

# Hydrological elements

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Always  
attractive





In Czechia there are also small waterfalls considered to be attraction

Only for seminar work

# Hydrological conditions – the entrance

- Why - Small parts in inland – lakes, rivers, fish ponds, damlakes
- Water – symbol of Life
- Water I Culture (Symphony about rivers, sources ... in Czechia Vltava, Morava)
- Evaluation mostly positive, but .....(x devastation !) polluted water, rubbish ...
- Types – Running waters x stagnant waters x marshes
  
- Running: Spring, brook, creek, river
  - Special cases: Karstic sinks, karstic springs, submerged rivers .... (Punkva)
  - Waterfalls, rapids, „wild water“, „calm water“, almost standing – very slow
  - **And their vegetation, biota**
- Stagnant: lakes, fish ponds, dam lakes, recreational artificial lakes,
  - **Dam lakes – great difference if they are in canyons or in open valley, basine**
  - **And their biota**
- Marshes – earlier taken negatively, now ambivalently. Sometimes very nice.





Karstic  
sink  
Nová  
Rasovna

Not necessary  
to the exam





Karstic spring  
Malý výtok  
Punkvy

Not necessary  
to the exam



# Hydrological condition - evaluation

- Problémy hodnocení: Kolísání hladiny (s x t), abraze (s+t), meandry, regulované toky
  - - otázka změny krajinného rázu výstavbou jezu v Děčíně
- Dynamika + (drobnokvět pobřežní, židovník, bezobratlí ...)
- Kolísání dané špičkováním vod. elektráren x zařezávání vod. toků pod přehradami
- Vodopády x peřeje **ohrožené, výstavba MVE**
  - - Čertovy proudy, Jizera 2x, Želivka, horní Morava, Svratka, Moravice...
- **Podchycené vyvěračky**
- Stojaté vody: Velikost < 3 – 20 > ha, z hled. Kraj. rázu – hranice ca 1 km<sup>2</sup>
- Čistota
- Kaskáda: ≥ 3 rybníky, Rybníční krajina
- **Tvar – ovál, linie x velmi členitý půdorys**
- **Břehové linie + Porosty ve vodě a na březích**
- Rybníky i nejstarší přehrady – již i památky
- Úpravy studánek – dobře – špatně – dobře (divočáci):



Rapids are  
Rare  
They should be  
protected  
– Elbe river  
close to spring

Video (5 min):  
[https://www.youtube.com/watch?v=bc6mVG9alhA&feature=emb\\_rel\\_end](https://www.youtube.com/watch?v=bc6mVG9alhA&feature=emb_rel_end)





- Greatest rapids in Czechia, on Vltava river – the Devil rapids.
- Altitude difference 162 m
- Originally it looked so.
- Video - 4 min., vlastní Čertovy proudy jsou až ve druhé polovině videa:

<https://youtu.be/PDVT0bYihXU>

Not necessary to the exam









Damaged by intake of water, for water power plant. Small amount of energy, great loss for nature and Landscape attractiveness





Second  
former  
greatest  
rapids – on  
the Vydra  
river. Now  
almost  
without  
water



Not necessary to the exam



- Taking such photos was left...





- As it looked originally

Not necessary to the exam





- And now

Not  
necessary to  
the exam





# Trolhättan rapids in Sweden

- Also damaged by intake of water for electricity
- Originally 900 m<sup>3</sup>/s, difference 32 m
- 1910 a 1938 power plants. But:
- In summer season 2x in week 300 m<sup>3</sup>/s are left for rapids



# Trolhättan rapids

- Starting to left the water for rapids







- In full beauty





Carpathians,  
branch of  
Tisa river,  
Ukraine

- Water itself could be relatively clean, but the rubbish makes it awfull place





Naturally  
meandering  
rivers – in  
Czechia only  
few left.

The Morava  
river, few  
kilometres.  
Anyway  
attraction, also  
for water  
tourists







The Morava river, as it was canalised in 70ties of 20. Cent.







No recreation, almost nothing





Awfull  
embank-  
ments  
also  
influence  
accepta-  
tion of  
water  
bodies





People not  
welcomed





Damlake in basins looks as natural lakes, in opposition to ones in canyons



Cases of our flooded vales – by damlakes.  
Lost attractivity of rivers, canyons, watermills.

