

**RECREATIONAL FISHERIES AND FISHING
GROUNDS IN THE CONTEXT OF THE TOURIST
ATTRACTIVENESS OF LAKELAND REGIONS**

***Tomasz Czarkowski¹, Krzysztof Kupren², Konrad Turkowski²,
Dariusz Kucharczyk², Krzysztof Kozłowski³,
Andrzej Mamcarz²***

¹ Agricultural Counselling Centre of Warmia and Mazury

² Department of Lake and River Fisheries

³ Department of Fish Biology and Pisciculture
University of Warmia and Mazury in Olsztyn

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Abstract

Recreational fisheries and dynamically growing aquaculture are the leading disciplines in inland fisheries. In addition, recreational fisheries (particularly angling) as an element of recreational, active and specialist tourism, generates important social and economic benefits. In many countries, it constitutes a significant part of the gross national product. Recreational fisheries, as a distinct and attractive tourist product, complements the recreational and tourist offer, especially in regions with abundant water ecosystems. This is particularly evident in the case of the province of Warmia and Mazury, where the qualities of the natural environment and numerous water reservoirs create great potential for fisheries and are a very important component of the activities offered by agritourist farms. This paper also presents a proposed division of fishing grounds for anglers by the author and discusses the role of Fisheries Local Action Groups in the development of recreational fisheries in the province of Warmia and Mazury.

**RYBACTWO REKREACYJNE I ŁOWISKA WĘDKARSKIE W KONTEKŚCIE
ATRAKCYJNOŚCI TURYSTYCZNEJ OBSZARÓW POJEZIERNYCH**

**Tomasz Czarkowski¹, Krzysztof Kupren², Konrad Turkowski², Dariusz Kucharczyk²,
Krzysztof Kozłowski³, Andrzej Mamcarz²**

¹ Warmińsko-Mazurski Ośrodek Doradztwa Rolniczego w Olsztynie

² Katedra Rybactwa Jeziornego i Rzecznego

³ Katedra Biologii i Hodowli Ryb

Uniwersytet Warmińsko-Mazurski w Olsztynie

Słowa kluczowe: rybactwo rekreacyjne, turystyka, regiony pojezierne, łowiska wędkarskie.

Abstrakt

Rybactwo rekreacyjne (*recreational fisheries*) jako jeden ze sposobów pozyskiwania ryb wraz z dynamicznie rozwijającą się akwakulturą stanowią obecnie wiodące dziedziny rybactwa śródlądowego. Rybactwo rekreacyjne, a w szczególności wędkarstwo, jako element turystyki rekreacyjnej, aktywnej oraz specjalistycznej generuje dodatkowo znaczne korzyści społeczno-ekonomiczne, stanowiąc w wielu krajach istotną część dochodu narodowego. Rybactwo rekreacyjne jako niezależny, atrakcyjny produkt turystyczny stanowi doskonale uzupełnienie oferty wypoczynkowo-rekreacyjnej, szczególnie na obszarach obfitujących w naturalne ekosystemy wodne. Jest to wyraźnie widoczne na terenie województwa warmińsko-mazurskiego, gdzie walory przyrodnicze, a w szczególności liczne zbiorniki wodne niosące możliwość korzystania z istniejących łowisk wędkarskich, stanowią niezwykle ważny element funkcjonowania gospodarstw agroturystycznych. Artykuł zawiera również autorski podział łowisk wędkarskich oraz przybliży rolę Lokalnych Grup Rybackich w rozwoju rybactwa rekreacyjnego w województwie warmińsko-mazurskim.

Introduction

Inland fisheries may be divided and classified in numerous ways depending on the area of operation. The specificity of the fishing industry in Central and Eastern Europe differs from this sector in other regions of Europe and the world to such an extent that European standards (especially in the western and southern part of Europe) do not apply to fisheries in Central Europe. This generates many problems and misunderstandings which become evident in the European legal system, particularly in relation to the support programs addressed to the fishing sector, e.g. from the financial resources of The European Fisheries Fund.

The environmental, cultural and historical background of the fishing industry in Poland and in other Central and East European countries, such as the popularity and long tradition in aquaculture in carp-type ponds and commercial lake fisheries, has led to the specific nomenclature and division of Polish fishing sector. This traditional Slavic classification divides the fisheries into marine and inland fisheries, with the latter being sub-divided into lake,

river and pond categories. Such a division has been presented in some contemporary fishing textbooks (e.g. SZCZERBOWSKI 1981, 2008). Nowadays, due to the rapidly changing conditions and legislation, the fisheries in open (public) waters are distinguished and further divided into fishing zones and aquaculture, i.e. rearing and reproduction of aquatic organisms (CZARKOWSKI et al. 2012a).

