data.

§ 19 of the Water Act refers to the Act No. 365/2000 Coll. on the Public Administration Information Systems (PAIS): According to § 1 and § 4 of this act the Office of the Public Information System is responsible for developing, installing, and running the PAIS. They are in charge of managing the data input, and they will have to ensure links to other existing information systems of public administrations by co-operating with bodies of the public administration (Ministries and other State Departments and Offices). This office is also empowered to set standards of data format maintain the control of the PAIS.

§ 19 of the Water Act also refers to the summary of water-management records based on the former Decree No. 126/1976 (now Decree No. 431/2001 Coll.). These water-management records are usually in paper format and contain the conditions required in permits and various documents. A summary water-management record contains this information and, in addition, data sheets with information from other water-management bodies (e.g. monitoring data) and maps with the location of polluters. According to the Decree No. 431/2001 Coll., the T.G.M. Water Research Institute is authorised to keep record of the summary water-management records; the new decree under § 19 of the Water Act will ensure that this data is properly transferred to the PAIS.

Annex 10.5.2 provides an illustration for the flow of effluent data and the establishment of the inventory pursuant to the above mentioned legislation is provided.

3.5.1.3 Recommendation for competencies

There is a solid legal basis for self-monitoring of direct discharges and indirect discharges of “*especially dangerous substances*” in the Water Act No. 254/2001 coll. However, only few permits presently require self-monitoring of dangerous substances. The competencies for external effluent monitoring are divided between different bodies in charge (see illustration in annex 10.5.2). There are currently no specific provisions in the legislation which clearly define the concrete duties of these bodies. In practice, it appears that most of the responsible institutions do not monitor compliance on a systematic basis.

Even though Council Directive 76/464/EEC does not explicitly require a state-based effluent monitoring, it is recommended to establish systematic effluent monitoring by one clearly defined state authority (e.g. regional authorities). The major task of the external monitoring system should be to control data quality and validation of the self monitoring system proposed under section 3.5.1.4. The frequency of this monitoring should be carried out in relation to the size of impact of the respective water body, i.e. in relation to the ratio of discharge volume to flow of receiving water body.

RECOMMENDATION No. 27: The Czech Republic should clearly identify one administrative body to carry out external monitoring of discharges of list 1 substances on a systematic basis. Regular checks should be carried out with a frequency depending on objective criteria such as level of discharge or impact on the receiving water body.

This recommendation equally applies to list 2 substances.

3.5.1.4 Recommendations for effluent monitoring

The Water Act foresees that water authorities may require self monitoring of polluters as a condition of permit. As already mentioned above, only few permits contain specific provisions on self-monitoring. Only if the discharger is legally required to pay a fee (corresponding to those which are above threshold emissions defined in the annex 2 of the Water Act), there is systematic self-monitoring, but only for the parameters relevant for payment. (The fees run into the State Environment Fund of which only minor parts are used to budget inspection of waste water effluents.)

To summarise, presently there is no routine inspection system in place for self-monitoring of dangerous substances in effluents. It is, therefore, recommended to introduce a systematic approach for self-monitoring. It is suggested to use the legal basis of the Water Act to stipulate, eventually in the New Governmental Order a minimum frequency for self-monitoring of list 1 substances depending on an a load threshold. Such threshold values may be taken, for example, from the French system of effluent monitoring, a summary is provided in annex 11.3. The threshold values should be compatible with the threshold values contained in daughter directives (allowing for simplified monitoring if pollutant loads are below thresholds).

RECOMMENDATION No. 28: A consistent system of self-monitoring of discharges of list 1 substances, based on §§ 38 (3) and (5) of the Water Act, should be introduced. In the New Governmental Regulation provisions for a daily self-monitoring should be set if certain threshold values for emitted loads in the untreated waste water are exceeded (see proposal for such thresholds in annex 11. 3).

External monitoring pursuant to recommendation No.27 should be applied as a validation of self-monitoring.

This recommendation equally applies to list 2 substances.

Finally, all general provisions of Council Directive 86/280/EEC regarding effluent monitoring (e.g. the requirement for a 24-hours representative sampling) as well as the substance-specific analytical requirements of daughter directives of Council Directive 76/464/EEC should be incorporated in the New Governmental Order. A summary of the general requirements is provided in annex 11.4.

RECOMMENDATION No. 29: All general provisions of Council Directive 86/280/EEC for effluent monitoring of discharges of list 1 substances, and the substance-specific analytical requirements of individual daughter directives should be incorporated in the New Governmental Regulation.

3.5.1.5 Recommendations for data flow and inventory

The incorporation of relevant emission data into the Public Administration Information System is foreseen in the Water Act.. Even though a bulk of relevant information has been and still is being collated by the Czech administration, especially for list 1 substances, there is presently no emission inventory available which has been established on a systematic and coherent basis.

In order to ensure that the data collection based on the existing legislative body (establishment of PAIS) will be capable of delivering all necessary data, it is essential that data from primary sources are systematically fed into the data base. As can be seen from the flow diagrams in annex 10, the most essential step is the coherent production, assessment and storage of pollution load data from self-monitoring. The present legal basis of the Water Act seems sufficient, but must be implemented now by concrete and specific secondary legislation. It is, therefore, recommended that the self-monitoring data

collated pursuant to recommendation No.28 should be submitted to water authorities at a regular basis, quality-checked by those authorities and forwarded, typically in an electronic format, to the PAIS. This provision should be implemented in the decree pursuant to § 19 (2), concerning records of the water authorities. A proposal for the relevant information to be reported by the water authorities is given in annex 10.6.2.

RECOMMENDATION No. 30: It is recommended to introduce in the decree pursuant to § 19 (2) of the Water Act an obligation of the competent authority to collate, validate and assess self-monitoring data obtained in accordance with recommendation no. 28. The water authority should be required store annual data, especially annual loads of discharged substances of list 1 in the PAIS on a regular basis. A proposal for the relevant data is provided in annex 10.6.2 of this report.

It is noted that the recommendations also apply to indirect discharges of list 1 substances (discharge classes 1 to 4), with the underlying assumption that these discharges will be subject to an authorisation procedure.

3.5.2 Effluent monitoring and emission inventory of list 2 substances

3.5.2.1 Community provisions

For an introduction of relevant Community provision reference is made to section 3.5.1.1.

Under Council Directive 76/464/EEC, there is no explicit obligation for Member States to establish an inventory of emissions of list 2 substances. However, under Council Directive 91/692/EEC (reporting directive) a three-annual report is required from Member States which should include, inter alia, total load estimates of list 2 substances. See annex 10.1.1 for further details.

Equally, the provisions in the context of Council Directive 96/61/EC and the comprehensive data assessment obligation under Council Directive 2000/60/EC apply also for list 2 substances.

3.5.2.2 Czech legislation

Basically, the legislation as well as the activities described in section 3.5.1.2 for list 1 substances also apply for list 2.

