



Implementation of nature-based solutions for flood risk management

## WIDELY SUPPORTED GUIDELINES FOR NATURE-BASED SOLUTIONS IN FLOOD RISK MANAGEMENT

Nature-based solutions are gaining popularity around the world and being implemented more widely. However, engineered constructions to reduce flood risk have design metrics and performance standards that are not yet available for nature-based solutions. Programmes and projects with nature-based solutions have provided their own guidelines but the upscaling and mainstreaming of nature-based solutions for flood risk management could benefit from a more widely accepted set of guidelines.

The World Bank, UNDP, GFDRR, Ecoshape and Deltares therefore invited global players in the field of nature-based solutions for flood risk management to a workshop at Deltares in April 2017. The aim of the workshop was to draft a common set of principles and implemen-

tation steps to guide the upscaling of nature-based solutions to reduce flood risks. Five principles were developed for avoiding the most common pitfalls affecting the proper implementation of nature-based solutions. Many of these principles can also be used to improve traditional engineering practice.

The five principles are:

- 1 The approach to nature-based solutions for climate change adaptation and disaster risk reduction should start with a system-wide analysis of the local socio-economic, environmental, and institutional conditions.
- 2 There should be a thorough assessment of the risks and benefits of the full range of possible measures, including risk reduction benefits as well as social and environmental effects.
- 3 Nature-based solutions for flood risk management need to be tested, designed, and evaluated using quantitative criteria.
- 4 Nature-based solutions for flood risk management should make use

of existing ecosystems and native species, and comply with the basic principles of ecological restoration and conservation.

- 5 Nature-based solutions for flood risk management need adaptive management based on long-term monitoring so that they remain sustainable.

In addition to these principles, detailed implementation steps were described with the aim of furthering proper project execution and ensuring that vital elements such as system analysis, risk assessment, cost-benefit analysis, monitoring and maintenance are not disregarded. The guidelines will be used by UNDP and the World Bank for project development and they will be evaluated and extended by all the partners within two years. 

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**Further reading:**

<http://documents.worldbank.org/curated/en/739421509427698706/pdf/120735-REVISED-PUBLIC-Brochure-Implementing-nature-based-flood-protection-web.pdf>