

Supervision over use of pesticides and mineral fertilisers

Will the condition of ground water remain “mostly good” in the nearest years?

Report of the National Audit Office to the *Riigikogu*,
Tallinn, 7 December 2010

Summary of audit results

The objective of the audit was to assess whether the state supervision helps to protect waters from the pollution arising from pesticides and fertilisers. The audit covered three counties: Lääne-Viru County, Järva County and Viljandi County. The first two of them are located in the nitrate vulnerable zone. Issues related to agricultural pollution are regulated by the Ministry of the Environment and the Ministry of Agriculture.

Pesticides and fertilisers affect the environment directly through the soil and water. The residues thereof may reach the surface and ground water as well as people consuming agricultural products. While the quality of surface water may improve naturally over the time if the pollution ceases, ground water does not purify itself.

According to the environmental objectives the good condition of bodies of water must be preserved in the nearest years and if it has declined, the water quality needs to be restored. The “mostly good” condition of both surface as well as ground water must be achieved by the year 2015. Changes in the water quality are studied through monitoring.

The guarantee for mitigating the impact of agricultural pollution is the adherence to the rules of good agricultural practice. Good agricultural practice consists of environmental requirements determined in legal acts as well as of other advisory guidelines.

To prevent and detect pollution, it is important to coordinate supervision of each chain: marketing, registration and use of chemicals.

As a result of the audit the National Audit Office found that the good condition of water quality could not be preserved all over Estonia without tightening supervision. The water quality has declined especially in the nitrate vulnerable zone where increasingly more harmful residues reach ground and surface water during agricultural activities. The reason for the aforesaid is that some producers do not adhere to the rules of good agricultural practice and supervision does not deal with detecting agricultural pollution.

The National Audit Office regards the Ministry of Agriculture, differently from the latter’s position, as the person assuming main responsibility for the whole agricultural pollution, incl. for nitrate pollution caused in the nitrate vulnerable zone.

The main conclusion of the National Audit Office is supported by the following findings:

- **According to the water monitoring data the nitrate content in ground water has increased** due to which in half of the monitoring wells of the Adavere-Põltsamaa area the water was not suitable for drinking and the condition of the ground water in Pandivere is also declining fast. By the year 2008 the water quality was almost at the same low level as the quality of ground water was at the end of the Soviet times in 1990s when the pollution was the highest. The objectives established for ground water in the action plan of the nitrate vulnerable zone (NVZ) in the period from 2004 to 2008 were not achieved as well as limiting diffuse pollution from agriculture.
- **The quality of surface water is also deteriorating** as a result of which there is less high-quality river and lake water. After 2004 the nitrate content in NVZ surface water has increased on average approximately 5 mg/l a year, which is considered a vast increase. With the degradation rate of the quality of surface water Estonia holds the first position among the new EU Member States.
- **Supervision areas have not been settled.** Currently supervision provides assurance that distributors sell fertilisers following the regulations, but their use in enterprises is not supervised. Monitoring helps detect cases of water pollution caused by the use of nitrogen fertilisers and pesticides, but no attention is paid to finding out the reasons for pollution.
- **Some agricultural producers do not adhere to good agricultural practice** and also violate mandatory requirements. Violations were found in an excessive use of nitrogen and pesticides as well as in improper storage of mineral fertilisers due to which the surface, springs and karst areas may be contaminated.
- **Data of pesticides and fertilisers cannot be used without additional processing.** Data of pesticides used in control work have been disclosed by official statistics in physical quantities, although it is more correct to express the quantity of active substance. The registration of nutrients contained in fertilisers does not include the quantities of organic fertilisers given to cultivates making the assessment of the adherence to nitrogen restrictions in the NVZ impossible. Without any follow-up processing the data of official statistics provide an incorrect picture about the use of the substances.

In order to achieve a positive change in the quality of waters in the nearest years, the National Audit Office recommends the Ministry of the Environment to establish a clear relation between the current situation and the results achieved in implementing earlier action plans and, based on that, plan further activities. The nitrate vulnerable zone should be subject to analytical monitoring which would help to find out the reasons for pollution, assess changes in the water quality during a longer period and plan measures.

The Ministry of Agriculture should take more active part in promoting the achievement of the requirements of the Water Framework Directive and the Nitrates Directive and encourage more extensive use of good agricultural practice. Proceeding from monitoring data referring to the

pollution the supervisory agencies should pay increasingly more attention to the consequences of using pesticides and fertilisers. It is not possible to achieve or preserve the good quality of waters without tightening supervision.

Responses of auditees

The Ministry of the Environment agreed with the findings and assessments made in the audit and intending to implement the recommendations made. In updating monitoring programmes the minister promised to take into account the results of earlier surveys and, where appropriate, change the existing ones and add new monitoring points. One of the possibilities for consolidating data as considered by the Ministry is the establishment of cross-usage of databases. In 2011, it has been planned to organise a more detailed survey in areas of intensive agricultural production to find out the dynamics of pesticide residues by months. To amend the agricultural part of the Water Act, a working group has been formed involving all stakeholders. The draft also contains a provision about amending the use of nitrogen in the NVZ.

The Environmental Inspectorate intends to draw up its working plan taking into account the recommendations made in the draft audit for analysing the findings of monitoring and find out the source of nitrogen compounds exceeding the standard in ground and surface water during the supervision procedure.

The Ministry of Agriculture brings in its letter of reply attention to the fact that the good agricultural practice is an advisory document not a legal act that must be complied with. According to the Ministry the exercise of supervision over the contamination of surface and water with pesticide residues and nitrogen compounds would exceed the limits of the area of government of the Ministry of Agriculture laid down in Section 64(1) of the Government of the Republic Act. In the reply the Ministry explains that the legal acts of the European Union serving as a basis for the rural development plan do not set out any measures which would allow compensation to producers for loss of profit that may arise from the adherence to the requirements laid down in the Water Act or its ancillary acts; however, in the case of actual loss of profit it would still be possible to consider the compensation therefore. Digital submission of the farm register cannot be made mandatory as there is no legal basis therefore and the establishment of an additional requirement on legal persons would lead to discriminative treatment, taking into account the large number of natural persons among producers.

The Agricultural Board notes that in the field of fertilisers the competence of the Board is limited to legal acts, including the Fertilisers Act. An increase in the volumes of separate inspections of adherence to the water protection restrictions in the surroundings of springs and karst areas would inevitably bring along a need to reduce the number of other important inspections, incl. those related to food safety.

Statistics Estonia agreed to the recommendations made in the audit, however considering the assessment about the fertiliser data incorrect.

As the disagreement of Statistics Estonia was due to a different interpretation of the text, the National Audit Office changed the wording of the report in order to preclude the possibility for any ambiguities. Amendments have also been made to the report arising from the comments and notes of the Ministry of Agriculture. The idea of the amendments was to achieve a better understanding of the text.

The National Audit Office notes that the levers to promote farming in a manner to reduce its negative effect on the environment, particularly on the nitrate vulnerable zone, are mainly held by the Minister of Agriculture. Despite the aforesaid the Ministry of Agriculture does not see its liability or possibilities for solving the problems.

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