SUStainable AQuaculture and the environment (SUSAQ)

The Baltic Region - Good Practice Workshop



Aquaculture in freshwater ponds in Poland – the way to protect environment

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Freshwater fisheries in Poland – general information

- The total area of inland waters in Poland is approximately 600 000 ha, of which:
  - lakes - almost 300 000 ha
  - rivers and streams - 140 000 ha
  - fish ponds – more than 55 000 ha
  - dam reservoirs - 55 000 ha
  - other waters - 40 000 ha (oxbow lakes, gravel pits …).

- Inlandwater fisheries in Poland comprises:
  - fish farming and fish breeding (aquaculture);
  - sustainable use of living freshwater resources (captures + enhancing).

- Production of freshwater species from inland fisheries amount more than 50 000 t, of which are:
  - caught: 15 000 t (3-4 ths. t - commercial, 10-15 ths. t - recreational),
  - farmed: 35 000 t (carp 15 -18 ths. t, trout 12-15 ths. t, others 3 ths. t).

Types of aquaculture

marine aquaculture

brackish water aquaculture

fresh water aquaculture

Ponds - artificial water bodies (installations) built for fish production

Pond fish farming might be divided in two main groups:

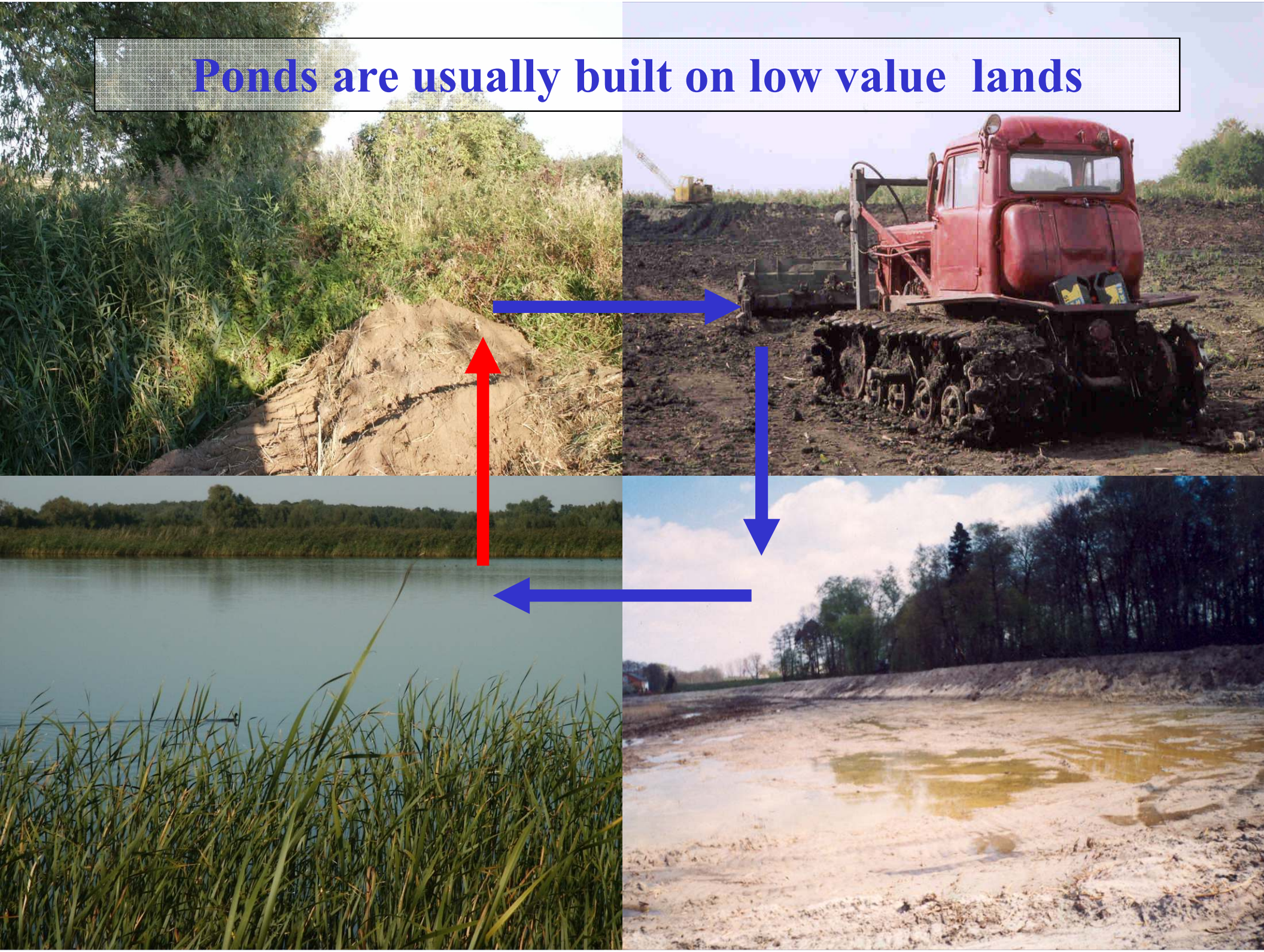
intensive farming – seeks to produce a maximum fish in a minimum of water

