Preservation of aquatic ecosystems in light of the audit of fishery management in the Warmian-Masurian Voivodeship

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Introduction (1)

- According to the law in force, all of the inland flowing waters in Poland are part of the State Treasury.

- Such waters are divided into fishing districts, in which the entities empowered to fishing conduct fishery management.

- Such empowered entities are:
  - Directors of regional water management authorities as representatives of the State Treasury,
  - Other entities (legal and natural persons, associations), which were granted the right to use particular fishing districts by the directors of regional water management authorities, by means of an agreement.
The main duty of all entities empowered to fishing is to conduct a rational fishery management in the used fishing districts.

According to the Act on Inland Fishery a rational fishery management is the use of productive resources of waters according to the fishery plan, with the preservation of the fish resources in biological balance and on the level that enables their efficient use by the future entities empowered to fishing.
Therefore the **fishing plan** is of key meaning in the conduct of the fishery management in a way that would ensure the preservation of biodiversity of aquatic ecosystems.

The fishing plan is a document that specifies the rules of the fishery management in a given fishing district. It is prepared by the entity empowered to fishing and is subject to review of independent scientific institutions that deal with inland fishing.
The audit was conducted in the Warmian-Masurian voivodeship, where about 20% of all water surface in Poland is located.
The audit started on 5 August 2013 and finished on 29 November 2013. It concerned the period 2011 – I half of 2013.

The audited entities included two ministers (Minister of Environment and Minister of Agriculture and Rural Development), two directors of regional water management authorities, Marshall of the Warmian-Masurian Voivodeship, Chief of the State Fishing Guard in Olsztyn and ten fishing users, which on the basis of concluded agreements conducted fishery management in 98 fishing districts of total area of 50,6 thousand ha (50,1% of waters in the Warmian-Masurian voivodeship that are commercially used).
Audit aims (1)

Main aim

To answer the question, whether a rational fishery management is conducted on the waters of the State Treasury lakes in the Warmian-Masurian voivodeship, which ensures a biological balance in the aquatic ecosystems and complies with the rule of sustainable development.
Specific aims – to answer the following questions:

- Whether the entities empowered to fishing conducted a rational fishery management in the used fishing districts,
- Whether the directors of water management authorities properly executed the ownership supervision over the fishery management,
- Whether the Marshall of the Voivodeship and the Chief of the State Fishing Guard in Olsztyn properly executed duties specified in the Act on Inland Fishery,
- Whether the Minister of Environment and the Minister of Agriculture and Rural Development provided conditions for the fishery management.
Audit methods

- Analysis of data included in the fishery management documentation (fish stocking protocols, catch protocols and management books) and their comparison with the values adopted in the fishing plans and the agreements on the use of fishing districts.

- Expert studies and expert opinions on the volume of fish stockings adopted in the agreements on the use of fishing districts and fishing plans.

- Inspection of fishery devices used to conduct fishery management, in order to examine whether they comply with the norms set by the law.
Commercial fishing and fish stockings

- The commercial fishing (executed by the users of fishing districts) and fish stockings – which make up for the deficiencies in aquatic ecosystems caused by among others commercial fishing, have a significant influence on the biodiversity of aquatic ecosystems.

- All of the fishing users fished within the limits set in the fishing plans and concluded agreements. Fishing was conducted only with the use of allowed fishing equipment.

- Amount and species structure of the fish stocking material introduced into the waters were compliant with the objectives set in the aforementioned documents. The main species introduced into the waters were: pike, zander, tench and eel.
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Significant findings (2)

Amateur fishing (angling)

- A factor that significantly influences the volume and species structure of the fish population is also angling.
- According to various estimations the amount of fish caught during amateur fishing ranges between 80% and 200% of the amount of fish caught in course of commercial fishing.
- In Poland there is no duty to register amateur fishing; the fishing users may introduce such duty in their fishing districts, however in most cases do not do so, due to the difficulty in its execution.
- Lack of duty to register amateur fishing has an unfavourable influence on the fishery management (for instance there is no possibility to accurately plan fish stockings) and at the same time on the preservation of aquatic ecosystems.
The audit showed that the directors of Regional Water Management Authorities in Warsaw and Gdańsk did not conduct fishery management in districts not ascribed for use to other entities, what had an unfavourable influence on the aquatic ecosystems.

