

hydraulic structure or a dam break of reservoirs impounding surface water. The defined flood areas, approved by the water authority, are one of the land use limits and are used by the public administration bodies particularly in issuing building permits. The studies of runoff conditions are sources of information on flood areas prior to and after the implementation of the proposed flood control measures, on the quantification of the extent of flood damages and evaluation of the effectiveness of the proposed technical and non-technical measures.

Sub-programme 129 126 “Support for Water Retention in Dry Polders on Minor Watercourses” responds to the repeating occurrences of “flash floods” and focuses on reducing risks of floods from torrential rains on minor watercourses through a construction (reconstruction) of dry polders in combination with the possible regulation of watercourse channels.

The measures under the programme 129 120 are implemented by watercourse administrators (the River Boards, state enterprises, the Forests of the Czech Republic, s.e. and the minor watercourse administrators appointed by the Ministry of Agriculture pursuant to Section 48, Subsection 2 of the Act No. 254/2001 Coll., on Water and the amendment to certain laws (the Water Act) as amended. The implementation of flood control measures under the sub-programme 129 126 is ensured by municipalities only.

Through the institution of the so-called promoter, the programme allows participation of municipalities, association of municipalities, towns and regions in the process of proposing flood control measures which are then implemented by the watercourse administrators.

In 2011, the total number of projects in progress under the programme 129 120 “Support for Flood Prevention II” included 7 projects of flood control measures with retention, 85 projects of flood control measures along watercourses, 9 projects aimed at increasing the safety of hydraulic structures and 5 projects of the delimitation of flood areas and studies of runoff conditions. The following table 9.1.6 shows some of the major projects under the programme 129 120.



Hydraulic structure Řimov

Table 9.1.6

Use of funds for selected major projects under the programme 129 120 “Support for Flood Prevention II” in millions of CZK

Watercourse administrators	Name of project	Implementation period	Total costs	Subsidies in 2011
Forests of the Czech Republic, s. e.	Flood control measures on the Žernovnik stream	10/10-06/13	11.390	9.000
Elbe River Board, s. e.	Lovosice area (Pištany, Lovosice) – flood control measures against Q100 on the Elbe	04/10-06/13	649.809	286.223
Morava River Board, s. e.	The Třebůvka River, Moravičany – damming	10/10-12/13	130.341	109.920
Oder River Board, s. e.	The Porubka River regulation, Ostrava – Svinov km 0.900-7.200	07/09-03/12	85.816	20.327
Ohře River Board, s. e.	Bohušovice nad Ohří – flood control measures	06/11-12/13	60.680	7.600
Vltav River Board, s. e.	Flood control measures for the protection of Strakonice	06/11-04/13	80.000	26.705

Source: MoA

Table 9.1.7

Use of state budget funds in the year 2011 under the programme 129 120 by the individual watercourse administrators in millions of CZK

Owners and administrators	Use of funds in 2011	
	Investments	Non-investments
Elbe River Board, s. e.	515.329	0.000
Vltava River Board, s. e.	79.954	0.000
Ohře River Board, s. e.	37.111	0.000
Oder River Board, s. e.	128.556	0.000
Morava River Board, s. e.	368.496	4.694
Forests of the Czech Republic, s. e.	82.357	0.000
Minor watercourse administrators – municipalities	3.996	0.000
Total	1,215.799	4.694

Source: MoA

In 2011, the Ministry of Agriculture continued to implement the programme 229 110 aimed at the rehabilitation of state-owned water management property administered by watercourse administrators, which was damaged by floods in the previous years. The rehabilitation is carried out in the year 2011 through the implementation of the sub-programme 229 116 “Remedying of the Impacts of Floods in the Year 2009” and the sub-programme 229 117 “Remedying of the Impacts of Floods in the Year 2010”.

In 2011, under the sub-programme 229 116, financial support was granted to 81 projects. Most of them, 48 projects, were implemented by the watercourse administrator Forests of the Czech Republic, s. e. Table 9.1.8 shows some of the major projects under this sub-programme.



Flood control measures of Strakonice

Table 9.1.8

Summary of costs of selected major projects under the sub-programme 229 116 “Remedying of the Impacts of Floods in the Year 2009” in millions of CZK

EDS/SMVS 229116	Name of project	Implementation period	Total costs of the project	Investor
1002	Remediation of flood damage on the Bystrá stream – reconstruction of stream channel downstream of the fire brigade building in Nový Oldřichov (km 16.000 – 16.950)	01/11-11/11	14.881	Ohře River Board, s. e.
1010	Remediation of flood damage on the Bystrá stream – repair of stream channel in Nový Oldřichov (km 16.950 – 17.770)	03/11-11/11	3.854	Ohře River Board, s. e.
2119	The Vojtovický stream in km 15.05 – 17.30	09/10-05/12	12.930	Forests of the Czech Republic, s. e.
2122	The Lánský stream in km 4.735 – 7.700, stage I	11/10-12/11	13.674	Forests of the Czech Republic, s. e.
5672	Nameless left-hand tributary of the Sedlnice stream km 0.000 – 1.100	01/11-12/11	5.683	Oder River Board, s. e.
5671	The Sedlnice stream km 18.040 – 20.270	11/10-12/11	34.521	Oder River Board, s. e.
5807	The Lichnovský stream km 3.950 – 5.800, cadastral territory of Bordovice	09/10-12/11	2.640	Oder River Board, s. e.
6004	Hydraulic structure Lovosice, dredging of sediments, river km 786.5 – 787.4	06/10-12/11	17.598	Elbe River Board, s. e.
9807	The Loučský stream – flood damage 2009	06/10-11/11	3.699	Morava River Board, s. e.

Source: MoA

Table 9.1.9

Use of state budget funds in the year 2011 under the sub-programme 229 116 in millions of CZK

Owners and administrators	Use of funds in 2011	
	Investments	Non-investments
Elbe River Board, s. e.	0.000	3.132
Vltava River Board, s. e.	0.000	0.000
Ohře River Board, s. e.	17.486	2.710
Oder River Board, s. e.	46.633	12.813
Morava River Board, s. e.	3.645	2.738
Forests of the Czech Republic, s. e.	27.508	17.056
Total	95.272	38.449

Source: MoA

In 2011, under the sub-programme 229 117, financial support was granted to 190 projects. Most of them, 57 projects, were implemented by the watercourse administrator Forests of the Czech Republic, s. e. The following table 9.1.10 shows some of the major projects under this sub-programme.



Hydraulic structure Labská, the Labe River

Table 9.1.10

Summary of costs of selected major projects under the sub-programme 229 117 “Remedying of the Impacts of Floods in the Year 2010” in millions of CZK

EDS/SMVS 229117	Name of project	Implementation period	Total costs of the project	Investor
1021	Remediation of flood damage 08/2010 – the Fojtovický stream, repair of stream channel in Heřmanov	03/11-11/12	9.942	Ohře River Board, s. e.
2101	Left-hand tributary of the Jičínka River in km 20.940	11/10-12/11	4.000	Forests of the Czech Republic, s. e.
2150	The Satina River km 3.350	11/10-12/11	3.034	Forests of the Czech Republic, s. e.
4005	The Lužnice River, river km 116.900 – 117.022, Majdalena – repair of bank lining	08/11-11/11	2.388	Vltava River Board, s. e.
5808	The Olše River km 19.100 – 19.800	09/11-12/11	4.198	Oder River Board, s. e.
5851	The Vendryňka River and left bank of the Vendryňka River, river km 0.600 – 2.800; 0.000 – 1.200	08/11-12/11	2.723	Oder River Board, s. e.
6040	The Černá Nisa River, Liberec, repair of channel, river km 0.00 – 7.15	11/11-12/11	6.429	Elbe River Board, s. e.
6044	Fojtka, hydraulic structure Fojtka, renovation of hydraulic structure	07/11-12/11	6.230	Elbe River Board, s. e.
9717	The Bečva River, repair of dike and remediation of left bank, Přerov and Kozlovice km 13.574 – 13.770 and 14.940 – 16.070	09/11-12/11	1.966	Morava River Board, s. e.
9692	The Rožnovská Bečva River, km 8.290, Zašovský weir – repair	08/11-12/11	4.148	Morava River Board, s. e.

Source: MoA

Table 9.1.11

Use of state budget funds in the year 2011 under the sub-programme 229 117 in millions of CZK

Owners and administrators	Use of funds in 2011	
	Investments	Non-investments
Elbe River Board, s. e.	30.475	52.403
Vltava River Board, s. e.	0.000	5.249
Ohře River Board, s. e.	9.831	20.892
Oder River Board, s. e.	3.916	42.974
Morava River Board, s. e.	0.316	32.755
Forests of the Czech Republic, s. e.	8.544	11.376
Total	52.082	165.649

Source: MoA

In 2011, the Ministry of Agriculture continued to implement the programme 129 130 “Renewal, Dredging and Rehabilitation of Fishponds and Construction of Water Reservoirs”.

The administration of the programme 129 130 was in the beginning postponed due to certain changes in the notification deadline and the consequent delays in the process of approving the programme documentation. For this reason, the funding of this programme effectively began as late as in the year 2008.

The objective of this programme is to improve the technical status of fishpond system in the Czech Republic and to renew the water management functions of fishponds and water reservoirs with focus on increasing their safety during floods, including the prevention of the threat of special floods, as well as to dredge fishponds and water reservoirs in order to restore their storage

capacity and thus fully renew their function. Another objective of this programme is to support construction of new water reservoirs that will be included in flood control system, in dry periods used for controlled increase of discharge and, at the same time, they will also be used for extensive fish farming. Both objectives of the programme are aimed at reducing the impacts of extreme hydrological situations, i.e. floods and drought.

In 2011, in total 64 projects were financed under the following breakdown: non-capital investment funds of the state budget were expended in the amount of CZK 14.999 million and capital investment funds in the amount of CZK 45.999 million, the EIB loan was used to draw non-investment funds in amount of CZK 269.556 million and capital investment funds in amount of CZK 189.556 million.

“Binding Rules” governing the submitting of project applications to be included in the programme 129 130 “Support for the Renewal, Dredging and Rehabilitation of Fishponds and Construction of Water Reservoirs” stipulate detailed terms, of which the most important are:

The applicant may only be an entity carrying out business in primary agricultural production, carrying out subsidized fish farming and fishing operations in a fishpond or water reservoir, which proves farming on more than 20 hectares of water bodies in the course of the last year and submits documents certifying the ownership, lease or other legal relationship in respect of 20 hectares of water bodies.

For the prepared project, the applicant shall submit the documents of ownership (lease or other legal relationship) of the land affected by the construction, the affirmative standpoints of the river basin administrator (River Board, state enterprise), of the administrator of the watercourse downstream of the respective hydraulic structure, and of the competent water authority having subject-matter and local jurisdiction.

In case of construction of a new water reservoir (or a system of water reservoirs), which must be larger than 2 hectares, the

Table 9.1.12

Use of state budget funds for selected major projects under the programme 129 130 “Renewal, Dredging and Rehabilitation of Fishponds and Construction of Water Reservoirs”, in millions of CZK

Applicant	Name of project	Implementation period	Total costs	Subsidies in 2011
Kinský Žďár, a.s.	Renewal and reconstruction of the Velké Dářko pond structures	07/11-08/12	25.200	19.039
Czech Agricultural University in Prague	Rehabilitation of the Vyžlovský pond in the cadastral territory of Vyžlovka	11/11-12/12	5.080	1.900
Rybářství Třeboň a.s.	Reconstruction of the Vitek pond structures in the cadastral territory of Stará Hlína	11/10-02/12	20.428	16.341
Moravský rybářský svaz, místní organizace Vyškov	The desilting and rehabilitation of water reservoir Kačenec II	07/11-04/12	18.532	14.291
František Švehla	Construction of water reservoir Křivohlav	06/11-06/12	20.381	14.400

Source: MoA

main purpose of such hydraulic structure will be the protection against floods and drought, i.e. only extensive fish farming will be permitted. Table 9.1.12 shows some of the major projects included in the programme 129 130.

Sub-programme 129 162 “Support for the Renewal and Construction of Irrigation Detail and Optimization of Irrigation Systems”

In 2011, the sub-programme 129 162 was not opened due to lack of financial resources under the programme 129 160.

In 2011, the Ministry of Agriculture continued to implement the programme 129 170 “Support for Improving the Functionality of Hydraulic Structures”.

The primary objective of the programme is to ensure, in particular, the following: to prevent major failures of the hydraulic structures, in respect of their technical condition and improvements in the quality of water in reservoirs. The main aspects include the reliability and safety of hydraulic structures and the quality of water in reservoirs, the deterioration of which might have significant impacts.

The subject-matter objectives of the programme are supported by rich experience in coherent and systematic technical and safety surveillance of hydraulic structures and water quality monitoring in the reservoirs. The programme focuses, in particular, on implementation of measures aiming to remedy the condition of the most threat-posing hydraulic structures.

The programme objectives are oriented at improving the functionality of the impounding structure itself and the dam, at accessories and service structures, and also at the reservoir area and the quality of accumulated water.

The programme does not include measures for fishponds and certain measures to improve the safety which are covered by another subsidy tools.

In 2011, three projects falling within the Morava River Board, s. e. were granted financial support in the amount of CZK 6.591 million of capital investment funds and CZK 127.805 million of non-capital investment funds under the programme 129 170. In total, the amount of CZK 134.397 million was used.

Programme 129 190 “Support for Agricultural Watercourses” – Agricultural Water Management Administration

The programme follows up with the sub-programme 229 013 and includes expenditures on purchase and technical renovation of state-owned property administered by the Ministry of Agriculture, namely by its organizational unit – Agricultural Water Management Administration.

The programme is constituted by three sub-programmes:

129 192 “Preparation of projects under the Operational Programme Environment”,

129 193 “Rehabilitation of Watercourses and New Adaptations of Watercourses”,

129 194 “Restoration of Water Reservoirs”.

In 2011, no state budget funds were released for the programme 129 190.

State funds are also provided for other measures in water management pursuant to Section 102, Subsection 1 letters b), i), k) of the Water Act. This support is of non-investment nature and is provided for current expenditures of the specific indicator “Support for water management in total” in the budget chapter of the Ministry of Agriculture for maintenance of minor watercourses, water reservoirs and polders and related structures, as well as for maintenance and operation of main drainage facilities.

Maintenance of minor watercourses, water reservoirs and polders

In 2011, no state budget funds were released for this purpose.

Operation of minor watercourses, water reservoirs and polders and related structures

In 2011, no state budget funds were released for this purpose.

Maintenance of main drainage facilities

In 2011, the non-capital investment funds of the state budget expended within the framework of this support, i.e. for maintenance, repairs and management of the state-owned property on main drainage facilities and related structures administered by the Agricultural Water Management Administration amounted to CZK 14.763 million. In total 161 non-capital investment projects (including 24 immediate interventions) were executed and completed and maintenance was carried out for 287.83 km of main drainage facilities.

Operation of main drainage facilities

In 2011, the non-capital investment funds of the state budget in the amount of CZK 14.266 million were expended within the framework of this support to cover operating costs of 112 projects of main drainage facilities administered by the Agricultural Water Management Administration

9.2 Ministry of the Environment

9.2.1 Financial support provided under the programmes co-financed from the EU funds

Operational Programme Environment

The Operational Programme Environment is a sectoral operational programme for the programming period 2007–2013, which was approved on 20 December 2007. The funds started to be used in September 2008. The aim of the operational programme is the protection and improvement of the quality of the environment as a basic principle for sustainable development. The Operational Programme Environment is divided into a total of eight priority axes:

1. Water Management Infrastructure Improvements and a Reduction of Flood Risks,
2. Air Quality Improvements and a Reduction of Emissions of Pollutants,
3. Sustainable Use of Energy Sources,
4. Improved Waste Management and Rehabilitation of Contaminated Sites,
5. Reducing of Industrial Pollution and Environmental Risks,
6. Improving the State of Nature and the Landscape,
7. Infrastructure Development for Environmental Education, Consultancy and Awareness,
8. Technical Assistance.

The Operational Programme Environment is managed and guaranteed by the Ministry of the Environment, the Intermediate Body is the State Environmental Fund of the Czech Republic. The applications for support are received by regional offices of the State Environmental Fund of the Czech Republic, those submitted under the priority axis 6 and under the intervention area I.3.2

are also received by the Agency for Nature Conservation and Landscape Protection of the Czech Republic. Dates for submitting the applications are published in the form of Calls on the portal www.opzp.cz. For the year 2011, the receipt of applications for the granting of support under the Operational Programme Environment was opened within one Call with focus on flood protection and implementation of measures aiming to execute river basin management plans. Under the priority axis I – Water Management Infrastructure Improvements and a Reduction of Flood Risks, the ERDF/CF funds in the total amount of CZK 5,546 million were used in 2011. Under the priority axis 6 – Improving the State of Nature and the Landscape (area of intervention 6.4 – Optimization of the Landscape Water Regime), the ERDF/CF funds in the total amount of CZK 663.6 million were used in 2011.

