

# Toolbox

Building with Nature Guideline

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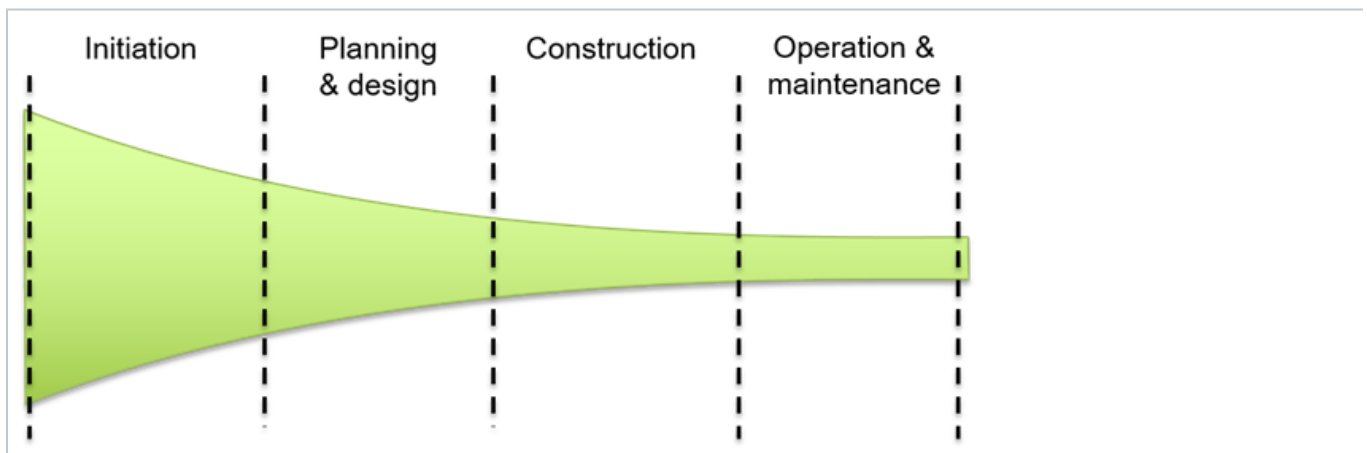
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## Toolbox for Building with Nature

*5 Basic steps towards  
Building with Nature*

Tools within Building with Nature include methods, frameworks and numerical models that can be used in the different phases and steps of a BwN project.



<p>&gt;&gt; View tools</p> <ul style="list-style-type: none"> <li>• Coastline intervention tool - Holland Coast (ITHC)</li> <li>• Contingent Valuation Method for Nature Valuation</li> <li>• Frame of Reference for specialist and end-user interaction</li> <li>• Framework for system understanding (DPSIR)</li> <li>• Geographical data and knowledge management (OpenEarth)</li> <li>• Identification of ecological and socio-economic components (EcoMindmap)</li> <li>• Interactive Dredge Planning Tool - Singapore</li> <li>• Interactive group modelling (MapTable)</li> <li>• Including natural value in decision-making (Nature Index)</li> <li>• Monte Carlo simulation and Social Cost Benefit Analysis</li> <li>• Quick model set-up using open databases (DelftDashboard)</li> <li>• Remote monitoring of bio -and morphological developments (ArgusBio)</li> <li>• Species Response Curves for Seagrass</li> <li>• Stakeholder analysis</li> <li>• System Analysis</li> <li>• Valuation of risks and opportunities in BwN</li> <li>• Visualising and managing uncertainties</li> <li>• Visual thinking for creative designing</li> </ul>	<p>&gt;&gt; View tools</p> <ul style="list-style-type: none"> <li>• Biogeomorphological Coastal Modelling System (Delft3D)</li> <li>• Coastline intervention tool - Holland Coast (ITHC)</li> <li>• Contingent Valuation Method for Nature Valuation</li> <li>• Ecosystem-Based Design Rules for Sand Extraction Sites</li> <li>• Framework for system understanding (DPSIR)</li> <li>• Geographical data and knowledge management (OpenEarth)</li> <li>• Identification of ecological and socio-economic components (EcoMindmap)</li> <li>• Interactive Dredge Planning Tool - Singapore</li> <li>• Interactive group modelling (MapTable)</li> <li>• Including natural value in decision-making (Nature Index)</li> <li>• Monitoring of coastal morphodynamics using satellite imagery</li> <li>• Monte Carlo simulation and Social Cost Benefit Analysis</li> <li>• Morphological predictor for mixed beds</li> <li>• Nearshore wave transformation table</li> <li>• Probabilistic analysis of ecological effects - Cause-effect chain modeling</li> <li>• Probabilistic effect analysis - The Species Sensitivity Distribution</li> <li>• Quick model set-up using open databases (DelftDashboard)</li> <li>• Remote monitoring of bio -and morphological developments (ArgusBio)</li> <li>• Roughness module for sediment dynamic modelling</li> <li>• Species Response Curves for Seagrass</li> <li>• Stakeholder analysis</li> <li>• System Analysis</li> <li>• Valuation of risks and opportunities in BwN</li> <li>• Visualisation of open-source data (OpenEarth-Viewer)</li> <li>• Visualising and managing uncertainties</li> <li>• Visual Thinking</li> </ul>	<p>&gt;&gt; View tools</p> <ul style="list-style-type: none"> <li>• Ecosystem-Based Design Rules for Sand Extraction Sites</li> <li>• Geographical data and knowledge management (OpenEarth)</li> <li>• Probabilistic analysis of ecological effects - Cause-effect chain modeling</li> <li>• Probabilistic effect analysis - The Species Sensitivity Distribution</li> <li>• Remote monitoring of bio -and morphological developments (ArgusBio)</li> <li>• Visualising and managing uncertainties</li> </ul>	<p>&gt;&gt; View tools</p> <ul style="list-style-type: none"> <li>• Fibre-optic distributed temperature sensing for monitoring morphological changes</li> <li>• Geographical data and knowledge management (OpenEarth)</li> <li>• Monitoring swimmer safety</li> <li>• Probabilistic analysis of ecological effects - Cause-effect chain modeling</li> <li>• Probabilistic effect analysis - The Species Sensitivity Distribution</li> <li>• Remote monitoring of bio -and morphological developments (ArgusBio)</li> <li>• Visualising and managing uncertainties</li> </ul>
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>> [Click here to view all available tools](#)

