Abstract

Recreational fishing is a very important leisure activity and one of the most important ways how humans influence freshwater habitats and wild fish populations. Both fish-eating predators and socio-economic trends play a major role in recreational fishing.

This thesis found that the Eurasian otter feeds mainly of small (5-10 g) and very abundant fish species of low angling value. In this case, gudgeon *Gobio gobio* dominated in the otter diet. The overlap between catches of otters and anglers was very low, and commercially important salmonids made up only 10 % of the otter diet by biomass. Cormorants also prey mostly on smaller (10-100 g) a very abundant fish species. In this case, roach *Rutilus rutilus* dominated in the cormorant diet. The overlap between catches of cormorants and anglers was also quite low. Commercially important fish species made up less than 10 % of the cormorant diet. Even though cormorants consume mostly smaller fish, they are potentially removing fish that serve as prey for piscivores, and they are also removing smaller fish that would grow into angling size.

The Atlantic salmon *Salmo salar* reintroduction programme has not yet been successful. However, cormorant predation is not the main reason for its low success. The main problem is somewhere on the lower River Elbe in Germany. If this programme is to be a success, the main reasons of high salmon mortality need to be found.

Recreational fishing seems to be on the rise. The numbers of anglers and angling visits are increasing, anglers visit more fishing grounds, and they are less loyal to their favourite fishing grounds. The amount of angling guard controls in the field is increasing as well. On the other hand, catch and yield of fish is steadily decreasing, and it is mostly because the catch-and-release fishing strategy is gaining popularity. Fishing grounds in urban and natural (rural) areas showed different patterns in recreational fishing. While the visit rates were similar on both types of fishing grounds, urban fishing grounds showed higher catch and yield. Inversely, natural fishing grounds showed higher amount of angling guard controls. Smaller and larger fishing grounds also showed different patterns in recreational fishing. Most importantly, large fishing grounds did not show the highest catch and the most visit rates. Instead, mid-sized fishing grounds showed the highest catch and the most visit rates. The fisheries management should reflect on the fact that fishing is gaining popularity and that different types of fishing grounds should be managed differently.

The large-scale regulation of angling size of grayling *Thymallus thymallus* did not affect the overall catch and yield of grayling in the study area. However, it affected the distribution of catches between fishing grounds, and also the average body weight of caught fish. Anglers displayed high solidarity with grayling, and they are strongly supporting grayling conservation, mostly because they are aware of its poor population status. While fishing regulations may be sometimes effective, it is mainly the actual opinion and behaviour of anglers in the field that matters the most.