Only with respect to indirect discharges, a significant difference must be noted. Authorisations of indirect discharges of substances which are defined by the Water Act as not “*especially dangerous substances*” (Water Act § 39 (3) and attachment no. 1 to the Water Act) are governed by the Act on Water Supply and Sewerage Systems No. 274/2001 Coll. This Act requires under § 14 (3) that the proprietor of the sewerage system must compile a Sewerage Systems Manual (SSM) which specifies the maximum admissible load of pollutants and how discharges are controlled and monitored. The Sewerage Systems Manual must be approved by the Water Authority and followed by the sewerage operator. Detailed general requirements for the SSM can be laid down in a decree under this Act. Only a drafted version (status end of 2000) has been made available to the twinning team. An illustration of the competencies for authorisations of indirect discharges is given in the annex 10.5.2 of this report.

The drafted decree stipulates the following obligations of monitoring of indirect discharges:

- Quality check-ups **by operators** carried out at certain points in the sewer system (not necessarily effluents of indirect discharges) based on plans. These checks must conform with the Sewerage Systems Manual (§ 8 of the draft version of decree).
- Quality check-ups of effluents **by indirect dischargers** according to the Sewerage Systems Manual (§ 20 (6) of the draft version of decree).

- Pilot samples of waste water (discharged at the inflow of indirect discharges) **by the operator** (§ 20 (7) of draft version of decree)

It is noted that for discharges of “*especially dangerous substances*”, effluent monitoring must be carried out by the indirect discharger if this is required by the permit (§ 19 (2) of the Act on Water Supply and Sewerage Systems).

The draft version of the regulation to the Act on water Supply and Sewerage Systems does not yet contain specific provisions for the effluent monitoring to be incorporated in the Sewerage Systems manual.

3.5.2.3 Recommendations for competencies

In order to clarify competencies the same recommendation applies as for list 1 substances.

Recommendation No. 27 applies also to discharges of list 2.

3.5.2.4 Recommendations for effluent monitoring

As far as concerns direct discharges and indirect discharges of “*especially dangerous substances*” the same comments and recommendations apply as for list 1 substances.

Recommendation No. 28 applies also to discharges of list 2 substances which are “*especially dangerous substances*” (as defined in the Water Act).

For indirect discharges, in particular those which are not “*especially dangerous substances*” under the Water Act, it is recommended that the monitoring requirements proposed in recommendation No. 28 should also enter the draft regulation based on the Act on Water Supply and Sewerage Systems No. 274/2001 Coll.

RECOMMENDATION No. 31: It is recommended that all monitoring requirements proposed in recommendation No. 28 should also be incorporated into the decree based on the Act on Water Supply and Sewerage Systems No. 274/2001 Coll.

3.5.2.5 Recommendations for data flow and inventory

With respect to direct discharges and indirect discharges of “*especially dangerous substances*” the same comments and recommendations apply as for list 1 apply.

Recommendation No. 30 applies also to discharges of list 2 substances which are “*especially dangerous substances*” (as defined in the Water Act).

According to the present legislation, data from indirect discharges of list 2 substances, which are not “*especially dangerous*” should be collected by the sewerage treatment operator. From the point of view of reporting to the European Commission it is probably not necessary to collect the detailed data of all individual indirect dischargers. It would be sufficient if the operator of the sewerage treatment plant is subject to regular reporting about the loads of dangerous substances from his effluent. Nevertheless, the Ministry of Environment may wish to consider the possibility of applying recommendation No. 30, *mutatis mutandis*, to dischargers governed by the Act on Water Supply and Sewerage Systems.

3.6 Recommendations for ambient water monitoring

3.6.1 List 1

3.6.1.1 EU-provisions

Council Directive 76/464/EEC does not contain an explicit obligation to monitor surface waters for list 1 substances. However, ambient water monitoring would be necessary to verify the standstill provision as required for some list 1 substances in the daughter directives to Council Directive 76/464/EEC (see annex 5 of this paper). This implies that Member States monitor these substances at a regular basis.

3.6.1.1.1 Council Directive 76/464/EEC

The Directive states in Article 13 (1) that the Member State shall supply to the Commission the results of monitoring by the national network. This provision has been amended and specified by Council Directive 91/692/EEC. (See 3.6.1.1.4)

3.6.1.1.2 Council Directive 86/280/EEC

Article 4 of Council Directive 86/280/EEC requires Member States to monitor waters which are affected by significant discharges of list 1 substances.

“The Member States concerned shall be responsible for monitoring the aquatic environment affected by discharges from industrial establishments and by other sources of significant discharges.”

3.6.1.1.3 Council Directive 96/61/EC

Article 10 of Council Directive 96/61/EC requires the application of the combined approach. This includes the requirement to fulfil environmental quality standards. Consequently the Member States will need to monitor waters which are directly affected by discharges of dangerous substances.

“Where an environmental quality standard requires stricter conditions than those achievable by the use of the best available techniques, additional measures shall in particular be required in the permit, without prejudice to other measures which might be taken to comply with environmental quality standards.”

3.6.1.1.4 Council Directive 91/692/EEC

Under the reporting directive 91/692/EEC and the corresponding questionnaire Commission Decision 95/337/EC, Member State have to report, inter alia, about the monitoring results of list 1 substances.

3.6.1.1.5 Council Directive 2000/60/EC

Under the Water Frame Work Directive Council Directive 2000/60/EC, a systematic monitoring strategy for all relevant pollutants must be established according to article 8 and annex V. It is noted that the “good chemical status” of surface waters is defined in the Council Directive 2000/60/EC by the compliance with the environmental quality standards of the daughter directives of Council Directive 76/464/EEC. Moreover, the Water Framework Directive gives quite a detailed description of the design of the monitoring system required in order to prove the “good chemical status” of surface waters.

In accordance with Article 8, Member States shall ensure the establishment of monitoring programmes in order to achieve a “coherent and comprehensive overview of water status within each River Basin District” (Article 8.1).

For surface waters such programmes shall cover (Article 8.1):

- the volume and level or rate of flow;
- survey of the ecological status and the chemical status and the ecological potential.