extensive farming – where obtaining a quantity of fish corresponds to natural productivity of pond

Extensive pond aquaculture

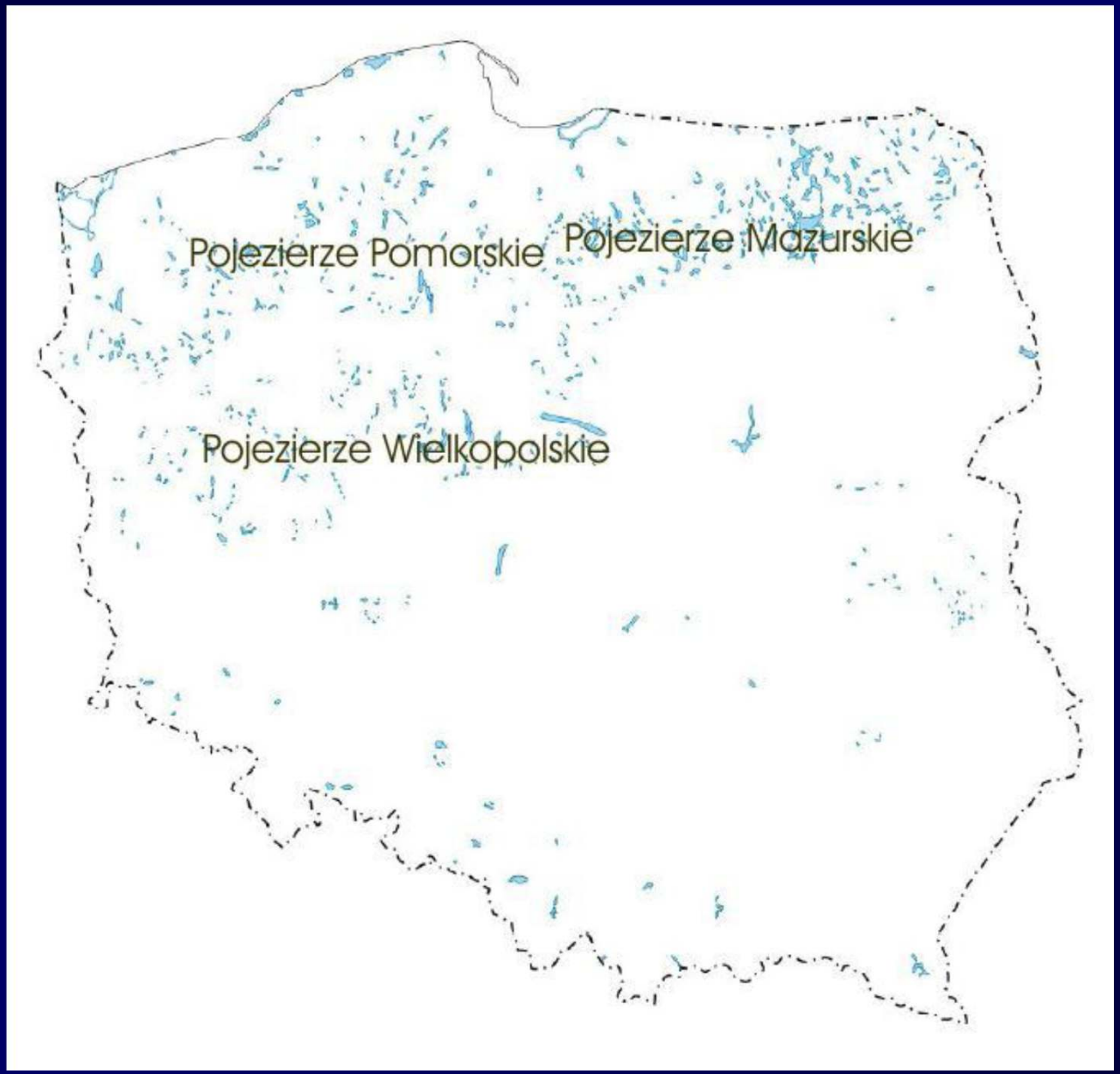
traditional and „modern”

