Operationalizing Nature Based Solutions through forestry and agroforestry



RESEARCH **PROGRAM ON** Forests, Trees and Agroforestry

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Nature-based Solutions are defined as actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits." (Cohen-Shacham et al., 2016) and actions that aim to help societies address a variety of environmental, social and economic challenges in sustainable ways. They are actions which are inspired by, supported by or copied from nature. (European Commission, 2015)



NBS can be a binding concept between ecosystem managers and other stakeholders

Need to distinguish!

The *potential contribution* of an ecosystem to solve a human problem, promoted to decision makers and various stakeholders, who, for the most part, are not involved nor directly dependent on this ecosystem for their livelihood The way to implement it, as part of a multiple objectives' management programme



The identification of different perspectives and objectives, of potential synergies and trade-offs, thus facilitating their management Leading to

The construction of an NBS, as a dialogue between 2 categories of actors:

1 Decision makers and various stakeholders in need of an NBS 2 Ecosystem managers that are directly involved and/or directly dependent

This requires

2 levels of governance

- 1 A dialogue between the two categories
- 2 Ecosystem managers that are directly involved and/or directly dependent

Cohen-Shacham, E., Walters, G., Janzen, C. and Maginnis, S. (eds.) 2016. Nature-based Solutions to address global societal challenges. Gland, Switzerland: IUCN. xiii + 97pp. Eggermont H. et al. 2015. Naturebased Solutions: New Influence for Environmental Management and Research in Europe | GAIA 24/4(2015): 243-248 European Commission. 2015. Innovation, D.-G. F.R.A. (Ed). Towards an EU Research and Innovation Policy Agenda for Nature-based Solutions and Renaturing cities. Final Report of the Horizon 2020 Expert Group. European Commission, Directorate General for Research and Innovation, Brussels IUCN (International Union for the Conservation of Nature), 2009, No time to lose - make full use of naturebased solutions in the post-2012 climate change regime. Position paper on the Fifteenth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 15). Gland: IUCN. MacKinnon, Kathy; Sobrevila, Claudia; Hickey, Valerie. 2008. Biodiversity, climate change, and adaptation : naturebased solutions from the World Bank portfolio. Washington, DC: World Bank Nesshöver C. et al. 2017. The science, policy and practice of nature-based solutions: an interdisciplinary perspective. Science of the Total environment 579 (2017) 1215-1227

Construction of an NBS in managed ecosystems in 4 steps



Implementation integrated in the management of the ecosystem, as part of sustainable forest management and/or landscape approach

