Progress in Integrated Water Management and Sustainable Mountain Development

Slovakia 2006

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FRAMEWORK CONVENTION on the Protection and Sustainable Development of the Carpathians

111/2006 notification of Ministry for forein affers Slovak republik

22. May 2003 Kyjev - sighned Carpatian convention Slovenská

It shall apply from 4. january 2006

Carpatian convention

Based on experience gained in the framework of the Convention on the Protection of the Alps (Salzburg, 1991) as a successful model for the protection of the environment and sustainable development of mountain regions, providing a sound basis for new partnership initiatives and further strengthening of cooperation between Alpine and Carpathian states;

Member states

-Czech republic

-Slovakia

- Poland

-Ukraine

-Romania

-Hungary

Article 6 m **Sustainable and integrated** water/river basin management

Taking into account the hydrological, biological and ecological, and other specificities of mountain river basins, the Parties shall:

(a) take appropriate measures to promote policies integrating sustainable use of water resources, with land-use planning, and aim at pursuing policies and plans based on an integrated river basin management approach, recognizing the importance of pollution and flood management, prevention and control, and reducing water

habitats fragmentation,

Article 6
Sustainable and integrated water/river basin management

(b) pursue policies aiming at sustainable management of surface and groundwater resources, ensuring adequate supply of good quality surface and groundwater as needed for sustainable, balanced and equitable water use, and adequate sanitation and treatment of waste water,

Article 6
Sustainable and integrated water/river basin management

(c) pursue policies aiming at conserving natural watercourses, springs, lakes and groundwater resources as well as preserving and protecting of wetlands and wetland ecosystems, and protecting against natural and anthropogenic detrimental effects such as flooding and accidental water pollution,

Article 7
Sustainable agriculture and forestry

The Parties shall maintain the management of land traditionally cultivated in a sustainable manner, and take appropriate measures in designing and implementing their agricultural policies, taking into account the need of the protection of mountain ecosystems and landscapes, the importance of biological diversity, and the specific conditions of mountains as less favoured areas.

Article 7
Sustainable agriculture and forestry

The Parties shall pursue policies aiming at developing and designing appropriate instruments, such as the crucially important agri-environmental programs in the Carpathians, enhancing integration of environmental concerns into agricultural policies and land management plans, while taking into account the high ecological importance of Carpathian mountain ecosystems, such as natural and semi-natural grasslands, as part of the ecological networks, landscapes and traditional land-use.

Article 7
Sustainable agriculture and forestry

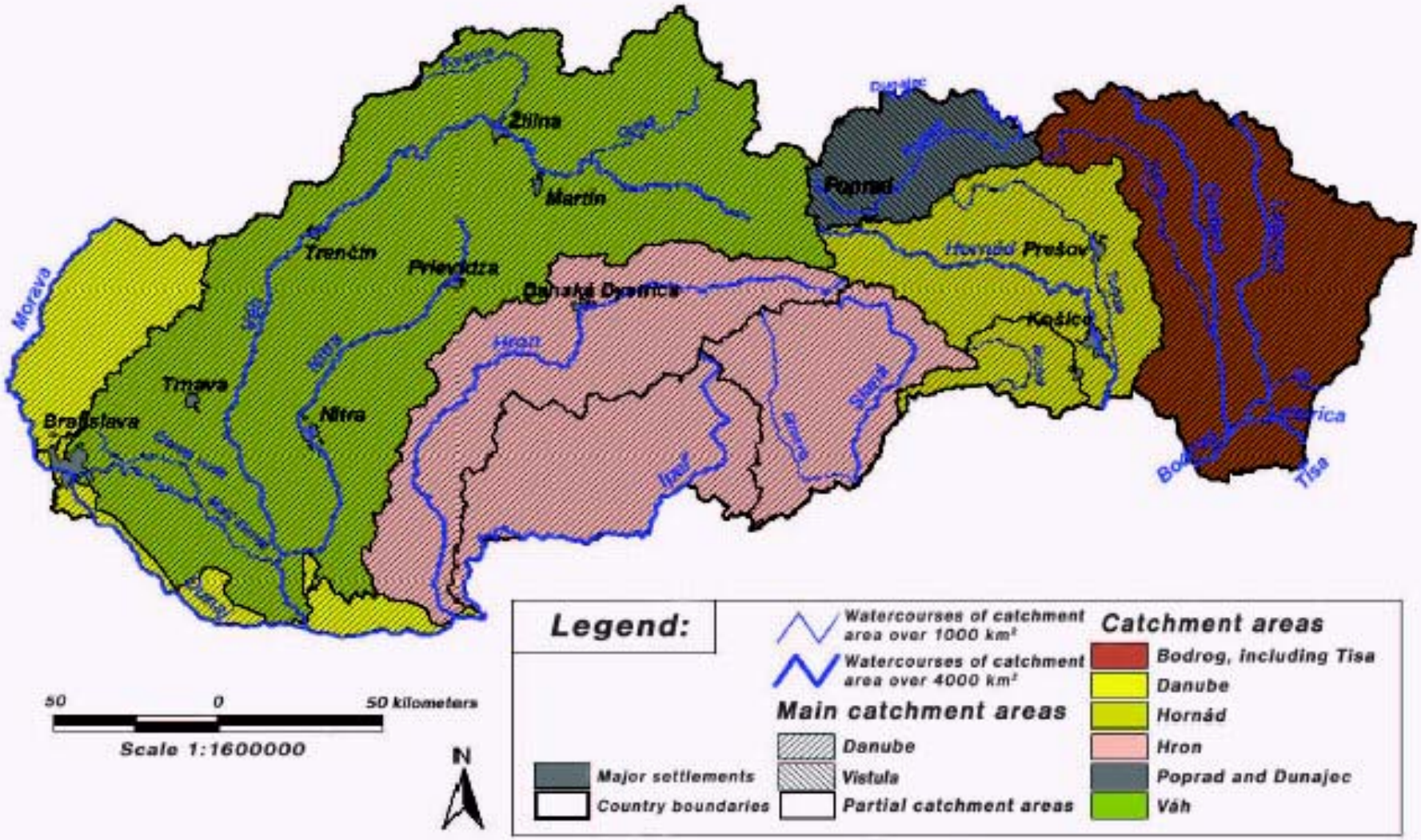
The Parties shall apply **sustainable mountain forest** management practices in the Carpathians, taking into account the multiple functions of forests, the high **ecological importance of the Carpathian mountain ecosystems**, as well as the less favourable conditions in mountain forests.