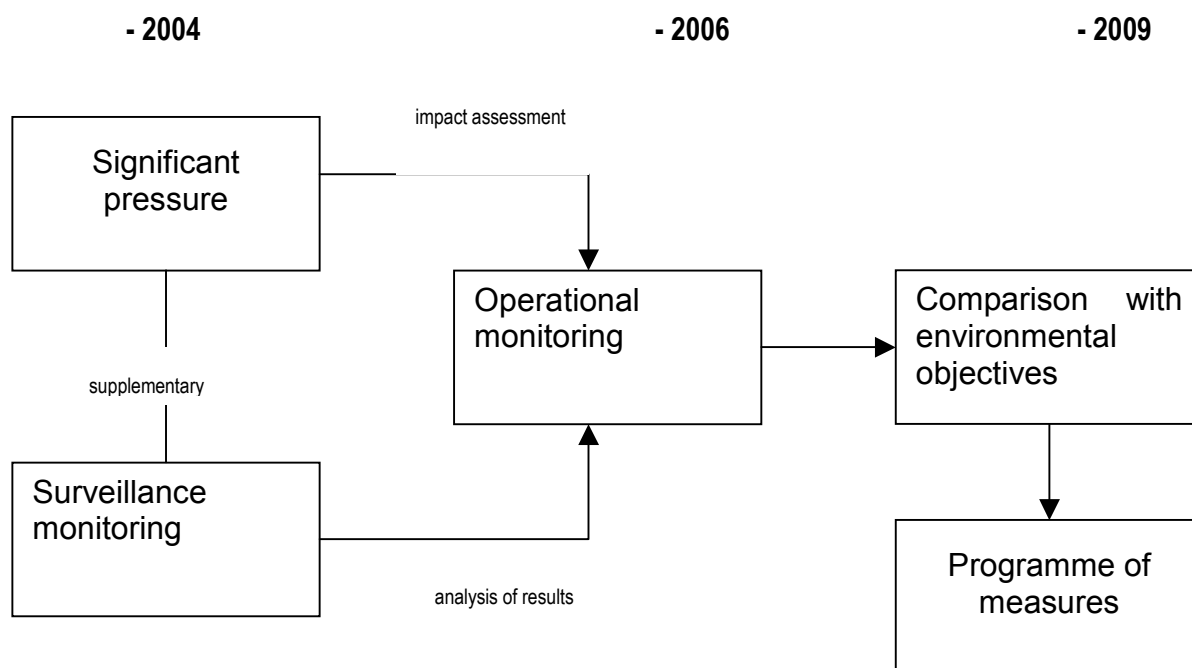
In protected areas the programmes shall be supplemented by the relevant specifications contained in Community legislation (Article 8.1).

The monitoring programmes shall meet the requirements of Annex V and shall be operational at the latest at the end of 2006 (Article 8.2).

Annex V, 1.3 of the Water Framework Directive contains the key technical requirements for the monitoring of the ecological and chemical status of surface waters. Annex V, 1.3 sets out some general requirements for the monitoring network, in particular:

- The monitoring network shall be designed so as to provide a coherent and comprehensive overview of the ecological and chemical status of the water bodies.
- It shall permit classification of the water status into 5 classes (see Annex V, 1.2).
- It must be presented in map form.
- It must consist of a surveillance monitoring programme and an operational monitoring programme which shall be established on the basis of the review of the characterisation and impact assessment in accordance with Article 5 and Annex II.
- It shall contain those parameters that are indicative of the status of each relevant quality element under Annex V (distinction between biological, morphological and physico-chemical quality elements).
- There may also be need to establish a programme of investigative monitoring.

The following figure shows a schematic representation of the monitoring concept as set out in the Water Framework Directive. A reference to more detailed specifications of annex V 1.3 is made in the recommendation section 3.6.1.4.

Figure 8: Monitoring concept of Council Directive 2000/60/EC

In the Commission Guidance Document on elements for pollution reduction programmes under Article 7 of Council Directive 76/464/EEC it is proposed under 4.17 that Member States apply for the design of the monitoring network and the identification of sampling points the provisions of annex V of Council Directive 2000/60/EC.

3.6.1.2 Czech legislation

The basis for the water quality monitoring in the Czech Republic is provided by § 21 of the Water Act. However, this paragraph is expressed in very general terms and therefore does not specify the scope and any details of the state monitoring network. For example, the selection of monitoring sites, frequency of sampling and selection of monitoring parameters are not specified by law but based on an internal administrative decision. § 21 (3) of the Water Act obliges *the river basin administrators and other professional subjects established or founded for this purpose by the Ministry of Environment or Ministry of Agriculture to detect and evaluate the condition of the surface waters*. Presently the river basin administrators are represented by the river boards (Povodis) and the professional subjects are represented by institutions such as the Czech Hydrometeorological Institute (Ministry of Environment), the T.G.M. Water Research Institute (Ministry of Environment) and the Agricultural Water Management Authority (Ministry of Agriculture), the competencies of which are not clearly established by the Water Act.

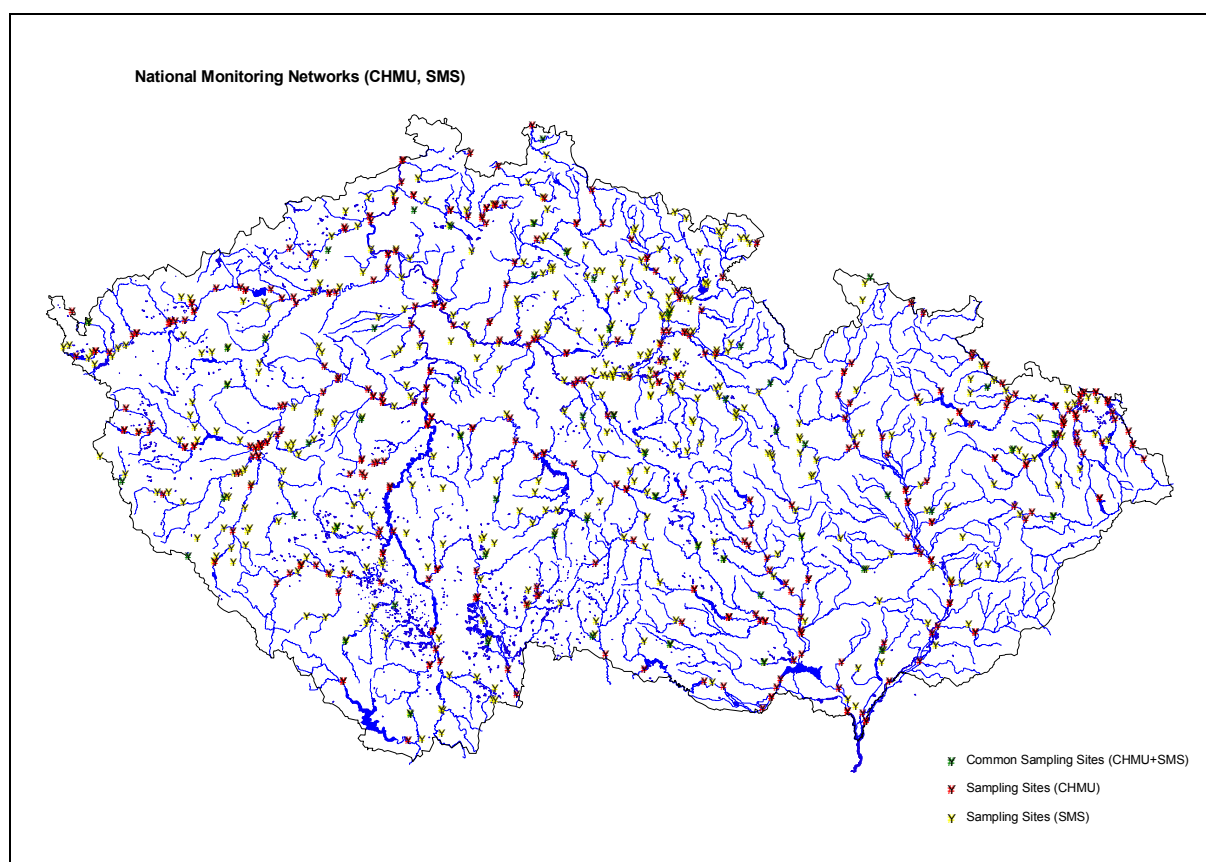
3.6.1.3 Czech monitoring strategies – current status and planned action

Historically, the engagement of CHMI in water quality monitoring started in 1963, and was gradually developed into a state monitoring network covering presently about 260 sampling sites for surface waters. The CHMI is mostly funded by the Ministry of Environment. Its duties are not legally described but laid down in the foundation document (decree) of the institute. Sampling and chemical analysis are carried out by contracted private bodies under strict quality requirements (accreditation). Most of the monitoring commissioned by the CHMI are carried out by the laboratories of the river boards.

