Building with Nature - The new paradigm in Coastal Engineering

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The talk presents and discusses latest approaches in research and practical implementation of coastal protection strategies and measures in the discipline of Coastal Engineering. In the first part the students will be exposed to the traditional "hard" coastal protection schemes (Coastal defence infrastructure), before elucidating newly developed guiding principles, terminologies and ad-hoc definition of the "Building with Nature" approach, i.e. with the design and implementation of "green" or "soft" coastal protection infrastructures. The second part deals with some key elements of Building with Nature. Knowledge gaps of the approach are discussed. The talk closes with some brief insights into current R&D projects in Coastal Research Center, Univ. Hannover, on current and wave attenuation of salt marshes, green dikes and seagrass meadows to help mitigating impacts of CC and SLR in order to sustain our coastlines in the future.