



LATVIJAS
VIDES, ĢEOLOĢIJAS UN
METEOROLOĢIJAS AĢENTŪRA

Assessment of risk due to morphological alterations



Risk assessment

- To assess impact of morphological alterations on surface water bodies
 - data about different kinds of alterations were used
 - criteria were established to decide, whether alterations lead to identification of surface water bodies as being at risk
 - risk assessment also considered the total area of surface water body and time when alterations were made
 - risk was assessed, comparing data on morphological alterations with expert opinion



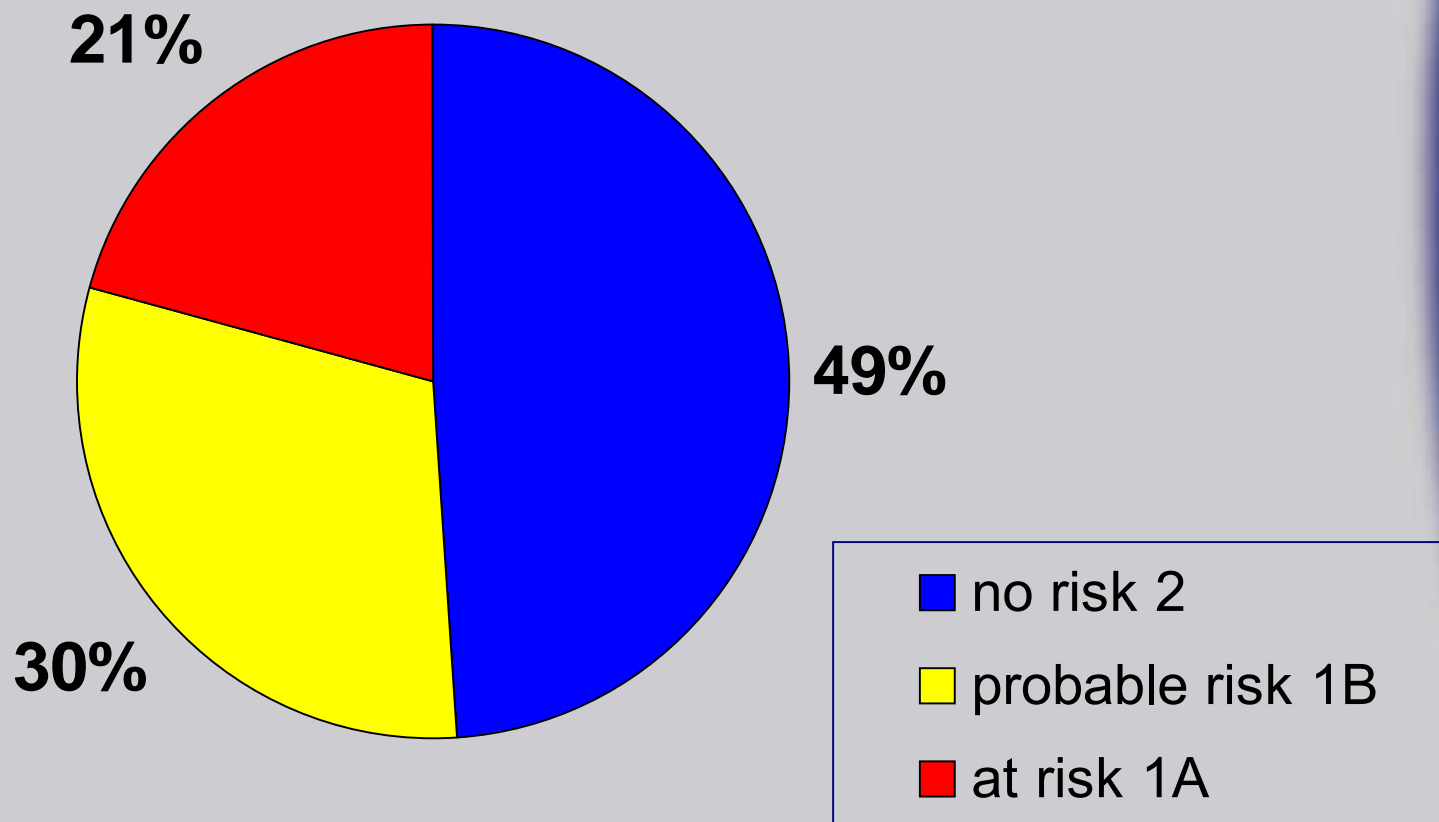
Risk criteria

- **River management (channel alteration, straightening, dredging etc.)**
 - no risk (category 2) – 0-50 km are regulated
 - probable risk (1B) – 51-150 km are regulated
 - at risk (1A) – more than 151 km are regulated
- **Number and type of hydropower station (HES)**
 - no risk (2) – no HES or 1 small HES
 - probable risk (1B) – 2 small HES
 - at risk (1A) – more than 2 small HES or 1 large HES
- **Number of small and large harbours in the water body**
 - no risk (2) – no harbours
 - at risk (1A) – 1 or more harbours
- **Number of polders in the water body**
 - no risk (2) – 1 polder
 - probable risk (1B) – 2 polders
 - at risk (1A) – more than 2 polders



Risk assessment results

- Risk due to morphological alterations
(all river WB)





Further steps

- There are a lot of water bodies assigned to Category 1B (probably at risk), where further characterisation and monitoring shall be carried out.
- It is planned to establish an expert group, which would evaluate necessity of application of the procedure for designation of heavily modified water bodies to some of water bodies assigned to Category 1A due to morphological alterations.



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Thank you for your attention!