

Summary

The INDUS methodology was developed by Mott MacDonald to integrate sustainability into the design process alongside traditional technical, financial, statutory planning, safety and regulatory decision-making criteria. INDUS assists in bridging the gap that exists between customers' aspirations and the performance of their projects.

Developer: Mott MacDonald

Applicable sectors				Function			
All Infrastructure	Water	Energy	Organisations	Design Guide	Option Appraisal	Construction Guide	Op&M Guide

Countries	UK and internationally.	Process summary	<p>INDUS is firstly employed at the beginning of the project to construct a sustainability assessment framework that can be used at critical decision-making points in the project cycle.</p> <p>The framework is constructed by initially working with the client to determine sustainability criteria and indicators that are relevant to the client. The client is also supported to assign weightings to high-level criteria according to their priorities.</p> <p>These criteria and assigned weightings are challenged and refined during an optioneering workshop in consultation with stakeholders and experts.</p> <p>During option appraisal, scores are assigned to each design option against the different indicators. These scores are aggregated and the final scores for each design option</p>
Guidelines for sustainable design	INDUS is not itself accompanied by guidelines for sustainable design. However, some tools it employs, such as the Water Sustainability Tool, do offer these.		
Use with other tools	INDUS is a generic sustainability appraisal method which employs other Mott Macdonald tools such as the CapIT and LifeCYCLE calculators and the Water Sustainability Tool, depending on the target sector.		
Level of support services	INDUS is currently used internally within Mott MacDonald as part of their sustainability commitments to services offered to clients. However, there is potential for the method to also be made commercially available.		
Sustainability criteria	<p>INDUS offers indicators from several criteria that clients can choose from for their sustainability appraisal. This includes:</p> <ul style="list-style-type: none"> - Economic; - Social; - Environmental; - Resilience (for example to climate change); - Technical feasibility; - Financial Feasibility. <p>A typical set of indicators can include cost, health and safety, constructability, environment, community, O&M, and resilience. For complex projects these can be further broken down into sub-indicators.</p>	Design option appraisal functions	<p>During an optioneering workshop consultants, stakeholders and experts review data available on the different design options in order to agree on performance scores of each option for each sustainability indicator.</p> <p>The scores are aggregated using Multi-criteria analysis methods and presented to different stakeholders and decision-makers.</p> <p>A sensitivity analysis is used to vary assigned weightings and scores to determine the extent to which the results are sensitive to these changes.</p> <p>Where it is deemed that they are, scoring and weighting decisions are revisited and reviewed more closely to ensure correct representation of sustainability performance.</p>

Fee	Fee is dependent on the consultancy services provided to the client.	Level of materiality (tailoring)	<p>Materiality occurs in two phases. At the initial project stages, the client is requested to identify criteria and indicators which are relevant to the project and their sustainability aspirations.</p> <p>The client is then supported to assign high-level weightings to the different criteria according to their priorities. During design appraisal or an optioneering workshop, stakeholders, clients and experts review and assign more detailed weightings to indicators.</p> <p>Multi-criteria analysis methods are used to combine opinions and determine the final weightings to be applied.</p>
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