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## **Net Environmental Benefit Analysis (NEBA) and ecosystem services valuation for the integrated assessment of environmental management options**

**Key words:** Ecosystem, Services, Benefits, Options, Social, Economic

### **Abstract:**

Selection of the most appropriate option for the management of environmental issues associated with large-scale projects requires careful consideration. Often the range of possible options is assessed individually on a purely environmental or economic basis when in fact the best practical environmental option typically requires an integrated approach with consideration of environmental, social and economic aspects.

Net environmental benefit analysis (NEBA) provides a powerful, non-arbitrary and quantitative approach to compare between alternative actions. Essentially, NEBA is a risk-benefit analysis applied to environmental management options to understand the flow of value over time by incorporating ecosystem service valuation and the calculation of socio-economic gains or losses. NEBA is a transparent process that provides clients and stakeholders with a clear understanding of demonstrable net benefits (or costs) associated with each management option. NEBA is applicable to any project where a number of alternative options are being considered.

NEBA has been successfully used in Europe and North America for many years, and is now being adopted into the Asia-Pacific region. Our paper will illustrate the benefits of NEBA using recent project examples from offshore and onshore environments.