

Carp culture in Europe, history and recent trends

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“Whenever the demands of aquatic/seafood-eating peoples exceed the abilities of their indigenous aquatic ecosystems to provide for them, these cultures, throughout the world, develop **AQUACULTURE**” (Barry Costa-Pierce)



Yangshao culture was a Neolithic culture that existed extensively along the middle reaches of the Yellow River in China from around 5000 BCE to 3000 BCE

Fish on Yangshao, Culture vessel (above) and on monoxylous boat, Poduri, Cucuteni – Trypillia Culture (below);

Cucuteni–Trypillia culture was a Neolithic culture (c. 5500 to 2750 BCE) of Eastern Europe. It extended from the Carpathian Mountains to the Dniester and Dnieper regions, centered on modern-day Moldova and covering substantial parts of western Ukraine and North-Eastern Romania.



- **China** – First trials of carp farming and first fisheries inspectors and instructors



2852 - 2205 B.C.E

Egypt –in a tomb is found the image of a man harvesting tilapia from a pond



2052 - 1786 B.C.E.

Fan Lai “The Classic of
Fish Culture”



473 B.C.E.

Marcus Terentius Varro
– “Rerum rusticarum libri III”
(About Agriculture)



36 B.C.E.

Lucius Junius Moderatus Columella “De re
Rustica” (About Agriculture)

Chapter VIII
DE VILLATICIS PASTIONIBUS. AVIARIUS ET
PISCATOR (Growing farm animals: Birds and
Fish)



50 A.D.

Charles the Great

Codex "Capitulare de villis vel curtis
imperii Caroli Magni"