Dangerous substances are continuously monitored at about 130 sites (heavy metals 12 times a year, organic micro pollutants 6 times a year). These sites are selected from the monitoring network if they are under specific pressure. Since 1998 additional monitoring of sediments, suspended solids and biota has been introduced into the routine monitoring programme, mainly in response to scientific evidence (many micro pollutants do preferably adsorb to sediments) and EC directives, particularly Council Directive 76/464/EEC.

Apart from routine monitoring some pilot projects have been started which are particularly targeted to identify dangerous substances in waters. In 1999, a project was started which comprises sampling of heavy metals and organic micro pollutants at 20 different sites in different media (water columns, sediments, suspended solids, biota, dreissena, periphyton, fish) with frequencies from 12 to one per year, depending on the specific medium.

Figure 9: Profiles of the state monitoring network and of the network of AMWA



In order to get an overview of the anthropogenic influences to the aquatic waters, the project was continued and amended in January 2001 under the title “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic”. The new system will serve as a surveillance monitoring system, providing an overview of the impacts of dangerous substances to all surface water bodies. The profiles have been chosen in order to get information about specific catchment areas, for transboundary water courses, for catchment areas of more than 2.500 km² and for catchments containing significant sources of pollution.

On this bases the following number of sites has been selected:

- 44 profiles from the existing national monitoring network = Complex Water Quality Network (operated by CHMI)
- 58 profiles from small creeks (operated by AWMA): at this profiles 25 parameters are monitored

For the last group of profiles the CHMI has agreed with the AWMA (Agricultural Water Management Authority) to obtain their monitoring data from the selected small water courses. The list of parameter and the sampling frequency is comparable to those of the national monitoring network.

One of the major goals of this project is to identify the relevance of dangerous substances in Czech surface waters, and to identify major pollution sources. For this purpose, a list of about 400 substances derived from existing Czech and EU legislation, known standards in other countries and from existing monitoring was established and a phased procedure was applied for the selection of parameters:

Based on a study of the T.G.M. Water Research Institute, this list was first divided into 3 classes (see annex 12.2), using information on chemical usage, emissions from IPPC installations and ambient monitoring:

Class A – substances which adversely influence water organisms and which are proved to be present (i.e. detectable) in surface waters or substances for which sources have been already identified (information based on work of WRI and, regarding accidental pollution, from CEI). A total of 54 substances has been identified, of which 29 are relevant for surface (also in sediments of rivers and lakes) and ground waters, 23 are relevant only for the water column and 2 are relevant only for sediments.

Class B – substances which may be of relevance in the Czech Republic and which affect the water organism adversely. 149 substances have been identified which should be surveyed by an investigative monitoring in order to prove their relevance. For the purpose of the investigative monitoring programme 2002 80 substances have been selected. These substances will be monitored at a sub-set of the selected sampling sites, which is based on known sources of pollution. Therefore, the number of monitoring sites for class B will vary from substance to substance. (The assessment of the relevance of substances of class B for the selected sampling sites will be worked out by T.G.M. Water Research Institute.)

Class C – substances for which there is no evidence that they are of relevance in the Czech Republic, because they are not found in any study, legislation or by any survey. This substances will not be covered by the monitoring system.

The monitoring frequencies are for the water column 12/year, for sediment 2/year, and for susp. solids 6/year, respectively. Parameters selected under class A have been monitored since Jan. 2001 and monitoring of parameters of class B will be started in 2002.

First results have been presented in November 2001 by an intermediate report of the project “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic”, final results will be available by the end of 2002. A more detailed description of the project is given in annex 12.2.

It is planned to start with the development of operational monitoring, based on the results of surveillance monitoring by the end of 2002.

3.6.1.3.1 Contents of the databases of the HEIS CHMI (surface water quality monitoring)

The data obtained by the state national monitoring system are part of the data base HEIS CHMI, which contains the following information on surface water bodies:

The watercourses like river and river reaches, taken from the structural model are presented. The hydrological measurement points and the profiles of the water quality are connected to them. All the relevant description data about measurement points are stored there.

Time series are stored in the database and are connected to some objects (measurement point...). Each individual value can be expanded by additional information. The time series can be saved in the different variants (discharges computed from the water levels using different Q-H curves for example). Data can be exported to the range of formats. Aggregated information about time series and the range of the predefined reports can be generated.

The time series of the data are connected to the hydrological measurement points. The following data are stored: daily averages of discharges, daily averages of temperatures, daily averages of contents of suspended matter, monthly cumulative discharges and none-equidistant digitalized water levels. This part of the database also contains Q-H curves used for the computation of the discharges from the digitalized water levels, flood waves (data saved in the step one hour) and basic hydrological parameters like m-days and n-years discharges.

The time series are connected to the measurement points in the water quality profiles of CHMI. The data in the time series represent samples taken typically 12 times a year. Time series are not equidistant. The additional comments are saved for the individual values (used standard, relative error of the measurement, detection limit etc.).

3.6.1.4 Recommendations

At present, competencies for ambient water monitoring are split between different institutions at local as well as federal level as described above.

One possibility to ensure a coherent implementation of ambient water monitoring would be to establish a clearly defined legal framework, e.g. under the Water Act.

RECOMMENDATION No. 32: In order to ensure that the ambient water monitoring will be carried out in a coherent way, it would be appropriate to establish a clear legal basis which defines the number and selection of sampling sites, the parameters and the frequency of monitoring. This legislation should also clearly define the obligation of individual institutions to comply with the monitoring provisions and to provide monitoring results to the Ministry of Environment.

This recommendation is valid for list 1 and all relevant list 2 substances.

As Council Directive 76/464/EEC does not provide specific guidance for developing a monitoring network, it is proposed, in accordance with the Commission Guidance Document on elements for pollution reduction programmes under Article 7 of Council Directive 76/464/EEC, that the national monitoring strategy for list 1 substances should be established pursuant to the provisions of annex V of the Council Directive 2000/60/EC.

RECOMMENDATION No. 33: It is recommended that the current ambient water monitoring system should be reviewed and modified in accordance with the monitoring system introduced by annex V of Council Directive 2000/60/EC.

This recommendation is valid for list 1 and all relevant list 2 substances.

In order to implement recommendation 33, it will be necessary to establish a routine surveillance and operational monitoring system for list 1 substances. For the design of this system, the results of the project "Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic" should be used in order to identify the best choice of sampling sites and of the substances to be monitored at each site.