Ponds are usually built on low value lands



Ponds – located in different places – are very important components for every landscape as reservoirs of water

Ponds - usually are supplementary to natural water bodies



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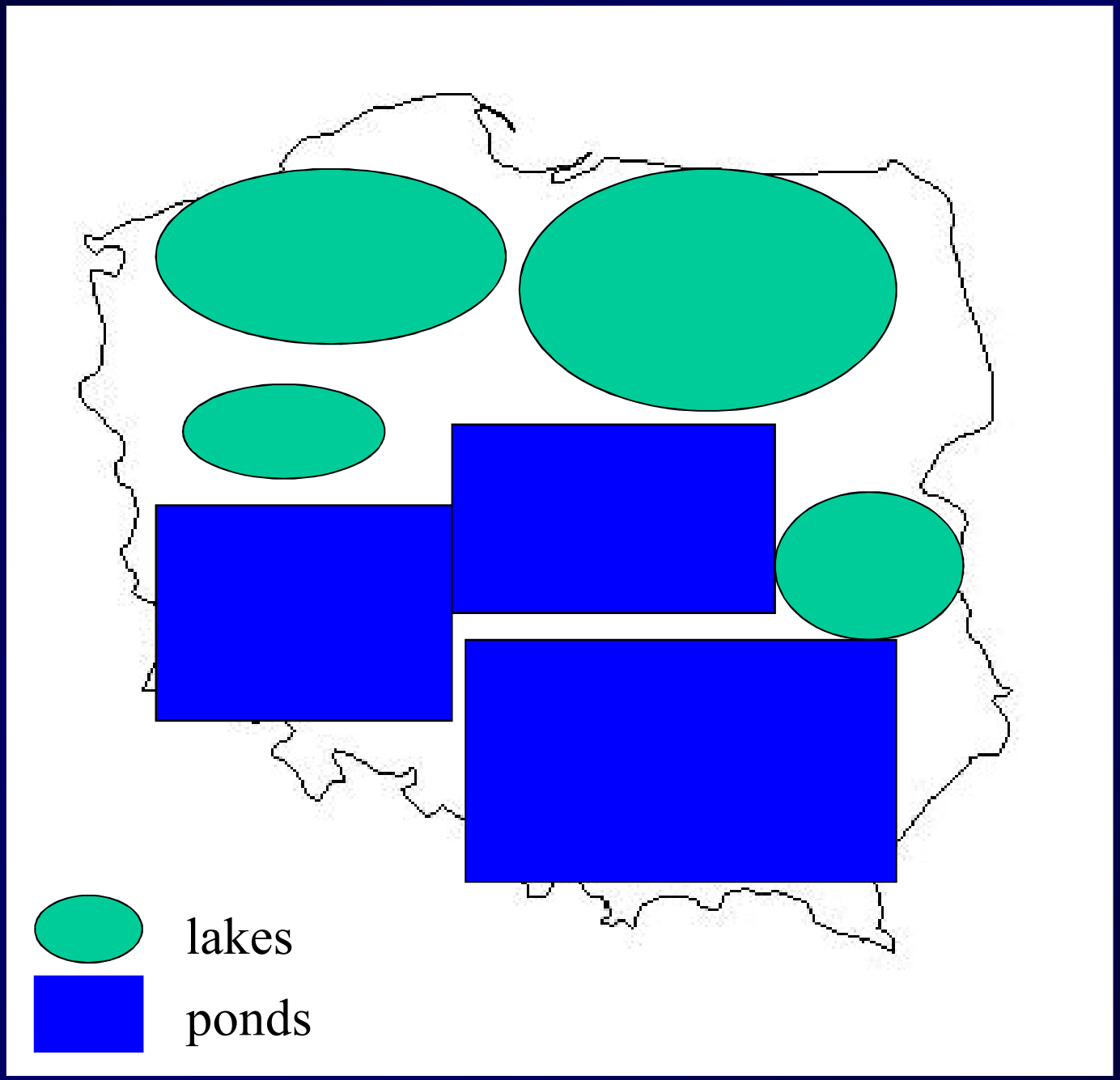
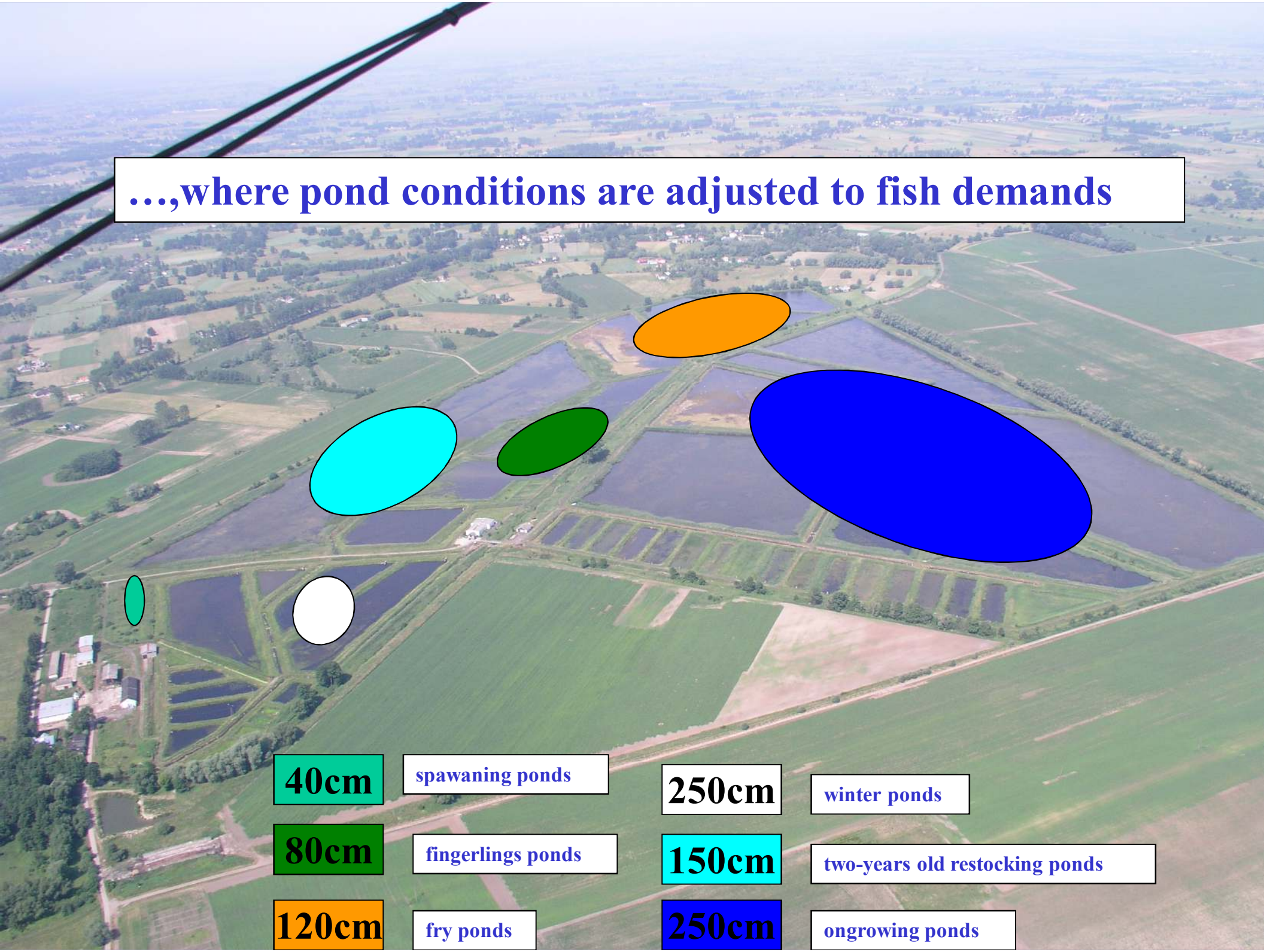
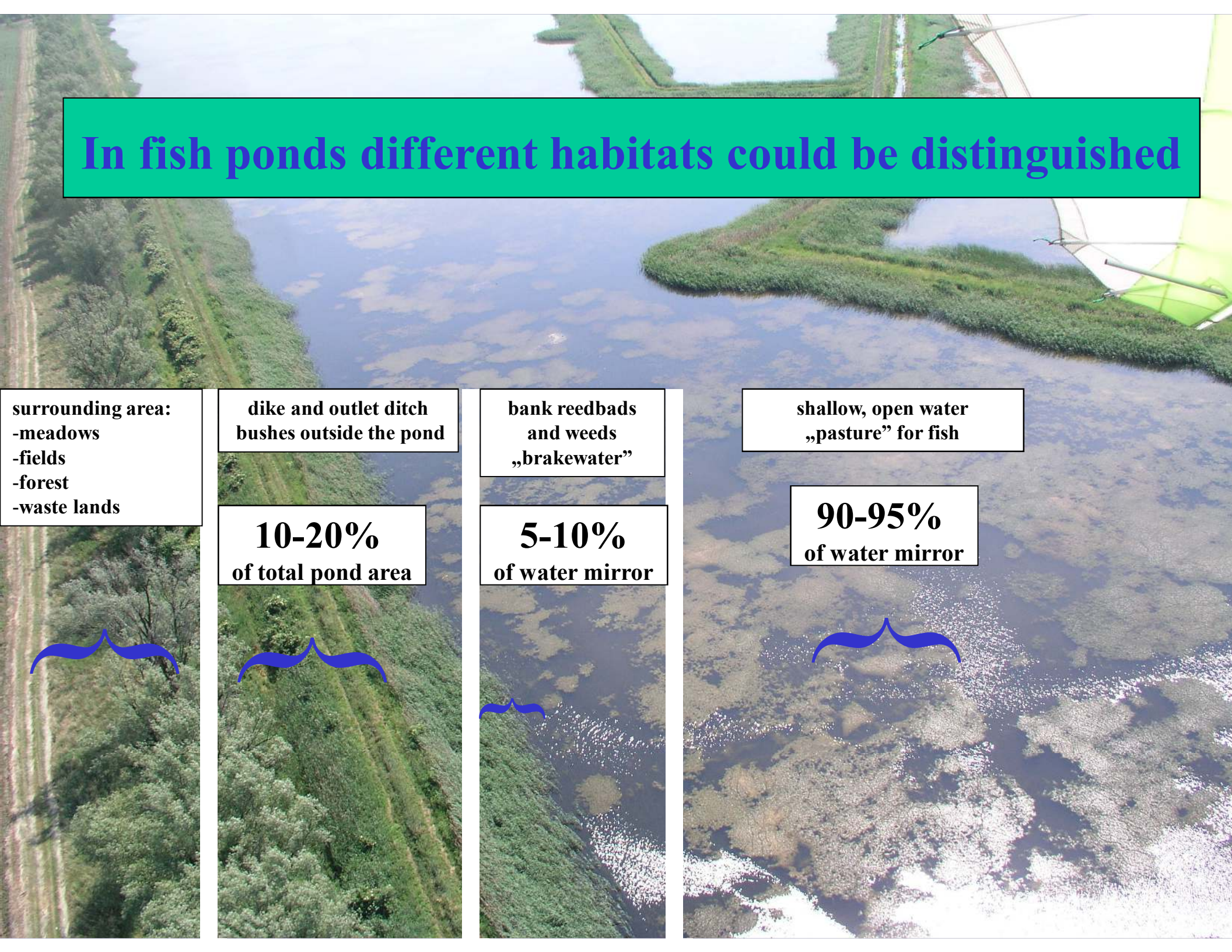


