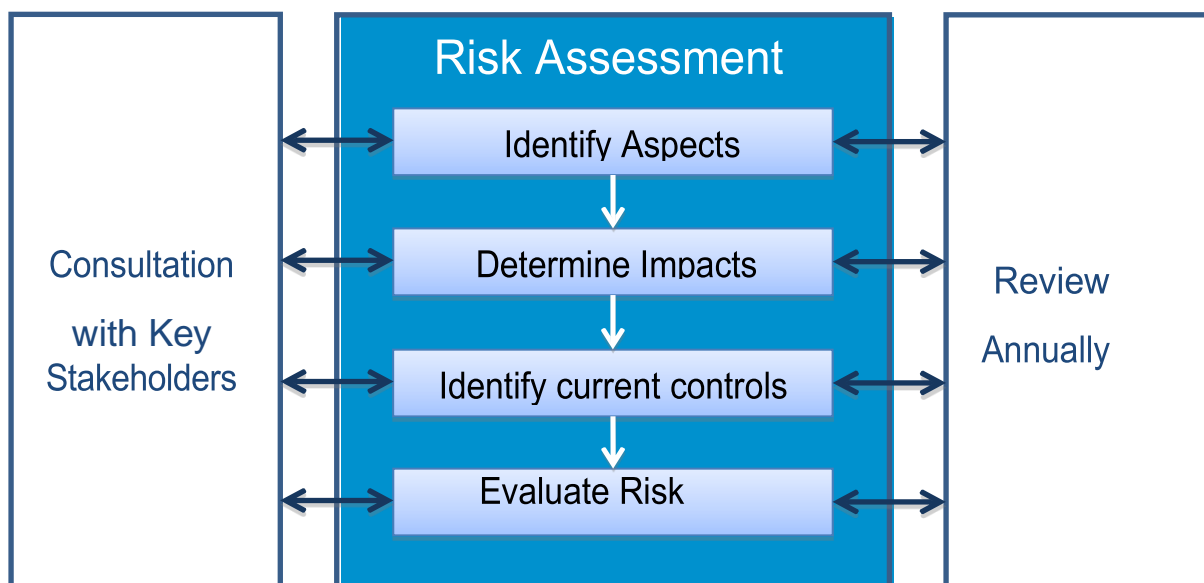


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RISK ASSESSMENT

The EarthCheck Destination Standard states: *"The Destination shall identify the level of actual and/or potential risks of planned, accidental and emergency situations – natural and man-made, in relation to the Destination's scope, by way of a documented **Risk Assessment**, referring to the 12 Key Performance Areas:*

1. *Energy efficiency, conservation and management*
2. *Greenhouse gas emissions*
3. *Air quality protection and noise control*
4. *Management of freshwater resources*
5. *Waste water management, drainage and streams*
6. *Ecosystem conservation and management*
7. *Land use planning and development*
8. *Transport*
9. *Solid Waste Management*
10. *Management of environmentally harmful substances*
11. *Cultural and Social Management*
12. *Economic Management"*



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How to Assess Risk:

1. Identify actual and/or potential impacts with regards to aspects;
2. Define categories representing the severity of actual and/or potential impacts (Table 1)
3. Define categories representing the likelihood of waste impacts (Table 2)
4. Define categories representing the risk evaluation (Table 3)
5. Determine the severity of potential/and or actual impacts and assign each to a severity category
6. Determine the likelihood of potential/and or actual impacts and assign each to a likelihood category
7. Evaluate the risk by multiplying the severity and likelihood to get the risk level

Table 1: Severity

Category	Definition
1	Catastrophic: Widespread, irreparable environmental, cultural, social and/or economic damage; loss of human life or long-term human health effects; national attention; serious litigation.
2	Major: Widespread, medium to long term impact; serious human health impacts; state-wide or national attention; major breach of legal requirements; major disruption to operations; Destination's reputation badly tarnished.
3	Medium: Localized medium to long term impact; moderate contribution to global warming; moderate human health impacts requiring medical treatment; regional media attention; moderate breach of legal requirements with fine.
4	Minor: Localized short to medium term impact; minor contribution to global warming; minor and reversible human health impacts treatable with first aid; negative publicity from local media; minor breach of legal requirements.
5	Limited impact to a local area but no long-term effects; concern or complaints from neighbors; no injury to people; minor technical nonconformity but no legal nonconformity.

Table 2: Likelihood

Category	Definition
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1	Certain/Daily: Impact is expected to occur in most circumstances or will occur on a daily basis.
2	Likely/Weekly: Impact will probably occur in most instances.
3	Possible/Monthly: Impact could occur or will occur on a monthly basis.
4	Unlikely/Annually: Impact could occur but is not expected or will occur annually.
5	Rare: Impact would occur only in exceptional circumstances.