For surveillance monitoring, Annex V, 1.3.1 of Council Directive 2000/60/EC lays down the criteria for the selection of sampling sites and for the selection of parameters, Annex V, 1.3.4 lays down the minimum frequency.

Based on these criteria and on the results of the project “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic”, it is proposed to identify a subset of sampling stations for regular surveillance monitoring. It is proposed to monitor at regular intervals of at least 6 years, all list 1 substances at these sampling stations for one year. Annex V, 1.3.4 of Council Directive 2000/60/EC requires a frequency of monthly monitoring for priority substances, and a three-monthly monitoring of other list 1 substances. In order to obtain sufficient and comparable data for all list 1 substances, it is proposed to apply a monthly monitoring frequency for all list 1 substances.

RECOMMENDATION No. 34: For the purpose of recommendation No. 33, a surveillance monitoring of all list 1 substances should be carried out at intervals of six years or more frequently. Surveillance monitoring should be carried out at the sampling sites identified in the project “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic”, or at a sub-set of these sites, selected in accordance with the criteria given in annex V, 1.3.1 of Council Directive 2000/60/EC.

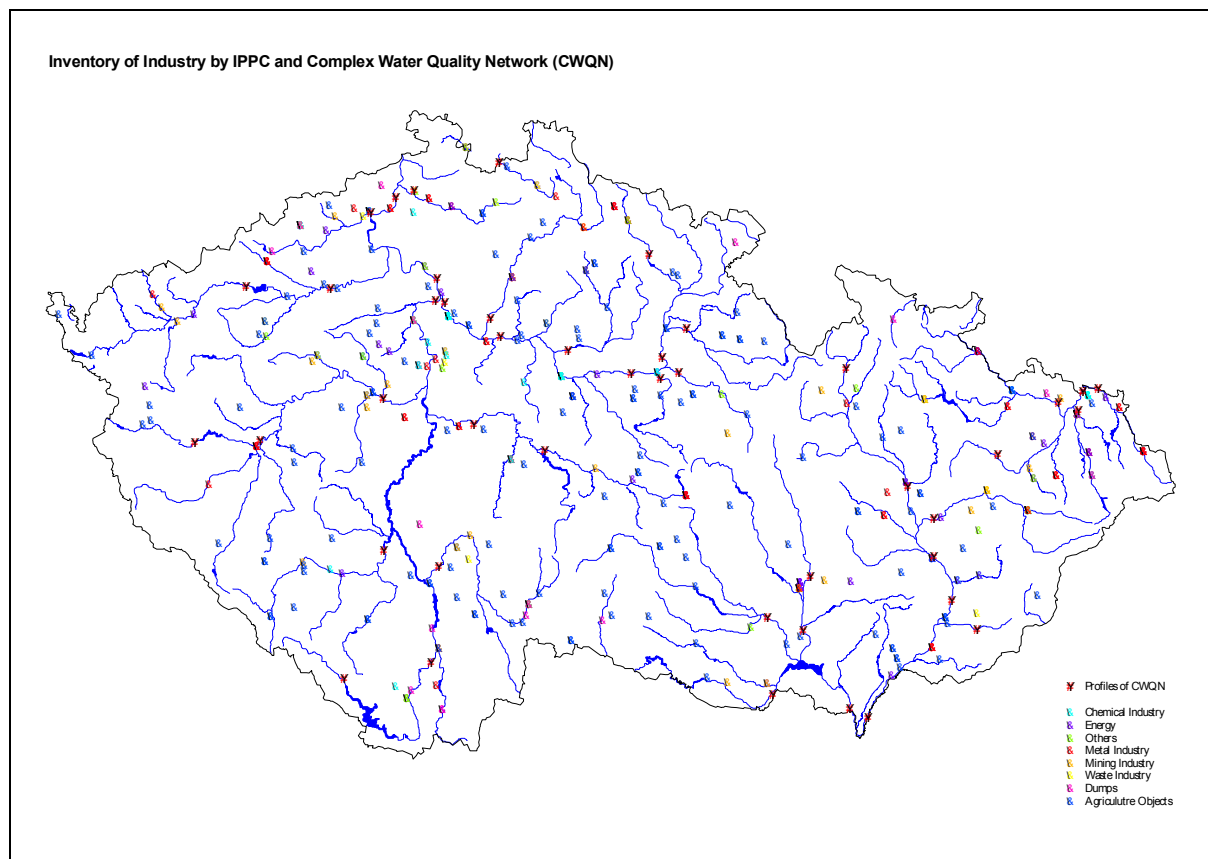
- a) the rate of flow is significant within the river basin district as a whole, in particular at points where the catchment area is greater than 2,500 km²
- b) the volume of water present is characteristic within the river basin district
- c) significant water bodies cross a Member State boundary
- d) sites identified under the decision 77/795/EEC

It is recommended to carry out surveillance monitoring for one year with a frequency of monthly sampling for all list 1 substances.

This recommendation also applies to all relevant list 2 substances.

As illustrated by figure 8 and set out under annex V, 1.3.2 of the Water Framework Directive, operational monitoring must be carried out on the basis of information from pollution pressures as well as surveillance monitoring. Currently, no harmonised procedures for the identification of “significant impacts” at EU level are available. A working group has been established in the context of the Implementation Strategy of the Water Framework Directive, but no final results have been published yet. It is proposed to apply recommendations of this working group as soon as they are available. For the time being, the results of the projects which are currently in progress, may be used to identify operational monitoring. Pollution pressures from point sources of list 1 substances have been identified in the study project “Implementation of Council Directive 76/464/EEC regarding the discharge from industrial installations”, worked out by T.G.M. WRI. An overview of the results is given in annex 11,2. Diffuse pollution of list 1 substances will probably mainly originate from smaller point sources, from diffuse applications (e.g. pesticides) or - probably predominantly - from leaking dumping or disposal sites. One way of detecting such pollution sources is via extensive ambient water monitoring as the one currently carried out by the project “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic” (annex 12.2).

Figure 10: Profiles of the Complex Water Quality Network and locations of IPPC installations in CR



It is, therefore, proposed to combine information from (a) the emission inventory project “Implementation of Council Directive 76/464/EEC regarding the discharge from industrial installations” (inventory of list 1 sources) and (b) the project “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic” (monitoring, including surveillance monitoring) as proposed under recommendation No. 34, to identify those sampling sites of the state monitoring network which should be used for operational monitoring of individual list 1 substances. Annex V of Council Directive 2000/60/EC does not specify the sampling frequency. However, given the high potential impact of list 1 substances, it is proposed to apply a monthly monitoring frequency during the first year, and a lower frequency for the subsequent years, depending on the results of the monitoring.

RECOMMENDATION No. 35: It is proposed to identify on the basis of the results of the emission inventory project “Implementation of Council Directive 76/464/EEC regarding the discharge from industrial installations” and the project “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic” those sampling sites of the state monitoring network which should be subjected to operative monitoring in accordance with the criteria set out in Annex V, 1.3.2 of Council Directive 2000/60/EC.