Under the Operational Programme Environment, the priority axis I – Water Management Infrastructure Improvements and a Reduction of Flood Risks, the Ministry of the Environment in 2011 approved 13 projects (registration sheet issued), of which 2 projects fell under the area of intervention I.1 The Reduction of Water Pollution (the total support from the EU funds amounted to CZK 953.3 million), 10 projects fell under the area of intervention I.2 Drinking Water Quality Improvement (the total support from the EU funds amounted to CZK 846.3 million) and 1 project fell under the area of intervention I.3 The Reduction of Flood Risks (the total support from the EU funds amounted to CZK 19.8 million). In 2011, no so-called large projects were approved, but the EC issued a decision for two water management projects approved at a national level in previous years. Under the OPE, priority axis 6 – Improving the State of Nature and the Landscape, the Ministry of the Environment in 2011 approved 66 projects (registration sheet issued) falling under the area of intervention 6.4 – Optimization of the Landscape Water Regime (the total support from the EU funds amounted to CZK 269.8 million).

Table 9.2.1.1

Grant funds from the Operational Programme Environment for the financing of measures in the area of water management in 2011

area of support	number of approved projects	total costs of approved projects (millions of CZK)	total amount of the EU support for approved projects (millions of CZK)	reimbursed by the EU *) (millions of CZK)	reimbursed from the State Environmental Fund/state budget in total (millions of CZK)
I.1	2	1,476.3	953.3	5,387.2	331.2
I.2	10	1,473.6	846.3	26.2	1.5
I.3	1	23.3	19.8	132.6	7.8
Priority axis I in total	13	2,973.2	1,819.4	5,546.0	340.5
6.4	66	408.9	269.8	663.6	73.4
Total	79	3,382.1	2,089.2	6,209.6	413.9

Source: MoE

Note: *) State budget funds expended on the pre-financing of expenditures that are to be covered from the ERDF/CF funds

Support under ISPA and Cohesion Fund

Based on the Government Resolution No. 149 of 14 February 2001, the Ministry of the Environment of the Czech Republic was established the Intermediate Body and the State Environmental Fund of the Czech Republic the implementing agency for the implementation of ISPA projects. The pre-accession instrument ISPA was designed for sectors of transport and environment in EU candidate countries. Through the accession to the EU on 1 May 2004 the Czech Republic was entitled to draw subsidies from the Cohesion Fund. Based on the Government Resolution No. 125/2004, the Ministry of the Environment of the Czech Republic was established the Intermediate Body and the State Environmental Fund of the Czech Republic the Implementing Body for the implementation of Cohesion Fund projects in the area of the environment. Due to the fact that as of the day of accession of the Czech Republic to the EU none of ISPA projects

was completed, these projects were transferred to the Cohesion Fund projects, pursuant to Art. 16a of the Council Regulation (EC) No. 1164/94. In total 106 projects applying for support under ISPA programme and CF were registered by the State Environmental Fund of the Czech Republic. As of 31 December 2006, of the total number of 106 projects, the European Commission approved 40 projects, of which 39 focused on the implementation of measures in the area of water management.

The eligible costs for 39 approved projects amount to € 800.1 million. The CF/ISPA support allocated for these projects amounts to € 565.6 million. The above mentioned projects also include a project of remediation of flood damage (comprising 13 sub-projects which were supported from ISPA fund), a non-investment project of Technical Assistance and also a project in the field of the hydrosphere monitoring (see table 9.2.1.2).

Table 9.2.1.2**The allocation of funds for types of measures (approved CF/ISPA projects) in millions of €**

Type of measure	Number of projects	Eligible costs	CF/ISPA support
water	36	763.2	536.6
monitoring of hydrosphere	1	16.9	12.7
Technical Assistance	1	2.3	1.7
floods ISPA 2002	1 (13 sub-projects)	17.7	14.6
Total	39	800.1	565.6

Source: MoE

In 2011, support was granted for 4 CF/ISPA projects. Since 2006, the granting of funds for the final beneficiaries has been proceeding in the form of a so-called pre-financing, i.e. through effecting payments from the state budget funds for the co-financing and pre-financing of expenditures that are to be covered from the CF funds. In the sector of environment, the payments for CF projects are effected through the chapter 315/MoE of the state budget. In 2011, support in the total amount of CZK 303.4 million was transferred from the state budget to the final beneficiaries. Approximately 20 projects in 2011 had the so-called final report of the project to the EC submitted. The approval of this final report is bound to the release of the final payment from the EU grant funds in the amount of 20% of the total grant provided.

Table 9.2.1.3**Summary of financial support provided under the national programmes of the Ministry of the Environment and programmes co-financed from the EU funds**

Grant funds for the Ministry of the Environment in total	millions of CZK
National grant titles	20.60
Operational Programme Environment	6,623.50
ISPA / CF	303.40
State Environmental Fund ⁹⁾	413.90
Total	7,361.40

Note: ⁹⁾ Support provided to the applicants from the SEF funds in the form of loans is not included in the table above.

9.3 The State Environmental Fund

The State Environmental Fund of the Czech Republic is a specifically oriented institution which is an important financial resource for support of implementation of measures to protect and improve the status of the environment in its respective compartments.

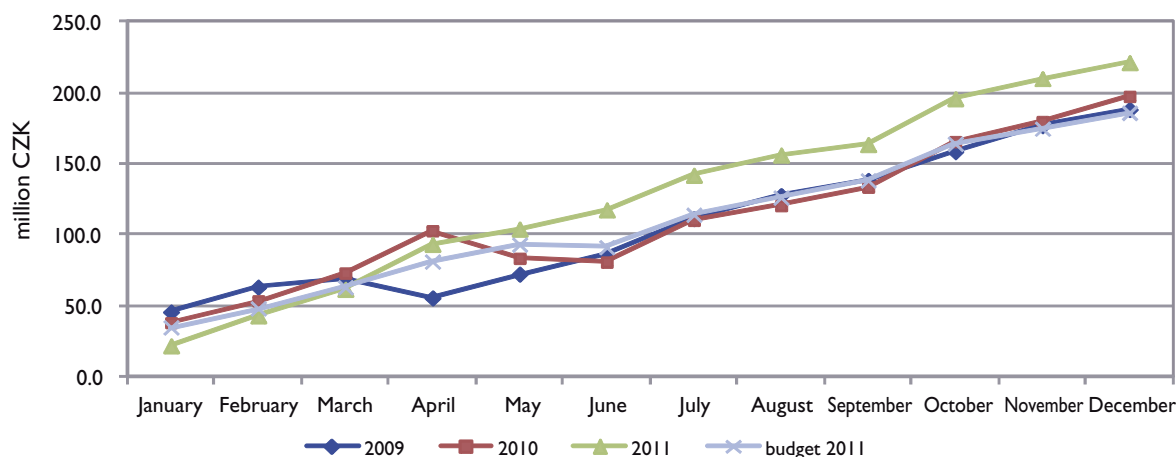
The revenues of the State Environmental Fund of the Czech Republic include collected charges for environmental pollution. In the area of the protection of waters they comprise a charge for waste water discharges into surface waters and a charge for abstracted groundwater quantities. The collection of charges for waste water discharges into surface waters in the year 2011 reached 119% of the budgeted revenues. This exceedance of the budgeted revenues was caused, despite the remaining low production in industrial sectors affected by recession, especially by enhanced inspection activities of the State Environmental Fund staff members in cooperation with control laboratories and measuring groups of the selected providers of these services (monitoring) in close cooperation with the Czech Environmental



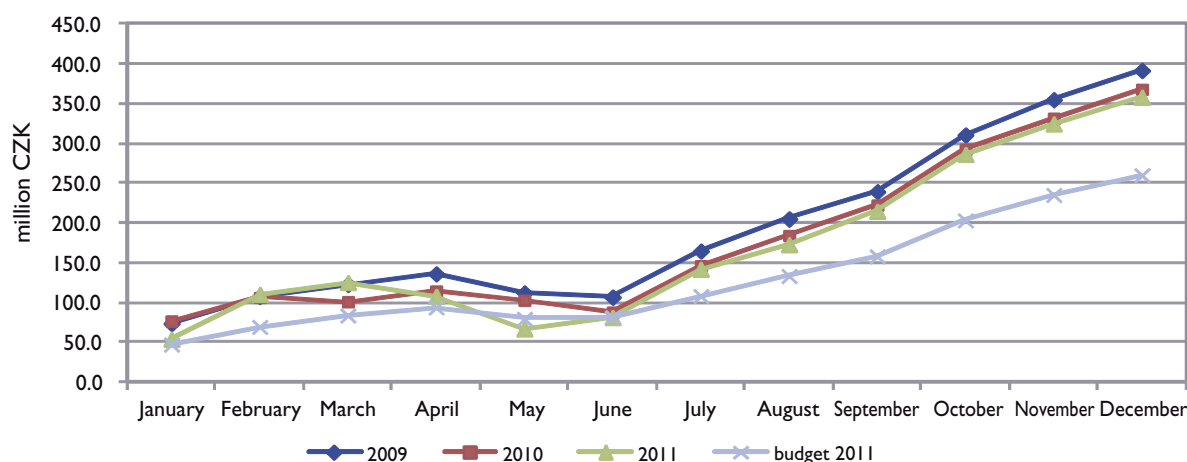
Hydraulic structure Kamenička

Inspection. These positive results were achieved despite the fact that many organizations still make use of the legal opportunity to defer payments of charges due to investments to waste water treatment plants, where the current legal regulations are relatively very benevolent, allowing even to fully forgive these deferred charges.

The chart below documenting the collection of charges for abstracted groundwater quantities in 2011 shows a similar trend as in the previous year. The revenues from charges reached the value of 137.7% of the planned annual revenues. It is evident that very positive results were achieved, in particular, due to permanent intensive controls performed in the recent three years by the State Environmental Fund staff members in close cooperation with the Czech Environmental Inspection. A slight but steady decrease in the revenues for abstracted water quantities was managed to be eliminated by this measure. Given the drastic reduction in the number of experienced inspectors due to a reorganization performed in late 2010, however, it can be assumed with a high degree of probability that the established trend of successful collection of charges will fail to be maintained in the coming years and repeated avoidances from the obligation to pay charges will occur again. Also legislative proposals to amend the current legislation, prepared by the State Environmental Fund of the Czech Republic, which would allow, among other things, to reduce losses of funds and stabilize revenues in this area, have not yet been accepted by the competent authorities and submitted to the government and the legislative councils. The development of revenues from both charges is shown in charts 9.3.1 and 9.3.2.

Chart 9.3.1**Development of revenues from charges for waste water in the years 2009–2011 in millions of CZK**

Source: The State Environmental Fund of the Czech Republic

Chart 9.3.2**Development of revenues from charges for groundwater in the years 2009–2011 in millions of CZK**

Source: The State Environmental Fund of the Czech Republic

The State Environmental Fund provides support from its resources under the so-called national programmes and carries out the activities which were delegated to it for administration of funds granted from the EU for the area of the environment. The State Environmental Fund of the Czech Republic was appointed the Implementing Body for the Cohesion Fund and the Intermediate Body for the Operational Programme Environment. To co-finance projects supported under the Cohesion Fund, the Operational Programme Infrastructure and the Operational Programme Environment, the State Environmental Fund provides financial grants from its resources.

Grant funds provided by the State Environmental Fund of the Czech Republic pursuant to MoE Directive 6/2010, on the provision of funds from the SEF under the national programmes

In 2011, in the area of water protection under the national programmes, the following programmes were announced by the State Environmental Fund of the Czech Republic:

- sub-programme IV.2.D Waste Water Treatment under the Programme of Support for Municipalities Located in the Regions of National Parks,

- sub-programme IV.4 The Increase in Support from the SEF in Co-financing OPE Projects – after two completed Calls to submit applications for support it can be stated that the overwhelming majority of projects (except for 2 submitted projects) under this sub-programme are projects in the field of water management infrastructure (18 projects, of that 16 approved),
- V.1 Support Programme to Ensure Comprehensive Monitoring of Water Status in the Czech Republic,
- V.2 Support Programme to Ensure Monitoring of Waters.

In 2011, based on approved projects under the above-mentioned support programmes, the area of water protection received grants in the total amount of CZK 31.8 million (of that CZK 13.8 million on the basis of the minister's exemption for the Municipality of Klec). As regards approved projects, liabilities in the total amount of CZK 22.8 million (of that CZK 18.7 million for the sub-programme IV.4 The Increase in Support from the SEF in Co-financing OPE Projects) are transferred to the year 2012.

In 2011, under support programmes for water protection, no Call to submit applications for support was announced, only Call



The Labe River in Klášterská Lhota

2 pursuant to Annex IV of the MoE Directive No. 6/2010 was coming to the end. Under this Annex IV, in the area of water protection, only one application for support for household waste water treatment plant in the amount of CZK 151.000 (included in the above-mentioned liabilities) was submitted.

In addition, under the national programmes, the completion of previously approved funding of projects in already closed programmes is under way.

9.4 Financial support from international cooperation and the EU

Projects focusing on the area of water management are also implemented under the Objective 3 programmes. The implementation of water management projects continued also in 2011, especially through the individual operational programmes falling under the Objective 3 of the European Territorial Cooperation. Control of these projects was entrusted to the Centre for Regional Development of the Czech Republic, which performs it through a network of offices in NUTS II regions. The offices store the project documentation, including documents on provided and used support from the foreign resources.

Under the Objective 3 programmes that are represented by Operational Programmes of Cross-border Cooperation Czech Republic – Republic of Poland, Slovak Republic – Czech Republic, Austria – Czech Republic, Free State of Saxony – Czech Republic and Free State of Bavaria – Czech Republic, support continues to be granted for the projects focusing on environmental protection, contributing to environmental status improvements and aiming to prevent risks (natural and technological risks including climate change, water management, etc.). Transnational Cooperation Operational Programme for Central Europe focuses, among other things, in the 2007–2013 programming period also on transfer and exchange of experience in the field of environmental protection.

During 2011, projects launched this year or in previous years continued to be implemented.

1. Operational Programme of Cross-border Cooperation between Austria and the Czech Republic in the field of environmental protection is represented mainly by the following projects:

- “Research of self-purification processes in minor heavily degraded watercourses in the area of Weinviertel and South Moravia: – the development of the methodology for sustainable measures to improve the quality of waters” (the ERDF support in the amount of 83.650 € for the Czech partner). The execution of this project was completed as at 31 December 2011.
- “Flood forecasting system for the Morava River – the Dyje River” (with a grant in the amount of 217.680 € for the Czech partner). The execution of this project was completed as at 31 December 2011.
- project “Nature-friendly flood control measures in the confluence area of the Morava River and the Dyje River” (with a grant in the amount of 1,801.804 € for the Czech partner) was approved in 2010 and its execution is currently under way.

The newly approved project is “Schwarzenberg navigation canal – cultural heritage revives”.

2. Operational Programme of Cross-border Cooperation between the Free State of Bavaria and the Czech Republic covers the implementation of the following projects:

- “The issues of nutrients and cyanobacteria in the Skalka water reservoir” with a grant in the amount of 135.371 €.
- “Cross-border water protection in the Drachensee Basin” with a grant in the amount of 92.650 €.
- “Mercury on the tributary to the Skalka water reservoir” with a grant in the amount of 68.000 €.

In 2011, all three projects were completed. The following projects continue to be executed in 2011:

- "The effects of the acidification on soils and water resources" with a grant in the amount of 407.150 €.
- "Bubbling Cheb area – a river without borders" with a grant in the amount of 310.564 €.
- The newly approved project in 2011 became a project "Integrated soil and water protection in the Drachensee Basin" with a grant in the amount of 229.500 €.

3. Under the Operational Programme of Cross-border Cooperation between the Free State of Saxony and the Czech Republic, the following projects continued to be executed:

- "The research of possibilities how to minimize the contents of organic harmful substances in drinking water resources in the Krušné hory Mountains" with a grant in the amount of 1,224.850 € and "The revitalization of peat-bogs between Hora Sv. Šebestiána and Satzung – Stage I" with a grant in the amount of 375,310.69 €.
- Project VODAMIN focusing on flood prevention.
- Focusing on education is the project "The Elbe River – our shared heritage" (with a grant in the amount of 467,117.50 €).

Newly approved projects include:

- "Flood protection and remediation of flood damage Hrádek nad Nisou – Zittau focusing on the rehabilitation of damaged meadows along the Nisa River in the area of Trojzemí and acquisition of water level monitoring system on the Nisa River and tributaries", with a total grant in the amount of 1.219 million €.
- Building adaptations including construction of a flood control dike will be executed under the project "Reconstruction of border communications and bridges after floods 2010" with a grant in the amount of 2.993 million €.