Table 3: Risk Evaluation Matrix

		Severity					Key
		1	2	3	4	5	
Likelihood	1	1	2	3	4	5	Severe
	2	2	4	6	8	10	Extreme
	3	3	6	9	16	15	High
	4	4	8	12	32	20	Medium
	5	5	10	15	40	25	Low

The Risk Assessment Matrix on the following pages provides an overview of Baião Municipality's risk assessment, including strategies to mitigate and impact potential and/or actual impacts with regards to the 12 Key Performance Areas of the EarthCheck Destination Standard.

RISK ASSESSMENT MATRIX

Aspect	Potential Impact(s)	Likelihood	Severity & Reversibility of Impact	Risk Evaluation	Risk Minimization/ Mitigation Strategy
Energy efficiency, conservation, and management					
Energy efficiency, conservation, and management	Depletion of natural energy resources through electricity consumption.	4	5	20 Low	<ul style="list-style-type: none"> • Energy conservation program in place for residents and visitors, through the implementation of LED technology in public lighting • Building design regulations encourage the use of natural lighting, solar panels and thermal insulation system • Use of wind power for electricity production • Use of biomass for an energy production plant • Encourage sustainable mobility, such as electric vehicles, bicycles, and public transport • Actions to promote energy efficiency for hotels and restaurants • Involvement of school students in adopting practices related to energy efficiency
Greenhouse Gas Emissions					
Greenhouse Gas Emissions	Potential ozone depleting substances (e.g. refrigeration coolants and air conditioning systems, releasing gases harmful to health into the atmosphere)	5	4	40 Low	<ul style="list-style-type: none"> • Maintenance contractors monitor coolants and refrigerants • Distribution of trees to local populations and planting actions to achieve carbon sequestration • Implement an environmental education program on the European and national commitment to achieve carbon neutrality • Construction of several pedestrian paths and requalification of roads, contributing to the improvement of accessibility, the
	Global warming and climate change	5	4	40 Low	

						<p>promotion of healthy living habits and the reduction of CO2 emissions</p> <ul style="list-style-type: none"> • Elaboration and implementation of the recommendations and measures defined in the Intermunicipal Plan for Adaptation to Climate Change (PIAAC)
Air Pollution protection, noise control, & Light Pollution						
Air Pollution protection, noise control, & Light Pollution	Emissions from local vehicles contributing to respiratory issues	5	4	40 Low	<ul style="list-style-type: none"> • Destination Authority is committed to maintain existing vehicles and/or when purchasing new, seek out efficient models when available • Community members are encouraged to use sustainable mobility, such as electric vehicles, bicycles and public transport • Construction of several pedestrian paths and requalification of roads, contributing to the improvement of accessibility, the promotion of healthy living habits and the reduction of CO2 emissions 	
	Occurrence of forest fires	4	2	8 High	<ul style="list-style-type: none"> • Efficient forest planning and management for forest fire prevention 	
Freshwater resources						
Freshwater resources	Depletion of freshwater resources in the Destination (Ovil River, Teixeira River and Douro River)	3	2	6 Moderate	<ul style="list-style-type: none"> • Municipal water supply or water supply taken from natural water sources is approved by government authority • The public company responsible for water management within the destination, has a defined strategy for the conservation and sustainable use of the freshwater resources • Awareness campaign on water saving and its rational use 	
	Degradation of water quality for consumption in Destination, including Degradation of water quality for human	4	3	12 Medium	<ul style="list-style-type: none"> • Partnership with the managing company for the cyclical monitoring of drinking water quality reports 	

	consumption captured in groundwater extractions, due to the aging of infrastructure				<ul style="list-style-type: none"> Expansion of the drinking water network to ensure quality water for all inhabitants The management of groundwater extractions is carried out by the Portuguese Environment Agency. A list of licensed extractions was requested to assess their representativeness in human consumption of water in the municipality, as well as the date of construction and / or licensing. After obtaining this list, an awareness campaign will be carried out to maintain the infrastructures, assess the quality of the water collected and encourage connection to the public water supply network.
Wastewater Management, drainage, and streams					
Wastewater Management, drainage, and streams	Contamination of waterways by storm water polluted by oil, grease, litter, and sediment.	5	4	40 Low	<ul style="list-style-type: none"> Installation of fat-dissipating equipment in hotels, restaurants, fueling stations and large commercial areas Run off from commercial operations to be monitored in accordance with local legislation to avoid contaminated run-off entering surface water drains, watercourses or groundwater causing pollution
	Contamination of waterways by domestic and industrial wastewater after treatment in WWTPs (Wastewater Treatment Plants)	4	3	12 Medium	<ul style="list-style-type: none"> Expansion of the wastewater network to an increasing number of residents The company managing the WWTP's carries out periodic checks on the quality and characteristics of the wastewater treated and released into waterways Promotion of an awareness campaign among entrepreneurs for the use of less harmful substances in their activities that contaminate wastewater

