Deforestation is often blamed as a main culprit for decreasing water quality. About 20% of the State Forest land in Indonesia is classified as ‘protection forest’ in order to safeguard water quality. Also in Sumberjava (sometimes violent) evictions took place in order to ‘safeguard’ the watershed. This study aims to assess the impact of land use on the biological water quality.

Macro-invertebrata are invertebrate animals visible to the naked eye (> 0.5 mm), such as insects, worms, crustaceae. Various groups of macroinvertebrates have different tolerance to variations in water quality and can thus be used as indicator.

Flow of activities:
1. Rapid test of physical and chemical characteristics
2. Kick-sampling to collect macroinvertebrata
3. Picking out of macroinvertebrata
4. Identification of macroinvertebrata
5. Calculate BBI- waterquality index (Belgian Biotic Index)

Results
- Overall biological water quality in the upper Way Besai catchment (43,000 ha upstream of the Hydro-Powerhouse) is quite good, with a BBI-index ranging between 5-10. A score of 10 points to high quality water with a high diversity and abundance of invertebrate species.
- The Air Hitam watershed, with virtually no forest cover and characterised by a lot of (extensively managed) monoculture coffee gardens, has the highest BBI-scores. Intact riparian areas, a stoney river bed and relatively high flow velocity, support a diverse and abundant macro-invertebrate community.

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