- The Krušné hory Mountains area, German-Czech project of waste water discharge with a grant in the amount of 6.630 million € focuses on construction of networks for German-Czech sewerage in the Upper Krušné hory Mountains area.
- T. G. Masaryk Water Management Research Institute, public research institution, on the Czech part represents a new project called "Jointly used groundwaters on the Czech-Saxonian border" with a grant in the amount of 9.991 million €.

4. Under the Operational Programme of Cross-border Cooperation between the Czech Republic and the Polish Republic, the following projects continued to be executed:

- The project "Optimization of water use and water quality improvement in the Metuje River basin in the Kladsko borderland through a construction of sewerage systems in the surroundings of the towns Chudoba and Náchod" (with a grant in the amount of 430,513.85 €) was executed between 1 May 2010 and 31 October 2011.
- Last but not least, also the project of the towns Žacléř and Lubawka: "The protection and rational management of surface waters and groundwaters in the Czech – Polish borderland" with a grant in the amount of 4,494,181.23 €, whose execution has been under way since June 2009 and will be completed in May 2012.

5. Under the Operational Programme of Cross-border Cooperation between the Slovak Republic and the Czech Republic, the following projects continued to be executed:

- "Automatization of exchange of crisis data in the hydrological district of the Morava River and the Dyje River basins" with a grant in the amount of 1,288,212.52 € and a project following up with the already completed project titled "Flood control measures and early warning system Říka-Vlára-Váh Rivers, Stage II", with the ERDF support in the total amount of 338,493.61 €.



Runoff from hydraulic structure Přisečnice – specific profile

Under the Operational Programme for Supranational Cooperation there continues the execution of the projects LABEL – Adaptation to flood risk in the LABe-ELbe river basin, where the partners are the Ministry of the Environment, state-owned enterprises the Vltava River Board, s. e. and the Elbe River Board, s. e., the Pardubický kraj, Liberecký kraj, Středočeský kraj, Královéhradecký kraj, Plzeňský kraj, Jihočeský kraj and Ústecký kraj regions and the claimed ERDF support amounts to 1,803.530 €. The project execution has been under way since 1 September 2008 and will be completed by 29 February 2012. The Czech partners to the project REURIS – REVitalization of Urban River Spaces are the Statutory City of Brno, Department of Planning and Development of the City of Plzeň and the ERDF support amounts to 619.977 €. The project implementation started on 1 September 2008 and was completed on 31 August 2011. In addition, under way is the execution of the project CEframe - Central European Flood Risk Assessment and Management in CENTROPE, where the Czech partners are the Ministry of the Environment, Regional Authority of the Jihomoravský kraj region and the ERDF support amounts to 599.250 €. The project execution is scheduled between 1 April 2010 and 31 March 2013.

Under the Operational Programme INTERREG IVC, the newly approved project is Lake-Admin (Regional administration of lake restoration initiatives), where the Czech partner is University of South Bohemia in České Budějovice, Faculty of Fisheries and Water Protection. The ERDF support for this project amounts to 157.250 €. The project execution started on 1 January 2012 and is expected to be completed not later than 31 December 2014.

The Rural Development Programme of the Czech Republic for the period 2007–2013 is based on the National Strategic Plan for Rural Development and was prepared in accordance with the Council Regulation (EC) No. 1698/2005. The provision of grants is aimed at developing rural areas, improving the environment, supporting the expansion and diversification of economic activities, creating new jobs and strengthening solidarity of the rural population.

The subsidies from the Rural Development Programme are co-financed from the EAFRD and from the state budget of the Czech Republic. The EAFRD support for the period 2007–2013 amounts to 2.8 billion € and the total support including the funds from the state budget of the Czech Republic amounts to 3.6 billion €. The funding for the Rural Development Programme proceeds in the form of pre-financing from the state budget, i.e. all payments to beneficiaries are first effected from national resources.

The Rural Development Programme through its measures significantly contributes not only to improving of living conditions in rural areas, but also supports investments in the basic water management infrastructure in municipalities with the population of less than 2 000 PE.

Measure III.2.1 Village Renewal and Development, Public Amenities and Services is divided into:

- sub-measure III.2.1.1 Village Renewal and Development,
- sub-measure III.2.1.2 Public Amenities and Services.

The sub-measure III.2.1.1 Village Renewal and Development is aimed at support for small municipalities with the population of less than 500. The support is intended for the area of traffic infrastructure including improvements in appearance of municipalities and for territorial plans of municipalities. In the area of water management infrastructure, the support is intended for municipalities with the population of less than 2000 PE (agglomerations with the population of less than 2000 PE). The sub-measures are further broken down to individual project schemes.

Under the project scheme b) public water supply systems, sewerage systems and waste water treatment plants, the applicants for subsidy may be municipalities and associations of municipalities.

Under this project scheme, support is not provided for projects aimed at construction of water supply systems, sewerage systems and waste water treatment plants in the territories requiring special protection – national parks and protected landscape areas including their protection zones, Natura 2000 sites, protected areas of natural accumulation of waters, water resource protection areas and the basin district of the Nové Mlýny hydraulic structure. The listed territories fall into the area of subsidies provided from the Operational Programme Environment. The association of municipalities may also include municipalities with the population of more than 2000 PE, but the project must be implemented in municipalities with the population of less than 2000 PE.

The eligible expenditures under scheme b) public water supply systems, sewerage systems and waste water treatment plants, for which subsidies can be drawn, include:

- public water supply systems,
- public sewerage systems and waste water treatment plants,
- supporting systems for the technical infrastructure,
- hard surfaces and laying of paved surfaces in connection with the project.

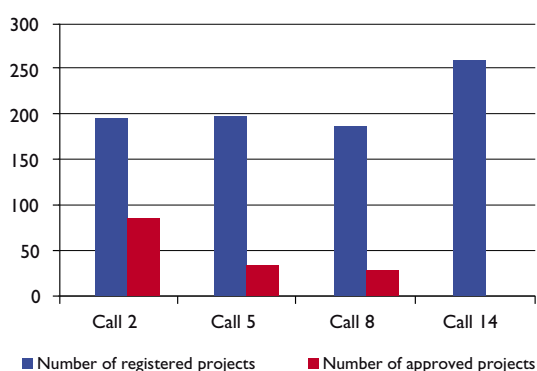


Flood control measures in the Lužická Nisa River in Machnín

For the sub-measure III.2.1.1 Village Renewal and Development, four Calls to submit the applications for the granting of support have already taken place. The last 14th Call took place in 2011 at the turn of October and November. Due to nearly exhausted funds, applications for the granting of support could be submitted only in some of NUTS 2 regions. Specifically, applications for the granting of support could be submitted in Central Bohemia, Southwest, Northeast and Moravia-Silesia regions (other NUTS II regions chose the project scheme a), i.e. traffic infrastructure).

Chart 9.4.1

Registered/approved projects in Call 2, Call 5, Call 8 and Call 14 to submit the applications for support – the state of approved applications/project execution under sub-measure III.2.1.1 Village Renewal and Development, project scheme b) public water supply systems, sewerage systems and waste water treatment plants as of 31 December 2011 in pcs



Source: MoA

Due to the fact that as of the mentioned date the results of Call 14 or the number of approved projects were not known, the chart only includes the number of registered projects under

this Call. The chart further shows a sustained high applicants' interest in the measure and the fact that despite commitments higher than the average amount of allocation in first three Calls there remains a large number of projects not approved due to lack of resources for their financing.

In the period between 2007 and 31 December 2011, in total 130 applications for support in the amount of over CZK 2 billion were approved. Of this, 110 projects in the amount of CZK 1.6 billion were reimbursed, i.e. put into operation, before 31 December 2011.

Table 9.4

Status of implementation of sub-measure III.2.1.1 Village Renewal and Development, project scheme b) public water supply systems, sewerage systems and waste water treatment plants as of 31 December 2011

	III.2.1.1 b
Number of registered projects	818
Amount claimed by registered projects	12,056,575.428 CZK
Number of approved applications	130
Amount covering approved projects	2,085,555.805 CZK
Number of reimbursed projects	110
Reimbursed amount	1,667,389.834 CZK

Source: MoA

Under the 2007–2013 programme period, the financial allocation for the measure III.2.1 Village Renewal and Development, Public Amenities and Services has already been fully exhausted. The last opportunity to submit the application for the granting of support was Call 14 which took place in autumn 2011.



Hydraulic structure Slezská Harta



Lukáš Drdla – 8 years

Palachova primary school, Žďár nad Sázavou, kraj Vysočina region

10. Legislative measures

10.1 Water Act and implementing regulations

The Water Act in 2011 has not undergone any major changes, but there was completed the greater part of implementing legal regulations to reflect changes caused by major amendment of 2010 to the Water Act.

In the year 2011, water management legislation focused on completion of implementing legal regulations to the Water Act that responded mainly to changes in the Water Act made by major amendment No. 150/2010 Coll. Also practice was adapting to changes and new procedures set by major amendment.

The wording of the Water Act was affected by the following two Acts:

First, the Act No. 77/2011 Coll. of 3 March 2011, amending the Act No. 25/2008 Coll., on the integrated pollution registry and on the integrated system of meeting environmental notification obligations and on amendment to some laws, as amended, and other related laws. This was necessitated by the amendment to the Act No. 25/2008 Coll., the related change in the Water Act only consisted in extending the method of meeting environmental notification obligations (Section 126, subsection 6) for the MoE data box designed to meet environmental notification obligations. The change became effective on the day of publication in the Collection of Laws, i.e. on 25 March 2011.

The latter Act affecting the wording of the Water Act was the Act No. 151/2011 Coll. of 28 April 2011, amending the Act No. 258/2000 Coll., on the protection of public health and on amendment to some related laws, as amended, and the Act No. 254/2001 Coll., on waters and on amendment to some laws (the Water Act), as amended. This Act transferred the Directive of the European Parliament and of the Council 2006/7/EC of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC, mainly through the amendment to the Act on the protection of public health. The Water Act was not affected significantly by the changes, only a greater part of powers over bathing waters were transferred from the Water Act to the Act on the protection of public health and thus also the powers of the Ministry of Health and of the Regional Public Health Offices under the Water Act were repealed (repeal of Section 108, subsection 4 and Section 113). In connection with the transfer of Directive 2006/7/EC, the so-called bathing water profiles were established (Section 34), which are compiled, reviewed and updated by river basin administrators in cooperation with the Ministry of the Environment, the Ministry of Health, water authorities and the relevant regional public health offices. The content and the method of establishing bathing water profiles is specified by Decree No. 155/2011 Coll. The Act No. 151/2011 Coll. became effective, due to the ongoing advanced phase of infringement, on the day of publication in the Collection of Laws, i.e. on 7 June 2011.

As regards implementing regulations, nine Decrees and one Government Order were published in the Collection of Laws of the Czech Republic in 2011. Only one decree (No. 155/2011 Coll.) was not prepared following the major amendment to the Water Act.

The first of them was published in the Collection of Laws at the very beginning of the year, on 11 January 2011, Decree No. 5/2011 Coll., defining groundwater zones and groundwater

bodies, the method of groundwater status assessment and the requirements of groundwater status identification and assessment programmes. It responds to changes in the amendment to the Water Act No. 150/2010 Coll., regulating especially the definition of groundwater zones and groundwater bodies and their monitoring. The decree became effective on 26 January 2011.

On 17 February 2011, there was published in the Collection of Laws the Government Order No. 23/2011 Coll., amending the Government Order No. 61/2003 Coll., on indicators and limits of surface water and waste water pollution, requirements of permits to discharge waste waters into surface waters and sewerage systems and on vulnerable areas, as amended by the Government Order No. 229/2007 Coll. It responds to changes in the amendment to the Water Act No. 150/2010 Coll. (Section 15a, Section 38 and Section 39) and regulates especially the categorization of products reported for discharges into surface waters or the best available technologies in the field of waste water disposal and conditions of their use. Government Order No. 23/2011 Coll. became effective on 4 March 2011.

On 17 February 2011, there was published in the Collection of Laws the Decree No. 24/2011 Coll., on river basin management plans and flood risk management plans which, with regard to the new regulation of planning in the area of waters in the amendment to the Water Act No. 150/2010 Coll., repealed the Decree No. 142/2005 Coll. and regulates in detail the process of preparation of river basin management plans and flood risk management plans. The Decree No. 24/2011 became effective on 4 March 2011.

Decree No. 49/2011 Coll., defining surface water bodies, was published in the Collection of Laws on 8 March 2011. The decree defines surface water bodies for the purpose of identifying and assessing the status of these waters and preparing river basin management plans. It became effective on 15 March 2011.

The next of implementing regulations relating to the major amendment of the Water Act was published in the Collection of Laws on 12 April 2011. It is a Decree No. 93/2011 Coll., amending Decree No. 20/2002 Coll., on the method and frequency of measurement of quantity and quality of water. It responds to omitting the obligation to measure quality of abstracted surface waters and groundwaters through the amendment to the Water Act No. 150/2010 Coll. (this also led to a change in the name of the decree to "Decree on the method and frequency of measurement of quantity of water"). It became effective on 27 April 2011.

Decree No. 98/2011 Coll., on the method of status assessment of surface water bodies, the method of assessment of ecological potential of heavily modified and artificial surface water bodies and the requirements of programmes of surface water status identification and assessment, was published in the Collection of Laws on 15 April 2011. The decree responds to changes in the amendment to the Water Act No. 150/2010 Coll. and governs mainly the details of monitoring of surface waters. It became effective on 15 May 2011.

Following the change in the Water Act by the Act No. 151/2011 Coll. and the establishment of bathing water profiles, on 1 July 2011 there was published in the Collection of Laws Decree No. 155/2011 Coll., on bathing surface water profiles, defining the content and the method of establishing bathing water profiles. Decree No. 155/2011 Coll. became effective on 1 July 2011.

Decree No. 175/2011 Coll., amending Decree No. 450/2005 Coll., on essential elements of the use of harmful substances and essential elements of the emergency plan, the method and scope of accident reporting, their amelioration and elimination of their harmful effects was issued in the Collection of Laws on 29 June 2011. The decree responds to changes in the amendment to the Water Act No. 150/2010 Coll., especially specifying the rules for the use of harmful substances and essential elements of the emergency plan, the method and scope of accident reporting, the method of their amelioration and elimination of their harmful effects and defines the requirements concerning qualified persons and trap basins pursuant to Section 39 subsection 4 letter d) of the Water Act. It became effective on 15 July 2011.

Decree No. 216/2011 Coll., on details of the manipulation regulations and operating regulations of water works was issued in the Collection of Laws on 21 July 2011. This decree replaced the previous Decree No. 195/2002 Coll. and responds to changes in the amendment to the Water Act No. 150/2010 Coll., especially in the provision of Section 3 subsection 3, and specifies the requirements concerning operating regulations of the reported water work pursuant to Section 15a of the Water Act in the way, that it considers instruction manual processed by contractor of the water work and complemented by some other details as operating regulations. Decree No. 216/2011 Coll. became effective on 1st of August 2011.

The last in 2011, Decree No. 336/2011 Coll., amending Decree No. 432/2001 Coll., on documents for an application for a decision or standpoint and on details of a permit, consent and standpoint of a water act authority, as amended, was issued in the Collection of Laws on 21 November 2011. The decree responds to changes made by the amendment to the Water Act No. 150/2010 Coll., and the subject-matter of the decree was extended. Long expected decree became effective on 6 December 2011.

In 2011, the Interpretation Committee for the Water Act at its three meetings adopted five interpretations that are made available to the public on the website of the Ministry of Agriculture.

10.2 Act on Public Water Supply Systems and Sewerage Systems and implementing regulations

In 2011, neither direct nor indirect amendment to the Act No. 274/2001 Coll., on public water supply systems and sewerage systems was made. Amendment was made to Decree No. 428/2001 Coll., implementing the above mentioned Act. Changes under the decree only apply to Annexes, especially Annex No. 12 Target figures of annual water demand. Full text of the Annexes to Decree No. 428/2001 Coll., as amended by Decree No. 120/2011 Coll., becomes effective from 1 January 2012.

The Department of Water Management of the Ministry of Agriculture issued on 18 August 2011 under ref. No. 44929/2011-15000 the Guidance Document on the discharges and treatment of waste waters containing standard-exceeding pollution.

The purpose of this Guidance Document is to ensure a consistent approach in addressing the issues of the discharges and treatment of waste waters containing standard-exceeding pollution within the approval of Sewerage System Operating Regulations pursuant to Section 14 subsection 3 of the Act No. 274/2001 Coll., on public water supply and sewerage systems and on amendment to some laws, as amended, and Sections 24 and 25 of the MoA Decree No. 428/2001 Coll., on implementing regulations of the Act No. 274/2001 Coll., as amended.

In 2011, Senior Director of Water Management Department approved two interpretations that in relation to the Act on public water supply and sewerage systems were prepared by the Interpretation Committee at its one meeting.