Ecosystem Conservation and Management						
Ecosystem Conservation and Management	Impact on local ecosystems from economic activities associated with the exploitation of forest resources, pastoralism, and forest fires and from visitor infrastructure including hotel and transport services.	4	3	12 Medium	<ul style="list-style-type: none"> • Classification and Promotion of the Regional Protected Area of Serra da Aboboreira • Constitution of a Geopark • Development of partnerships with Universities for the resilience of the territory against fires • Valuation of the Carvalhal de Reixela (native forest of the Iberian Peninsula) • Reforestation of Serras da Aboboreira, Matos and Marão with native species • Restocking of inland rivers with native species • Planning regulations monitored to ensure conservation measure are enforced • Adoption of an acquisition policy that privileges recycled paper products 	
Land Use Planning and Development						
Land Use Planning and Development	Incorrect use of land not considering its suitability according to national and municipal regulations	4	4	32 Low	<ul style="list-style-type: none"> • Municipal Master Plan (PDM) aims to guide the occupation of urban land, based on objectives such as the preservation of nature and memory, as well as the main options regarding the location of equipment and infrastructure, defining the municipality's development strategy • Compliance with other territorial management instruments (municipal and national) 	
	Natural Disasters (e.g. earthquakes, floods, droughts, and severe storms)	4	3	12 Medium	<ul style="list-style-type: none"> • Construction of buildings resistant to natural disasters, according to the applicable legislation • Implementation of the Municipal Emergency Plan by the Municipal Civil Protection Services 	

Transport						
Transport	Predominance of the use of own vehicles, powered by fossil fuels, as an alternative to the public transport	1	4	4	High	<ul style="list-style-type: none"> Public Transport Tariff Reduction Support Program (PART) Electrification of the Douro railway line
Solid Waste Management						
Solid Waste Management:	Green House Gas emissions from solid waste going to land fill.	2	3	6	High	<ul style="list-style-type: none"> Application of the user pays principle at the level of waste Awareness campaign for waste recycling, reducing, and reusing Municipality green waste put into compost Disposal of other waste to a well-managed intermunicipal land fill (Codessoso, Celorico de Basto)
Management of environmentally harmful substances						
Management of environmentally harmful substances	Potential risk of polluting the environment through the disposal of used batteries and accumulators	3	4	16	Medium	<ul style="list-style-type: none"> Collection by a government managed waste facility which has specific disposal processes for harmful substances Purchasing policy in place that all suppliers adhere to international standards when disposing harmful substances
	Potential risk of polluting the environment through the incorrect use and storage of plant protection products, pesticides, and herbicides	3	3	9	High	<ul style="list-style-type: none"> Mandatory training course for application, use and storage of plant protection products, pesticides, and herbicides
Cultural and Social Management						
Cultural and Social Management	The non-involvement of the local population in the valorization and conservation of their cultural heritage and traditions, as well as the behavior of tourists that can affect the customs, values and material and immaterial heritage of the community	3	3	9	High	<ul style="list-style-type: none"> Involve the community in the certification, valuation and monitoring of the tourist destination Involve the community in promoting and valuing material and immaterial heritage Elaboration of Baião's Tourism Strategy, based on an anchor project Rehabilitation of the Ancede Monastery with

	Appearance of epidemics / pandemics	5	2	9 High	<ul style="list-style-type: none"> a cultural reference project Promotion of the Eça de Queiroz Foundation Holding a Youth and Sustainability Festival Implementation of the Municipal Emergency Plan and preparation / implementation of specific contingency plans by the Municipal Civil Protection Services Implementation of preventive and public health measures, as well as social support for families and companies
Economic Management					
Economic Management	Economic downturn due to low visitor numbers	4	4	32 Low	<ul style="list-style-type: none"> Gastronomic and Territory Promotion Fairs Promotion of the Grand Prix of Motonautics, as an environmentally responsible event Business Reception Areas Involve tourism and agriculture companies and stakeholders in sustainable practices and projects, making them agents of sustainability. Creation of a Center for Logistics and Promotion of the Douro Verde Agrifood Sector Monitoring and conducting satisfaction studies of interested parties, residents, visitors, and tourists