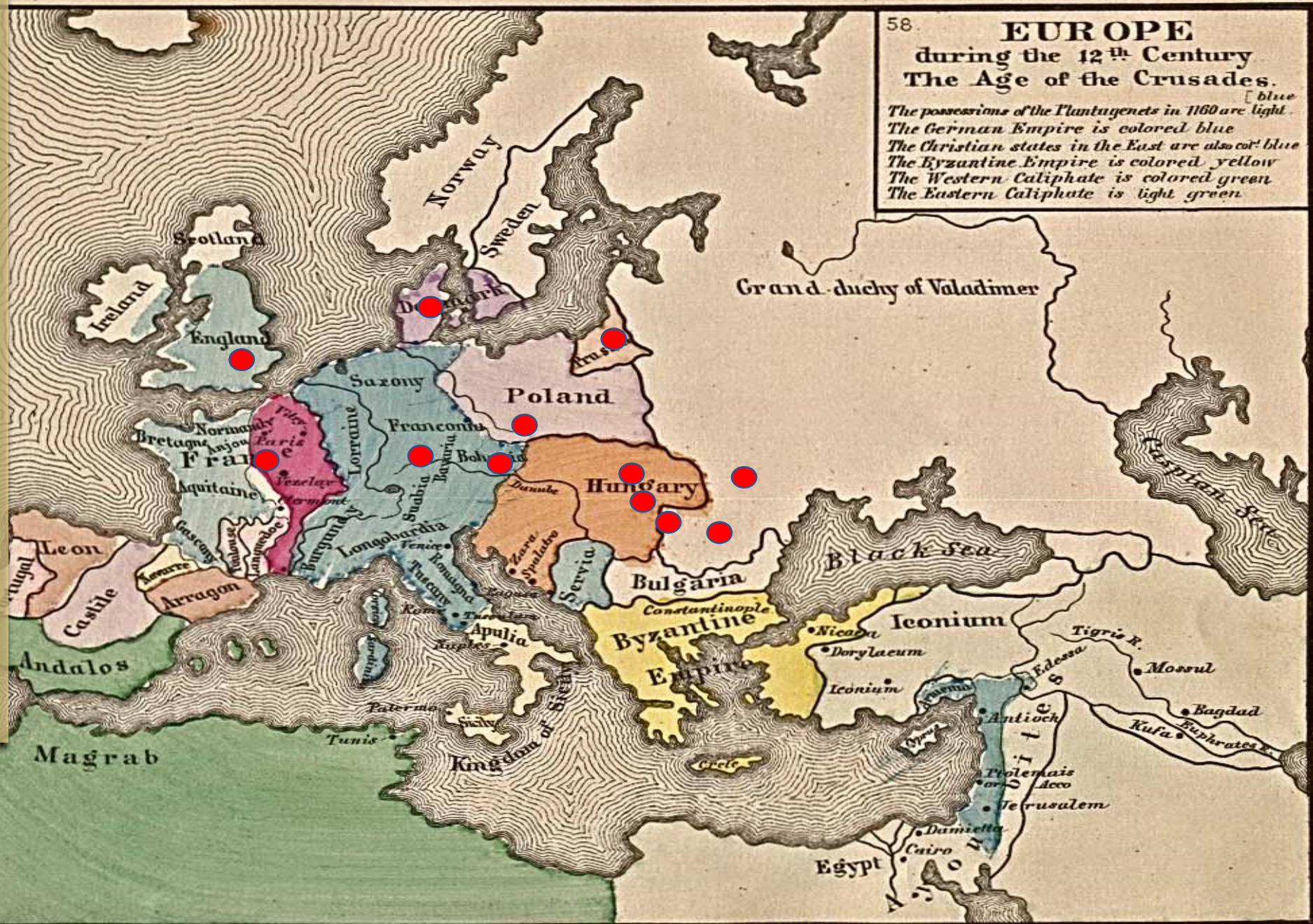


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"21. Every steward is to keep fishponds on our estates where they have existed in the past, and if possible, he is to enlarge them. They are also to be established in places where they have not so far existed but where they are now practicable."

"65. That the fish from our fishponds shall be sold, and others put in their place, so that there is always a supply of fish; however, when we do not visit the estates, they are to be sold, and our stewards are to get a profit from them for our benefit."

- England (1086) – William the Conqueror - Domesday Book
- Bohemia (1115) – Kladruby Monastery
- Hungary – Komarom and Szeged ponds (X)
- Poland – Zator ponds (XI), Milicz
- Romania (Transilvania - 1247, 1322, 1329), (Valachia - 1247), (Moldova – 1421)
- France: 12th – 13th century – Valois (1160), Dombes (1258)
- Germany – Regensburg (IX-XI)
- Lithuania – 1402
- Denmark - 1560



Main phases in the development of carp pond farming

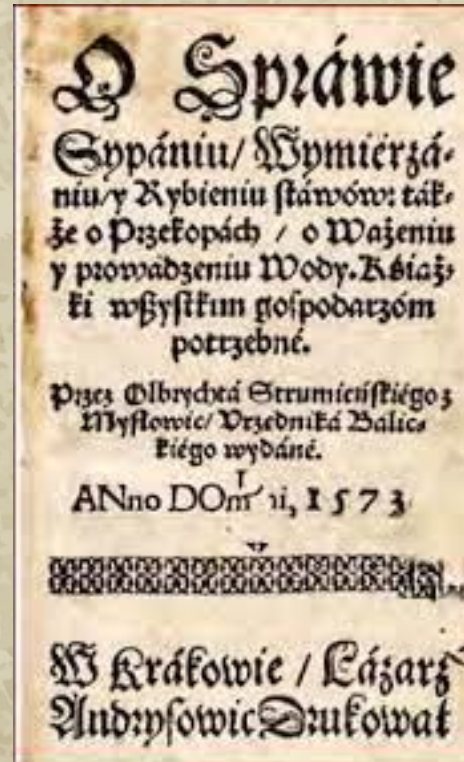
1. Rapid growth (12th c.-17th c.),
2. Decline (18th c. – middle of 19th c.)
3. Modernisation (middle of 19th c.- middle of 20th c.),
4. Growth 20th c. '60s- 20th c. '70s/'80s)
5. Stagnation

Jan Dubravius, Bishop of Olomuc (Moravia)
1559 - *De piscinis et piscium qui in eis aluntur naturis* (About ponds and fish growing in them).



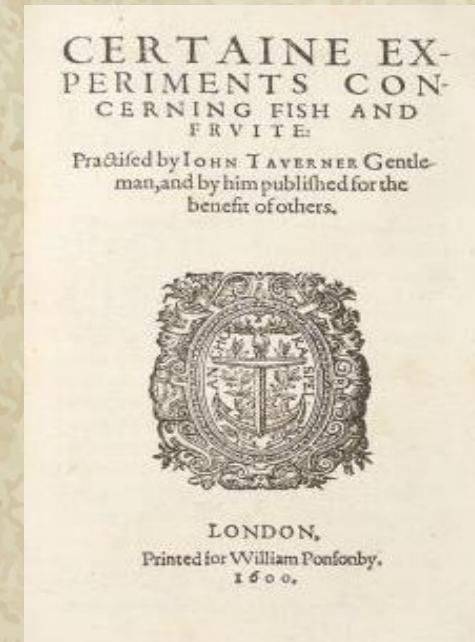
1559

1573



Olbrycht Strumiński. 1573. *O sprawie, sypaniu, wymierzaniu i rybieniu stawów* - On the repair, grading, measuring and stocking of ponds

John Taverner - *Certaine experiments concerning fish and fruite: practised by John Tavernier Gentleman, and by him published for the benefit of others*, London: Printed [by Richard Field] for William Ponsonby, 1600.