WFD Implementation strategy

The basic information on the Water Framework Directive (WFD) was introduced in the Report on Water Management for the year 2002, including information on its origination, content, objectives and the way of its implementation within the conditions of the Slovak Republic. Therefore, we are going to briefly sum up the basic information on the WFD and, above all, to describe the ctivities executed in the year 2003 in this field.

Management plans for the flood areas are the main catchment area administrative management tools, which must be drawn up by the member states for each catchment area within its territory. The first River Basins Management Plan must be elaborated until October 2009, revised and updated every 6 years (2015, 2021, 2027). The member states must secure a public access to all the parts of the River Basins Management Plan. In case of international floods, the member states must show sufficient effort for arrangement of coordination and cooperation with the objective to create one international catchment area management plan.

Catchment area - overview map



Flood Protection Programme in the Slovak Republic till 2010

On January 15, 2003 the Government of the Slovak Republic adopted the Resolution no. 25/2003 by which it acknowledged the report on implementation of the measures of "The Flood Protection Programme in the Slovak Republic till 2010" (hereinafter the Programme) and their implementation from the point of priorities with respect to protection of Bratislava, the capital city of the Slovak Republic. The costs for updated version of the Programme were modified to the amount of 20.766 billion SKK out of which 18.415 billion SKK covers the implementation of the measures for the Slovak Water Management Enterprise, Banská Štiavnica. Next amount of 223.79 million SKK is reserved for the solution of scientific-technical projects which should be used in the proposals of solutions for individual localities.

Program of flood protection in the Slovak Republic until 2010

The Government of the Slovak Republic considered the "Report on measure realisation of the Program of flood protection in the SR until 2010 and on its updating from the point of view of priorities and with regard to the protection of the capital Bratislava" through the Decree No. 25/2003. from January 15, 2003. Revised demand for financial resources for realisation of "Program of flood control in the SR until 2010" represents 20.766 bilion SKK, out of which for SWME, s.e. Banská Štiavnica 18.415 bilion SKK. ***Another 223.79 millions SKK are appointed for the solution of scientific-technical projects.***

Floods in winter and spring 2004

February 2004 For this date warm weather
Snow rapidly melting and ice breaking
Icebergs and bariers at many rivers and streams

Hron in section Psiare – Tlmače and village Kozárovce,
Štiavnica in section Horné Semerovce - Hokovce,
Jablonianka in Jablonovce village
Slatina in village Zvolenska Slatina,
Krivánsky stream flooded in village Domaníky

Floods in winter and spring 2004

March 2004 snow melting
Flooding rivers upper Vah and Nitra

Floods in winter and spring 2004

May 2004 storm rains

in regions Prievidza, Senica, Vranov nad Topľou, Púchov, Liptovský Mikuláš, Skalica, Bánovce nad Bebravou, Topoľčany, Zvolen, Lučenec, Revúca, Nové Zámky, Šaľa Trenčín.

Floods in sommer 2004

June 2004

Village Mnichova Lehota, 150houses inundate

Villages Jacovce, Malé Bedzany a town Topoľčany

65 houses inundate

Trenčín inundate buildings of City University and Apelt establishment

Consequences of floods

Floods in Slovak republik from january to august 2004

350 villages and towns inundatetd

5418 houses under water

29 houses and 101 buildings very suffered water demage

Consequences of floods

water demage

59 km rouds ,

166 km rouds in villages ,

173 bridges

444 m railway rouds

Consequences of floods

Affected 12 434 persons

Evakueted 1701 persons

89 homeless.

2 persons drowt

302 persons saved.

Total costs and damages were 1,198.038 million SKK out of which the costs for security operations were 103.415 million SKK and the costs for rescue operations were 37.231 million SKK.

The biggest damage was at the flood protection equipment on watercourses and water management buildings – 431.326 million SKK. Damage at property (of state, inhabitants, villages, higher regional units and other subjects) was 626.066 million SKK.

Table no. 9.2.1 Financial consequences of floods

Floods - year	Number of places affected by flood	Flooded areas in hectares	Flood damages in million SKK	Costs in million SKK		Total costs and damages in million SKK
				Rescue operations	Security operations	
2001	379	22,993	1,960.6	57.10	32.10	2,049.80
2002	156	8,678	1,525.7	58.10	50.10	1,639.90*
2003	41	744	43.9	5.69	4.20	53.79
2004	350	13,717	1,057.4	37.23	103.41	1,198.04

Source: Reports about floods on watercourses in Slovakia in 2001, 2002, 2003, 2004 (Ministry of Soil Management of the Slovak Republic, Ministry of Environment of the Slovak Republic)

*the amount of 6. 0 million SKK is included – costs for mosquito pesticide