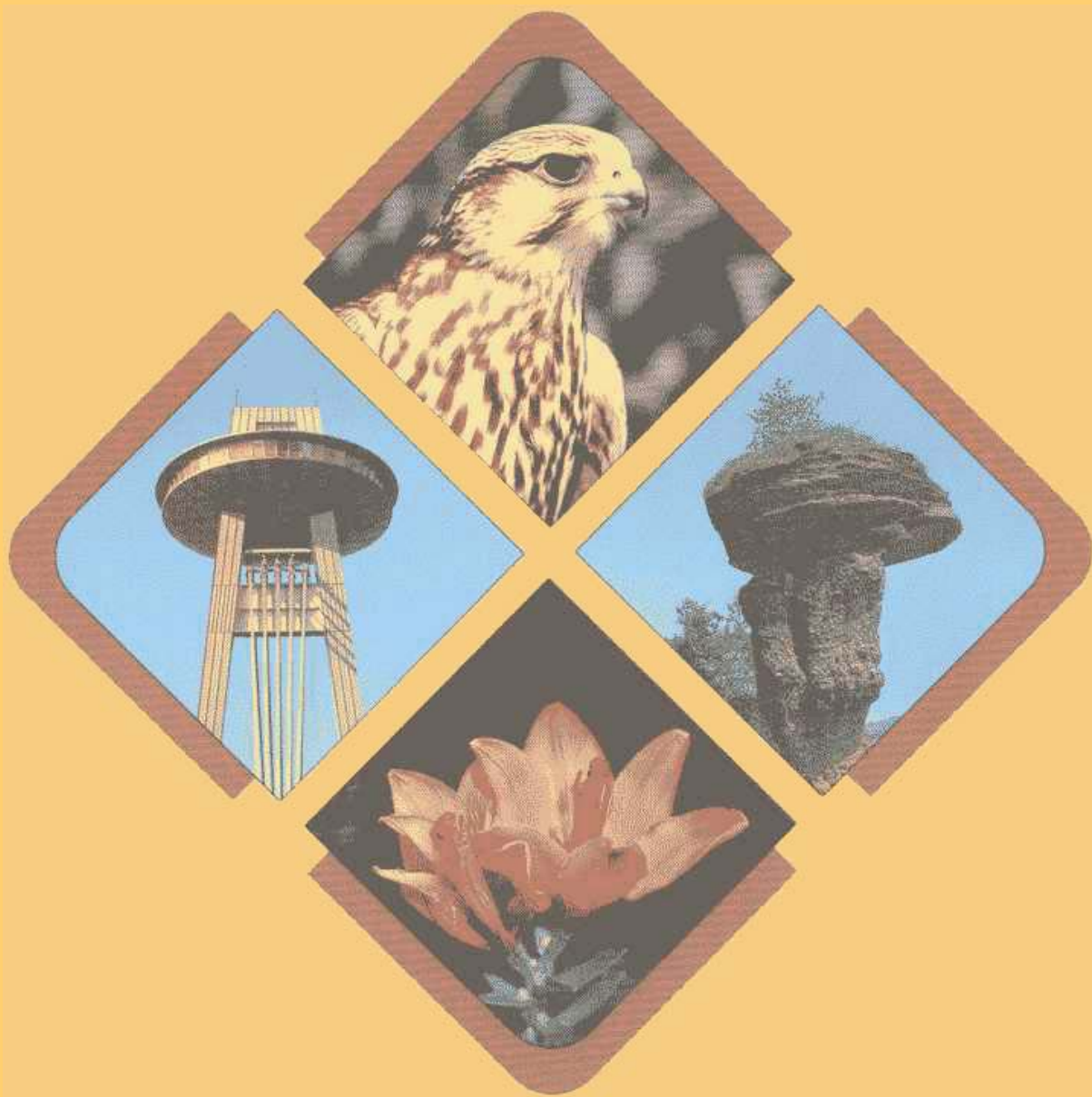




MINISTRY OF THE ENVIRONMENT OF THE SLOVAK REPUBLIC



STATE OF THE ENVIRONMENT REPORT SLOVAK REPUBLIC 2005





A selected dangerous chemical substance and a selected dangerous chemical agents, use of which should be limited, can be introduced to market on condition they will not be harmful for human life and health and for the environment...