It is proposed to apply a monthly monitoring frequency during the first year, and a lower frequency for the subsequent years, depending on the results of the monitoring.

This recommendation applies also to relevant list 2 substances.

The above mentioned projects are not yet finalised. Nevertheless, a comparison was made of the location of the profiles in the complex monitoring system and the monitoring system of AWMA with the location of discharges of IPPC installations (provided by CHMI). This is illustrated by figure 10. It seems

that all significant sources of pollution are covered at least by one monitoring profile. Moreover, a comparison was made between the location of discharges of list 1 substances (given by the project “Implementation of Council Directive 76/464/EEC regarding the discharge from industrial installations”) with the location of the profiles in the complex monitoring system. This comparison showed that for each of the discharges identified by the current inventory at least 1 monitoring station for the corresponding list 1 substance was in operation. Examples are illustrated in annex 11.2. This evidence seems to show that the provision of Council Directive 86/280/EEC to carry out monitoring of list 1 substances in waters which are polluted by significant discharges is already well implemented.

For the majority of list 1 substances, the daughter directives of Council Directive 76/464/EEC require a “standstill” with respect to sediments and/or biota (see annex 5). Member States are free to choose the most appropriate approach. No guidance is given at Community level. One possible approach may be to carry out monitoring of sediments and/or biota at all surveillance sampling sites once a year during surveillance monitoring. If monitoring data from subsequent samplings demonstrate that the standstill is breached (significant increase of concentration of pollutant in sediment and/or biota), pollution sources must be identified within the sub-basin of the surveillance site and intensified operational monitoring must be carried out in affected water bodies.

RECOMMENDATION No. 36: It is proposed to establish an appropriate monitoring of sediments and/or biota for list 1 substances in order to prove the fulfilment of the “standstill” provisions of the daughter directives of Council Directive 76/464/EEC.

3.6.2 List 2

3.6.2.1 EU-provisions

Council Directive 76/464/EEC does not contain any specific provisions regarding ambient water monitoring of list 2 substances. With respect to ambient monitoring, the relevant requirements of Council Directive 96/61/EC, 91/692/EEC, 2000/60/EC together with the Commission Guidance Document are the same as those described under section 3.6.1.1.

3.6.2.2 Czech legislation

In section 3.6.1.2, the national legislation regarding ambient monitoring has been already described.

3.6.2.3 Czech monitoring strategies – current status and planned action

The relevant projects currently carried out by the Czech Republic have been described in section 3.6.1.3.

3.6.2.4 Recommendations

As already described in section 3.4.2.3.1 an identification of relevant substances for CR has to be carried out. Following this exercise, it is recommended to apply the monitoring procedure under Annex V of Council Directive 2000/20/EC for these substances (as proposed for list 1 substances).

RECOMMENDATION No. 37: It is recommended to introduce for all relevant list 2 substances the same monitoring procedure as proposed for list 1 substances in Recommendation Nos. 32 - 35.

Regarding monitoring of sediments/biota it may be discussed if standstill provisions for list 2 substances with an octanol-water coefficient of $Pow > 1000$ or a bio-concentration factor of $BCF > 100$ (criteria

proposed by Fraunhofer Institute) should be introduced similarly to the corresponding provision for 1 substances.

4 Conclusions and collection of recommendations

The objective of the project part on the Dangerous Substances Directive 76/464/EEC was to develop specific guidance for the implementation of the directive and its daughter directives into Czech legislation.

The major target areas have been identified in the covenant of the project:

- **Legislation:** Drafting of appropriate legislative measures with the aim to support the Czech administration in the drafting of secondary legislative measures necessary to ensure the proper implementation of the directive
- **Emission inventory:** Developing of a practical approach to the assessment and quantification of industrial discharges, including major discharges to sewers
- **Ambient water monitoring:** Support of the Czech administration in the establishment of a surface water monitoring system which fulfils the monitoring requirements of the directive

During the continuation of the project these problem areas have been confirmed as being the most critical ones for the appropriate implementation of the directive. Thanks to the excellent co-operation with the Czech partners it was possible, during the phases 1 and 2 of the project, to identify for each of these problem areas the gaps of the present regulatory and administrative system, and to design appropriate recommendations during phase 3. The present report represents the result of phase 4 of the project. It sets out, for each of the three target areas, a number of recommendations to the Czech administration together with detailed technical proposals contained in the annexes.

The work of the Czech administration to fill the existing gaps in the identified target areas is still ongoing and will have to be continued after the date of entry of the Czech Republic into the Community. These recommendations should be seen as a concrete and practical guidance to facilitate this process.

This conclusion provides, as a summary of the work accomplished under the project part on Council Directive 76/464/EEC, the complete table of the recommendations elaborated.

Note, the figure on the right corner in the last row of each recommendation in the list below is leading you to the page of this report from where the recommendation has been originally taken and if you click on this figure in the file you will be dropped to the text by a hyperlink. The headings between the recommendations may help you to orientate and response to the structure of this report.

4.1 List of recommendations

Classification of discharges (list 1 and 2)

RECOMMENDATION No. 1: Classify discharges into emissions of list 1 substances and list 2 substances. In order to introduce distinct authorisation regimes for both types of substances this classification should be incorporated in the New Governmental Regulation. 24

RECOMMENDATION No. 2: Classify discharges of list 1 substances into five different classes as shown in table 4. Each class represents a different authorisation regime. It is recommended that this classification should be introduced in the New Governmental Regulation in order to allow for the establishing of distinct regulatory provisions and deadlines. 24

RECOMMENDATION No. 3: A new class of “other single relevant point sources of list 1 substances” should be introduced as discharge of class 4.

A discharge of class 4 is defined as any discharge (direct or indirect) of a substance of list 1 which does not belong to classes 1 – 3, but which belongs to the discharges listed in annex 3, except of discharges from the following sources (which are explicitly subject to the establishment of programmes and therefore belong to class 5):

- non-industrial sources of mercury
- emissions of pentachlorophenols from wood treatment
- tetrachloromethane from industrial laundries
- DDT from any other source than those regulated
- chloroform from any other source than production
- 1,2-dichloroethane, trichloroethene, tetrachlorethane from use as chlorinated solvents below an annual emission of 30 kg/yr
- emissions of trichlorobenzenes from textile dyeing or use in transformer oils. 25

RECOMMENDATION No. 4: Introduce in the New Governmental Regulation 2 distinct classes of authorisations for list 2 substances as specified by table 5 in order to allow for the establishing of distinct regulatory provisions and deadlines. 25

Authorisation procedures and deadlines (list 1)

RECOMMENDATION No. 5: Direct and indirect discharges of class 1 should be authorised on the basis of the Water Act No. 254/2001 coll., §§ 8(1)c) and 16, respectively.

In order to meet the Community emission limit values established under Council Directive 76/464/EEC by the date of entry of the Czech Republic into the Community it is proposed to introduce, preferably in the New Government Regulation, an obligation of dischargers falling under class 1 to report to the competent authority at the latest 2 years before the accession date if the Community emission limit values are complied with. If this is not the case, the discharger should be obliged to provide a detailed plan for the technical adaptation to the required emission limit values by the date of entry. The competent authority must revise the permit within this period accordingly.