10.3 Audits of the execution of state administration in the field of water management and water protection

Ministry of Agriculture

Auditing of the execution of the delegated authority in water management sector were carried out by the Ministry of Agriculture, through the Department for State Administration in the Water Management Sector and for River Basin Administration as the central water authority. At the regional level, auditing activities were carried out in compliance with the Government Resolution No. 1181 of 18 October 2006 and in compliance with the Plan for Audits of Regional Authorities and the City of Prague for the years 2010 and 2011 prepared by the Ministry of the Interior.

Audits carried out by the Ministry of Agriculture, in addition to examining water authority operation (such as the matters of the achieved qualifications and practice of personnel, organization of work, material background for work, etc.) focus on due application of the relevant legal regulations, in particular, the Act No. 254/2001 Coll. on Water and on amendment to certain laws (the Water Act), as amended, the Act No. 274/2001 Coll. on Public Water Supply and Sewerage Systems and on amendment to certain laws (the Water Supply and Sewerage Systems Act) as amended, as well as the related implementing legal regulations. The agenda of water right proceedings is also associated with other fields of administrative law, therefore, the audits were always also examining the compliance with the provisions of the Act No. 500/2004 Coll., Code of the Administrative Procedure, as amended. With regard to the fact that water authorities carry out the agenda of special building offices, the audits examined also the procedure according to the Act No. 183/2006 Coll., on Land-Use Planning and Building Code (the Building Act) as amended and its implementing legal regulations. In the particular proceedings, the audits are effected by examining the randomly selected documents.

The audits examining the execution of the delegated authority monitor the legality of this activity. This is corresponded to by the scope of the audits of the individual components guaranteeing legality in activities of water authorities – for instance, correct application of legal regulations in general, compliance with the relevant competence legal provisions, due conduct of administrative proceedings, compliance with administrative time-limits, provision of source documents for decisions in compliance with the Code of Administrative Procedure and the possibility to review the content of a decision.

Table 10.3.1

Audit of the execution of state administration, carried out by the Ministry of Agriculture at Regional Authorities in 2011

Region	Audit date
Liberecký	27 January 2011
Pardubický	24 February 2011
Moravskoslezský	29 March 2011
Vysočina	14 April 2011
Jihočeský	12 May 2011
Karlovarský	14 June 2011
City Council of Prague	30 June 2011
Zlínský	16 November 2011

Source: MoA

Based on the audits that were carried out it can be stated that the execution of the delegated authority by regional authorities in the water management sector maintains its high level. Positive as well as continuing efforts of regional authorities to provide detailed methodological guidance for water authorities in their jurisdiction. This statement can also be confirmed by the fact that no measures to remedy the situation were imposed in any of the audits. The most frequent shortcomings were identified, similarly to the previous periods, in the application of the relevant provisions of the Code of the Administrative Procedure in practice. The identified irregularities, nevertheless, in none of the cases made the issued decisions unlawful.

High levels of the execution of state administration are also reflected by the fact that the Ministry of Agriculture cooperates with Regional Authorities to develop water management legislation. In 2011, this cooperation consisted mainly in the preparation of changes in implementing regulations relating to the amended Water Act.

At the level of water authorities of municipalities with extended authority, the audits were carried out randomly in the period between July and September, in accordance with long-term efforts of the Ministry of Agriculture to contribute, mainly through the methodological guidance, to improvements in the level of execution of state administration in the water management sector.

The highly positive feedback from the audits confirms their correct targeting, which helps to deepen mutual communication at all levels of the administrative hierarchy. Beneficial to all interested parties as well is the acquaintance with the regional water right issues and findings in the field of application of legal regulations under the authority of the Ministry of Agriculture.

Table 10.3.2

Audit of the execution of state administration, carried out by the Ministry of Agriculture at water authorities of municipalities with extended authority in 2011

Municipality	Audit date
Municipal Office Jablonec nad Nisou	19 July 2011
Municipal Office Tanvald	19 July 2011
Municipal Office Třebíč	27 July 2011
Municipal Office Moravské Budějovice	27 July 2011
Municipal Office Znojmo	28 July 2011
Municipal Office Dačice	28 July 2011
Municipal Office Praha 18	4 August 2011
Municipal Office Šternberk	10 August 2011
Municipal Office Uničov	10 August 2011
Municipal Office Zábřeh	11 August 2011
Municipal Office Mohelnice	11 August 2011
Municipal Office Praha 19	23 August 2011
Municipal Office Bystřice pod Pernštejnem	31 August 2011
Municipal Office Boskovice	31 August 2011
Municipal Office Kuřim	1 September 2011
Municipal Office Tišnov	1 September 2011

Source: MoA

The audits of water authorities of municipalities with extended authority repeatedly confirmed the long-term trend of improving quality of the execution of the state administration in water management sector also at this level. In comparison with the regional authorities some larger differences in the quality of the management of the agenda continue to occur, but this is caused especially by the fact that the quality of work of the water authorities of municipalities with extended authority is influenced by personnel and material equipment. The higher quality level of the administrative proceedings is usually observed at larger water authorities, better equipped with personnel and material background, although this may not always be the case. In smaller municipalities, the delegated authority is sometimes executed by only one person responsible for several fields of administration, in some cases even including the separate authority.

In spite of that, nevertheless, most of the identified irregularities were largely of formal and procedural nature and repeatedly occurred to a larger or smaller extent practically in all of the authorities. Similarly to the regional authorities, the shortcomings were mainly identified in the application of the individual provisions of the new Code of the Administrative Procedure. Furthermore, conditions referred to in statements and opinions of the participants in the proceedings and the respective bodies were insufficiently incorporated into the conditions of the decision. It has to be emphasized, nevertheless, that despite these problems of purely formal and procedural nature the audits revealed no case of insufficient execution of the state administration.

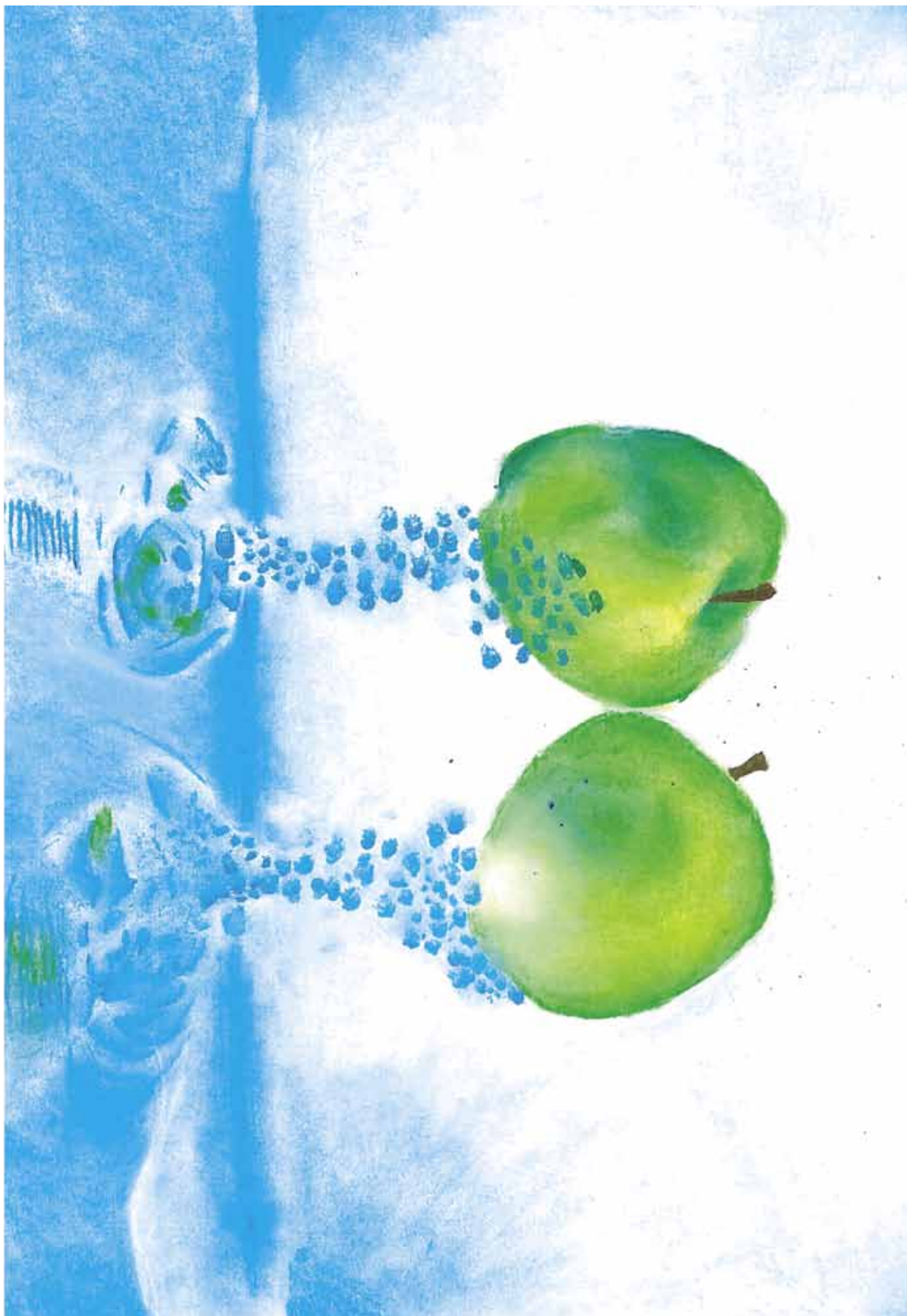
The audit results are used for the potential legislative or methodological activities. The water management sector also organized as every year a work meeting with water authorities, which is traditionally of high interest to all participants. These events are aimed at educating and making water authorities staff members acquainted with the current water management issues. The audit findings also serve as a basis to prepare concepts of the methodological presentations. In this way, the audit findings are almost immediately applied in the methodological guidance for subordinate water authorities.

The audit results show that despite the above mentioned minor shortcomings the execution of the state administration in 2011 in the water management sector at all levels of water authorities can be assessed to be of high quality and again fully meeting the requirement for adherence to the basic principles of public administration which can be called public service.

Ministry of the Environment

The departments executing state administration at the Ministry of the Environment, in compliance with the rules of organization, similarly to the past years, dealt only with individual appeals against first instance decisions of the Czech Environmental Inspectorate, the City Council of Prague and the regional authorities.

In 2011, similarly to the years before, the Department of Water Protection organized work meetings with water authorities and the Czech Environmental Inspectorate. The purpose of this event was to make water authorities staff members acquainted with the current issues of water protection and the activities of the Department of Water Protection. Staff members of the Department of Water Protection of the Ministry of the Environment participated, whenever possible, also in other training workshops and meetings organized by the individual regional authorities.



Veronika Šefrnová – 11 years
Generála Janouška primary school, Prague

II. Priority tasks, programmes and key documents in water management

II.1 Planning in the field of waters

In 2011, the implementation of Programmes of Measures adopted by River Basin Management Plans continued. There also started a preparation of the second river basin management planning cycle until 2015, during which the current River Basin Management Plans will be reviewed and updated. In the preparation of flood risk management plans, areas with significant flood risks were defined.

Programmes of Measures to achieve the objectives of water protection are to be implemented within three years from the approval and publication of the respective plans, i.e. by 22 December 2012. In 2011, there began a preparation of report to the European Commission pursuant to Article 15 par. 3 of Directive 2000/60/EC describing the progress achieved in preparing and implementing the approved measures to protect waters; the report will also be the basis for updating the measures within the second river basin management planning cycle.

For the purpose of the second river basin management planning cycle, activities of the Commission for Planning in the Water Sector at the national level as well as of the commissions for sub-basins for each of the river basin administrators were renewed in 2011 in cooperation between the Ministry of Agriculture and the Ministry of the Environment.

The task of these commissions is, similarly to the first river basin management planning cycle, the coordination of the preparation of national river basin management plans, sub-basin management plans and flood risk management plans. Its members are representatives of the central authorities, under the competence of which there fall various areas relevant to water planning, representatives of the regional authorities, the Association of Regions of the Czech Republic, river basin administrators, Forests of the Czech Republic, significant water management institutions, Agency for Nature Conservation and the Landscape Protection, Czech Environmental Inspection, major water users and non-governmental organizations. Working Group for implementation of the Flood Directive was incorporated into the Commission for Planning in the Water Sector.

To ensure planning in the water sector by 2015, a time schedule and work programme which identifies the individual tasks in the process of planning in the water sector and assigns responsibility for addressing these challenges started to be prepared. The general objective of planning in the water sector there remains, also for the second planning cycle, a definition and mutual harmonization of public interests to protect water as the environmental compartment, a reduction of the adverse effects of floods and droughts and sustainable use of water resources, especially for the purposes of drinking water supply. In the second river basin management planning cycle, the authors of plans have to eliminate uncertainties specified in the approved river basin management plans through ensuring the availability of existing and adding the missing data, and they also have to address a number of new suggestions and requirements. The most important requirements include those ensuing from the Strategic Framework for Sustainable Development of the Czech Republic and the requirement of the European Commission to take into account the need for adaptation to climate change in updating Programmes of Measures for the second planning cycle. Other requirements include mutual harmonization of measures to achieve good water status and measures for flood risk

management, harmonization of river basin management plans with development plans for water supply and sewerage systems in terms of protection of water resources and investments in the development of the sector of drinking water supply, sewerage and waste water treatment. The second planning cycle in the water sector will also have to be more interlinked with the Common Agricultural Policy which is scheduled to be reformed by 2013. This reform will be an exceptional opportunity for the Czech Republic, how to further modernize the Common Agricultural Policy and adapt its operations to better respond to the current needs and challenges faced by European society. In this context, a preparation of the new setting of Rural Development Programme for the years 2014-2020 is under way. This programme should focus on stronger enforcement of water management measures. The condition for successful linking of river basin management plans with the Common Agricultural Policy is that measures under river basin management plans must be compatible with the tools of Rural Development Programme.

The significant part of water management planning is the implementation of the Directive 2007/60/EC of the European Parliament and of the Council, on the assessment and management of flood risks. In 2011, in accordance with the requirements of the Directive, with financial support provided by the Ministry of the Environment, a preliminary assessment of flood risks and definition of areas with potentially significant flood risks was completed (see Figure II.1.1). After taking into account the comments, the resulting material is made available to the public and can be found on the website of Flood Information System www.povis.cz. This system will further be used to inform and involve the public in further work in the implementation of the Flood Directive.

The transparency of the process is contributed to by the fact that all current and general information on water management planning process are available to the public on the website of the Ministry of Agriculture www.eagri.cz with links to the websites of the Ministry of the Environment and individual river basin administrators. More information relating to water management planning is provided on the website of Public Administration Information System WATER www.voda.gov.cz.



The Krounka River in Předhradí

Figure 11.1.1**Definition of areas with potentially significant flood risks in the Czech Republic**

Source: MoE

11.2 Development plans for water supply and sewerage systems

The National Development Plan for Water Supply and Sewerage Systems in the Czech Republic, prepared pursuant to Section 29, Subsection I, Letter c) of the Act No. 274/2001 Coll., on public water supply and sewerage systems and on amendments to certain related laws, as amended, is placed on the website of the Ministry of Agriculture.

The National Development Plan for Water Supply and Sewerage Systems is a medium-term concept of the sector of water supply and sewerage systems for the period until the year 2015. It follows up with other strategic documents and departmental policy documents and also respects the requirements resulting from the relevant regulations of the European Communities.

The Regional Development Plans for Water Supply and Sewerage Systems are the basis for utilization of the European Community funds and national financial resources for construction and renewal of water supply and sewerage system infrastructure. Therefore, one of the obligations of each applicant requesting the provision of the state financial support is to document the compliance of the submitted technical and economic solution with the valid Regional Development Plan for Water Supply and Sewerage Systems.

For the approved and effective Development Plans for Water Supply and Sewerage Systems in the Regions of the Czech Republic, the Ministry of Agriculture continued to issue statements on the proposed changes in the technical solutions for drinking water supply and waste water sewerage and treatment.

302 statements were issued in 2006, 423 statements were issued in 2007, 597 statements were issued in 2008, 612 statements were issued in 2009, 1,163 statements were issued in 2010

and 352 statements were issued in 2011 by the Ministry of Agriculture. In total for the period 2006–2011, the Ministry of Agriculture issued 3,449 statements.

The Regional Development Plans for Water Supply and Sewerage Systems are used by the Ministry of Agriculture, the Ministry of the Environment, the regional authorities, municipalities with extended authority (water authorities), municipalities, owners and operators of water supply and sewerage systems as well as by both specialists community and the general public.

The National Development Plan for Water Supply and Sewerage Systems together with the Regional Development Plans for Water Supply and Sewerage Systems express the concept of the Ministry of Agriculture. In relation to this fact a change is being prepared, through which these materials will become continually complemented medium-term plans. This means that a preparation of new plans will not be carried out after the elapsed expiry dates.