§ 28 par. 3 of the Act No. 163/2001 Coll. on Chemical Substances and Chemical Agents as subsequently amended

• CHEMICAL RISK FACTORS

Chemical substance

In the area of chemical substances management, the MoE SR ensured and coordinated activities in cooperation with the Ministry of Economy SR, Ministry of Health SR, Centre for chemical substances and products (Centrum), and Federation of Chemical and Pharmaceutical Industry of the SR. These activities relate to the implementation and transposition of the EU legislation into the SR legal system through adopting EU directives and ordinances on chemical substances and chemical products (chemicals) and biocides, in accordance with the SR legislation.

On the basis of a meeting of the SR authorities that control compliance with the National Council of the SR Act No.163/2001 Coll., the MoE SR defined, together with other responsible institutions, conditions to implement control system for introducing chemical substances to environmental market. Involved are also authorities that carry out inspection and implement the system of international inspection activities within the EU – the CLEEN system.

MoE SR is actively involved in the SAICM Programme (Strategic Access to International Chemicals Management) founded by the UNEP Executive Board in 2002. This process is carried out under the leadership of UNEP, in cooperation with the International Forum for Chemical Safety (IFCS) and the Inter-Organization Programme for the Sound Management of Chemicals (IOMC). SAICM creates chemical policies not only for the EU states, but also for other countries. Objective of the SAICM is to use chemical substances in appropriate way during their lifecycle. In the future, this objective will be carried out through the REACH directive and through a change to the Directive No 67/548/EEC on the approximation of laws, other legislation, and measures relating to classification,

packaging, and labelling of hazardous compounds. Next SAICM objective is to ensure that the chemicals be used and produced by methods that minimize significant adverse effects on human health and environment. REACH will meet this objective by making the information on alternative substances or technologies available to business persons within the authorisation process. “Rigorous control” of all used chemicals as well as their alternatives will be a critical activity that will ensure meeting the mentioned objective within the REACH system.

Xenobiotics in the food chain

Monitoring of xenobiotics collects information on the status and trends in pollution of individual components of environment, as well as information on health safety of local foods. Results from the monitoring, including the risk assessment, serve as a basis for adoption of preventive measures.

Testing for xenobiotics is carried out by testing organisations under the valid legislation, with the goal to prevent the flow of unacceptable foods to the consumer. Results from the tests serve as the basis for adopting immediate decisions.

♦ Monitoring of xenobiotics in the food chain

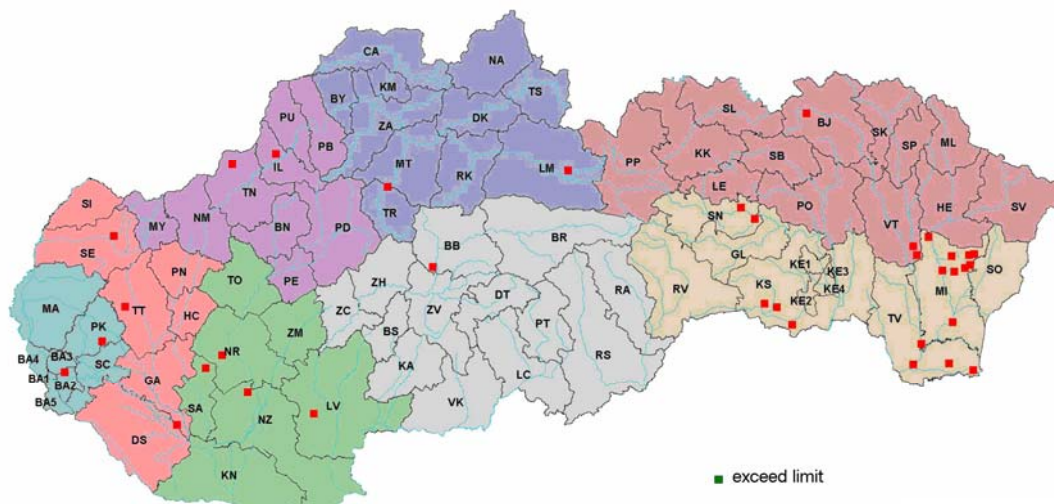
Partial monitoring system called: **Xenobiotic in foods and forage** is composed of three subsystems:

- Co-ordinated focus-specific monitoring (CFM) has been used since 1991.
- Consumption pool monitoring (CPM) has been used since 1993.
- Monitoring of game, wildlife, and fishes (MGF) has been implemented since 1995.