Traditional pond fish farm is organized due to the Dubisch system…

…,where pond conditions are adjusted to fish demands



In fish ponds different habitats could be distinguished



surrounding area:
-meadows
-fields
-forest
-waste lands

dike and outlet ditch
bushes outside the pond

10-20%
of total pond area

bank reedbads
and weeds
„brakewater”

5-10%
of water mirror

shallow, open water
„pasture” for fish

90-95%
of water mirror

Gołysz Ponds (1500ha)

2105 species of plant and animal species recorded,...

Siemińska A, Siemińska J. 1967.

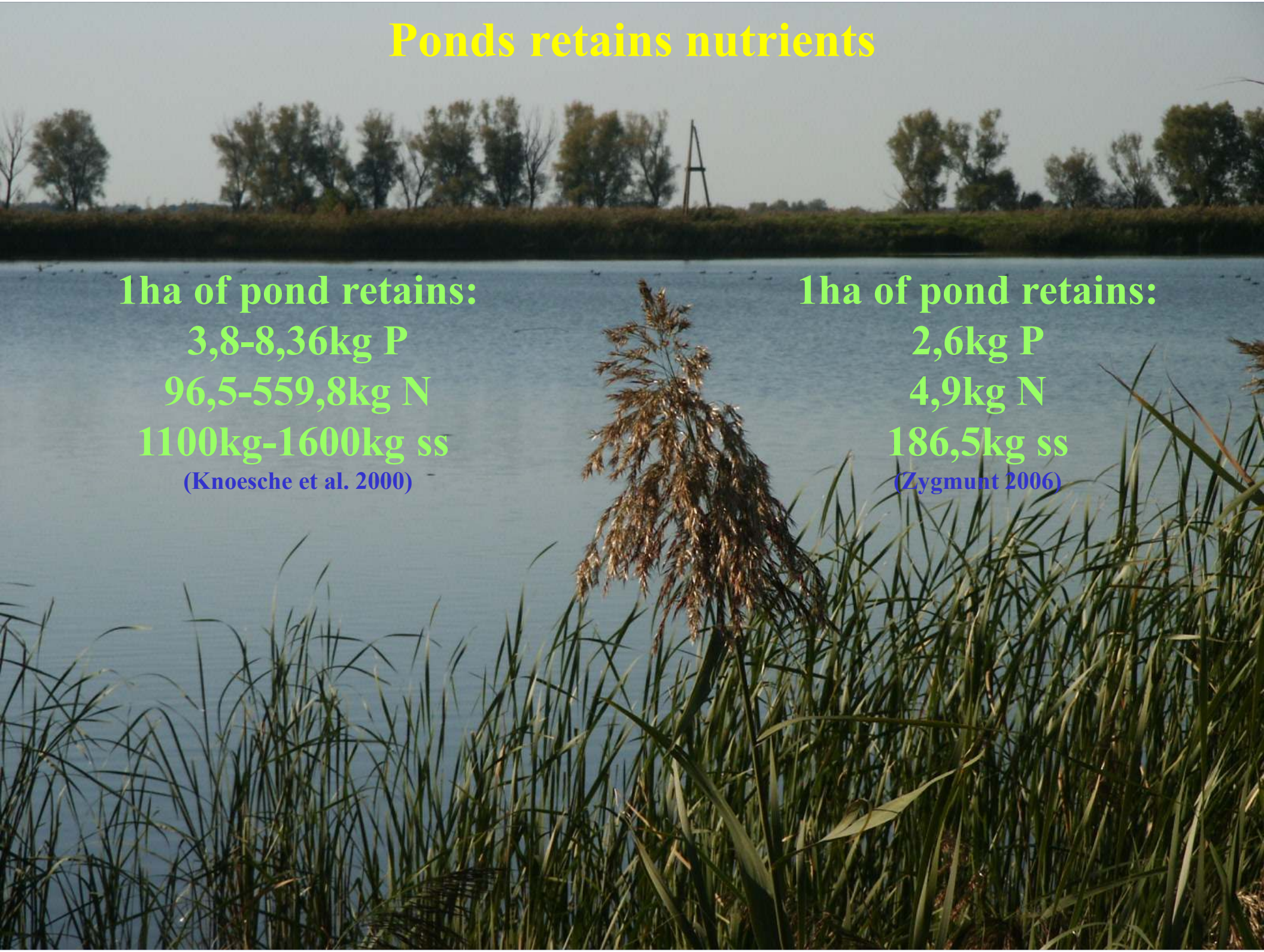
Stawinoga Ponds (74 ha)

160 species of birds recorded,...