Recommendation No. 5 applies also to discharges of class 2. 27

RECOMMENDATION No. 6: All discharges of class 1 are reviewed by the competent authority and revised where necessary by 2007, based on the legislation implementing Council Directive 96/61/EC. As a prerequisite, binding environmental quality standards for list 1 substances must be introduced in the New Governmental Regulation, preferably at the same time when Community emission limit values will be adopted.

Recommendation No. 6 applies also to discharges of class 3. 28

RECOMMENDATION No. 7: It is recommended to introduce, for example in secondary legislation based on § 115 (2) of the Water Act No. 254/2001 coll. a general obligation for holders of permits of list 1 discharges to report to the competent authority about the compliance with national emission limit values at regular intervals of 4 years. The report must also contain an estimate of the impacts of the discharge to the receiving water (impact on the water quality with respect to list 1 substances). On the

basis of this report, the competent authority must review the permit conditions and revise them if necessary (update to best available techniques or compliance with environmental quality standards).

Recommendation No. 7 applies also to discharges of class 2, class 3 and class 4. 28

RECOMMENDATION No. 8: It is proposed that all authorisations for discharges of class 2 should be reviewed by the competent authority by 2009, and revised where necessary by 2012, in accordance with Council Directive 2000/60/EC. As a prerequisite, binding environmental quality standards for list 1 substances must be introduced in the New Governmental Regulation, preferably at the same time when Community emission limit values will be adopted.

Recommendation No. 8 applies also to discharges of class 4. 31

RECOMMENDATION No. 9: Direct and indirect discharges of class 3 should be authorised on the basis of §§ 8 (1) c) and 16 of the Water Act No. 254/2001 coll. In order to meet the deadline for authorisations given in the Common Position to chapter 22 (CONF-CZ 28/01), it is proposed to introduce, preferably in the New Governmental Regulation, guide emission limit values (generally applicable, not branch-specific). The competent authority may accept higher emission limit values unless there is evidence from the monitoring network that the receiving water body will not meet the Community environmental quality standards for the respective substance. In order to facilitate the procedure, it is proposed to introduce, e.g. on the basis of the § 115 (2) of the Water Act No. 254/2001 coll. an obligation of dischargers of class 3 to report to the competent authority at the latest 2 years before accession the current levels of emissions of list 1 substances and the expected impact on the receiving water body.

Recommendation No. 9 applies also to discharges of class 4. 32

Emission limit values (list 1)

RECOMMENDATION No. 10: Introduce in the New Governmental Regulation emission limit values which are in compliance with the relevant daughter directives, e.g. as given in annex 6 in this report. 35

Data flow (list 1 and list 2)

RECOMMENDATION No. 11: In order to ensure that competent authorities receive the information which is necessary to implement the provisions on authorisations under Council Directive 76/464/EEC and its daughter directives, including water-related provisions of Council Directive 96/61/EC the Ministerial Regulation pursuant to Water Act § 115 (2) should be reviewed and revised, if necessary, to ensure that it contains the complete information listed in annex 10.6.1 in this report.

The recommendation should also be applied to applicants of indirect discharges.

For reasons of consistency of the information regime it is recommended to apply recommendation No. 11 also to dischargers of list 2 substances. 38

RECOMMENDATION No. 12: In order to ensure the fulfilment of reporting obligations under Council Directive 91/692/EEC and under Commission Decision 2000/479/EC of 17 July 2000 on the

implementation of a European pollutant emission register (EPER), it is recommended to include in the draft Ministerial Regulation to § 19 (2) of the Water Act the information listed in annex 10.6.2.

The recommendation should also be applied to applicants of indirect discharges.

For reasons of consistency of the information regime it is recommended to apply recommendation No. 12 also to dischargers of 2 substances. 38

Environmental quality standards (list 1 and list 2)

RECOMMENDATION No. 13: Introduce in the New Governmental Regulation binding environmental quality standards and stand still provisions for list 1 substances as required by the daughter directives of Council Directive 76/464/EEC, and summarised in annex 7 of this report. 39

RECOMMENDATION No. 14: The New Governmental Regulation should require the water authorities to set emission limit values which are lower than the Community emission limit values where it is considered necessary to do so in order to ensure the achievement of the environmental quality standards, or to achieve load reduction objectives set in emission reduction programmes.

This recommendation applies also to discharges of list 2 substances. 40

RECOMMENDATION No. 15: All discharge permits for list 1 substances under classes 1 to 4 (see recommendation No. 2) issued or reviewed after the date of accession should be subject to an assessment of their impact on the receiving water. This assessment should utilise a „simplified assessment“ procedure in the first instance. If this assessment, or available monitoring data, reveals that the environmental quality standards is likely to be breached, or that it is being breached, then a more detailed assessment should be made prior to the issue of the permit. 40

RECOMMENDATION No. 16: For the purpose of authorisations for discharges of classes 1 to 4 (see recommendation No. 2) the competent authorities should be provided with detailed guidance on the development of „Water Quality Based Emission Limit Values“ as soon as practicable, but in any event not later than the date of accession. This guidance should be used to ensure that the emission limit values for list 1 substances are such as to not cause a breach of the environmental quality standards in the receiving waters.

Existing monitoring data and additional data from the project of the Czech Hydrometeorological Institute “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic“ should be used to prioritise the review of existing authorisations.

Detailed guidance should be derived from existing Czech best practice and guidance, but should be amended to incorporate best practice as represented by current UK, European and United States manuals.

This recommendation applies also to discharges of list 2 substances. 41

Programmes (list 1)

RECOMMENDATION No. 17: The Czech Republic should prepare programmes of measures for list 1 substances by no later than the date of accession. These programmes should be based on the procedure set out in section 3.4.1.3 of this report following the example in annex 14 and they should take full account of the Commission Guidance Document on list 2 programmes (see annex 16). 42

Authorisations and deadlines (list 2)

RECOMMENDATION No. 18: Measures undertaken for the implementation of Council Directive 96/61/EC for direct and indirect discharges of list 2 substances of class 1 by the final deadline of 2007 should be incorporated as integral parts of the emission reduction programmes described in section 3.4.2.3. A necessary prerequisite is the identification of relevant list 2 substances and the establishment of environmental quality standards as recommended in this report. It is recommended that this exercise should be finalised by the date of entry of the Czech Republic in the Community. 48

RECOMMENDATION No. 19: All direct discharges of relevant substances of list 2 under class 2 should be authorised by 2009 at the latest. These measures should be incorporated as integral parts of the emission reduction programmes described in section 3.4.2.3. A necessary prerequisite is the identification of relevant list 2 substances and the establishment of environmental quality standards as recommended in this report. It is recommended that this exercise should be finalised by the date of entry of the Czech Republic in the Community. 49

RECOMMENDATION No. 20: For indirect discharges of list 2 substances under class 2 it is recommended that the Czech Republic should make a decision about those installations to which an authorisation pursuant to the Water Act No. 254/2001 coll. should apply and those which should be governed by the Act on Water Supply and Sewerage Systems No. 274/2001 coll. This decision may require a revision of these bodies of legislation which should be completed by the date of entry of the Czech Republic in the Community at the latest. All measures following this decision should be implemented as a part of the emission reduction programmes by the end of 2009 at the latest. 49

RECOMMENDATION No. 21: For discharges of list 2 substances under class 1, the existing body of legislation implementing Council Directive 96/61/EC should be reviewed and if necessary, revised, to ensure that the competent authorities responsible for the authorisation of such discharges in the Czech Republic will be bound in their decision to the environmental quality standards set for list 2 substances in the New Governmental Regulation as proposed in recommendation No. 22. 50

RECOMMENDATION No. 22: For discharges of list 2 substances under class 2, the emission limit values laid down in permits must be set on the bases of environmental quality standards by 2009 at the latest. This deadline should be incorporated into the New Governmental Regulation together with binding quality standards for all relevant list 2 substances.