Dalešice



The names of damlakes not necessary to the exam





Vranov



Slapy

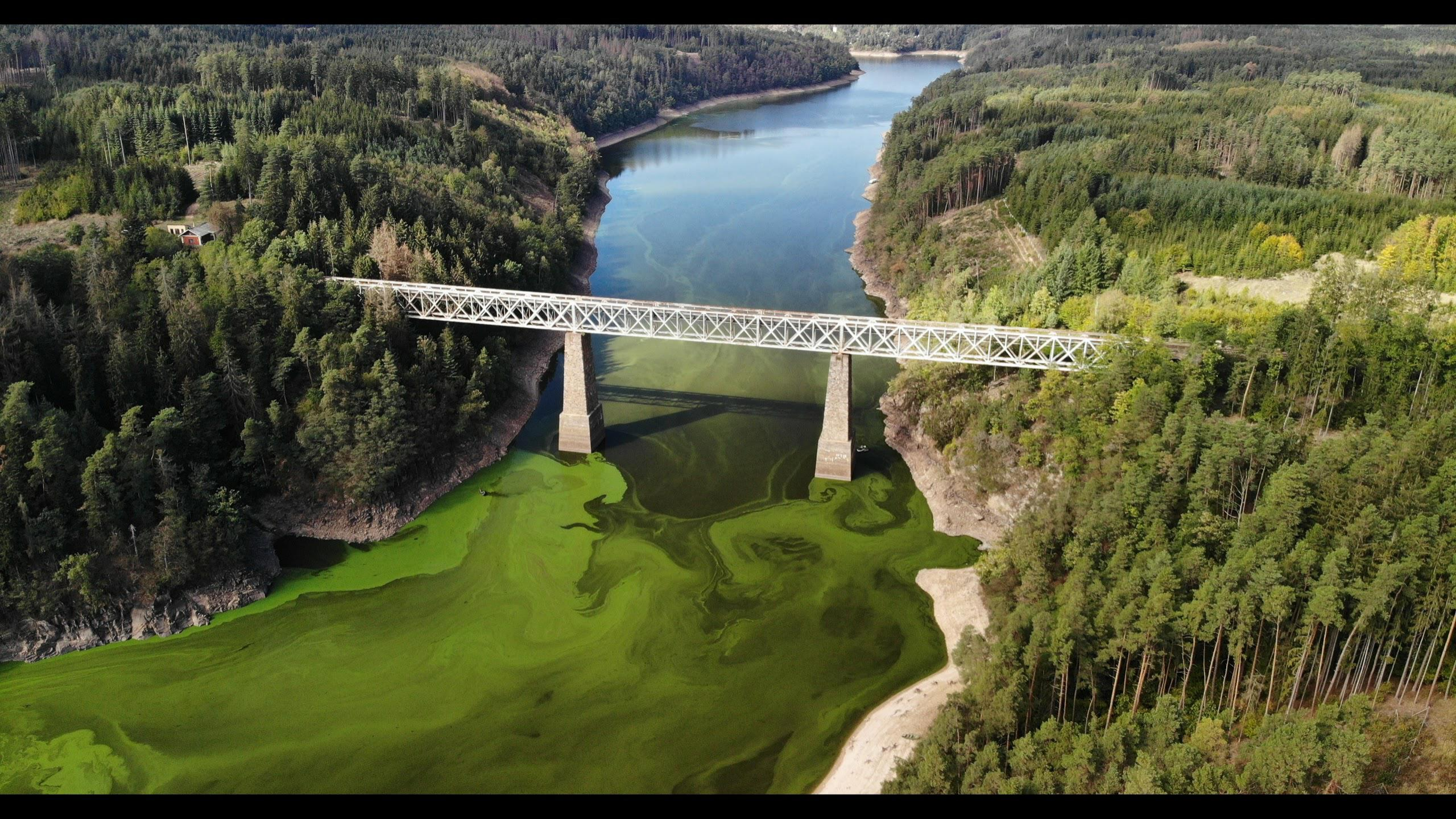






Orlík







For recreational ponds and lakes are important indented and diverse banks  
– try to discover all. Oval lakes are not so interesting







The same pond





Jihlava  
river  
2006

Floods  
belongs  
also to  
Landscape  
and are  
attractive.

Certainly  
people  
and  
houses  
must be  
protected.





Josef Dobrovolný

Beauty of  
floods,  
Svratka river,  
as presented  
by this  
painter



# Thank you for attention to Water.

- In presentation were used pictures of author's archive and from Internet, mostly Google Earth.