

**In-depth assessment of the environmental impact of potential areas of support**

Reference to matrix of impacts (code: priority axis, investment priority, action)	Priority Axis, Investment Priority	Field of intervention, typical projects (from the matrix of impacts)		
2.6f.1.b	<b>Priority Axis II: Exploiting the environmental and cultural potential of the South Baltic area for the blue and green growth</b> <b>Promoting innovative technologies in environmental protection and resource efficiency</b>	Development, demonstration and deployment of green technologies, including small-scale investments (pilot projects) in the field of energy production from renewable sources (e.g. onshore wave and wind energy)		
Elements of environment subject to analysis	Description of the results of analyses			
	Identification of impacts	Duration	Type	Possible cumulative impacts
Biodiversity	<b>Potential negative:</b> local threat to the submarine natural habitats and species inhabiting those habitats related to the use of land for wind turbines or devices for energy recovery from sea waves, and related to transmission cable laying. The possibility of disturbance of valuable species (emission of noise and vibration) and bat and bird collisions with wind turbines. Possibility of water pollution during construction (temporary) and operation (risk of collisions with vessels). <b>Indirect positive</b> impact through a reduction of air emissions in energy sector.	long-term, medium-term, short-term, temporary	direct, indirect	n/a
Fauna	<b>Potential negative:</b> local loss of marine species habitats; increased mortality of birds and bats. Possibility of water pollution during construction (temporary) and operation (risk of collisions with vessels). <b>Indirect positive</b> impact through a reduction of air emissions in energy sector.	long-term, medium-term, short-term, temporary	direct, indirect	n/a
Flora	<b>Potential negative:</b> possibility of local destruction of submarine habitats in place of foundation of the facility and on the route of transmission cables. Possibility of water pollution during construction (temporary) and operation (risk of collisions with vessels). <b>Indirect positive</b> impact on the reduction of air emissions generated by the energy sector.	long-term, medium-term, short-term, permanent, temporary	direct, indirect	n/a
Integrity of protected areas	Due to the scale of projects, impact will be local and should not affect the integrity of protected areas	n/a	n/a	n/a
Water	<b>Potential negative:</b> disruption of the seabed sediments, possibility of releasing deposited pollutants into the water, and deterioration of water quality due to possible emergency leakages of petroleum substances. The risk of collision of vessels with objects, resulting in penetration of petroleum substances and other pollutants into the marine waters. <b>Potential negative:</b> wave motion interference and wave energy diminution.	long-term, short-term, temporary	direct, indirect	n/a
Air	<b>positive:</b> reduction of air pollution emissions from other energy sources. The use of wind energy leads to production of energy free from air pollutant emissions. Energy acquired in this way reduces demand for power from conventional sources (including coal based energy), and that should lead to a further reduction in air pollutants emissions from power sector.	long-term	indirect	n/a
People	<b>positive:</b> elimination of conventional energy (mainly coal-based) indirectly affects reduction of emission of pollutants into the air, and thus may limit adverse impact of air pollution on human health. <b>negative:</b> obstruction to navigation.	long-term	indirect	n/a
Soil	<b>Positive:</b> reduction of waste production from conventional energy	long-term	indirect	n/a
Landscape	<b>negative:</b> change in the sea landscape.	long-term	direct	n/a
Climate	<b>positive:</b> will have impact on reduction of greenhouse gas emissions in conventional energy sector.	long-term	indirect	n/a
Natural Resources	<b>negative:</b> little use of rock raw materials and construction materials at the stage of construction. <b>positive:</b> reduction in the consumption of energy resources	long-term, short-term	direct	n/a

Historical Heritage Objects	<b>Positive:</b> reduction of pressure of gaseous and particulate pollutants on historic buildings as a result of the reduction of air emissions. <b>negative:</b> in case of impact on underwater historical heritage objects	long-term	indirect	n/a
Material Goods	n/a	-	-	-
Other supplementary information and reference for GIS analysis of maps. Identification of all protected areas and ecological corridors associated with the project.	GIS analyses performed for the purpose of the Report indicated that the Programme eligible area covers 1508 Natura 2000 sites and 163 Baltic Protected Areas (BSPA). It also includes ecological corridors of national and international importance, and bird migration routes. To avoid any relevant negative impacts at the stage of localisation analysis for individual projects, GIS tools should be used together with information from existing <b>and drafted</b> management plans for Natura 2000 sites and BSPAs in order to eliminate location within the valuable natural areas. <b>Planned and proposed protected areas should also be taken into account.</b>			
Conclusions on effects reduction, alternatives and compensation.	Special attention should be paid to the location of renewable energy facilities in relation to BSPA sites and Natura 2000 sites (especially in order to eliminate locations within the valuable marine habitats and sites of rare species of plants and animals) and air routes of birds and bats. Proper location makes it possible to avoid the most significant negative impacts. These issues should be included in the criteria for selection of projects to be implemented. Depending on the characteristics and location of the project, appropriate measures should be taken to minimise environmental impacts during construction and operation, such as construction deadlines, construction methodology, design, etc. <b>Location analyses and project implementation should make use of the recommendations of the study 'Underwater Cultural Heritage in the Baltic Sea Region (Cod of Good Practice for the Management of the Underwater Cultural Heritage in the Baltic Sea Region)'</b>			
The table above should indicate the following impacts:	positive, negative, significant negative, possible	long-term medium-term, short-term, permanent, temporary	direct, indirect, secondary	If cumulative impacts occur, actions shall be identified to which the impacts refer.