It should be noted that the term “inland fisheries” is not identical with “inland fishing”. Fishing denotes a narrow notion indicating the harvest of aquatic organisms, whereas fisheries includes other numerous fields of human activities such as aquaculture, controlled reproduction of fish, fish stocking management, active and passive protection of ichthyofauna, water monitoring, etc. As opposed to inland fisheries, the marine sector focuses almost exclusively on fishing.

The Polish legal system distinguishes (within the fishing industry) fisheries and fishing, which is reflected in two separate regulations: The Inland Fisheries Act (Ustawa o rybactwie śródlądowym Dz.U.2009.189.1471 j.t.) and The Fisheries Act which applies to marine fishing (Ustawa o rybołówstwie Dz.U.2004.62.574).

However, the most interesting division of the fishing sector, in the context of tourism and recreation, is related to the commercial and recreational fisheries and, consequently, to the correlation between fisheries and the tourist sector. A special role is attributed to fishing grounds which may attract many tourists in the future.

Materials and Methods

The paper highlights the potential of recreational fisheries in the context of development of lakeland regions based on the example of the province of Warmia and Mazury. The analysis was based on fisheries publications with special attention paid to recreational fisheries and tourism. The study includes the legal regulations on fisheries. A significant proportion of the results were based on local strategic documents relating to the development of tourism and fisheries. The analysis was carried out with factual methodology and general methods of conclusion (induction and deduction).

Results and Discussion

Recreational and commercial fisheries: differences and similarities

Angling is the inherent part of the fishing industry. Despite some anglers attempting to separate it from the fishing sector, the majority of researchers perceive angling as a type of fishing (ARLINGHAUS 2004, COOKE and COWX 2004, ARLINGHAUS et al. 2007, EIFAC 2008, COWX et al. 2010, ENVIRONMENT YUKON 2010, ROGERS et al. 2010, WELCOMME et al. 2010, BEARD et al. 2011). In general, inland fisheries are divided into commercial and recreational fisheries. This division is confirmed by the above-mentioned authors. Some of them present a more detailed classification by dividing the commercial fish catches into industrial and domestic fisheries and the recreational fish catches into angling and non-professional fishing with other equipment. In addition, EIFAC (2008) distinguishes the so-called “fishing for living” which provides an opportunity to satisfy the basic needs of local communities which inhabit areas situated near water reservoirs.

The inclusion of angling and recreational fisheries in the fishing sector is justified by the definitions and legal regulations in Poland. In general, the legal acts refer to so-called “amateur fishing”. RADECKI (2011) defines this term in relation to the Article 7 of The Act on Inland Fisheries (Ustawa o rybactwie śródlądowym Dz.U. 2009.189.1471 j.t.) with amendments (Dz.U. 2010 No. 182, item 1228 and No. 200, item 1322) as “harvesting fish with a fishing rod or a crossbow”. This author emphasizes the difference in the initial and current edition of the fishing act which, after the amendment, does not refer to “the conditions of rearing, reproduction and catching fish in surface inland waters and amateur fish catching” but to “the conditions of rearing, reproduction and catching fish in surface inland waters” and, therefore, classifies amateur fish catching as one of the methods of using living water resources. According to this lawyer, amateur fish catching is simply fishing. The author moves forward with his legal interpretations and concludes that “angling is neither recreation nor sport”, but only one of the ways of using fish resources.

The fish catches in inland open waters in Poland are steadily decreasing. SEREMAK-BULGE (2010) reports that the volume of fish catches reached 20,320 tons (including 17,200 tons of recreational catches) in 2004, 17,410 tons (including 14,800 tons of recreational catches) in 2007 and only app. 16,500 tons (including 14,100 tons of recreational catches) in 2010. The volume of recreational catches constitutes over 86% of the total catches in the fishing zones in Poland. Similar proportions have been observed in some provinces in Canada (Environment Yukon 2010), in Denmark (JACOBSEN et al. 2004) and in Germany (BRÄMICK 2007).

WOŁOS and DRASZKIEWICZ-MIODUSZEWSKA (2011) report the data generated by analysing the volume of angling catches in the selected fish farms, which indicates a high average daily harvest of fish (app. 1.5 kg) per angler. By multiplying these values by the number of sold permits and the surface of fishing waters (as was done by the above-mentioned authors) it may be concluded that the angling catches in Poland constitute app. 260% of professional fish catches.

