



GHENT UNIVERSITY

Water detectives: MACRO-INVERTEBRATA AS INDICATOR FOR WATER QUALITY IN THE WAY PETAI RIVER, SUMBER JAYA

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TRANSFORMING LIVES AND LANDSCAPES



Introduction

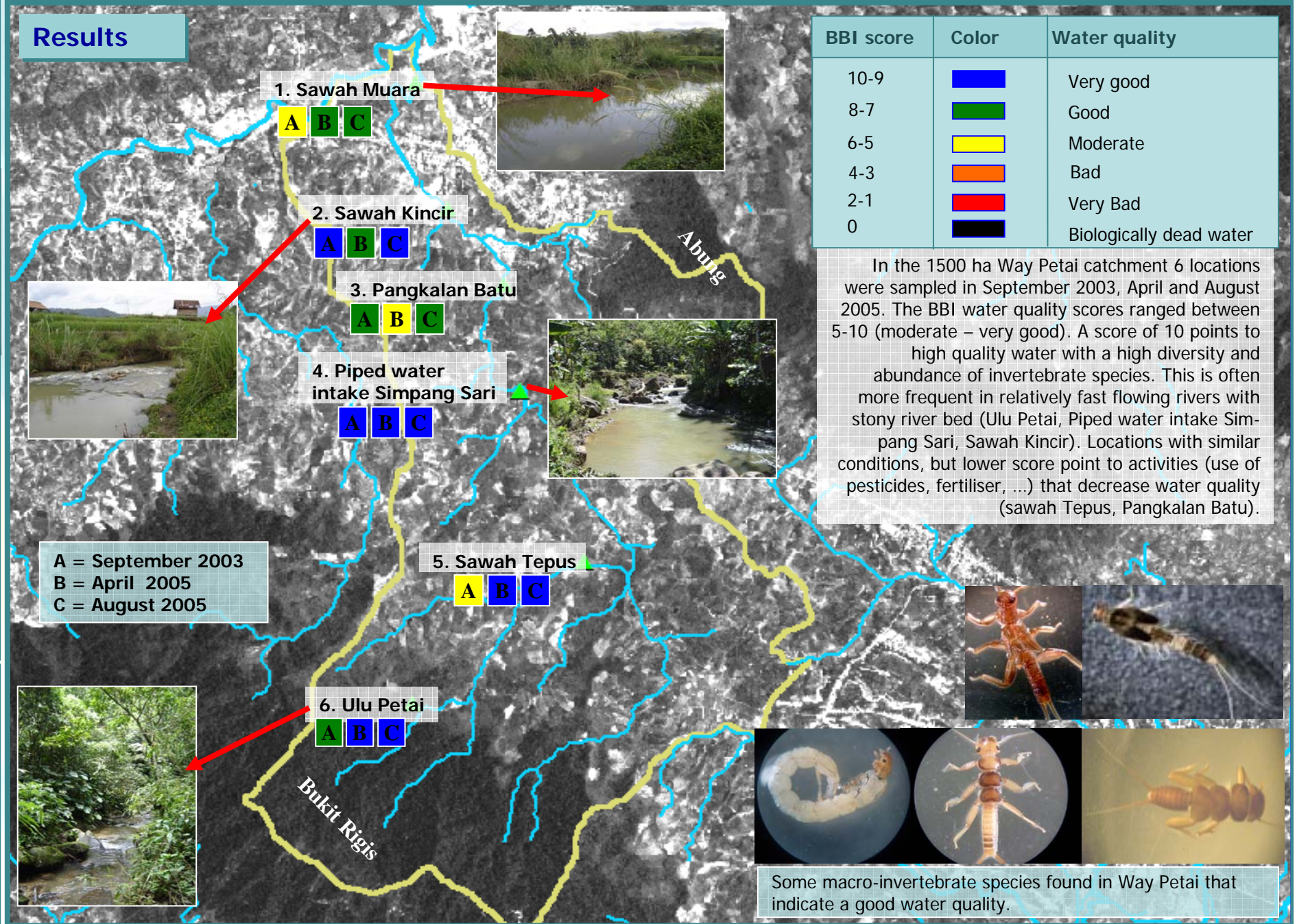
The Way Petai river provides a lot of local services ranging from the provision of fish, household water, bathing, washing clothes, irrigation and playground for children. Maintaining a reasonable good water quality is important for most of these uses. One way to assess water quality is to quantify abundance and diversity of macro-invertebrates. (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.

Activities of the 'water detectives'



1. Collect macroinvertebrata in the river
2. Sort the macroinvertebrata in the lab
3. Identify the invertebrate species in the lab
4. Calculate the water quality index using the BBI method (Belgian Biotic Index).

Results



Conclusions and recommendations

Conclusions: Overall water quality in the Way Petai is good, 😊 with a decreasing trend from upstream to downstream. At some locations biological water quality is lower than one might expect, pointing to agricultural activities (like spraying of pesticides in coffee fields or paddy rice), household related activities nearby the river (bathing, cleaning clothes, toilet) and garbage. 😞

Recommendations: To make sure that the river Way Petai will stay biologically alive and continue to deliver the required services to the various users it is important to; 1). Prepare your dose of pesticides just for the amount needed to avoid left-over, 2). Do not clean the pesticide sprayer in the river, but in a place isolated from the river. Fish and macro-invertebrata will appreciate it. 😊 3). Don't throw garbage in the river.

Acknowledgements

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