

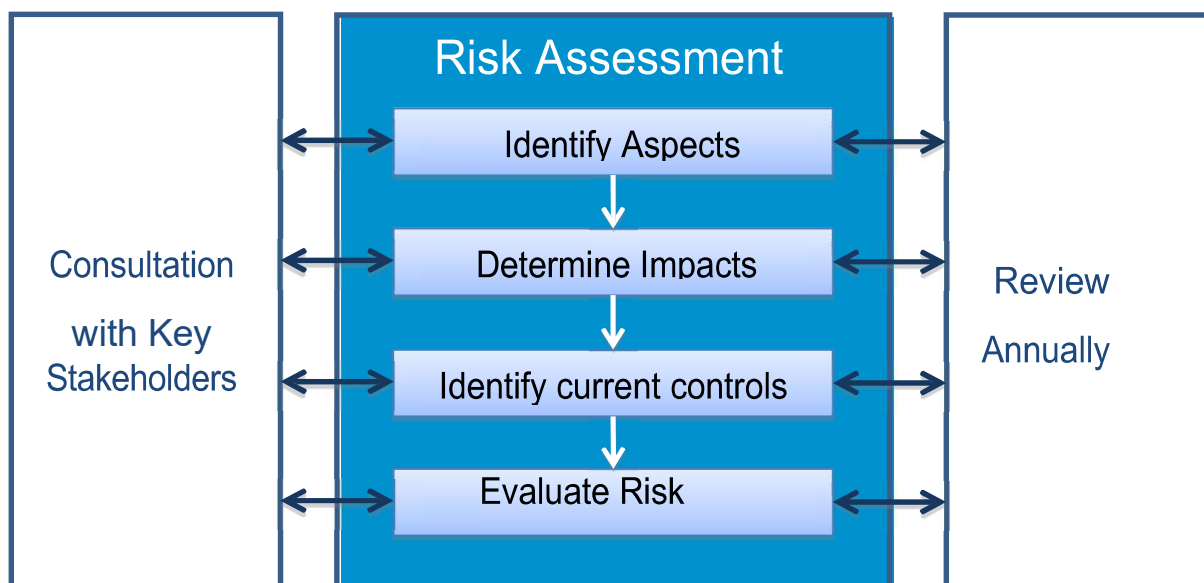


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|   | <h2>Risk Assessment</h2> | <p>DATE: 31/03/2022</p> <p>PLACE: Municipality de Baião</p> |
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RISK ASSESSMENT

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 |
|----------|---|
| 1 | Certain/Daily: Impact is expected to occur in most circumstances or will occur on a daily basis. |

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| 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 • National policies to support and 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 tourist activities and community • Involvement of school students in adopting practices related to energy efficiency |
| Greenhouse Gas Emissions | | | | | |
| Greenhouse Gas Emissions | Potential ozone depleting substances | 5 | 4 | 40 Low | <ul style="list-style-type: none"> • Distribution of trees to local populations and planting actions with school students and volunteers 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 promotion of healthy living habits and the reduction of CO2 emissions |
| | Global warming and climate change | 5 | 4 | 40 Low | |

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|--|--|---|---|----|------|---|
| | | | | | | <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 gradually replacing its car fleet with electric vehicles, more efficient and environmentally friendly Community members are encouraged to use sustainable mobility, such as electric vehicles, bicycles and public transport Installation of public stations to supply electric vehicles 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"> Implementation of the Sub-Regional Integrated Management Plan for Rural Fires, which promotes forest management and planning, as well as rural fire risk management, in the Tâmega and Sousa region. Elaboration and implementation of a Municipal Plan for the Defense of the Forest Against Fires, for an efficient management of rural fire risk. Implementation of the Municipal Commission for the Integrated Management of Rural Fires, with the participation of local and national authorities. Acquisition of land in key areas to promote correct forest management and reforestation with native species. |

| Freshwater resources | | | | | |
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| 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 taken from natural water sources is approved by government authority The public company responsible for water management within the destination (Águas do Norte), has a defined strategy for the conservation and sustainable use of the freshwater resources Awareness campaign on water saving and its rational use is promoted by the Municipality and the public water management company (Águas do Norte) |
| | Degradation of water quality for consumption in Destination, including Degradation of water quality for human consumption captured in groundwater extractions, due to the aging of infrastructure | 4 | 3 | 12 Medium | <ul style="list-style-type: none"> Partnership with the public managing company (Águas do Norte) or the cyclical monitoring of drinking water quality reports Expansion of the drinking water network to ensure quality water for all inhabitant 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 restaurants and other tourist facilities, as well as in other public or private institutions. • Promote reforestation with native species, to manage the cycle and quality of rainwater before it enters water courses and groundwater. | |
| | 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 public companies managing the WWTP's in the Municipality (SIMDOURO and Águas do Norte) carries out periodic checks on the quality and characteristics of the wastewater treated and released into waterways • Awareness campaign for the use of less harmful substances that could contaminate wastewater promoted by the public wastewater management companies (SIMDOURO and Águas do Norte) | |
| 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 • Adoption of an acquisition policy that privileges recycled paper products | |

| Land Use Planning and Development | | | | | | |
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| 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 by the municipality and the and by the waste management company, Resinorte. 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 a cultural reference project Promotion of the Eça de Queiroz Foundation Holding a Youth and Sustainability Festival |
| | Appearance of epidemics / pandemics | 5 | 2 | 9 High | <ul style="list-style-type: none"> 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 by local and national authorities. |

| 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 |