In Poland, there were only 474 commercial fishermen in inland open waters in 2007. The surface of water per fisherman averaged 817 ha (WOŁOS et al. 2009). With a decreasing tendency, it is assumed that in the near future the surface of water per commercial fisherman would reach app. 1000 ha. In the case of people fishing with rods, the surface of water will be app. 0.35 ha per fishing person.

In order to depict the strong pressure of recreational fisheries on inland waters in Poland, it should be compared with the pressure in Finland, with 1,800,000 recreational anglers per app. 3,300,000 ha of inland waters (KUUSISTO 2012). In Poland, there is a similar number of anglers (i.e. 1,500,000 to 2,000,000 (WOŁOS 2006), but a six-fold smaller water surface. The Polish Angling Association includes almost 620,000 members (KUSTOSZ 2011).

It should be noted that the individual fishing efficacy of anglers is different, depending on the abilities, equipment and, above all, on personal engagement. There are anglers who go fishing a few times a year and there are others who angle almost every day. The latter are sportsmen who, on a daily basis, improve their professional capacities and divide their time between training and angling competitions. The efficacy of such anglers may be very high, amounting to a number of tons per year (SAMET: oral report). The total volume of fish catches is not intended for consumption, but anonymous interviews with anglers confirm very high catches, particularly of predatory species such as pike (in this case, the number of fish caught may amount to few hundred per angler per year).

The goal of fishing, not the tool that is used, makes an angler a “recreational fisherman”. If a fisherman wants to bring fish to the market for general consumption and gain profit in this way, he then becomes a commercial fisherman. However, if a fisherman seeks recreation, adventure and excitement and also wants to consume fish (without putting it on the market), he becomes a recreational fisherman.

In modern society, the role of both types of fisheries is different. Commercial fishermen have a special mission since their role is to provide society with access to high-quality food. Nowadays, the commercial fish catches in inland waters constitute a tiny fraction of the total fish production, because aquaculture becomes the leading producer and commercial fisheries in open inland waters are, in reality, a traditional addition. The most recent data indicates

a further decrease in inland commercial fish catches in Poland, which amount to 6.5% of freshwater fish production and the rest, i.e. 93.5% (app. 30,000 tons), is covered by aquaculture. This situation is comparable in all countries and aquaculture is the most dynamically developing branch of the global food industry.

The recreational fisheries (mainly angling), not the commercial sector, are the biggest hazard to freshwater fish populations. COOKE and COWX (2004), EIFAC 2008, WELCOMME et al. (2010) and Environment Yukon (2010), DONALDSON et al. (2011) have discussed the potential impact of recreational fisheries on the over-exploitation of numerous fish populations.

It should be noted that there is a reasonable and non-confrontational way of solving disputes between recreational and professional fishermen. Both groups have an equal right to use fish resources. In a document entitled, "The Code of Practice for Recreational Fishing", the EIFAC (2008) discerns the conflict between these two communities and recommends minimizing the tension between anglers and professional fishermen and managing the sector and live water resources in a way to ensure sustainable usage for all users.

Recreational fisheries and tourism in lakeland regions

The vast sector of the national industry, i.e. tourism and recreation, is associated with fisheries, in particular with recreational fisheries. The European tourist industry, which includes app. 1.8 million enterprises and employs 5.2% of the total workforce (app. 9.7 million jobs), constitutes over 5% of the EU gross domestic product. If the related sectors are included, the estimated share of tourism in the EU gross domestic product is significantly higher. Tourism indirectly generates over 10% of the EU gross domestic product and creates over 12% of work places (Europe, the world's No. 1 tourist destination...). Recreational fisheries, particularly angling, as a distinct product of recreational, active and specialist tourism, make up a substantial share. It is estimated that angling in Europe generates a total income of app. 25 billion Euros per year (*The Socio-Economic Value...*). In Poland, the angling sector employs app. 15 thousand workers and its total estimated annual value amounts to 1.12 billion PLN (PZW Report 2003).

Tourism, including angling, is a major branch of industry and a basic source of income for local communities in many poorly-industrialized regions of the world. The social and economic benefits that are associated with fisheries are under-exploited in Poland. They create considerable potential for development of Lakeland regions which, apart from their natural values, have a poorly developed infrastructure and high levels of unemployment compared with the national average (KUPREN et al. 2012).

