

Supplementary Information

Environmental and socio-economic sustainability assessment of remediation alternatives for a contaminated oil refinery site in Southern China

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Contents

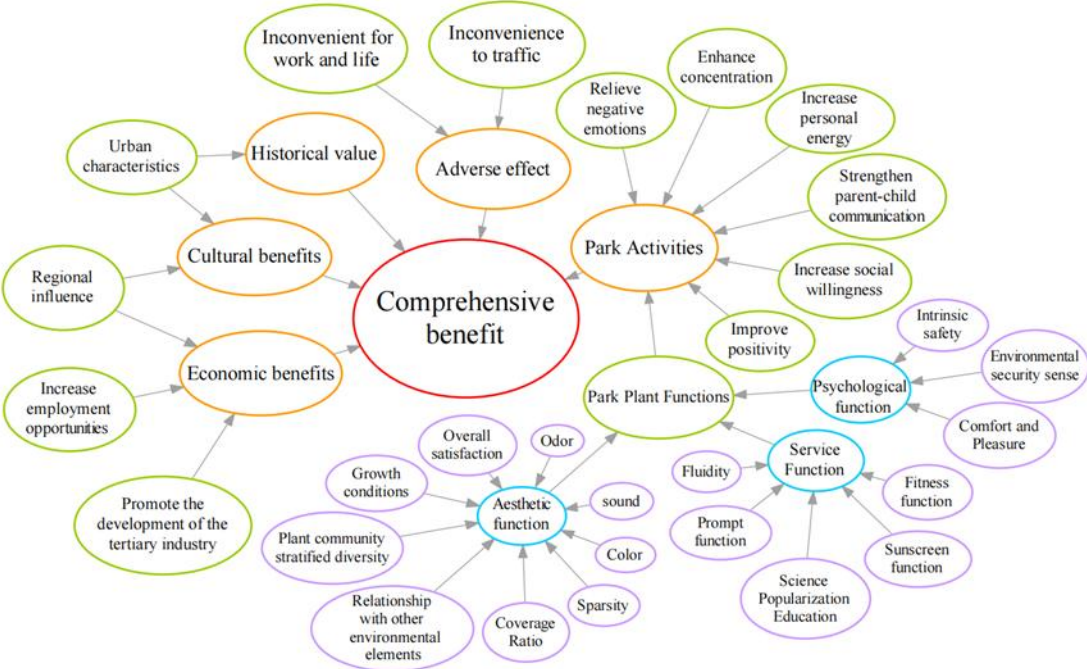
1. Social and economic sustainable indicators

Table S1 Social and economic indicators for MCA

Category	Label	Sub-category	Category	Priority Weighting	Unit
Economic	ECON 1	Total economic cost	Quan	1	¥
	ECON 2	Net present value	Quan	0.5	¥
	ECON 3	Employment opportunity	Qual	0.5	n/a
	ECON 4	Net present value ratio	Quan	0.5	n/a
	ECON 5	Operation time	Quan	1	days
Social	SOC 1	Installation and operational risks	Quan	1	hrs
	SOC 2	Ethics and equality	Qual	0.5	n/a
	SOC 3	Dust, traffic, noise, vibration	Qual	1	n/a
	SOC 4	Communities and community involvement	Qual	0.5	n/a
	SOC 5	Robustness of sustainability assessment	Qual	0.5	n/a

Qual= qualitative; Quan= quantitative

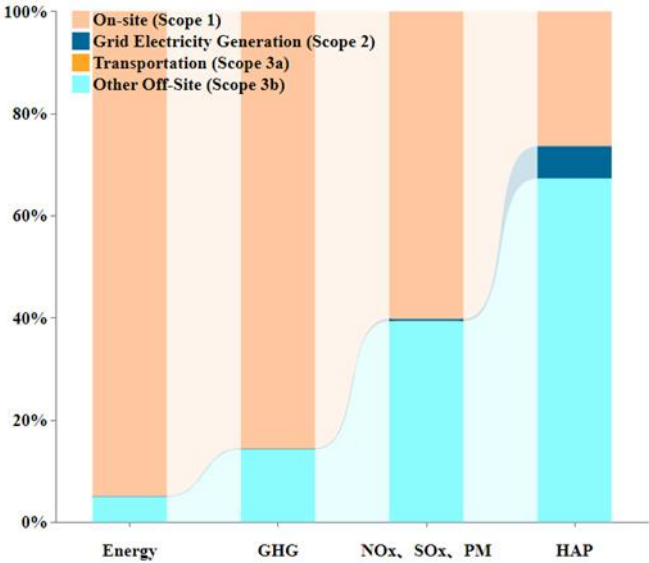
2. Overall sustainability appraisal based on BNs



23
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Fig. S1 Bayesian network structure of comprehensive benefit

25 **3. Quantification of environmental impacts**



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28

Fig. S2 Proportion of environmental impacts at different scopes