1600

7

MOLDAVIAE

QVAE OLIM DACIAE PARS,
CHOROGRAPHIA, GEOR-
GIO A REICHERSTORF,
TRANSYLVANO &c.
AVTORE.

EXCVSVM VIENNAE PAN-
NONIAE PER IOANNEM SIN-
GRENIVM M. D. XLI.



Georg Reicherstorffer - Moldaviae quae olim Daciae pars (Describing Moldova which was a part of Dacia), Chorographia, Vienna, first edition 1541 – “Moldova is so rich in ponds and lakes in a manner that one could not ask more from nature for the daily needs.”

Integration in the society

Carp ponds were owned by:

1. Royals
2. Monasteries
3. Nobles
4. Countrymen and townspeople
5. Local communities

*Paul Beke Jesuit missionary in Moldova writing in **1644** about the number of ponds he has found there: “they pride themselves on lakes and ponds, before other countries, and hence the unbelievable quantities of fish.”*

“[...] therefore, there is advantage enough in the mastery of fish, from the diversion, not to speak of the employment that it brings to a family. Young people love angling extremely; then there is a boat, which gives pleasure enough in summer, frequent fishing with nets, the very making of nets, seeing the waters, much discourse of them, and the fish, especially upon your great sweeps, and the strange surprizes that will happen in numbers and bigness, with many other incident entertainments, are the result of waters, [...]”

“Parks, bowling-greens, and billiard-tables, are of the same design; but it will be easily granted, this of fish is beyond them all.”

“So you avoid offending the public, increase your store, win your friends and family, and preserve your health; all which, I take it, are accomplished, in great measure, by the mastery of fish.” (Roger North – A discourse on fish and fishponds – 1714)

Environmental integration

- Pond rotation, grazing years;
- Water retention (ex. King Karl the 4th);
- Pond muck fertilizer for arable soils (ex. Johannes Coler – 1596 *On rural and domestic economy*);
- Pond fertilization with manure;
- Biodiversity

“But the truth is, in such a drie Sommer as aforesaid, the cattell then feeding in such grounds as then lie drie, do bestow therein great quantitie of dung and stale, wherein is bred great abundance of such bodes, flies, and wormes, as aforesayd: as also the naturall and livelie heate of the Sunne piercing such grounds, doth make the same pleasant and fat, and to bring forth the next Sommer many hearbes and weedes, the seedes of which do yeeld unto fishes verie great foode and nourishment” (John Taverner – Certaine Experiments Concerning Fish and Fruite – 1600)

The Decline

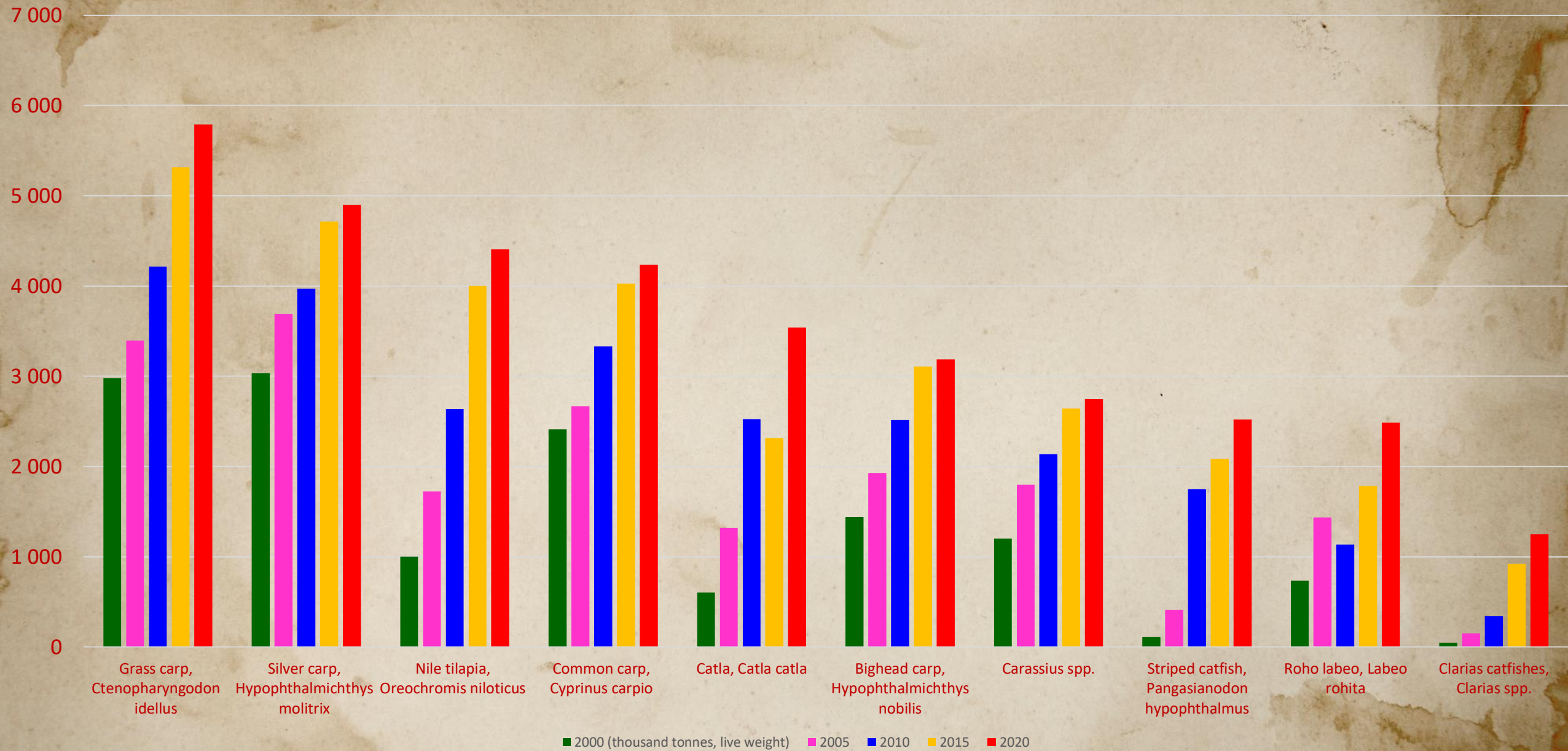
Causes:

1. Steam engine invention
2. Controlled reproduction of trout (1741 L. Jacobi)
3. Industry development and rivers' pollution
4. The increased need for arable and grazing land
5. they were accused with more or less reason of spreading malaria and were dried

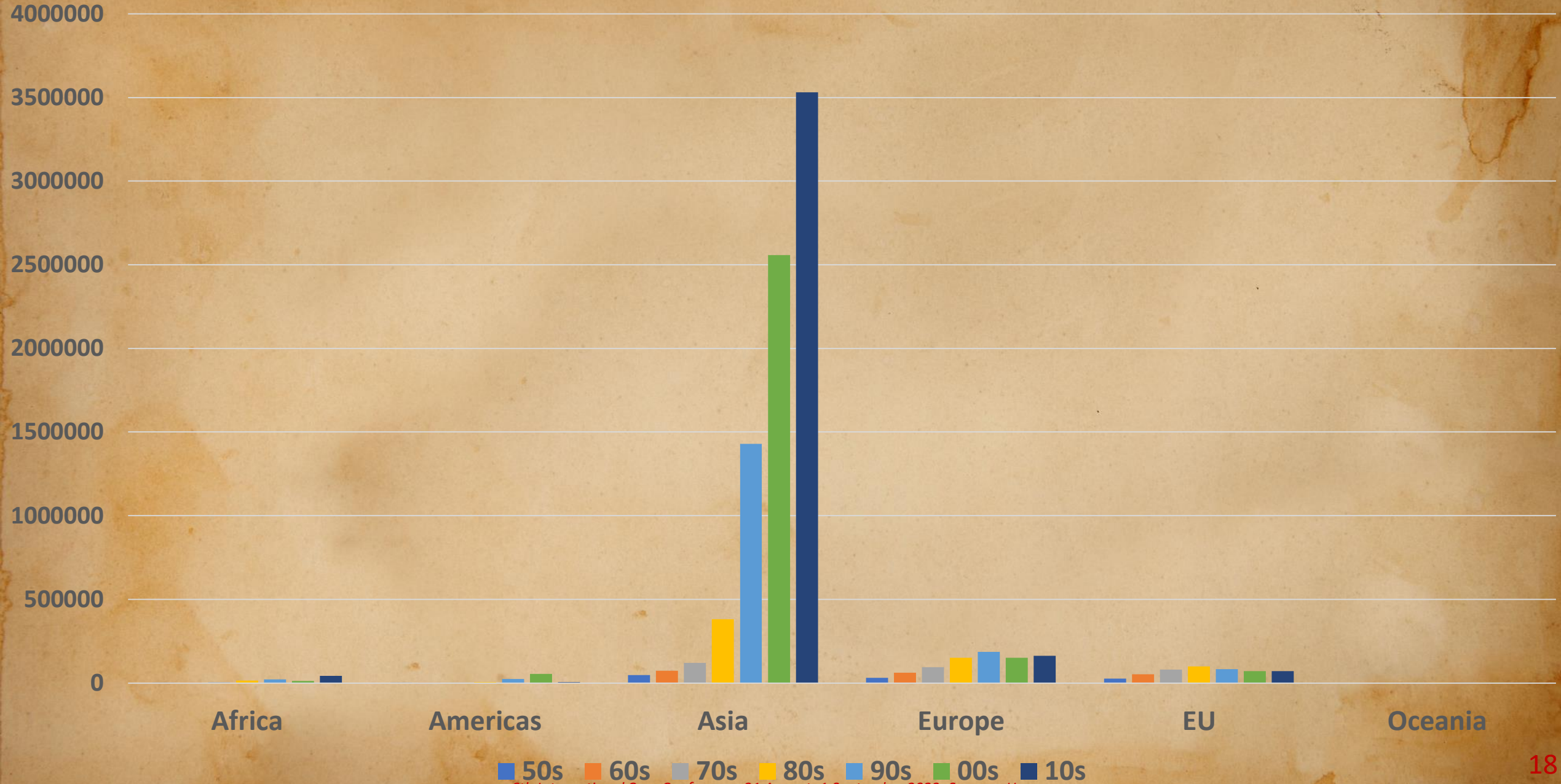
The Modernization

1. Professional organisations (Germany – 1870, Poland – 1879, Hungary – 1885, Romania – 1926, Austria – 1936);
2. Specific legislation for fish farming;