The province of Warmia and Mazury, which covers the majority of the Mazurian Lake District, serves as a good example. The region of Warmia and Mazury is one of the largest European areas, with attractive resources and spectacular natural values, but with low tourism intensity. This region is not a well-established brand on the tourist market, although this can be achieved with development and promotion of specific tourist products. The Strategy for Development of Tourism in Warmia and Mazury (*Strategia rozwoju turystyki...*) enumerates many possibilities which include actions aimed at using angling resources. A detailed answer to this question is found in a different document on regional development, i.e. Strategy for Development of Fisheries in Warmia and Mazury until 2030 (*Strategia rozwoju rybactwa...*). According to the authors of this publication, the changes aimed at improving the infrastructure necessary for productive angling and adverse fish inventory are critical, apart from a more expansive promotion of angling values. The main causes of disruption of the ichthyofauna structure include:

- the process of eutrophication of ichthyofauna;
- violation of regulations on shore protection;
- increasing the size of the cormorant population;
- insufficient input for fish stocking with species preferred by anglers;
- insufficient expenditure on the protection and monitoring of ecosystems.

In the case of angling infrastructure, the main area of interest is the availability of fishing areas and hotel accommodation.

Rural tourism, including agritourism, is one of the numerous forms of tourism and it is dynamically developing in Lakeland regions. The data presented by CZARKOWSKI et al. (2012b) confirms the clear impact of natural waters and angling grounds on the condition and development of rural tourism in the province of Warmia and Mazury. The authors emphasize that 90% of agritourist holdings are situated in lake districts (counties) and 65% (452) of the farms presented in the Catalogue of Agritourist Farms entitled “The Countryside of Warmia and Mazury Invites You” (KOGUT and KAPELEWSKA 2010) offer recreational fisheries as one of the local attractions. As only 80 of these farms have their own fish ponds, the majority of agritourist holdings use the abundance of natural, mainly lake, fishing grounds.

Fisheries Local Action Groups and the development of recreational fisheries and fishing grounds

In the province of Warmia and Mazury, the opportunity for angling with an accommodation background is offered mainly by agritourist farms. In recent years, this type of accommodation has become a predominant and rapidly

developing type of hotel (Strategy for Development of Tourism in Warmia and Mazury). The fishing lake farms have significantly contributed to this developmental potential (Strategy for Development of Fisheries in Warmia and Mazury until 2030). The development of infrastructure associated with recreational fisheries is supported with the availability of EU funds. The European Fisheries Fund 2007–2013 (EU Regulation No 1198/2006 of July 27, 2006) provides a high level of assistance. This fund guarantees many years of co-funding of the activities detailed in The Strategy for Development of Fishing 2007 and in the Operational Programme, “Sustainable Development of the Fisheries Sector and Coastal Fishing Areas 2007–2013” (OP “Fish”).

The measures aimed at sustainable development of regions which depend on fisheries (313 million Euros, i.e. 32% of financial resources of the whole OP “Fish”) are the main points of the Programme. This is to be achieved through mobilization of communities which depend on fisheries (including Lakeland regions) with the inclusion of social and industrial partners in the planning and implementation of local initiatives. Currently, this strategy is being put into effect within the framework of the Local Strategies of Development of Fishing Regions by the Fisheries Local Action Groups (48 in Poland and 4 in Warmia and Mazury). The main goal of Local Strategies for Development of Fishing Regions is to improve the living conditions in areas which depend on fisheries through development of entrepreneurship and initiatives within local communities as well as support of development of infrastructure largely designed for anglers (KUPREN et al. 2012).

General and specialist fishing grounds

Finally, this contribution tries to specify the notion of a “fishing ground”, as the main and inherent component of angling infrastructure. The term is defined as a site designed for fishing. The recently published “Encyclopaedia of Fisheries” edited by Prof. SZCZERBOWSKI (2011) lacks such an entry as “fishing ground” and its description. However, logically, the fishing ground is a place for catching fish with angling methods (with a fishing rod) by people called “anglers” and for amateur purposes.

The fishing grounds may be divided into general operating grounds and specialist grounds. According to the above-cited encyclopaedia (*Encyklopedia rybactwa* 2011), “special fishing grounds” are “water reservoirs and sectioned part of water flows destined for amateur fish catching. They may include typical fish ponds seasonally available for anglers as well as recreational water reservoirs stocked with well-grown fish. As opposed to ordinary fishing areas, a specialist fishing area is usually separated, i.e. fenced and monitored”.