Dobrowolski et al.. 1995.

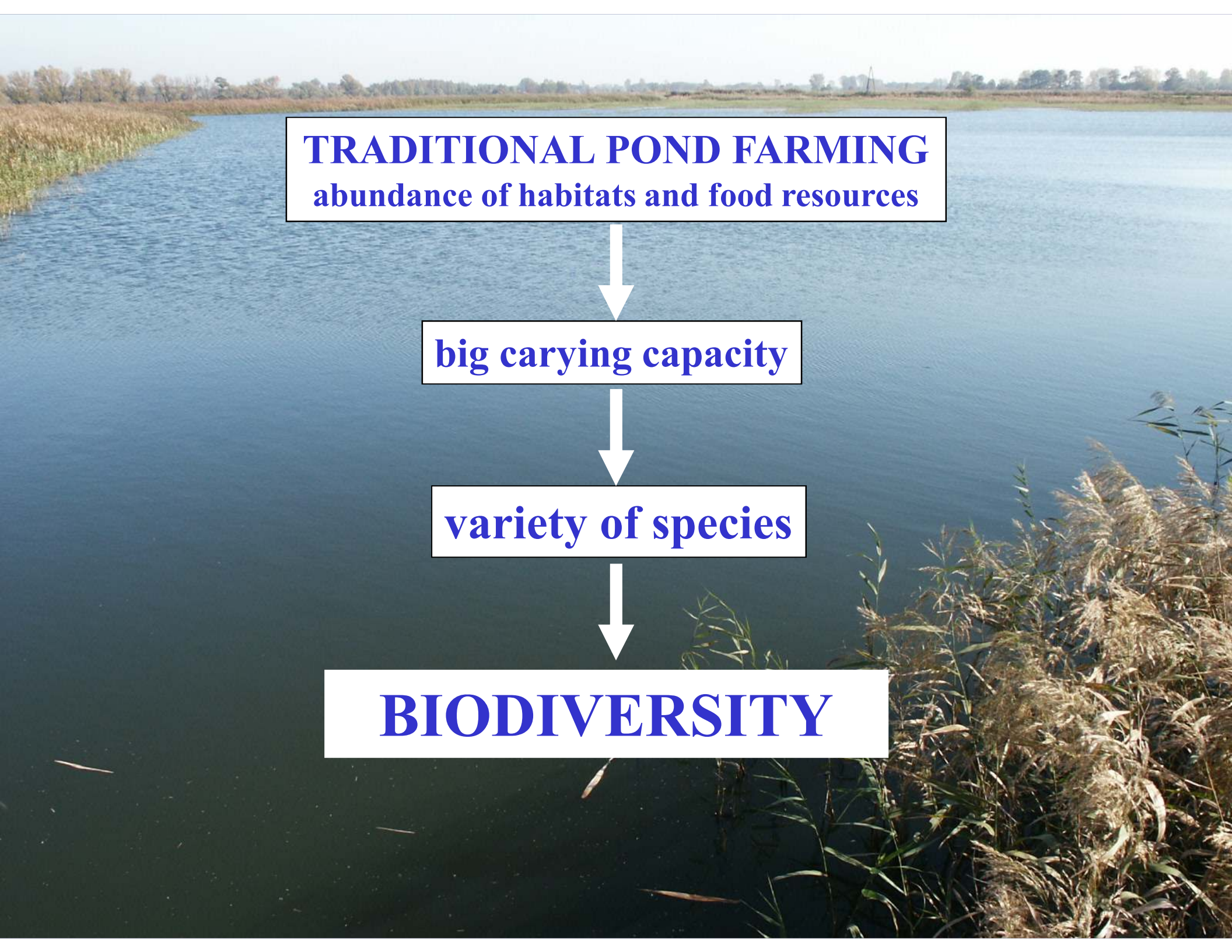
and this is due to the traditional aquaculture only!