Partial monitoring system has been connected to the GEMS/FOOD EURO international monitoring system since 1994.

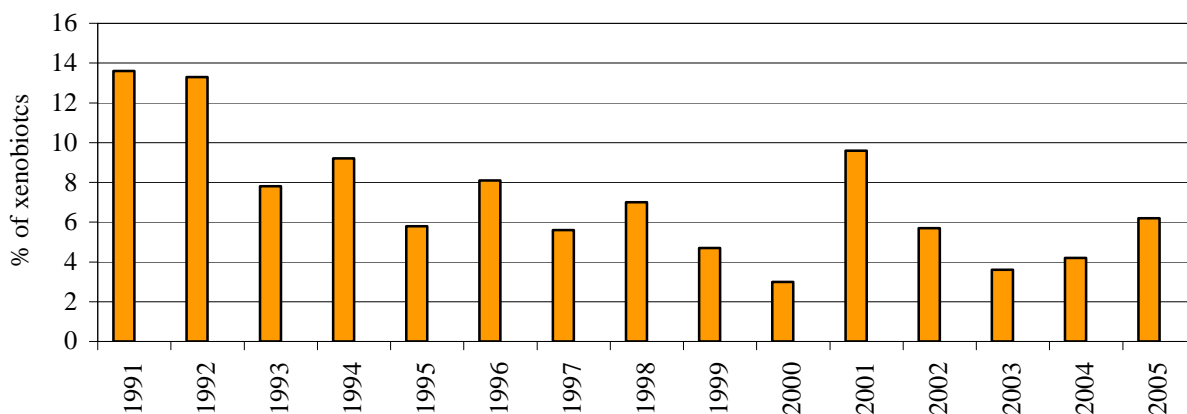
Coordinated focus-specific monitoring (CFM) has the objective to determine actual mutual relationship between the degree of contamination of agricultural land, irrigation water, feeding water, crop and animal production, within the primary agricultural production, and obtain information on the contamination of individual food chain components.

Monitored sites within the CPM with occurrence of the exceeding values of the xenobiotics in all monitored commodities in 2005



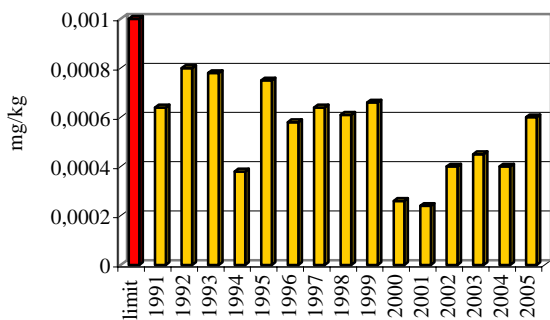
Source: SEA

Comparison of percentage changes of the limit-exceeding samples of all xenobiotics since 1991 in all commodities together (in percentage)

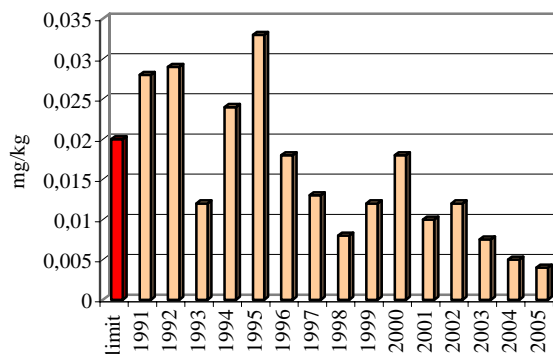


Source: FoRI SR

Comparison of the average findings of mercury in milk



Comparison of the average findings of lead in milk



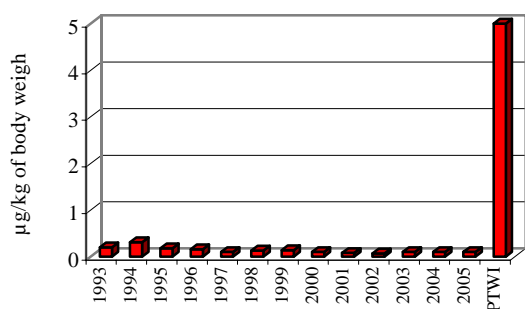
Source: FoRI SR

Objective of the **Consumption pool monitoring (CPM)** is to obtain data on contamination of foods in the consumer network in places with appr. 20 000 inhabitants and various forms of settlement. Samples are purchased from the commercial network twice a year (May, September) at 10 Slovak sites classified as heavily-contaminated, medium-contaminated, and relatively clean areas.