3. Subsidies, facilities and gratuities for fish farming businesses;
4. Education infrastructure for fish farming technicians, veterinarians and engineers;
5. Tomasz Dubisch 1868 – specialised ponds;
6. Josef Sušta 1884 – On Nutrition of the Carp and its Fishponds Associates;
7. Grigore Antipa 1906 - Necessary measures for the development of carp culture in ponds;
8. Wilhelm Schaeperclaus published in 1933 “Textbook of Pond Culture”.

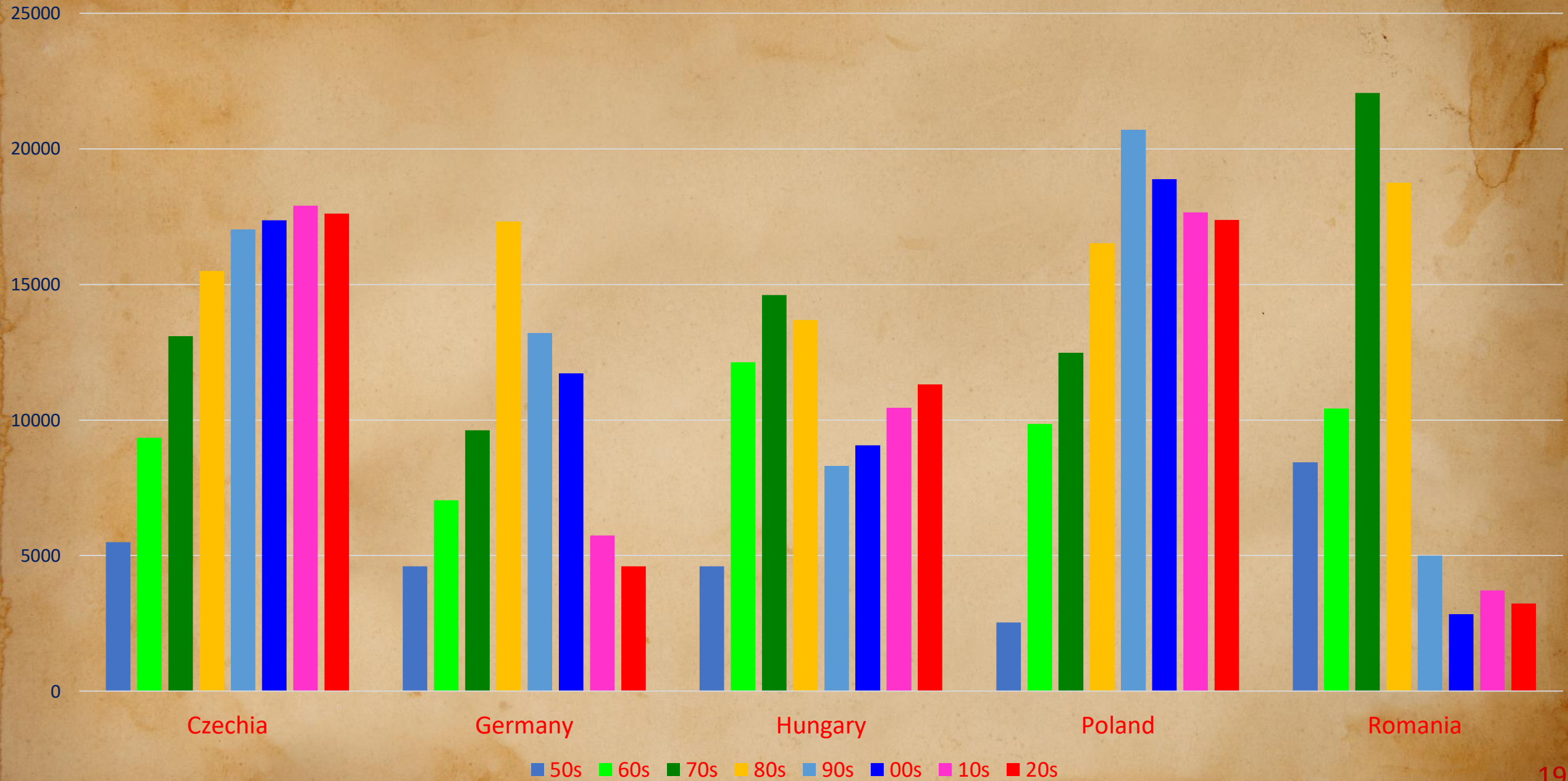
Top 10 freshwater finfish in global aquaculture