Ponds retains nutrients



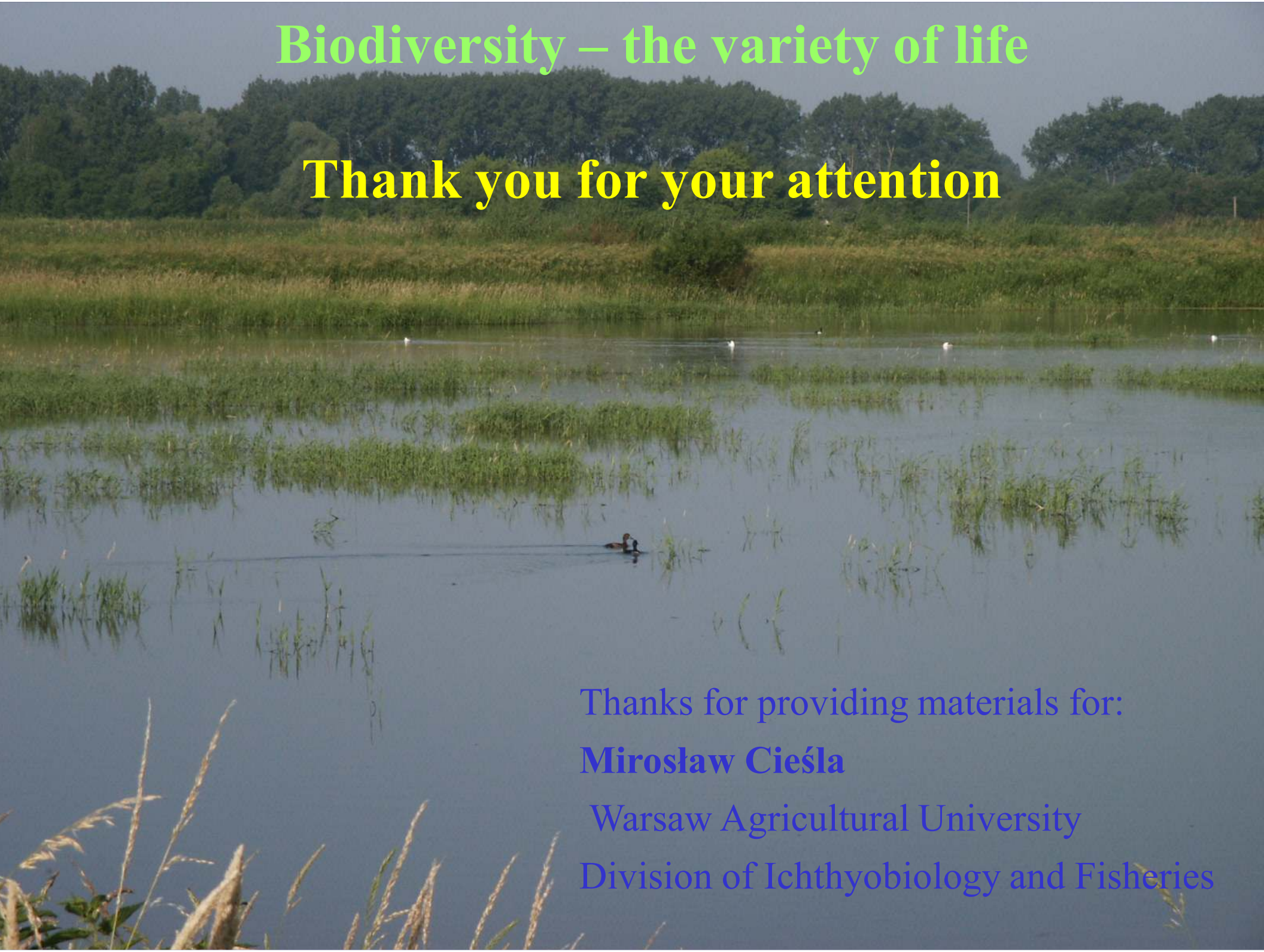
1ha of pond retains:
3,8-8,36kg P
96,5-559,8kg N
1100kg-1600kg ss
(Knoesche et al. 2000)

1ha of pond retains:
2,6kg P
4,9kg N
186,5kg ss
(Zygmunt 2006)


TRADITIONAL POND FARMING
abundance of habitats and food resources
big carying capacity
variety of species
BIODIVERSITY

Biodiversity – the variety of life

Thank you for your attention



Thanks for providing materials for:
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