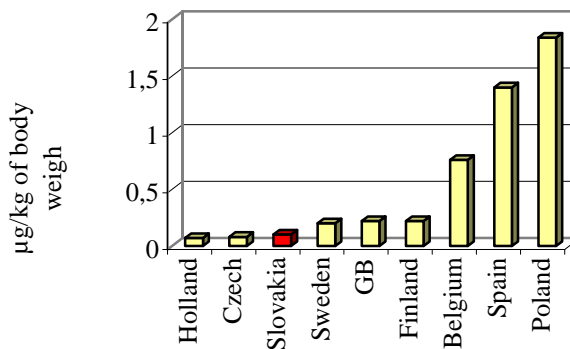
In 2005, 27 basic food items were sampled within the consumption pool (based on statistical consumption) together with drinking water samples from public water supplies.

MSK focuses primarily on determining the intake of individual xenobiotics into the human organism, in order to assess exposition of the population and compare it with the permitted tolerable weakly intake (PTWI) as well as acceptable daily intake (ADI).

Weekly income of mercury to human organism in individual years of CMS realization

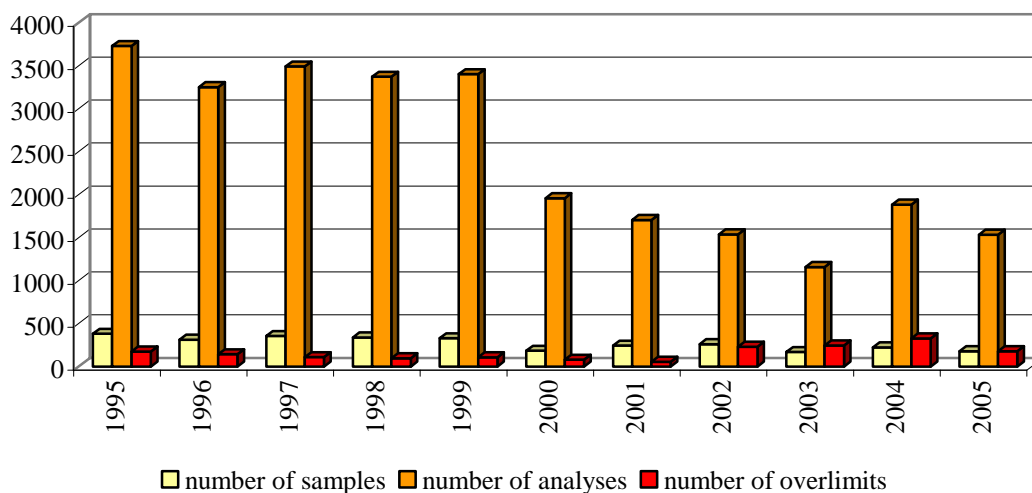


Comparison of weekly income of mercury to human body in SR with other countries



Source: FoRI SR

Comparison of number of analyses and over limits at hoof game 1995 - 2003



Source: SVFA SR

Compared with available international data, the SR may be considered among countries with **lowest values** of weekly intake of arsenic, cadmium, mercury, chrome, nickel, lead, and nitrates by the human organism.

Monitoring of game, wildlife, and fishes (Ministry of Health SR) in 2005 tested 178 samples of clove-hoofed game, hunting fish, fungi, lichens, small feather game, and water. Of 1 535 analyses, 179 exceeded the limit values. Samples of the PCB congeners from regular monitoring of fish from the Zemplínska Šírava and the surround rivers of this region were again detected in Eastern Slovakia. Control of dioxins in fishes was also included into the monitoring scheme of 2005. The found limit-exceeding values call for a need to continue with monitoring of these pollutants as well.

◆ **Control of xenobiotics in food chain**

31 210 samples (230 663 analyses from domestic production) come from monitoring of xenobiotic compounds in soil, water, forage, raw material, and food of the plant and animal origin in 2005. Of these, 1 226 did not meet the valid sanitary limits for the monitored parameters. The analysis included 2 016 soil samples, inputs to soil and plant material, 9 575 water samples, 1 217 forage samples, and 18 403 food samples. Further, tested were 4 447 imported samples, 115 samples of exceptional cases, and 18 030 samples under agrochemical soil testing. Water showed the greatest number of limit-exceeding events.