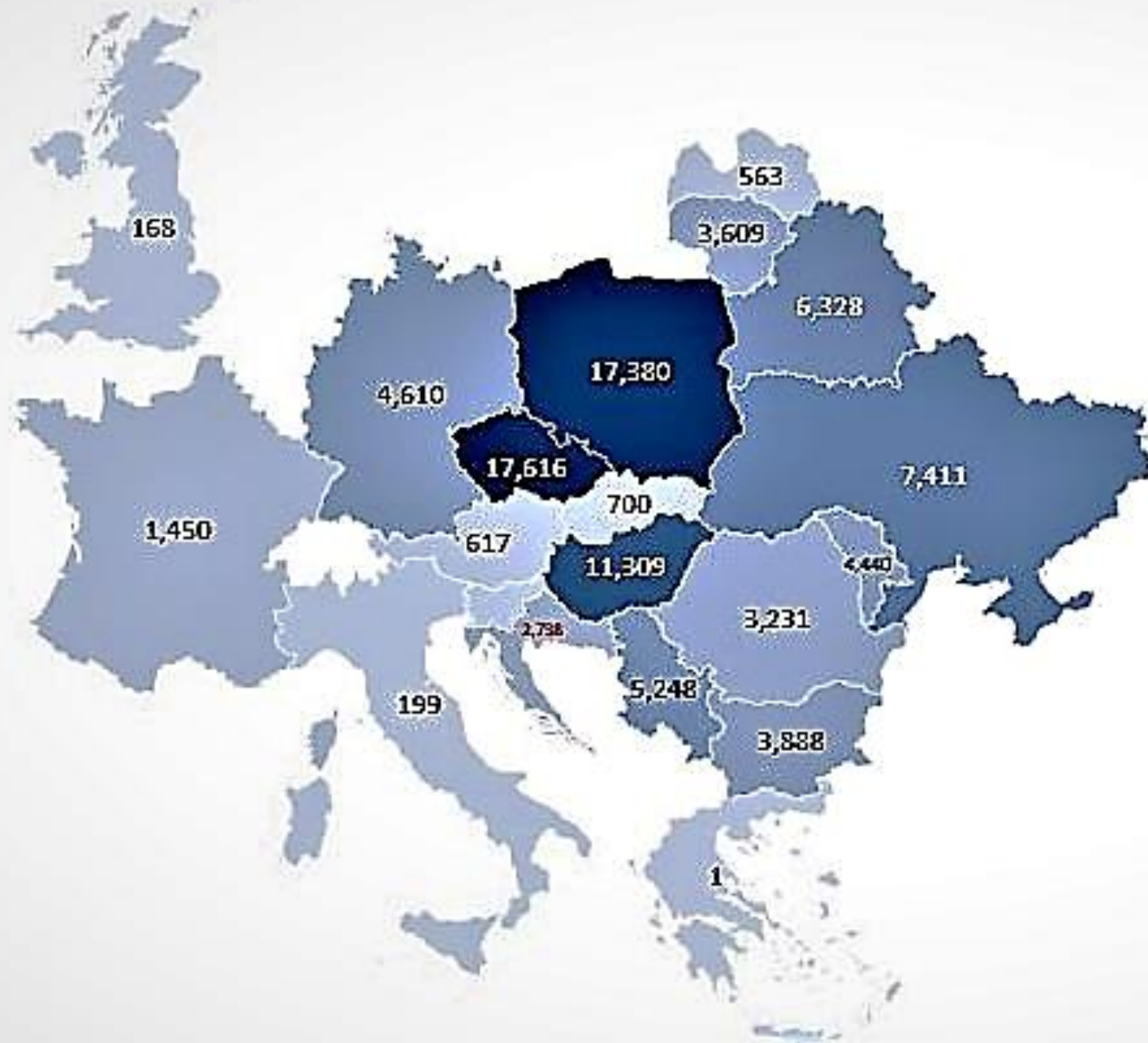


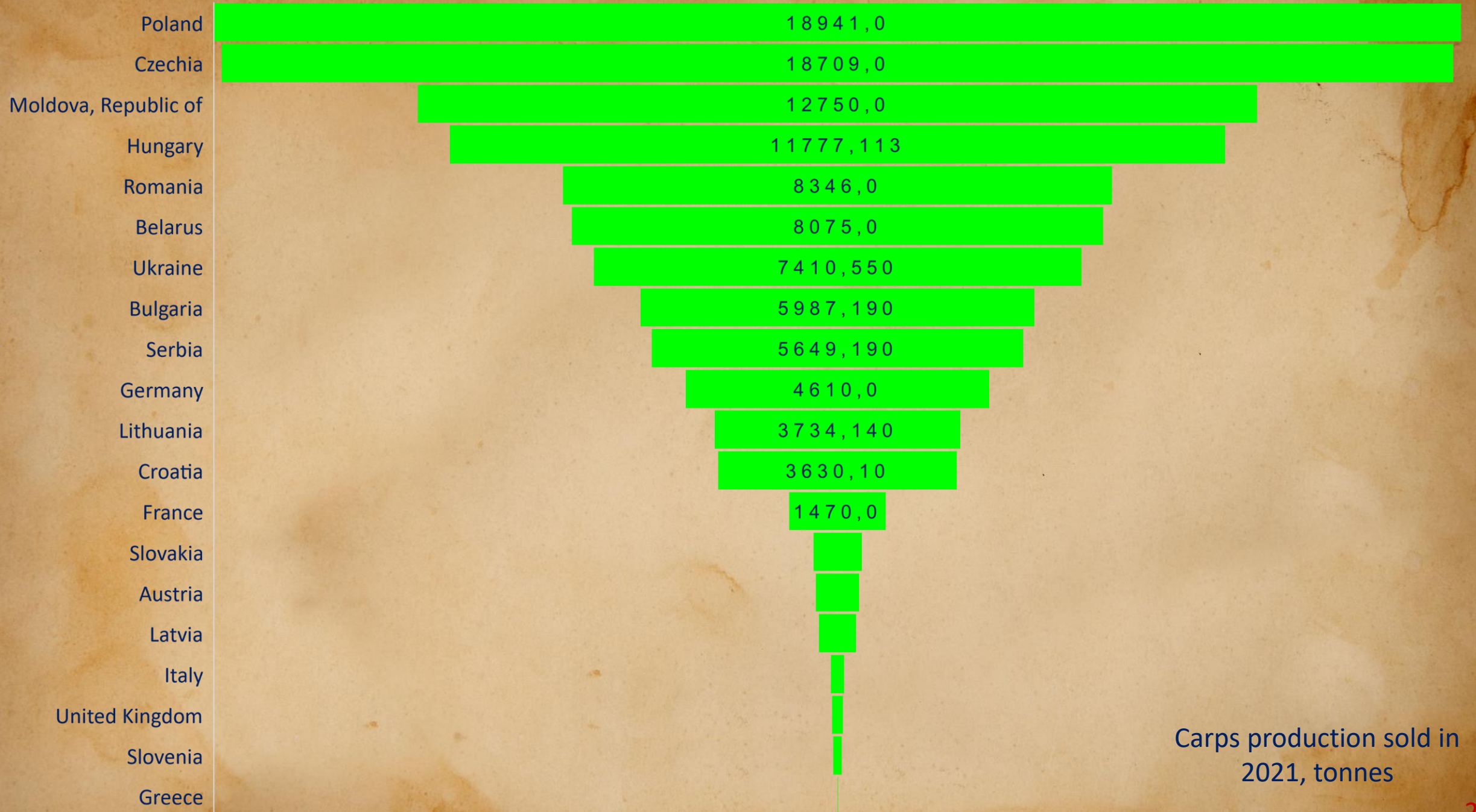
Common Carp global production, by decades



