Cost effective system for monitoring fish migration with a camera

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Fish passes on Ljubljanica
FishCam location
Advantages and disadvantages of using camera monitoring compared to commonly used RFID tagging

Advantages:
- non invasive method
- detects all passing fishes
- low cost

Disadvantages:
- camera needs regular cleaning
- poor performance in dirty water
- Image processing could be time consuming
- it is difficult to identify exact fish size and weight from the photo
Camera components
Camera components

Sony Camera
- IR Sensitive
- Very sensitive in low light conditions (0.001 Lux)

IR Lightning
- night recording
- IR led diodes
Software used to detect fishes
Camera upgrade

Disadvantage:
- it is difficult to identify fish size from the picture

Stereovision
Monitoring results

Danube salmon (*Hucho hucho*)
Monitoring results

Klen (Squalius cephalus)

Mrena (Barbus barbus)

Rdečeoka (Rutilus rutilus)

Zelenika (Alburnus alburnus)

Pisanka (Alburnoides bipunctatus)

Potočna mrena (Barbus balcanicus)
Monitoring results