- Biogeomorphological Coastal Modelling System (Delft3D)
- Coastline intervention tool - Holland Coast (ITHC)
- Contingent Valuation Method for Nature Valuation
- Ecosystem-Based Design Rules for Sand Extraction Sites
- Fibre-optic distributed temperature sensing for monitoring morphological changes
- Frame of Reference for specialist and end-user interaction
- Framework for system understanding (DPSIR)
- Geographical data and knowledge management (OpenEarth)
- Identification of ecological and socio-economic components (EcoMindmap)
- Including natural value in decision-making (Nature Index)
- Interactive Dredge Planning Tool - Singapore
- Interactive group modelling (MapTable)
- Monitoring of coastal morphodynamics using satellite imagery
- Monitoring swimmer safety
- Monte Carlo simulation and Social Cost Benefit Analysis
- Morphological predictor for mixed beds
- Nearshore wave transformation table
- Probabilistic analysis of ecological effects - Cause-effect chain modeling
- Probabilistic effect analysis - The Species Sensitivity Distribution
- Quick model set-up using open databases (DelftDashboard)
- Remote monitoring of bio -and morphological developments (ArgusBio)
- Roughness module for sediment dynamic modelling

- Species Response Curves for Seagrass
- Stakeholder analysis
- System Analysis
- Valuation of risks and opportunities in BwN
- Visualisation of open-source data (OpenEarth-Viewer)
- Visualising and managing uncertainties
- Visual thinking for creative designing

Some of the tools are or have been (further) developed within the BwN programme, and others have proven their practicality through the application in previous BwN studies and pilot projects. Application of the tools should be seen as an iterative process, as the tools can be used in different contexts in the various phases of a project. For example: a more general application of a nature valuation tool when generating alternatives, and a more elaborate application to study the alternatives in more detail. It is important to point out that the use of a tool should fit with the project approach and that the project vision should be sufficiently clarified before applying a tool. When you decide to use a certain tool, you should have a goal on what you would like to achieve through its application. Afterwards, the goal and the results should be compared and evaluated. This way, the tool will contribute best to the project.

You can access the tools through the different project stages given above or through the different type of assessment as given below.




Systems Analysis	Environmental Economics	Impact Assessment
		
<p>&gt;&gt; View tools</p>	<p>&gt;&gt; View tools</p>	<p>&gt;&gt; View tools</p>
<ul style="list-style-type: none"> <li>• Ecosystem-Based Design Rules for Sand Extraction Sites</li> <li>• Frame of Reference for specialist and end-user interaction</li> <li>• Framework for system understanding (DPSIR)</li> <li>• Geographical data and knowledge management (OpenEarth)</li> <li>• Identification of ecological and socio-economic components (EcoMindmap)</li> <li>• Quick model set-up using open databases (DelftDashboard)</li> <li>• Stakeholder analysis</li> <li>• System Analysis</li> <li>• Visual Thinking</li> <li>• Visualisation of open-source data (OpenEarth-Viewer)</li> </ul>	<ul style="list-style-type: none"> <li>• Contingent Valuation Method for Nature Valuation</li> <li>• Including natural value in decision-making (Nature Index)</li> <li>• Monte Carlo simulation and Social Cost Benefit Analysis</li> <li>• Valuation of risks and opportunities in BwN</li> <li>• Visualising and managing uncertainties</li> </ul>	<ul style="list-style-type: none"> <li>• Biogeomorphological Coastal Model (Delft3D)</li> <li>• Coastline intervention tool - Hollar</li> <li>• Interactive Dredge Planning Tool</li> <li>• Interactive group modelling (MapT)</li> <li>• Morphological predictor for mixed</li> <li>• Nearshore wave transformation tool</li> <li>• Probabilistic analysis of ecological chain modeling</li> <li>• Probabilistic effect analysis - The Distribution</li> <li>• Roughness module for sediment transport</li> <li>• Species Response Curves for Seagrass</li> </ul>

Other toolboxes that may also be of interest for BwN projects can be found >> here:

- [Natural Capital Project InVEST](#)
- [NOAA Digital Coast Tools](#)

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