11.3 Programmes and measures to reduce surface water pollution

The programme to reduce surface water pollution by hazardous substances and especially hazardous substances

The Programme to Reduce Surface Water Pollution by Hazardous Harmful Substances and Especially Hazardous Harmful Substances (hereinafter the "Programme") was adopted by the Czech Republic Government Resolution No. 226 of 22 March 2010. This resolution established an obligation to prepare every two years, starting in 2011, the information on the progress of implementation of the Programme and submit it to the Government as part of the Report on Water Protection. With regard to the Government Resolution No. 770 of 2007, however, the report concerned is the

Report on Water Management in the Czech Republic in 2011. The commitment to prepare the Programme is based on Article 6 of Directive of the European Parliament and of the Council 2000/60/EC of 23 October 2000, establishing a framework for Community action in the field of water policy. It was transferred into Section 38 subsection 5 of the Act No. 254/2001 Coll., on waters and on amendment to some laws (the Water Act), as amended.

The Programme is valid for the entire territory of the Czech Republic for the period between 1 January 2010 and 22 December 2013, and relates to the substances or groups of substances hazardous to (or through) the aquatic environment, listed in Annex I of the Water Act. The Programme specifies the main measures related to water protection and other measures not directly related to water protection, but which ultimately contribute to water protection.

Especially hazardous harmful substances

The discharges of waste waters containing especially hazardous harmful substances, listed in Annex I to the Water Act and specified in part C of Annex I to the Government Order No. 61/2003 Coll., on indicators and values of permissible pollution of surface waters and waste waters, on requirements for permits to discharge waste waters to surface waters and to sewerage systems and on vulnerable areas, as amended by the Government Order No. 229/2007 Coll., to surface waters and sewerage systems may only be performed if permitted by the water authority (Section 38, Subsection 3 of the Act No. 254/2001 Coll.). Permissible values of pollution indicators for waste waters with the contents of especially hazardous harmful substances, for sectors of industry and types of production listed in Annex I, part C of the Government Order No. 61/2003 Coll., had to be complied with as at the date of the accession of the Czech Republic to the EU, for certain sectors of industry or uses as at the date of 31 December 2009. The following text describes the status for the year 2010 for each of especially hazardous harmful substances, the discharges of which from the pollution sources are relevant.

In the Czech Republic there exist approximately 60 important economic entities or their plants that by the activity according to the sectoral classification CZ-NACE fall within the scope of part C of Annex No. I to the Government Order No. 61/2003 Coll.

The most significant sources of mercury pollution include plants engaged in the chemical production (amalgam electrolyzers in two plants), refining of metals and hazardous waste disposal. In the majority of cases, the most advanced technological processes are applied in the facilities and slight exceedances of emission standards occur only sporadically. Small mercury pollution sources include, in particular, stomatological facilities, reaching the number of approximately 6,000 registered in the Czech Republic. As at 31 December 2005, all these stomatological workplaces were furnished with amalgam separators showing the efficiency of at least 95 %. There is an ongoing process of replacing the electric facilities containing mercury by facilities not containing this hazardous substance.

The discharges of cadmium, according to part C of Annex No. I to the Government Order No. 61/2003 Coll. concern particularly plants engaged in metallurgy of cadmium and nonferrous metals, production of negative accumulator mass or Ni-Cd galvanic cells, production of fertilizers and in surface finishing, in total 10 significant plants. In the majority of cases, the most advanced technological processes are applied in the facilities. In two of them, technologies without the production of waste waters are used. As regards cadmium plating, used by 50 % of the plants in question, emission standards expressed in grams of the discharged cadmium relative to the quantity of

processed cadmium are not complied with. This is particularly given by a very small quantity of cadmium consumed in the process of electroplating (generally first kilograms per year). The discharges of waste waters containing cadmium are fully in compliance with water management permits. Cadmium pollution of waste waters further occurs in the locations where this hazardous substance appears as an admixture in raw materials used or in the contaminated sites (for example, the Příbram area). Significant quantities of cadmium compounds are also used in glass industry (for glass-staining), however, the discharges of waste waters to surface waters occur to the minimum extent only. Every year, the consumption of cadmium and its compounds for surface finishing of metals gradually declines, and cadmium using plants in glass industry are gradually restricted or closed.

The only significant source of tetrachloromethane, hexachlorobenzene and hexachlorobutadiene pollution of waters is the production of tetrachloroethene and tetrachloromethane by perchlorination. Exceedances of the emission standards set by the Government Order No. 61/2003 Coll. do not occur. The Integrated Pollution Register mentions emissions of hexachlorobenzene in wastes only. As regards tetrachloromethane, emissions to the air are registered, as regards hexachlorobutadiene, emissions in wastes are registered.

Chloroform in significant quantities is used as organic solvent in the pharmaceutical production (only two producers in the Czech Republic). Exceedances of the emission standards set by the Government Order No. 61/2003 Coll. do not occur. Trichloromethane is further used as solvent in organic synthesis for the production of adamantane in the pilot plant apparatus. The Integrated Pollution Register mentions emissions of this substance in both waters and wastes. In total four plants are registered to monitor chloroform in their waste waters.

The production of 1,2-dichloroethane proceeds in the only plant in the Czech Republic. In 2010, emission standards set by the Government Order No. 61/2003 Coll. were complied with. With regard to the earlier unsatisfactory situation, the pollution monitoring frequency has been changed since 2005 and daily measurements are performed. From the production plant premises, this hazardous substance is also discharged via the remediation waters. Further, 1,2-dichloroethane is used for the production of other substance than vinylchloride. In the technological process, no waste waters are produced. To the limited extent, 1,2-dichloroethane is used as solvent in the pharmaceutical production. In total four plants are registered to monitor 1,2-dichloroethane in their waste waters.

The production of tetrachloroethene is carried out in the only plant in the Czech Republic, using the TETRA-PER technique – the manufacturing unit designed for the production by the method of thermic chlorination of propylene in excess chlorine. The latest technological procedures are used in this facility. In 2010, emission standards set by the Government Order No. 61/2003 Coll. were complied with. Further, tetrachloroethene along with trichloroethene are used in significant quantities especially as solvent and degreasing agent before surface finishing of metals by 56 plants. Permits to discharge waste waters with the contents of trichloroethene or tetrachloroethene were granted to approx. 30 % of plants, especially where waste waters are produced from the regeneration of sorbent fillings capturing these hazardous substances from the exhausted air in the working environment. Most of the plants handling the trichloroethene or tetrachloroethene solve or have already resolved the problems of sites contaminated by these substances. The emission standards set by the Government Order No. 61/2003 Coll. for the discharges of waste waters containing the hazardous substance are being complied with. The pollution is monitored using the AOX indicator. The formation of trichloroethene in the production of tetrachloroethene and tetrachloromethane using

the perchlorination cannot be excluded, the emission standards for the contents of tetrachloroethene in waste waters from this production are complied with. In 2010, the use of trichloroethene or tetrachloroethene to degrease metals was finished in a number of plants. From year to year, the consumption declines and these substances remain to be used in the cases where technological substitution for other environmentally acceptable degreasing agents is not possible. The Integrated Pollution Register states only leakages of these substances to the air and their contents in wastes (a declining trend). In total 63 plants are registered to monitor tetrachloroethene in their waste waters.

Hazardous substances

With regard to the extent of hazardous substances, they are not individually discussed. The discharges of waste waters containing hazardous substances are also subject to permits granted by the water authority. The electronic registration of the selected data from the effective administrative decisions falls within the cognizance of Decree No. 7/2003 Coll., on Water Right Evidence, as amended by Decree No. 619/2004 Coll., Decree No. 7/2007 Coll. and Decree No. 40/2008 Coll. The obligation of water authorities to include in this electronic registration also all earlier issued decisions was extended until 31 December 2009. The central database of water right evidence is maintained by the Ministry of Agriculture.

Audits performed for management of hazardous substances

In 2010, approximately 460 audits were carried out in industrial plants and establishments providing services (such as petrol stations), and 270 audits were carried out in facilities with the integrated permit. Pursuant to the Water Act, 42 penalties in the amount of CZK 3,450,450 were imposed on industrial plants and establishments providing services. In total 76 farming establishments were audited and 19 penalties in the amount of CZK 705,527 were imposed. In the area of fisheries, 37 establishments were audited and 6 penalties in the amount of CZK 95,000 imposed. Minor irregularities were resolved by imposing corrective measures in approximately 35 cases.

In 2010, in total 8 kg of Hg, 4 kg of Cd and 38,700 kg of AOX contained in discharged waste waters were charged for. The Czech Environmental Inspection in cooperation with the regional authorities and integrated inspection bodies, pursuant to the Act No. 59/2006 Coll., on the major accident prevention, audited in 2010 in total 157 entities (43 falling within group A, 113 within group B and I establishment not classified). Since 2000, when the Act on the major accident prevention became effective, six major accidents by course of this law occurred. In 2010, no such accident occurred. With regard to the quantities of leaked substances, the number of persons injured and the fact that no environmental damage occurred, other emergency events were not accidents by course of the Act No. 59/2006 Coll.

Construction projects for water quality protection completed in 2011

As regards the most important projects relating to the sources of pollution produced by the municipalities with the population of more than 2,000 PE, the following waste water treatment plants were completed in 2011 (N = nitrification, DN = denitrification, BP = biological removal of phosphorus, CHP = chemical removal of phosphorus):

New municipal waste water treatment plants (in total 18,300 PE): Třeboň (16,000 PE, N, DN, CHP), Konice (2,300 PE, N, DN, CHP).

New industrial waste water treatment plant: Vinium Velké Pavlovice (8,700 PE, N, DN, CHP).

Furthermore, the existing municipal waste water treatment plants were reconstructed or extended in 2011:

The existing municipal waste water treatment plants: Uherský Brod (95,170 PE, N, DN, CHP), Strakonice (75,000 PE, N, DN, CHP), Krnov (70,000 PE, N, DN, CHP), Česká Lípa (48,150 PE, N, DN, CHP), Pelhřimov (43,000 PE, N, DN, CHP), Nový Jičín (35,000 PE, N, DN, CHP), Kopřivnice (29,000 PE, N, DN, CHP), Broumov (25,167 PE, N, DN, CHP), Nové Město nad Metují (25,000 PE, N, DN, CHP), Rokycany (25,000 PE, N, DN, CHP), Moravská Třebová (20,070 PE, N, DN, CHP), Říčany (16,160 PE, N, DN, CHP), Hlučín (13,300 PE, N, DN, CHP), Police nad Metují (11,950 PE, N, DN, CHP), Tachov (11,600 PE, N, DN, CHP), Nový Bydžov (10,000 PE, N, DN, CHP), Studénka (9,500 PE, N, DN, CHP), Praha-Vinoř (8,923 PE, N, DN, CHP), Staré Splavy (8,440 PE, N, DN, CHP), Žirovnice (8,340 PE, N, DN, CHP), Opočno (8,000 PE, N, DN, CHP), Praha-Kbely (7,120 PE, N, DN, CHP), Pečky (7,000 PE, N, DN, CHP), Pacov (7,000 PE, N, DN, CHP), Stráž pod Ralskem (7,000 PE, N, DN, CHP), Klánovice (6,055 PE, N, DN, CHP), Úvaly (6,000 PE, N, DN, CHP), Chýně (6,000 PE, N, DN, CHP), Dolní Břežany (5,000 PE, CHP), Trnávka (4,800 PE, N, DN, CHP), Hrušovany nad Jevišovkou (4,500 PE, N, DN, CHP), Jince (4,400 PE, N, DN, CHP), Lány (4,000 PE, N, DN, CHP), Řevnice (3,700 PE), Nebužice (3,600 PE, N, DN, CHP), Heřmanice (3,600 PE, N, DN), Němčice nad Hanou (3,500 PE, N, DN, CHP), Mirošov (3,300 PE, N, DN, CHP), Blovice (3,300 PE, N, DN, CHP), Jirny (3,200 PE, N, DN, CHP), Dolní Čermná (3,200 PE, N, DN, CHP), Dubenec (3,000 PE, N, DN), Mratín (2,500 PE, N, DN, CHP), Nučice (2,500 PE, N, DN, CHP), Slavonice (2,500 PE, N, DN, CHP), Dolní Roveň (2,300 PE, N, DN), Velké Hamry (2,300 PE, N, DN, CHP), Hrotovice (2,200 PE, N, DN, CHP), Kunštát (2,100 PE, N, DN, CHP), Hluboká – Záměstí (2,080 PE, N, DN), Nová Ves pod Pleší (2,000 PE, N, DN), Slapy (2,000 PE).

Action Programme under the Directive of the Council 91/676/EEC (so-called Nitrate Directive)

In 1991, Council Directive 91/676/EEC on the protection of waters against pollution caused by nitrates from agricultural sources, the so-called Nitrate Directive, was adopted. The transfer of the Nitrate Directive was implemented into the provisions of Section 33 of the Act No. 254/2001 Coll., on waters, as amended (the Water Act), where it is imposed on the government to set by order vulnerable areas and in these areas to regulate the use and storage of fertilizers and farmyard manure, crop rotation and implementation of erosion control measures (the so-called Action Programme).

Vulnerable areas represent the areas, where the contamination of groundwaters and surface waters by nitrates has already exceeded or might exceed the set limit of nitrate concentration in amount of 50 mg/l. The list of vulnerable areas was promulgated by the Government Order No. 103/2003 Coll., on the designation of vulnerable areas and on the use and storage of fertilizers and farmyard manure, crop rotation and implementation of erosion control measures in these areas. Vulnerable areas are subject to review, according to the Nitrate Directive, at least every four years from their promulgation. The first review of vulnerable areas was carried out in 2007 and promulgated through the amendment to the Government Order No. 219/2007 Coll., with effect from 1 September 2007. The second review of the designation of vulnerable areas was carried out in March 2011 and will be promulgated through the Government Order, whose preparation is under way, with effect from 1 July 2012.

The Action Programme which is prepared each time for the period of four years, represents mandatory methods of management in the defined vulnerable areas which are aimed at

reducing the risk of nitrogen leaching into surface waters and groundwaters. Through the amendment to the Government Order No. 103/2003 Coll., the so-called Action Programme 2 (Government Order No. 108/2008 Coll.) with effect from 4 April 2008 was promulgated and through the Government Order, whose preparation is under way, Action Programme 3 will be promulgated, with effect from 1 July 2012. User relation-based Land Use Register brings information for farmers on measures which the farmer should comply with within the specific land block. The Action Programme is the most effective system of measures in the implementation of the Nitrate Directive.

The general measures of the Action Programme in the Czech Republic which is produced in compliance with Annex III to the Nitrate Directive, include:

1. Period, when the use of certain types of fertilizers and farmyard manure is prohibited.
2. The establishment of maximum nitrogen fertilization limits for the individual crops.
3. Specification of the minimum capacity of farmyard manure storage facilities allowing to store farmyard manure during the period when manuring is prohibited (in the Czech Republic, this is based on general legal regulations; from the year 2014 on, the required capacity of farmyard manure storage facilities will have to be large enough for six-month production).
4. Ban on wide-row crop growing on land threatened by erosion.
5. Reduction of the application of fertilizers on sloping land.
6. Maintaining a protection zone near surface water bodies.

The measures included in the Action Programme must guarantee that the quantity of farmyard manure together with organic and organic-mineral fertilizers applied in any farming establishment in a vulnerable area will not exceed on average the limit of 170kg nitrogen per hectare per year.

The Government Order, whose preparation is under way, will slightly extend vulnerable areas and, mainly based on comments raised by the European Commission, it will tighten some methods of land use and management in these areas. This is particularly the extension of the period when the use of fertilizers is prohibited, the harmonization of farming on sloping land with GAEC requirements and by the end of 2013 the increase in the capacity of farmyard storage facilities for six-month production.

II.4 Czech Republic's reporting to the EU

The reporting pursuant to the Council Directive 91/271/EEC, concerning urban waste water treatment

Official data on the status of waste water treatment in 2011 was submitted to the European Commission as part of regular reporting under Article 15 of Directive 91/271/EEC, concerning urban waste water treatment, in three terms as required by the European Commission between February and March 2012. The corrected reporting was carried out as required by the European Commission on 30 March 2012. The data will be publicly available on the EIONET.

The reporting documents the status of waste water discharges as of 31 December 2011 in the Czech Republic in agglomerations with the population of more than 2,000 PE. All agglomerations with the population of more than 10,000 PE have nitrogen and phosphorus removal (tertiary treatment), although not all meet the requirements of the Directive in terms of quality limits of discharged waste waters. This fact was also reflected in filling the data in the reported WWTP database. Still, there are agglomerations in the category of between 2,000 and 10,000 PE, which do not have yet their own waste water treatment plant.

The situation in agglomerations with the population of more than 2,000 PE at the end of 2011 is as follows: requirements of the Directive in terms of treatment limits are not met by 35 agglomerations (20 agglomerations having a waste water treatment plant fail to meet the requirements for total nitrogen and 15 agglomerations still do not have a waste water treatment plant). In total 6 agglomerations are connected to a waste water treatment plant in other agglomerations having still unsatisfactory WWTP and 2 agglomerations build connections to a satisfactory waste water treatment plant in another agglomeration. Unsatisfactory status of waste water discharges and treatment in relation to the Directive is shown by 43 agglomerations of the total number of 633 agglomerations with the population of more than 2,000 PE. The current status is continuously improving.

