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## Application of the International Guidelines on Natural and Nature Based Features for Flood Risk Management and the way forward

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In 2021, the International Guidelines on Natural and Nature Based Features for Flood Risk Management were published, as a result of a joint project between the Rijkswaterstaat (Netherlands), the Environment Agency (England) and the Army Corps of Engineers (USA). These Guidelines give direction in the application of Nature Based Solutions (NBS) for coastal and fluvial systems. In this contribution we will focus on the fluvial part of the guidelines. We will briefly discuss the process that lead to the origin of the Guidelines and discuss the intended use. It is important to realize that the location within a catchment, and the scale of a catchment determine the specifications of the most optimal NBS. Considering the classical 'source-pathway-receptor' approach, in the source of a catchment, NBS aim to hold back the water in the headwaters of larger catchments, enhancing management of water and sediment. In the pathways-receptor (floodplains), NBS are more focussed on increasing the discharge capacity of the main stem. In smaller catchments, also temporarily storage of water in the floodplains occurs, if flooding of such a temporary nature can be accommodated. Rather than a detailed instruction guide, the Guidelines are intended to give best practices and list important points of attention when applying NBS. Furthermore, they act as inspiration through the many case studies that are listed.

We will also connect the Guidelines to other initiatives on the application of NBS, for example the impact that NBS might have on reaching the United Nations Sustainable Development Goals. This requires a proper assessment framework which has been developed in adjacent projects and which values the added co-benefits that NBS have, compared to grey or grey-green alternatives. These benefits are also addressed in the Guidelines. Finally, we will share some thoughts on upscaling and mainstreaming NBS and the actions that are needed to accomplish that.