

Ecological engineering in citylake of Amsterdam

Ahmed M.M. Ali¹, Rob Ververs², Diederik P.L. Rousseau^{1,*} and
Johan J.A. van Bruggen¹

¹ UNESCO-IHE Institute for Water Education, PO BOX 3015, 2601DA Delft, The Netherlands

² WATERNET, PO BOX 94370, 1090GJ Amsterdam, The Netherlands

* Corresponding author: d.rousseau@unesco-ihe.org

ABSTRACT

The water bodies in the Sloterbinnenpolder (SBP), a citylake of Amsterdam, are suffering of high nutrient loads (mainly phosphorus) which cause eutrophication problems especially in the Sloterplas Lake. Identification of the sources of phosphorus loads to the Sloterplas Lake and assessment of ecological engineering measures, and conventional engineering methods that could reduce phosphorus loading were carried out. External phosphorus loads reduction that could be achieved by surface runoff treatment and treatment of water from neighbouring polders pumped into the SBP was quite high (75%), but was not enough to restore the lake due to the natural background loads, and the extensive internal load. However, with the proposed external load reduction measures and additional in-lake measures, it seems that a good ecological condition of Sloterplas Lake could be possible. Other possible ecological measures are discussed.