Reporting pursuant to the Council Directive 76/160/EEC, concerning the quality of bathing water and Directive of the European Parliament and of the Council 2006/7/EC, concerning the management of bathing water quality

In terms of the European legislation, the issues of bathing waters are governed by the following Directives: Council Directive 76/160/EEC of 8 December 1975, concerning the quality of bathing water, which will be repealed with effect from 31 December 2014, and Directive of the European Parliament and of the Council 2006/7/EC of 15 February 2006, concerning the management of bathing water quality and the repeal of Directive 76/160/EEC. Before the start of the bathing season 2011, a list of waters identified as bathing waters for the recreational season 2011 was submitted to the European Commission. Report on the quality of waters used for bathing in the recreational season 2011 was prepared in accordance with the requirements of Directive 76/160/EEC and submitted to the European Commission in December 2011. Reports from European countries are annually after the processing of the results placed on the portal of the European Commission http://ec.europa.eu/environment/water/water-bathing/index_en.html.

In the Czech Republic, waters used for open air bathing of persons are divided into natural open air bathing pools operated on surface waters used for bathing (surface waters where bathing services are offered by the pool operator) and surface waters where large numbers of persons are expected to bathe and for which no permanent ban on bathing or permanent warning against bathing was issued by the relevant public health protection authority (so-called other surface waters used for bathing).

The most frequent problems of water quality in the Czech Republic are associated with the mass presence of cyanobacteria, which during the bathing season 2011 led to the ban on bathing at 12 sites. At one site, the ban on bathing was imposed due to exceedances of the microbiological indicators. Of the total number of 183 reported bathing waters, only one site was classified as failing to comply with the mandatory values defined by Directive 76/160/EEC.



Hydraulic structure České Vrbné



Kateřina Rjašková – 8 years

Komenského primary school, Ústí nad Orlicí, Pardubický kraj region

12. International cooperation in the field of water protection

Water as a force of nature knows no boundaries. Problems that occur in the field of water management on the territory of one country may become a problem faced by other states situated in the lower parts of the river basin. Similarly, the measures implemented within one region may affect the neighbouring regions. This fact is significantly noticeable in international relations. The aim of the Czech Republic is to maintain these relations at such level, so that Czech water management problems were manifested in other states as little as possible and that measures implemented by the Czech party on its territory would be of not negative, but rather a positive impact on the neighbouring states. Although the Czech Republic is not a coastal state, it participates through this cooperation in reducing pollution of the North Sea, the Black Sea and the Baltic Sea.

The principle of international cooperation of the Czech Republic in the field of water protection, based on international agreements, treaties and conventions, is the comprehensive protection of surface waters and groundwaters in integrated hydrological river basins or groundwater zones. This cooperation is based on:

1. cooperation within UN ECE;
2. cooperation in the area of international river basins of the Danube, the Elbe and the Oder;
3. cooperation of the Czech Republic with the neighbouring states in the field of water management on transboundary watercourses.

12.1 Cooperation within UN ECE

The cooperation within the framework of UN ECE covers most of the aspects of protection of the quality and quantity of waters. The Convention on Protection and Use of Transboundary Watercourses and International Lakes in its Article 9 assumes that the riparian states sharing the same waters shall enter into bilateral or multilateral agreements or other arrangements, which is met by the cooperation of the Czech Republic within transboundary waters and integrated river basins. Thanks to the Protocol on Water and Health having become effective, this cooperation also includes the aspect of the population health protection against diseases transmitted by water.

Convention on Protection and Use of Transboundary Watercourses and International Lakes

The Czech Republic has been a party to the UN ECE Convention on Protection and Use of Transboundary Watercourses and International Lakes ("Convention on Water") since May 2000 and the Czech experts participate in activities relating to the fields of integrated management of water resources and water ecosystems, monitoring and assessment of water status, flood control, adaptation to climate change, protection of waters against accidental pollution from industrial sources, support for international cooperation on transboundary watercourses and in integrated international river basins as well as to the field of water and human health.

In 2011, the activities within the UN ECE Convention on Water focused on completion of the preparation for the 7th ministerial conference The Environment for Europe, which took place on 21

– 23 September 2011 in Astana in Kazakhstan. With regard to the fact that one of the main topics of the conference was water and its environment, the Secretariat and the Bureau of the UN ECE Convention on Water participated in organizing the conference. Bureau of the UN ECE Convention on Water together with the UN ECE Committee for Environmental Policy prepared the conference topics: "sustainable management of waters and the related ecosystems", "sustainable management of waters and greening of the economy" and "greening of the economy – the inclusion of environmental considerations into economic development" and agreed upon the way of their presentation at the conference. The Working Group for integrated management of water resources in cooperation with the Bureau prepared a questionnaire "Water Action", which represents a list of actions taken up by the individual countries at the conference. For the needs of the conference, the Working Group for monitoring and assessment prepared a publication "The Second Assessment of Status of Transboundary Watercourses, International Lakes and Groundwaters", which comprehensively assesses the watercourses, lakes and groundwaters within the entire UN ECE region. In parallel to these activities, discussions of the joint group for water and accidents on preparing the harmonization of emergency planning for accidents with a possible impact on transboundary waters and a workshop on the 25th anniversary of the accident in Sandoz called "Sandoz+25" took place. The group for legal issues dealt with preparation of a document concerning the mechanism to support the implementation of the Convention on Waters and control of this implementation. This group was also preparing a document on groundwaters. In connection with the work of the task force for water and climate, a regular workshop on this topic was organized.



The Dyje River in Bulhary

Protocol on Water and Health

Within the UN ECE Convention, a convention document was produced with focus on the connection between water and human health – the Protocol on Water and Health. The Czech Republic has been a party to the Protocol since 2001. The Protocol entered into force in 2005.

In 2011, guidance documents related to the setting of the Protocol objectives and control mechanisms were reviewed. Exchange of experience in monitoring the occurrence of diseases transmitted by water continued, parties to the Convention dealt with problems of quality of bathing waters and waters from small sources, which are also associated with the communication with the public.

In more detail, the information on the UN ECE Convention and the Protocol is available on the website www.unece.org/env/water.

12.2 International cooperation in the field of water protection in the integrated Elbe River, Danube River and Oder River Basins

International cooperation in the field of water protection in the integrated river basins proceeds through the International Commission for Protection of the Elbe, the International Commission for Protection of the Danube River and the International Commission for Protection of the Oder River against Pollution.

The Commissions were established for the purpose of implementation of the following international agreements:

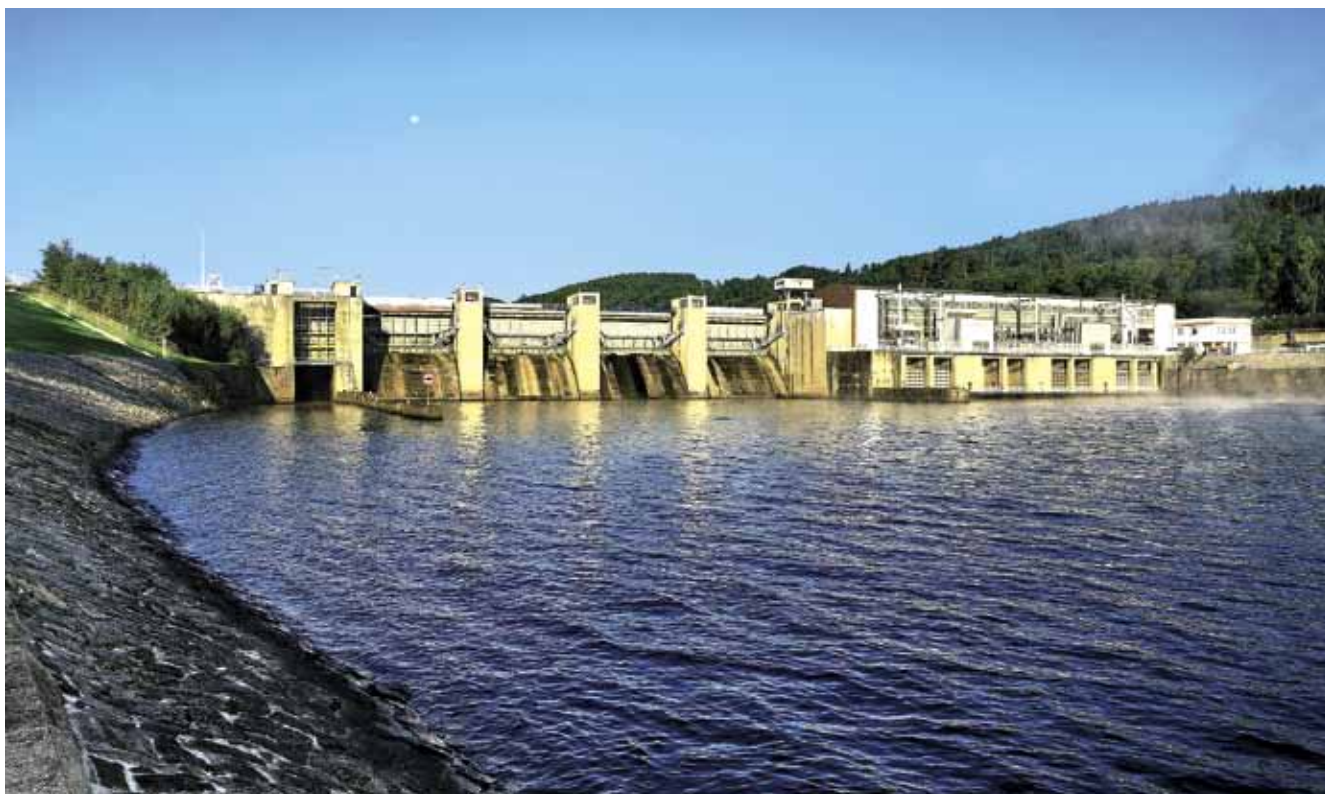
- Agreement on the International Commission for Protection of the Elbe (signed on 8 October 1990, entry into force on 13 August 1993);
- Convention on Cooperation for Protection and Sustainable Use of the Danube River (signed on 29 June 1994, entry into force on 22 October 1998);

- Agreement on the International Commission for Protection of the Oder River against Pollution (signed on 11 April 1996, entry into force 28 April 1999).

This international cooperation in protection of the main river basins in the Czech Republic primarily focuses on reducing the pollutant load on the Elbe, the Danube River and the Oder River, striving to achieve an ecosystem that is as close as possible to natural condition with a healthy diversity of species, allowing the use of water, especially the provision of drinking water from bank infiltration and the agricultural use of water and sediments, reducing pollution in the North Sea from the Elbe River Basin, in the Black Sea from the Danube River Basin and in the Baltic Sea from the Oder River Basin, flood control, coordinated implementation of Directive 2000/60/EC of the European Parliament and of the Council, establishing a framework for Community action in the field of water policy in integrated river basins.

Agreement on the International Commission for Protection of the Elbe

The International Commission for Protection of the Elbe is the most important board of the Czech-German cooperation in the field of water protection in the Elbe River Basin. Its activity is focused on reducing the pollution of the Elbe and its tributaries, improving the status of water-related ecosystems, the programmes of water quality measuring and monitoring, the prevention of accidental pollution and in the recent years especially on the coordinated approach to fulfilling the requirements of the so-called Water Framework Directive and improving flood control measures through the coordinated approach to fulfilling the requirements of the EC Directive on the assessment and management of flood risks (the so-called Flood Directive). In addition, since 1988 the International Commission for Protection of the Elbe participates in preparing and implementing the Magdeburg Workshop on protection of waters which is the most significant international expert and scientific event in the field of water protection in the Elbe River Basin.



Hydraulic structure Kamýk

The International Commission for Protection of the Elbe in its 24th session which took place in Vienna from 11 October to 12 October 2011, approved the documents “Summary of tasks according to the Water Framework Directive and the daughter Directive on environmental quality standards for the years 2010–2015, “Scheduled terms and objectives for the implementation of the Water Framework Directive at a national level in the Elbe River Basin in the years 2010–2015” and “International Programme of the Elbe Monitoring 2012”. In the field of flood protection, the International Commission for Protection of the Elbe was informed on the progress of work in implementing the so-called Flood Directive, the results of workshop on preliminary assessment of flood risks in the International Elbe River Basin District and approved the text and publication of the document “Hydrological characteristics of low flows in the Elbe and its major tributaries”. The Commission also agreed upon a preparation of this publication in English. In addition, the Commission took note of the documents “Summary of current knowledge on the impacts of climate change on the hydrological regime of the Elbe River Basin, especially with regard to the occurrence of floods” and “Criteria for evaluation of floods in the Elbe River Basin”. In the field of accident prevention, the Commission was informed about the preparation of the revised version of the “International Warning and Alert Plan for the Elbe” and discussed the possibilities of realization of a stable accident profile in the border stretch of the Elbe. Furthermore, the ICPE was acquainted with the progress of work on the report “Surface waters used for navigation purposes”.

In more detail, the information on the activities of the International Commission for Protection of the Elbe is available on the website www.ikse-mkol.org.

Convention on Cooperation for Protection and Sustainable Use of the Danube River

The International Commission for Protection of the Danube River was established on the basis of the Convention on Cooperation for Protection and Sustainable Use of the Danube River, which entered into force in 1998 and represents one of the most extensive international activities in the field of water protection, involving 14 states in the Danube River Basin and the EU. The seat of the Secretariat of the International Commission for Protection of the Danube River is in Vienna.

The 14th session of the International Commission for Protection of the Danube River took place from 13 December to 14 December 2011 in Vienna under the presidency of Ukraine. The session was attended by the delegations of all 15 parties to the Convention on Cooperation and Sustainable Use of the Danube River), chairmen of the individual expert groups, representatives of observer organizations and the Commission Secretariat staff members.

The ICPDR over the years of its existence has a number of international contacts and in 2007 in Brisbane, Australia it was awarded by the IRF the Thiess Riverprize for the most successful river commission. The awarded prize is associated with money which can only be used for transfer of experience to other commissions for protection of river basins. Based on agreement with the IRF and proposal of the ICPDR delegations it was decided to establish with the ICPDR an institution allowing cooperation between the commissions for protection of international river basins, which would also perform the function of the European offshoot of the IRF. One of its tasks would be to award European Riverprize. The ICPDR discussed the possibilities of establishing this institution and asked the relevant expert group to elaborate the proposal into a definite form.

In addition, the International Commission for Protection of the Danube River approved the auditors' report for the previous period, the budget and the membership fees for the next period.

The Commission discussed the work of the individual expert groups aimed especially at the fulfilment of the Water Framework Directive requirements and the preparation of reports 2012 and 2013 according to this directive. The activities relating to flood control and coordination of preparing the implementation of the Directive on the assessment and management of flood risks (2007/60/EC) were presented. The Commission discussed the issues relating to financing of audits of the laboratories and a preparation of the third Joint Survey of the Danube River, which will take place in 2013. The Commission also discussed the Danube Strategy, where it intends to get involved in the points concerning water quality, accident prevention and biodiversity and participate in a number of projects funded from external sources (the EU, WB, FAO, etc.). Worth mentioning is the intended project of fish pass through the Iron Gate dams.

In more detail, the information on the activities of the International Commission for Protection of the Danube River is available on the website www.icpdr.org.

Agreement on the International Commission for Protection of the Oder River against Pollution

The Agreement on the International Commission for Protection of the Oder River against Pollution is implemented through the International Commission for Protection of the Oder River against Pollution, which is seated in Wrocław in the Republic of Poland.

The activities of the Working Groups in 2011 were discussed at the 14th plenary session of the International Commission for Protection of the Oder River against Pollution, held on 22 November 2011 in Wrocław. The reports presented at this session included reports on the activities of the individual working groups aimed primarily at preparing the work plan for the International Commission for Protection of the Oder River against Pollution and the task schedule for the planning period 2010–2015, preparing the Terms of Reference for the project “Modelling of nutrient emissions for the International Oder River Basin District from point sources and various diffuse sources of pollution for the historical, current and future volumes of nutrient emissions”, preparing the strategies to meet the objectives for significant water management issues, preparing the report “Preliminary assessment of flood risks in the International Oder River Basin District” according to the so-called Flood Directive and update of Emergency Plan including the International Warning and Alert Plan for the Oder River for the Events of Emergency Pollution.

Detailed information on the activities of the International Commission for Protection of the Oder River against Pollution is available on the website www.mkoo.pl.

12.3 International cooperation on transboundary waters

Cooperation of the Czech Republic on transboundary waters with the Republic of Poland, the Austrian Republic, the Slovak Republic and the Federal Republic of Germany is regulated by bilateral international or intergovernmental agreements. The fulfilment of these agreements is being ensured by bilateral committees for water management issues on transboundary waters, or by the authorized government representatives appointed for water management issues with the neighbouring states.