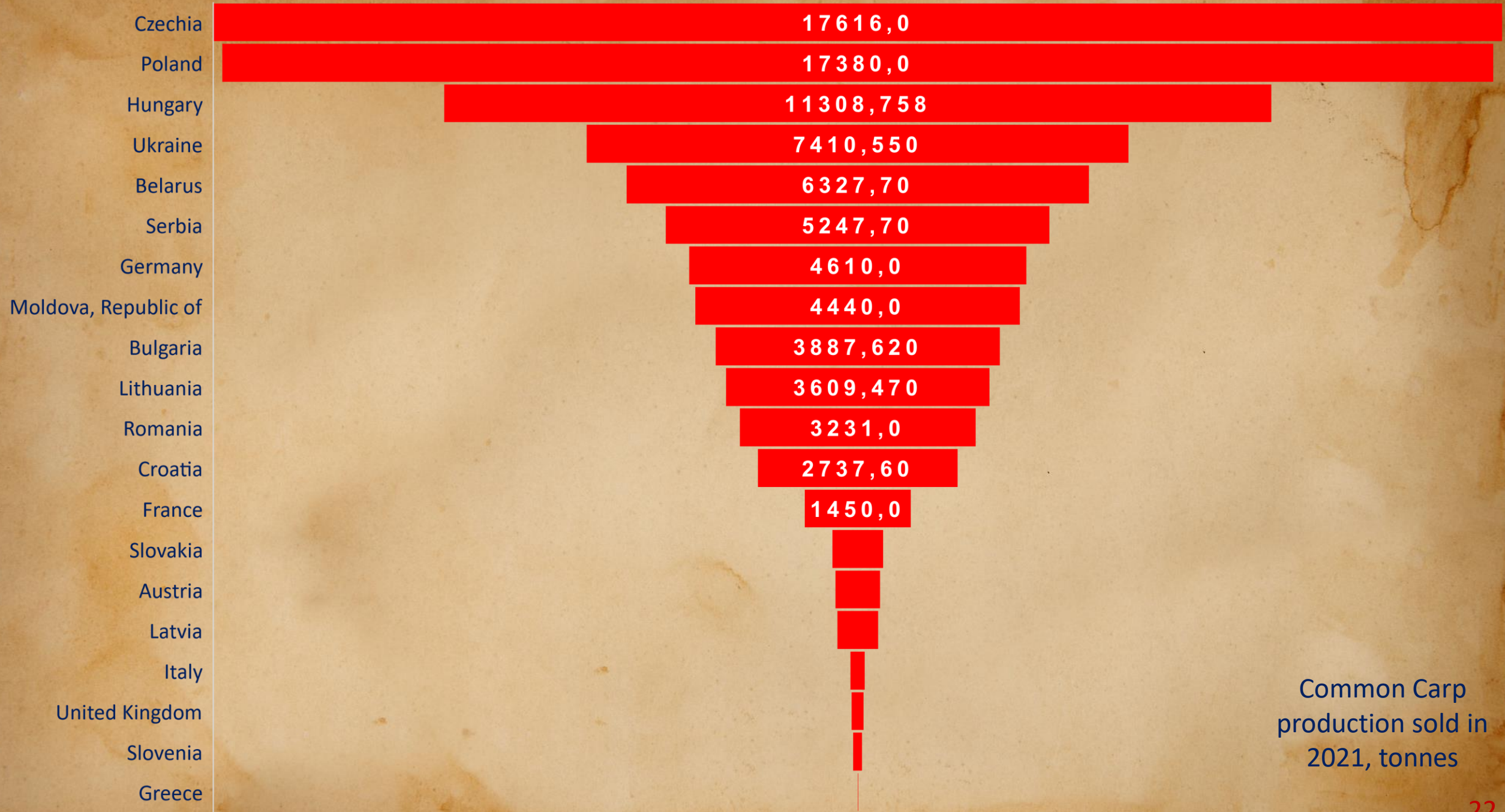
Top 5 common carp producers by decades







Carps production sold in 2021, tonnes



Common Carp
production sold in
2021, tonnes

1. Common carp farming it is not an industry but a part of the world's cultural heritage as an occupation enshrined also in Europe's societal evolution;
2. The place of carp farming into environmental objectives is confirmed by the vast majority of carp farms that are included in N2000 networks;
3. Common carp farming is well documented in the European historical literature but unfortunately very few of them are translated in a worldwide spoken language;
4. Presently the carp farming in Europe is stagnating and faces many challenges which must be addressed;
5. Common carp farming is easily compatible with almost all of the UN SDGs and can contribute to all major EUs strategies and policies and this has to be documented and acknowledged

“A ‘*culture of aquaculture*’ needs to be built on historical foundations so that informed politicians, investors, and communities can make better decisions based upon complete information and timelines of this historically important food innovation that has arisen multiple times in antiquity”

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patience!