The directors sold permits for amateur fishing in such districts, despite the fact that no fish stockings of those waters were conducted, what also negatively influenced the aquatic ecosystems.

In NIK’s opinion those activities were contradictory to the rules of rational fishery management. It is also worth mentioning that such bodies, as the representatives of the owner, are obliged to take due care of the State Treasury assets, in this case the population of fish inhabiting the waters, which constitutes one of the significant elements of the aquatic ecosystems.
The great black cormorant (*Phalacrocorax carbo*)

- The population of the great black cormorant (a fish-eating migratory bird), which in the years 1992-2011 increased in the Warmian-Masurian voivodeship by 269% – to about 33,5 thousand specimen, has a negative influence on the aquatic ecosystems.
- The estimated mass of fish eaten by the cormorants in 2011 amounted to about 2,4 million kg – over twice as much as the mass of fish caught by the fishing users.
- The number of this population is being restricted, mainly by means of culling a particular number of birds, with the consent of the regional nature protection director, however such activities are of little effectiveness.
- This problem also concerns other European countries, therefore it is essential to undertake activities on the international scale that would lead to the restriction of the cormorant population.
Protective zones

- The Act on the Inland Fishery specifies particular protection means of the areas where spawning takes place and fish fry is developing – it is possible to establish protective zones within the fishing districts. Currently there are 47 such zones in the Warmian-Masurian voivodeship.

- None of the audited fishing users fulfilled the duty to mark such places. Furthermore, in the last 20 years no new zones were established and the ones that ceased to function were not repealed. Only as a result of NIK’s audit was the verification of their validity commenced.

- Irregularities connected with the functioning of the protective zones had in NIK’s opinion an unfavourable influence on aquatic ecosystems, in which the fishery management was conducted.
Poaching

- Combating poaching and the mitigation of such phenomena is one of the significant processes carried out in order to stop the degradation of aquatic ecosystems.
- Those tasks are executed by the State Fishing Guard – a government agency that functions in every voivodeship.
- In the years 2010 - 2013 State Fishing Guard in Olsztyn achieved one of the best results in Poland in the scope of fight with poaching – among others the biggest amount of poaching equipment was intercepted, the biggest number of fines imposed, the biggest amount of penal proceedings commenced.
- In NIK’s opinion the activity of the State Fishing Guard had a positive influence on the natural environment of lakes in Warmian-Masurian voivodeship.
The system of supervision of inland fishery

- There are two entities supervising inland fishery management in Poland – the Ministry of Agriculture and Rural Development and the Ministry of Environment.
- Direct supervision and control are performed by four public administration entities – regional water management authorities, local self-government authorities, state fishing guard and regional nature protection authorities.
- In NIK’s opinion, aforementioned division and dispersion of competence have negative impact on inland fishery management.
Conclusions (1)

- The population of the great black cormorant is too numerous. This problem also concerns other European Union countries and therefore a cooperation in order to prevent the further development of the population and stabilise it on a level safe both for the aquatic ecosystems and the cormorant population itself is necessary.

- The directors of regional water management authorities have to conduct a rational fishery management in the districts that are not ascribed for use to other users.
It is crucial to introduce a duty to register amateur fishing (angling) into the Act on Inland Fishery.

Furthermore, it is necessary to amend this act by regulations introducing the duty of periodic verification of the validity of protective zones, in order to eliminate the zones that do not fulfil their functions and establish them in such locations in which spawning actually takes place and fish fry is developing.

The system of supervision of inland fishery is too complicated and according to NIK, consolidation of its elements should be considered.
Thank you for your attention