Although more than 30% of the state border are constituted by watercourses and water bodies (approx. 740 km of the total length of 2.290 km of the state border of the Czech Republic with

the neighbouring states), border reaching waters are considered not only segments of watercourses or of their main branches that constitute or cross the state border, but also surface waters and groundwaters in the vicinity of the state border, where the water management measures implemented on the territory of one party would substantially affect water management conditions on the territory of the other party.

Cooperation on transboundary waters especially focuses on ensuring the stability of the state border in segments which are constituted by border reaching watercourses, regulation and maintenance of border reaching watercourses including construction and operation of structures on these watercourses, the protection of transboundary waters against pollution (including the respective monitoring, joint monitoring of the quality of transboundary waters, exchange of data and organization of warning and alert service in case of emergency), hydrology and flood warning service (including monitoring, joint measurements, exchange of data and organization of warning and alert service in case of emergency), cooperation in matters of the state border administration on transboundary watercourses, etc.

Agreement between the Czech Republic and the Federal Republic of Germany on Cooperation on Transboundary Waters in the Field of Water Management

Cooperation in the field of water management is regulated by the "Agreement between the Czech Republic and the Federal Republic of Germany on Cooperation on Transboundary Waters in the Field of Water Management", which was signed on 12 December 1995 and became effective on 25 October 1997. The fulfilment of the Agreement with the Federal Republic of Germany takes place through the Czech-German Commission for Transboundary Waters (hereinafter referred to as the "CR-FRG Commission").

The 14th session of the CR-FRG Commission was held in Dresden in the Federal Republic of Germany from 21 October to 22 October 2011. The purpose of this session was to discuss and approve the results of the 13th session of the Standing Committee Bavaria (on 13 – 15 April 2011 in Český Krumlov in the Czech Republic) and the 13th session of the Standing Committee Saxony (on 7 – 9 June 2011 in Oybin in the Federal Republic of Germany).

The CR-FRG Commission further discussed other relevant issues of cooperation on transboundary waters, concerning especially the principles for direct cooperation of the relevant authorities and expert workplaces, Lists of Transboundary Waters, points of cooperation with the Standing Czech-German Border Commission and implementation of the Water Framework Directive on transboundary waters. In addition to these topics, both parties informed each other about the current state of preparations for a change of "Agreement between the Government of the Czechoslovak Socialist Republic and the Government of the German Democratic Republic on the adjustment of some of the common issues associated with the construction and operation of the water reservoir in the Föha stream valley near Rauschenbach" (concerning the new calculation of the elevation of upper level of the retention area of this reservoir), possibilities of funding for the project "Stable Accident Profile of the Elbe", etc.

The next, 15th session of the CR-FRG Commission will take place on 25 – 26 October 2012 in Prague in the Czech Republic.

The results of the meeting are included in the "Protocol on the 14th meeting of the Czech-German Commission for Transboundary Waters", which was signed by both representatives of the Parties, submitted to heads of the departments concerned for their standpoint and on the Czech party approved by the Minister of the Environment.

Convention between the Government of the Czechoslovak Republic and the Government of the People's Republic of Poland on Water Management on Transboundary Waters

Cooperation with the Republic of Poland on transboundary waters is regulated by the Convention between the Government of the Czechoslovak Republic and the Government of the People's Republic of Poland on Water Management on Transboundary Waters, which was signed on 21 March 1958 and became effective on 7 August 1958.

The 13th meeting of the representatives of the governments of the Czech Republic and the Republic of Poland for cooperation in the field of water management on transboundary waters took place in Prague in the Czech Republic from 8 November to 10 November 2011. During this meeting, the results of activities of the individual joint working groups for the period from the 12th meeting of the government representatives were discussed and approved. The individual working groups were assigned tasks in the respective fields of cooperation and work plans for the next period were approved. The matters discussed included, among others, the issues of reducing flood risks to the Upper Opava River by means of the Nové Heřminovy water reservoir, the issues of effects of the scheduled Ratiboř water reservoir and the Kopytov stage, joint monitoring in the area of Intra-Sudetic Basin and the issues of the impact of Turów mine operations on surface waters and groundwaters (including the requirement of the Czech party to get current information to assess the impact of this mine on groundwaters), and also the current status of implementation of the Danube River-the Oder River-the Elbe River corridor. At the 13th meeting of the representatives of the Governments, both parties informed each other about the status of the preparatory work on the "Agreement between the Government of the Czech Republic and the Government of the Republic of Poland on Cooperation in the Field of Water Management on Transboundary Waters", which will replace the currently valid Convention of 1958. In 2011, both parties finished the national inter-departmental consultations on the planned update of the Convention and informed each other about the drafts of the new text to be discussed at the expert level. This agreement is expected to be signed in the second half of 2012.

Conclusions from the meeting of the government representatives are included in the Protocol on the 13th meeting, which was subjected to interdepartmental discussion and approved by the Minister of the Environment.

The next, 14th meeting of the representatives of the governments of the Czech Republic and the Republic of Poland is scheduled to take place in November 2012 in the Republic of Poland.

Agreement between the Czechoslovak Socialist Republic and the Republic of Austria on Regulation of Water Management Issues on Transboundary Waters

The 19th session of the Czech-Austrian Commission for Transboundary Waters (hereinafter referred to as the CR-A Commission) took place in St. Lorenz/Mondsee in the Republic of Austria from 14 June to 17 June 2011. The purpose of this session of the CR-A Commission was to discuss the individual areas of mutual cooperation in water management on transboundary waters in accordance with the "Agreement between the Czechoslovak Socialist Republic and the Republic of Austria on Regulation of Water Management Issues on Transboundary Waters" of 7 December 1967 and effective from 18 March 1970.

The CR-A Commission at its 19th meeting discussed the results of monitoring of surface waters (especially the report on the results of joint monitoring of the Pulkava River and the Dyje River affected by the Austrian chemical plant in Pernhofen), the evaluation of construction work on transboundary watercourses, including final settlement of accounts relating to the joint work,

the state of proceedings regarding the extension of water management permit for the Vranov hydropower plant, the issues of optimization of its work, etc.

The result of the meeting of the CR-A Commission is included in the mutually agreed and signed “Protocol on the 19th meeting of the Czech-Austrian Commission for Transboundary Waters”, which was subjected to interdepartmental discussion and approved by the Minister of the Environment.

The next, 20th meeting of the CR-A Commission will take place on 30 – 31 May 2012 in Prague.

Agreement between the Government of the Czech Republic and the Government of the Slovak Republic on Cooperation on Transboundary Waters

The 11th session of the Czech-Slovak Commission for Transboundary Waters (hereinafter referred to as the “CR-SR Commission”), established on the basis of the “Agreement between the Government of the Czech Republic and the Government of the Slovak Republic on Cooperation on Transboundary Waters” that was signed and became effective on 16 December 1999, was held in Oščadnica in the Slovak Republic from 18 May to 20 May 2011.

The CR-SR Commission at its 11th meeting approved the reports on activities of its Working Groups in 2010 and approved work plans for 2011. In addition to the cooperation with the Standing Czech-Slovak Border Commission (under the Ministry of the Interior), evaluation of joint monitoring of surface waters, hydrological and navigation issues, the CR-SR Commission discussed the current status of joint Czech-Slovak projects focusing on flood protection and projects aimed at improvement of the existing systems of transfer of the hydrological data in cross-border catchment area of the Morava River and the Dyje River and more effective cooperation between the relevant water management control centres. In terms of the planned project “Extension of Navigability of the Otrokovice – Rohatec Waterway”, both parties informed each other about the course of discussions to reach the “Agreement between the Government of the Czech Republic and the Government of the Slovak Republic on Temporary Use of Part of the Territory and Property of the Slovak Republic for the Construction and Operation of the Project “Extension of Navigability of the Otrokovice – Rohatec Waterway” on the transboundary watercourse Radějovka (Radejovka) in the cadastral territory of the town of Skalce and the municipalities of Sudoměřice and Rohatec”.

The result of the meeting is included in the “Protocol on the 11th meeting of the Czech-Slovak Commission for Transboundary Waters”, which was subjected to interdepartmental discussion and approved by the Minister of the Environment.

The next, 12th meeting of the CR-SR Commission was agreed to take place on 15 – 16 May 2012 in Prague in the Czech Republic.

Trilateral meeting of the government representatives of the Czech-Austrian Commission for Transboundary Waters, the Czech-Slovak Commission for Transboundary Waters and the Slovak-Austrian Commission for Transboundary Waters

The 5th meeting of the government representatives of the Czech-Austrian Commission for Transboundary Waters, the Czech-Slovak Commission for Transboundary Waters and the Slovak-Austrian Commission for Transboundary Waters took place on 5 December 2011 in Pavlov in the Czech Republic.

Although these meetings do not take place on the basis of existing international agreement, the effort of all three parties is to make a joint meeting once a year to discuss the topics in the field of cooperation on transboundary waters, especially in the Morava River and the Dyje River confluence area. At this 5th meeting, the government representatives informed each other of the following jointly planned or already implemented projects co-financed under cross-border programmes of the European Union:

1. Czech-Austrian project “Nature-friendly Flood Control Measures in the Morava River and the Dyje River Confluence Area” (polder Soutok) and other projects in this area;
2. Czech-Slovak project “Joint Flood Control Measures on Both Banks of the Morava River”;
3. Czech-Austrian project “Flood Prediction System for the Morava – Dyje Rivers,
4. Slovak-Austrian project focusing on the use of the Dyje River and the Morava River for recreational boating,
5. The concept of harmonization of flood protection in transboundary river basins CEFAME.

The result of the trilateral meeting of the government representatives is taken into account by all parties in the drafting of protocols for the upcoming meeting of the relevant bilateral commissions for transboundary waters.



The Šembera River in Český Brod



Hana Schováňková – 9 years

Art club „Zdeňka“, Kladno, Středočeský kraj region

13. Research and development in water management

13.1 Research and development in the competence of the Ministry of Agriculture

In 2011, the Ministry of Agriculture provided special-purpose funding for research and development projects in the field of water management in the amount of almost CZK 53 million.

In 2011, the funds to support water management R&D amounted in total to CZK 52,878 thousand. The R&D projects launched in 2007 were funded by the amount of CZK 3,646 thousand, the R&D projects launched in 2008 were granted support amounting to CZK 28,030 thousand, the R&D projects launched in 2009 were granted support amounting to CZK 15,499 thousand and the R&D projects launched in 2010 were granted support amounting to CZK 2,324 thousand. In 2011, three new R&D projects tackling the issues of water management were launched and were granted support amounting to CZK 3,379 thousand. R&D projects are primarily aimed at soil and water protection in sustainable development of the agricultural sector, landscaping, revitalization and protection of cultural landscape, forests and water bodies, rationalization of water management and addressing the impacts of climate change.

An overview of the individual R&D projects in progress is shown in a summarized form in table 13.1.1. Publicly accessible data on these projects are available on the website of the Council for Research, Development and Innovations at www.vyzkum.cz in the section Information System R&D&I (the Central Register of R&D Projects). The information on the results of the R&D projects is also available on the same website in the Information Register of R&D Results. Other information on the research and development

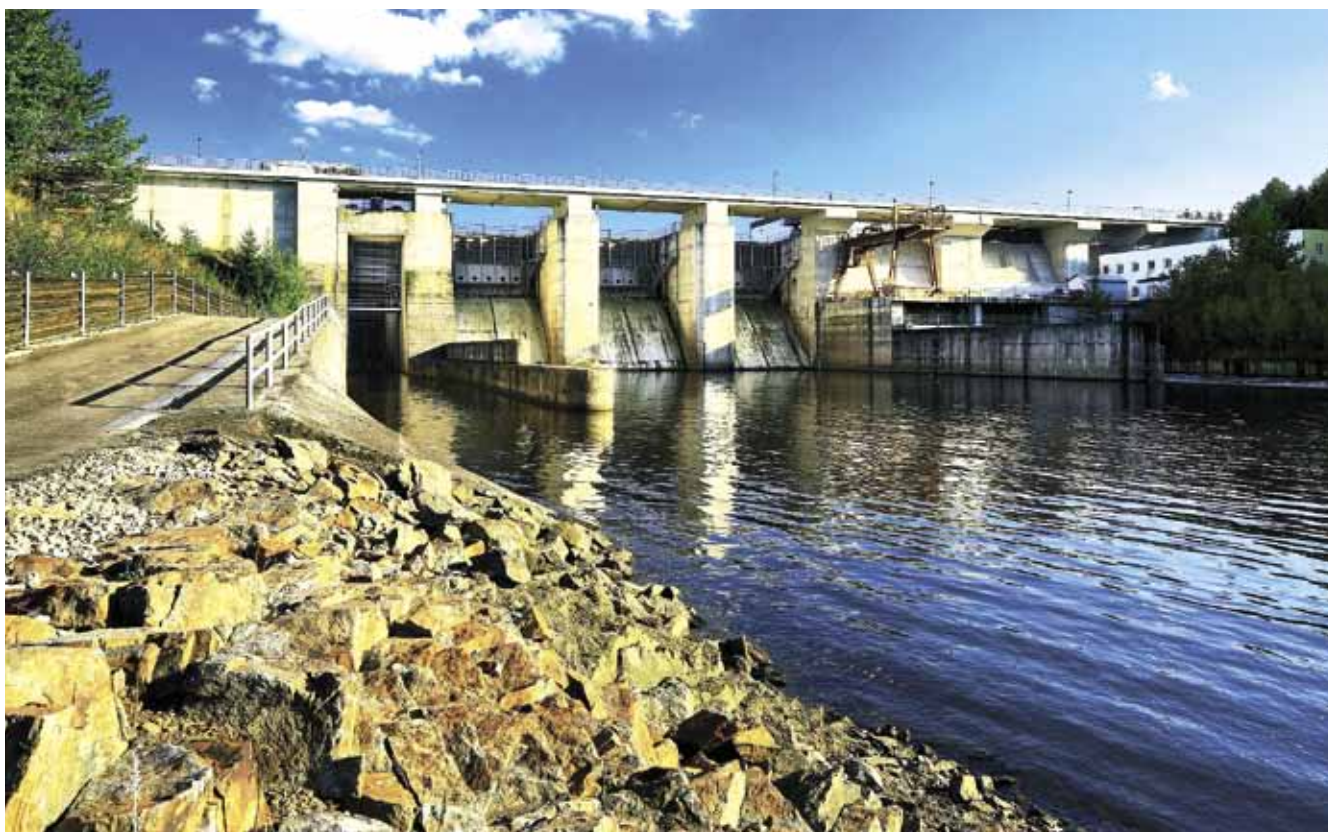
in the field of water management can also be found on the website of the National Agency for Agricultural Research with the Ministry of Agriculture at www.nazv.cz in the Infobanka section.

Water management R&D projects resulted from public tenders called under the research programmes of the Ministry of Agriculture, namely the Programme of Research in Agricultural Sector 2007–2012 and the Research in Agricultural Complex 2009–2014. They also include sub-programmes, research trends or objectives relating to water management issues.

The Programme of Research in Agricultural Sector 2007–2012 includes the sub-programme Effective Approaches in Agricultural Sector, where one of the research trends is the Sustainability and Enhancement of Water Resources and Reducing the Impacts of Climate Change. One of the research trends under the sub-programme Effective and Friendly Management Practices is the research trend Interactions between Water, Soil and Environment.

The programme of Research in Agricultural Complex 2009–2014 includes the sub-programme Rural Development through Sustainable Management of Natural Resources, where one of the objectives of this sub-programme is to develop water management practices with regard to assumed climate change risks and to innovate waste water treatment techniques.

In 2011, the Research Institute for Soil and Water Reclamation, public research institution continued to conduct the work under research scheme No. MZE0002704902, Integrated Systems of Soil, Water and Landscape Protection and Use in Agriculture and Rural Development. Under this scheme, the chapters relating to water management received support in the amount of CZK 14,602 thousand.