50

Environmental quality standards (list 2)

RECOMMENDATION No. 23: Environmental quality standards should be derived for all relevant list 2 substances (see recommendation No. 25) and included into the New Government Regulation. The

approach of deriving environmental quality standards should follow, as much as possible, the procedure laid down under Annex V,1,2,6 of Council Directive 2000/60/EEC and should take into account the results of the ongoing discussion of environmental quality standards for priority substances at European level. This paper contains in annex 9 a collection of environmental quality standards from literature which were partially derived by a procedure similar to the one required by Council Directive 2000/60/EEC. It is, therefore, proposed that these environmental quality standards should be taken into consideration when environmental quality standards will be developed.

52

Programmes (list 2)

RECOMMENDATION No. 24: The Czech Republic should prepare programmes of measures for relevant list 2 substances by no later than the date of accession. These programmes should be based on the procedure set out in this report following the example in annex 15 and should take full account of the Commission Guidance Document on list 2 programmes as set out in annex 16. 53

RECOMMENDATION No. 25: The selection of relevant substances/pollutants of list 2 substances should be achieved by a combination of screening monitoring of candidate substances and the assessment of emissions data (including information from production volumes). Both activities should be continued with much effort to identify the relevant list 2 substances significantly prior to the date of accession, as these substances will form the basis for the New Governmental Regulation. 54

RECOMMENDATION No. 26: Programmes of measures for list 2 substances should be based on the procedure set out in section 3.4.1.3 of this report following the example in annex 15 of this report. They should take full account of the Commission Guidance Document on list 2 programmes as set out in annex 16 of this report. 54

Effluent monitoring and emission inventory (list 1 and 2)

RECOMMENDATION No. 27: The Czech Republic should clearly identify one administrative body to carry out external monitoring of discharges of list 1 substances on a systematic basis. Regular checks should be carried out with a frequency depending on objective criteria such as level of discharge or impact on the receiving water body.

This recommendation equally applies to list 2 substances. 61

RECOMMENDATION No. 28: A consistent system of self-monitoring of discharges of list 1 substances, based on §§ 38 (3) and (5) of the Water Act, should be introduced. In the New Governmental Regulation provisions for a daily self-monitoring should be set if certain threshold values for emitted loads in the untreated waste water are exceeded (see proposal for such thresholds in annex 11. 3).

External monitoring pursuant to recommendation No.27 should be applied as a validation of self-monitoring.

This recommendation equally applies to list 2 substances. 62

RECOMMENDATION No. 29: All general provisions of Council Directive 86/280/EEC for effluent monitoring of discharges of list 1 substances, and the substance-specific analytical requirements of individual daughter directives should be incorporated in the New Governmental Regulation. 62

RECOMMENDATION No. 30: It is recommended to introduce in the decree pursuant to § 19 (2) of the Water Act an obligation of the competent authority to collate, validate and assess self-monitoring data obtained in accordance with recommendation no. 28. The water authority should be required store annual data, especially annual loads of discharged substances of list 1 in the PAIS on a regular basis. A proposal for the relevant data is provided in annex 10.6.2 of this report. 63

RECOMMENDATION No. 31: It is recommended that all monitoring requirements proposed in recommendation No. 28 should also be incorporated into the decree based on the Act on Water Supply and Sewerage Systems No. 274/2001 Coll. 64

Ambient water monitoring (list 1 and 2)

RECOMMENDATION No. 32: In order to ensure that the ambient water monitoring will be carried out in a coherent way, it would be appropriate to establish a clear legal basis which defines the number and selection of sampling sites, the parameters and the frequency of monitoring. This legislation should also clearly define the obligation of individual institutions to comply with the monitoring provisions and to provide monitoring results to the Ministry of Environment.

This recommendation is valid for list 1 and all relevant list 2 substances. 71

RECOMMENDATION No. 33: It is recommended that the current ambient water monitoring system should be reviewed and modified in accordance with the monitoring system introduced by annex V of Council Directive 2000/60/EC.

This recommendation is valid for list 1 and all relevant list 2 substances. 71

RECOMMENDATION No. 34: For the purpose of recommendation No. 33, a surveillance monitoring of all list 1 substances should be carried out at intervals of six years or more frequently. Surveillance monitoring should be carried out at the sampling sites identified in the project “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic”, or at a sub-set of these sites, selected in accordance with the criteria given in annex V, 1.3.1 of Council Directive 2000/60/EC.

- a) the rate of flow is significant within the river basin district as a whole, in particular at points where the catchment area is greater than 2,500 km²
- b) the volume of water present is characteristic within the river basin district
- c) significant water bodies cross a Member State boundary
- d) sites identified under the decision 77/795/EEC

It is recommended to carry out surveillance monitoring for one year with a frequency of monthly sampling for all list 1 substances.

This recommendation also applies to all relevant list 2 substances. 72

RECOMMENDATION No. 35: It is proposed to identify on the basis of the results of the emission inventory project “Implementation of Council Directive 76/464/EEC regarding the discharge from industrial installations” and the project “Occurrence and migration of dangerous substances in the hydrosphere of the Czech Republic” those sampling sites of the state monitoring network which should be subjected to operative monitoring in accordance with the criteria set out in Annex V, 1.3.2 of Council Directive 2000/60/EC.

It is proposed to apply a monthly monitoring frequency during the first year, and a lower frequency for the subsequent years, depending on the results of the monitoring.

This recommendation applies also to relevant list 2 substances. 73

RECOMMENDATION No. 36: It is proposed to establish an appropriate monitoring of sediments and/or biota for list 1 substances in order to prove the fulfilment of the “standstill” provisions of the daughter directives of Council Directive 76/464/EEC. 74

RECOMMENDATION No. 37: It is recommended to introduce for all relevant list 2 substances the same monitoring procedure as proposed for list 1 substances in Recommendation Nos. 32 - 35. 74

5 Documentation

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This work would not have been possible without valuable contributions from a number of experts involved. Therefore, the Austrian twinning team would like to express their appreciation and special thanks to the following Czech colleagues for their helpful and constructive support and advice during the different stages of the project:

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6 *Annexes to the final report*