It seems that this definition should be complemented with one characteristic element: angling in the so-called special fishing grounds (regardless of the type of ground) is always associated with an extra fare. The use of a special fishing area, regardless of the fact that a person pays for each caught fish in a fish pond or for purchasing a supplementary permit for special lake area, always requires an extra fare for angling and is more expensive than angling in general fishing areas. This is logical, since these types of fishing grounds are created for commercial purposes and for generating income. Even if such fishing areas are set up for social reasons by a Local Fishery Action Groups, the costs of its maintenance will necessitate higher fares for angling.

CZERWIŃSKI et al. (2006) divided special fishing grounds into pond, lake and river categories and proposed a more detailed classification which included the legal division of waters (ownership rights) and the main rules of fishing use (Figure 1).

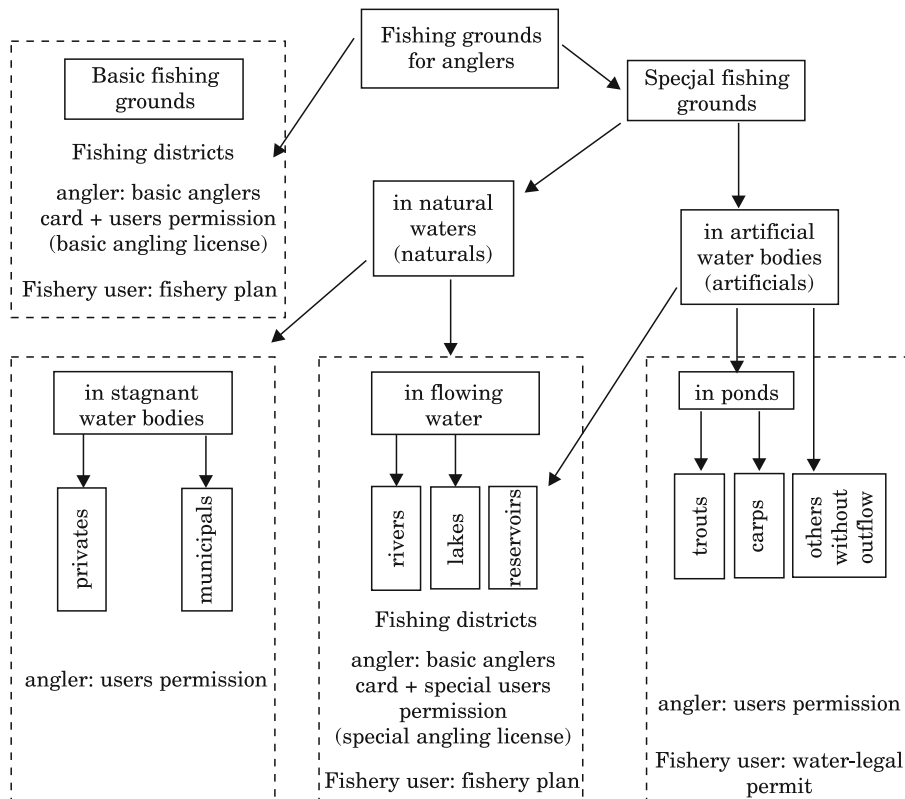


Fig. 1. The division of fishing grounds based on the legal division of waters (ownership rights) and the main ways of usage

Despite the fact that special fishing grounds do not generate as much interest as 10–15 years ago, they may still be a tourist and angling attraction, especially in relation to agritourism. The small “put and take” fishing grounds seem to be the key to success since they may operate on every agritourist farm (even in those located near lakes). Many tourists are not well-experienced anglers who can easily handle wild fish on large waters and they therefore need a “practice session” on a small reservoir with dense fish stocking where, supervised by a professional, they can learn to entice, bait a hook, tow and take off fish, etc.

Conclusions

Recreational fisheries, mainly angling, are one of the leading disciplines in inland fisheries. It is undoubtedly a very important element of the tourist offer, including rural tourism, in lakeland regions. This is particularly evident in the case of the province of Warmia and Mazury, where the qualities of the natural environment facilitate the use of fishing grounds, which are a very important component of tourism. It seems that further development of fisheries, not limited to recreational fisheries, may influence the intensity of tourism and form the core of rural tourism and agritourism in lakeland regions. This goal may be supported by European financial resources, e.g. from The Operational Programme “FISH” 2007–2013, and the so-called “Fisheries Local Action Groups” set up with the assistance of these funds.

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