Hydraulic structure Hněvkovice

Table 13.1.1

Research and development projects in the field of water management financed from the budget chapter of the Ministry of Agriculture in 2011

project No.	name of project	from - to	coordinator	funds (thousands of CZK)
QH71015	Minimization of risks of the occurrence of cyanobacteria metabolites in technological processes in fishing sector	1 May 2007 31 December 2011	Mendel University in Brno	1,261
QH71201	Reliability and safety of water management structures in changing climate conditions	1 May 2007 31 December 2011	Czech Technical University in Prague	1,203
QH72085	Differentiation of erosion control measures according to soil erodibility and rain erosivity	1 May 2007 31 December 2011	Czech Agricultural University in Prague	1,182
QH81012	The use of aeration technologies for the reduction of cyanobacteria resting phases and nutrient bioavailability in reservoir sediments	1 January 2008 31 December 2011	Institute of Botany of the Academy of Sciences of the Czech Republic, public research institution	1,863
QH81046	Optimization of the bio-manipulation effect of predatory fish in ecosystems of water reservoirs	1 January 2008 31 December 2012	Biology Centre of the Academy of Sciences of the Czech Republic, public research institution	1,464
QH81170	Multidisciplinary evaluation of impacts of special territorial protection of hydrologically important areas in the Czech Republic	1 January 2008 31 December 2012	Czech Agricultural University in Prague	1,615
QH81200	Optimization of water regime in the landscape and increasing its retention capacity through application of compost from biologically degradable waste on arable land and permanent grassland	1 January 2008 31 December 2012	Research Institute of Agricultural Engineering, public research institution	1,847
QH81326	New cultivation technologies in potato production aimed at higher efficiency of fertilization and water protection	1 January 2008 31 December 2012	Potato Research Institute Havlíčkův Brod	1,299
QH81331	Research of adaptation measures to eliminate the impacts of climate change in the regions of the Czech Republic	1 January 2008 31 December 2012	T. G. Masaryk Water Management Research Institute, public research institution	1,425
QH82078	Water retention in floodplains and possibilities of its enhancing	1 January 2008 31 December 2011	Daphne CR – Institute of Applied Ecology	2,200
QH82083	Potential and limits of the use of river and fishpond sediments in agriculture	1 January 2008 31 December 2011	Research Institute for Soil and Water Reclamation, public research institution	1,271
QH82089	Non-production function of soils in the Czech Republic in relation to their production function, their assessment and their influence on soil, water and landscape protection	1 January 2008 31 December 2012	Research Institute for Soil and Water Reclamation, public research institution	712
QH82090	Changes in soil properties due to grassing, afforestation or in the long-term abandoned arable land, with impacts on soil, water and landscape protection	1 January 2008 31 December 2012	Research Institute for Soil and Water Reclamation, public research institution	760
QH82095	The impact of land use type location on runoff and wash loss of selected substances	1 January 2008 31 December 2012	Research Institute for Soil and Water Reclamation, public research institution	2,346
QH82096	Development of conceptual model for generation of groundwater vulnerability synthetic maps and its comparison with model DRASTIC	1 January 2008 31 December 2012	Research Institute for Soil and Water Reclamation, public research institution	1,516
QH82098	Analysis of changes in land use in source areas of agricultural area pollution using remote sensing data	1 January 2008 31 December 2011	Research Institute for Soil and Water Reclamation, public research institution	585
QH82106	Recultivation as a tool for landscape water regime function regeneration after opencast brown coal mining	1 January 2008 31 December 2012	University of South Bohemia in České Budějovice	1,693
QH82117	Environment friendly and effective fishpond management with maximum utilization of current trophic potential and maintaining good quality of water and fish production	1 January 2008 31 December 2012	University of South Bohemia in České Budějovice	2,492
QH82126	Harmonization of landscaping, hydrological and production function of hedgerows and terraces for diversification of activities in countryside	1 January 2008 31 December 2011	Jan Evangelista Purkyně University in Ústí nad Labem	1,615

QH82191	Optimization of batching and placement of organic matter into soil with the aim to reduce surface water runoff during intensive rainfall	1 January 2008 31 December 2012	Research Institute of Agricultural Engineering, public research institution	1,143
QH82283	Research of interaction of water, soil and environment from the viewpoint of barnyard manure management in sustainable agriculture	1 January 2008 31 December 2012	Research Institute for Crop Production, public research institution	2,184
QH91247	Possibilities of mitigation of current impacts of climate change through enhanced accumulation capacity in the Rakovnický stream catchment area (pilot project)	1 January 2009 31 December 2011	T. G. Masaryk Water Management Research Institute, public research institution	1,312
QH91257	Socio-economic analysis of impacts of climate change in relation to water management in the Czech Republic – the effectiveness of costs of water management services and tools for their regulation	1 January 2009 31 December 2011	T. G. Masaryk Water Management Research Institute, public research institution	1,177
QH92034	Identification of infiltration areas in selected river basins by means of water vegetation stress	1 January 2009 31 December 2011	Research Institute for Soil and Water Reclamation, public research institution	1,304
QH92073	Mountain forests – basic ecosystems influencing water balance, floods and drought periods in the landscape	1 January 2009 31 December 2011	Research Institute for Forestry and Game Management, public research institution	860
QH92086	Methodology of drafting and implementing infiltration and capture measures within rehabilitation of hydrological conditions and land use in the landscape	1 January 2009 31 December 2011	Czech Agricultural University in Prague	936
QH92091	Optimization of recultivation and remediation methods for landscape units devastated by mining, with emphasis on protection of waters and ecological stability	1 January 2009 31 December 2011	Czech Agricultural University in Prague	972
QH92298	System of nature friendly erosion control and flood control measures and its optimization in the process of land consolidation	1 January 2009 31 December 2011	University of South Bohemia in České Budějovice	834
QI91C008	Optimization of drafting of technical erosion control measures	1 June 2009 31 December 2013	Research Institute for Soil and Water Reclamation, public research institution	1,761
QI91C054	Soil Climate Atlas of the Czech Republic – definition of thermal and hydric regimes and their impact on productive capacity of soils	1 June 2009 31 December 2013	Mendel University in Brno	1,217
QI92A012	The assessment of implementation of erosion control and water management facilities in comprehensive land adaptations in terms of farming landscape protection and creation	1 June 2009 31 December 2013	Research Institute for Soil and Water Reclamation, public research institution	1,011
QI92A139	Research of methods improving the efficiency of water management of small reservoirs with respect to risks posed by expected climate change	1 June 2009 31 May 2012	Czech Technical University in Brno	851
QI92A207	Recovery and long-term nature friendly management of watercourse bank vegetation	1 June 2009 31 December 2013	Silva Taroucy Research Institute for Landscape and Ornamental Gardening, public research institution	3,264
QI102A265	Determination of the proportion of phosphorus in eutrophication of standing surface water bodies at risk	1 January 2010 31 December 2013	Czech Technical University in Prague	2,324
QI111C034	Influence of livestock grazing on soil properties, water quality and quantity and species biodiversity in the landscape	1 January 2011 31 December 2014	Research Institute for Soil and Water Reclamation, public research institution	1,371
QI112A132	Research of measures to ensure drinking water supply in the period of climate change	1 January 2011 31 December 2014	Mining University - Technical University of Ostrava	935
QI112A174	Forestry and agricultural aspects of management of water component in the landscape	1 January 2011 31 December 2014	Research Institute for Forestry and Game Management, public research institution	1,073
Total				52,878

13.2 Research and development in the competence of the Ministry of the Environment

In 2011, the main research institution in the competence of the Ministry of the Environment, dealing with the issues of water protection was the T. G. Masaryk Water Management Research Institute, public research institution. Another institution dealing with important research projects or participating, to a large extent, in these projects was the Czech Hydrometeorological Institute.

The year 2011 was the last year when the Ministry of the Environment supported R&D&I research projects. Therefore, all activities in this year were focused on the successful completion of all research activities within the Ministry of the Environment.

The year 2011 was the seventh and the last year of the implementation period of research scheme No. MŽP0002071101 – “Research and Protection of Hydrosphere – research of relations and processes in the aquatic compartment of the environment, with particular focus on the impact of anthropogenic pressures, and on the sustainable use and protection, including legislative tools”. The subsidy is granted by the Czech Republic through the Ministry of the Environment, the beneficiary was the T. G. Masaryk Water Management Research Institute, public research institution. In 2011, the Ministry of the Environment was responsible for the execution of scientific and research projects in the field of water management (including related areas) under the programme of the Government Council for Research and Development. These projects are shown in table 13.2.1.



The Pruněřovský stream

Table 13.2.1

R&D&I projects in the field of water management financed from the budget chapter of the Ministry of the Environment in the year 2011

Project No.	Name of the project	From – to	Coordinator	Funds (thousands of CZK)
SP/1c2/121/07	Maps of flood risks in the Czech Republic	2007–2011	T. G. Masaryk Water Management Research Institute, public research institution	3,231
SP/1c4/16/07	Research and implementation of new flood and runoff prediction tools in the framework of ensuring flood prediction and warning system in the Czech Republic	2007–2011	Czech Hydrometeorological Institute	2,143
SP/2e7/229/07	Anthropogenic pressures on the status of soils, water resources and water ecosystems in the Czech part of the international Elbe River Basin	2007–2011	T. G. Masaryk Water Management Research Institute, public research institution	18,269
VZ-MZP0002071101	Research and Protection of the Hydrosphere – research of relations and processes in the aquatic compartment of the environment, with particular focus on the impact of anthropogenic pressures and on the sustainable use and protection, including legislative tools	2005–2011	T. G. Masaryk Water Management Research Institute, public research institution	50,161
SP/1a6/108/07	Refinement of the existing estimates of the impacts of climate change in the sectors of water management, agriculture and forestry and proposals of adaptation measures	2007–2011	Czech Hydrometeorological Institute	4,706
SP/1a6/151/07	Assessment of the impacts of climate change on the hydrological balance and design of practical measures to mitigate such impacts	2007–2011	Czech Geological Survey	4,758
Total				83,268

Source: MoE

In 2011, the execution of the research project No. SP/1c2/121/07 “Maps of Flood Risks in the Czech Republic”, funded by the Ministry of the Environment, was completed. The project was based on elaboration of partial issues to complete the so far used or proposed methods of risk assessment of flood plain areas and the proposal for effective fulfilment of the obligations of the Czech Republic resulting from the Directive 2007/60/EC on the assessment and management of flood risks. The project focused on the verification of applicability of current data sources for effective description of threat, vulnerability, assessment of potential damage and expressing flood risks. This was conducted along with update and verification of partial methodologies for potential damage assessing and flood risk expressing. The vectorization of the individual drawings of land-use planning documentation of municipalities in the pilot basins of the Lužnice River and the Nežárka River was completed. The source documents were used to be incorporated into a map of flood risks on the basis of matrix for individual municipalities in the pilot basin. Field investigation in the remaining part of the pilot basin of the Lužnice River from the town of Tábor as far as confluence with the Vltava River was carried out.

The project No. SP/1c4/16/07 “Research and implementation of new flood and runoff prediction tools in the framework of ensuring flood prediction and warning system in the Czech Republic” focused in 2011 on research of the influence of inputs of assembly systems for probabilistic weather forecast on hydrological modelling. The project further focused on the development of a methodology for long-term probabilistic hydrological predictions, the assessment of probabilistic prediction outputs applicability in water management practice, the development of a robust method of estimating runoff from torrential rains, the development of methods to determine and measure snow cover parameters with regard to the needs of flood prediction and warning system, and the compilation of flood risk guide for the needs of flood control bodies and the public.

The project No. SP/2e7/229/07 “Anthropogenic pressures on the status of soils, water resources and water ecosystems in the Czech part of the international Elbe River Basin” focused on the

identification of pressures caused primarily by human activity on the quality of water resources, soils and water ecosystems, including the description of the changes in habitats and their subsequent impact on communities of aquatic organisms. With regard to the scope of the issues dealt with, this project was divided into a series of nine separate special blocks. Other research institutions participating in this project included the Research Institute of Fish Culture and Hydrobiology of the University of South Bohemia, the Czech Geological Survey and the Czech Technical University in Prague, the Faculty of Civil Engineering.

Project No. SP/1a6/108/07 “Refinement of existing estimates of the impacts of climate change in the sectors of water management, agriculture and forestry and proposals of adaptation measures”. The project focused on the process of reducing the risks of the impacts of climate change, especially on the issue of adaptation measures comprehensively, with the aim to orientate it in the next few years primarily to the sectors of water management, agriculture and forestry. Current knowledge of sectoral impacts of climate change has shown that in the conditions of the Czech Republic the most vulnerable is the sector of water management and the ongoing changes in the hydrological regime are subsequently reflected in the sectors of agriculture and forestry.

Project No. SP/1a6/151/07 “Assessment of the impacts of climate change on the hydrological balance and design of practical measures to mitigate such impacts”. The project monitored the impacts of climate change on the hydrological balance, extreme hydrological events and water resources in forest catchments of GEOMON network. Forest in the conditions of the Czech Republic is the best approximation to the natural ecosystem and a suitable environment allowing to monitor the effects of extreme hydrological situations. With regard to the fact that in spruce monocultures the naturalness of the ecosystem is disturbed and forest is prone to acidification, also critical loads of selected chemical elements were monitored and assessed.

The execution of all of the above mentioned projects was completed in 2011.



Overflows the Ohře River in Vršovce

List of acronyms in text

BOD ₅	biochemical five-day oxygen demand
CEB	Council of Europe Development Bank
CF	Cohesion Fund
CHP	chemical removal of phosphorus
COD _{cr}	chemical oxygen demand
CSN	Czech State Standard
DDT	1,1,1-trichloro-2,2-bis(p-chlorophenyl) ethane
DIS	dissolved inorganic salts
DN	denitrification
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
EEC	European Economic Community
EIA	environmental impact assessment
EIB	European Investment Bank
EQS	Environmental Quality Standards
ERDF	European Regional Development Fund
EU	European Union
FAD	flood activity degree
HCH	hexachlorocyclohexan

ISPA	Instrument for Structural Policies for Pre-Accession
MoA	Ministry of Agriculture
MoE	Ministry of the Environment
N	nitrification
N _{-inorganic}	inorganic nitrogen
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne (sectoral classification of economic activities according to Eurostat)
OECD	Organization for Economic Co-operation and Development
OPE	Operational Programme Environment
PCB	polychlorinated biphenyls
PE	population equivalent
Q _a	long-term annual average flow
Q _m	long-term monthly average flow
R&D	research and development
R&D&I	research, development and innovation
s. e.	state enterprise
VAT	value added tax



The Chrudimka River in Rváčov

Important contacts in water management

Ministry of Agriculture

Těšnov 65/17, Praha 1, 117 05, www.eagri.cz

Ministry of the Environment

Vršovická 1442/65, Praha 10, 100 10, www.mzp.cz

Elbe River Board, state enterprise

Víta Nejedlého 951/8, Hradec Králové, 500 03, www.pla.cz

Vltava River Board, state enterprise

Holečkova 106/8, Praha 5, 150 24, www.pvl.cz

Ohře River Board, state enterprise

Bezručova 4219, Chomutov, 430 03, www.poh.cz

Oder River Board, state enterprise

Varenská 3101/49, Ostrava, 701 26, www.pod.cz

Morava River Board, state enterprise

Dřevařská 932/II, Brno, 602 00, www.pmo.cz

Forests of the Czech Republic, state enterprise

Přemyslova 1106/19, Hradec Králové, 501 68, www.lesy.cz

Agricultural Water Management Administration

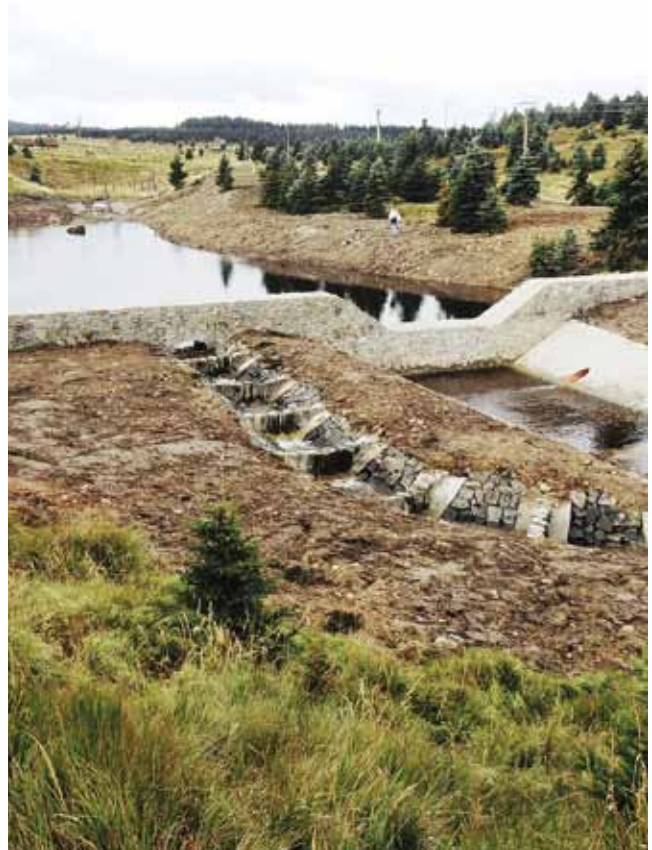
Hlinky 60, Brno, 603 00, www.zvhs.cz

Czech Hydrometeorological Institute

Na Šabatce 2050/17, Praha 412-Komořany, 143 06, www.chmi.cz

T. G. Masaryk Water Management Research Institute, public research institution

Podbabská 2582/30, Praha 6, 160 00, www.vuv.cz



Sphagnum in the Fláje stream



The Orlice River in Malšovice

Notes: