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Sustainable Urban Rehabilitation in Europe

URBAN DESIGN IN CITIES ATTRACTING MULTICULTURAL TRAVELLERS

Erasmus+

Key Action 2: Strategic Partnership Projects
Agreement n° 2016-1-PL01-KA203-026232

URBAN DESIGN IN CITIES ATTRACTING MULTICULTURAL TRAVELLERS

W5.2

Selection of case studies.

THE URBAN WASTE PROJECT
URBAN STRATEGIES FOR WASTE MANAGEMENT IN TOURIST CITIES

The URBAN WASTE project aims to help develop strategies aimed at reducing the amount of municipal waste production as well as strategies to further develop re-use, recycling, collection and disposal of waste. In doing so URBAN-WASTE will adopt and apply the urban metabolism approach to support the switch to a circular model where waste is considered as resource and reintegrated in the urban flow.

The project will develop eco-innovative and gender-sensitive waste prevention and management strategies in cities with high levels of tourism in order to reduce the urban waste production and improve municipal waste management. These strategies will facilitate the reintroduction of waste as a resource into the urban metabolism flows and address waste management, risk prevention and land-use as an integral part of urban development.

source: www.urban-waste.eu

THE URBAN WASTE PROJECT

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source: www.urban-waste.eu

Europe's cities are some of the world's greatest tourism destinations. The socio-economic impact of tourism is extraordinary in cities, but it brings at the same time a range of negative externalities, including high levels of unsustainable resource consumption and waste production. In comparison with other cities, tourist cities have to face additional challenges related to waste prevention and management due to their geographical and climatic conditions, the seasonality of tourism flow and the specificity of tourism industry and of tourists as waste producers.

URBAN-WASTE will support policy makers in answering these challenges and in developing strategies that aim at reducing the amount of municipal waste production and at further **support the re-use, recycle, collection and disposal of waste in tourist cities**. While doing so, URBAN-WASTE will adopt and apply the urban metabolism approach to support the switch to a circular model where waste is considered as resource and reintegrated in the urban flow. URBAN-WASTE will perform an analysis leading to a state of art of urban metabolism in 11 pilot urban areas.

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The cities and regions which will support the project and act as pilot cases range from islands and island cities, coastal tousitic cities, coastal highly urbanised cities and inland touristic destinations. The cities and regions participating in the project are **Florence (IT), Nice (FR), Lisbon (PT), Syracuse (IT), Copenhagen (DK), Kavala (GR), Santander (ES), Nicosia (CY), Ponta Delgada (PT), Dubrovnik – Neretva county (HR), Tenerife (ES)**. Parallel to the support, a participatory process involving all the relevant stakeholders will be set up through a mobilization and mutual learning action plan. These inputs will be integrated in the strategies along with a review of the most innovative existing technologies and practices in the field of waste management and prevention. The strategies will then be implemented in the 11 pilot cases and the results will be monitored and disseminated facilitating the transfer and adaptation of the project outcomes in other cases.

URBAN METABOLISM

definition

source: www.urban-waste.eu

The concept of urban metabolism (UM) was developed by Wolman (1965). Kennedy et al. (2007) define urban metabolism as **"the sum total of the technical and socioeconomic processes that occur in cities, resulting in growth, production of energy, and elimination of waste"**. Waste, and therewith waste from tourists occurring in the urban sphere, are main components of urban metabolism. In this section we review different approaches and methods used to conceptualise and operationalise urban metabolism and how these tackle issues of waste, more specific from tourist activities.

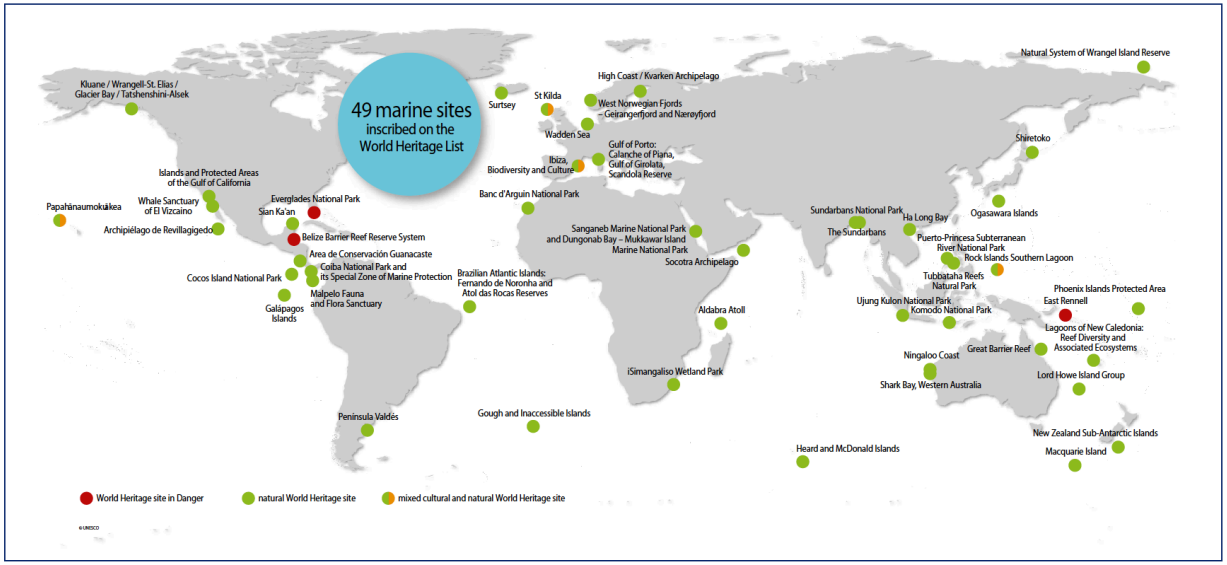
Depending on the approach chosen, the analysis of urban metabolism can be used for four purposes (Kennedy et al. 2011):

1. provision of sustainability indicators
2. provision of inputs to urban greenhouse gas (GHG) accounting
3. provision of dynamic mathematical models for policy analysis
4. development of design tools.

UNESCO WORLD HERITAGE MARINE SITES
World Heritage Marine Programme

World Heritage sites are recognized for their Outstanding Universal Value (OUV) – places that are so unique and exceptional that their protection should be a shared and common responsibility of us all. A central difference between marine protected areas (MPAs) and marine World Heritage sites is the international oversight that comes with monitoring, evaluation and reporting obligations for the latter. To ensure the characteristics that make up a site's World Heritage status will endure all sites inscribed on the UNESCO World Heritage List are subject to systematic monitoring and evaluation cycles embedded in the official procedures of the 1972 World Heritage Convention. Along with the recognition and inscription of an area on the List, the State of Conservation process is a key value added to the protection of MPAs that are globally unique. This monitoring and evaluation of all natural sites – and by definition all marine ones -- on UNESCO's World Heritage List is done in cooperation with IUCN, which has an official advisory role formally recognized under the World Heritage Convention.

The 49 marine sites inscribed on UNESCO's World Heritage List (as of 1 August 2016)



CRUISE SHIPS POLLUTION AND IMPACT ON OUVS
World Heritage Marine Programme

source: UNESCO, The future of the World Heritage COnvention for Maarine Conservation, 2016

The concept of sea cruising to visit maritime sites of cultural significance or natural beauty rapidly spread across the globe, and by the late 1880s, the Pacific Coast Steamship Company, based out of San Francisco, began taking passengers on ‘cruises’ to Alaska.

Passengers on the deck of the steamship Ancon while on a cruise to visit the tidewater glaciers in Glacier Bay, circa 1886. Public Domain. Source: Partridge Photography, Boston, Massachusetts.

Obviously, cruise shipping can negatively impact a site's natural or cultural resources and OUV because they are, in effect, floating cities that produce large volumes of waste water, air pollutants, and underwater noise. Cruise ships also have the potential for introducing exotic or invasive species via ballast water or hull fouling, creating turbidity by manoeuvring in shallow areas (Jones, 2011), disturbing sensitive marine wildlife (Young et al., 2014), and being involved in oil spills. In addition to impacts to marine and terrestrial ecosystems, ships can also impact the experience of other visitors to a site and, owing to the large volume of passengers, increase congestion, strain visitor services, and degrade the infrastructure of a gateway community.

Thus, management of cruise ships and their passengers at World Heritage sites requires well-informed decisions that carefully balance negative impacts with their experiential and economic benefits.

AIR POLLUTION

"cruise ships produce a suite of air pollutants, including oxides of sulfur and nitrogen, particulate matter, and CO2. While pollutants are produced through the operation of on-board incinerators, gas turbines, and oil-fired steam boilers, the largest volume of air pollutants are produced by the set of 4 to 5 large diesel engines which power the ship."

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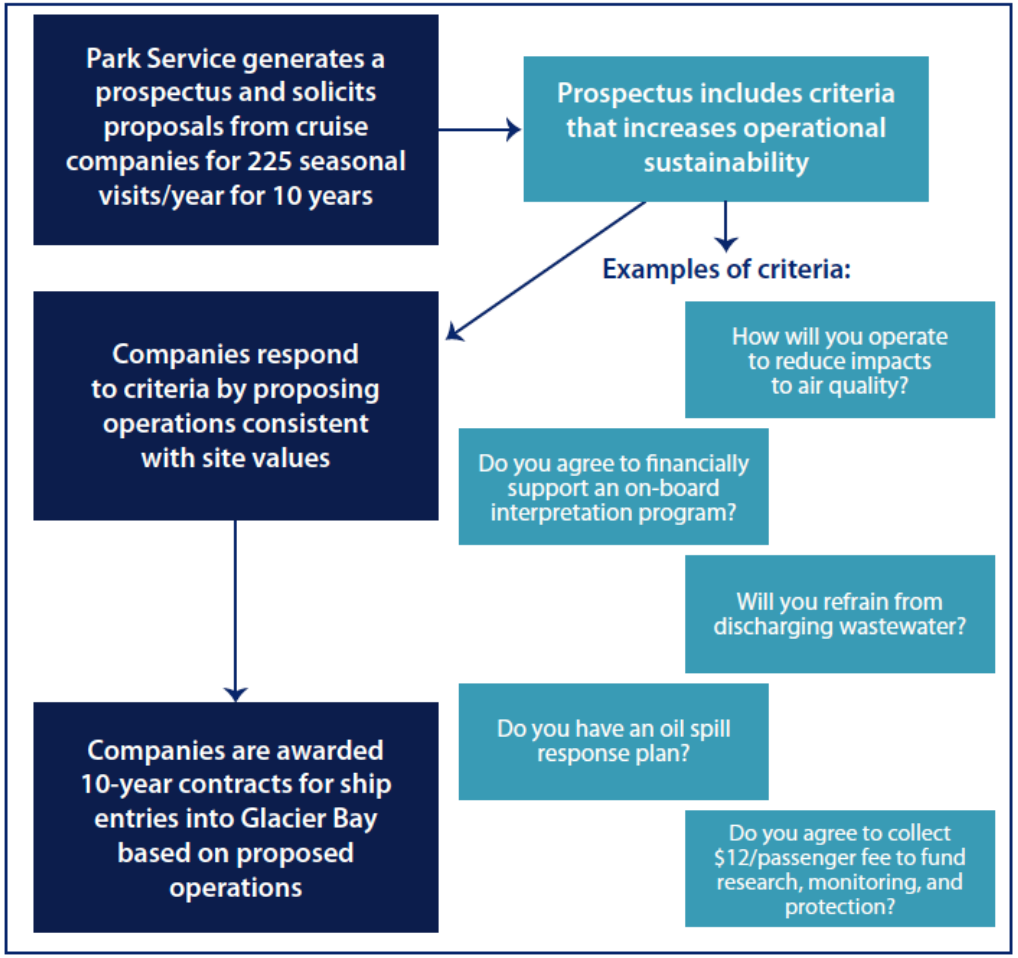
WATER POLLUTION

"cruise ships also produce large amounts of wastewater as part of their normal operations. Wastewater originates from toilets ('black water'), sinks, showers, laundries, and kitchens ('grey water'), although it is also produced from engine coolant water, ballast water, and oily bilge water, which is the mix of water, oily fluids, lubricants, and other wastes that accrue in the lowest part of the ship. [...] In Alaska, estimates of the total combined black and grey water produced for cruise ships varied from 37 to 146 gallons (140 – 553 litres) per passenger per day (EPA, 2008). Thus, an average-sized ship carrying 2000 passengers may thus produce >150,000 gallons (>50,0000 litres) of black and grey water per day (EPA, 2008). Ships may also produce over 5000 gallons of oily bilge water per day (ADEC, 2000)."


VENICE, ITALY
source bing maps 2018

GLACIER BAY CASE STUDY
Sustainable model for cruise ship visitation

source: UNESCO, The future of the World Heritage Convention for Maarine Conservation, 2016



Source: National Park Service

LIMITED ENTRIES REGULATION CONCESSION CONTRACTS

Schematic demonstrating the process by which Glacier Bay increases the sustainability of cruise ships during their operations in the park using a concessions prospectus. The prospectus has a number of criteria which ship companies respond to with proposals. If companies are awarded entries into Glacier Bay, they are then contractually obligated to operate based on their proposals.

BIODIVERSITY AND FOREST LANDSCAPE RESTORATION
IUCN

source: IUCN, Biodiversity guidelines for forest landscape restoration opportunities assessments, 2018

"Forest landscape restoration (FLR) is the long-term process of regaining ecological functionality and enhancing human well-being across deforested and degraded landscapes, and it continues to be a key initiative for maintaining or restoring biodiversity. FLR is implemented using a landscape approach, combining natural resource management, restoration opportunities and livelihood considerations across jurisdictional boundaries with an aim to restore a mosaic of land uses, including forests and woodlands, pastures, croplands, and more."

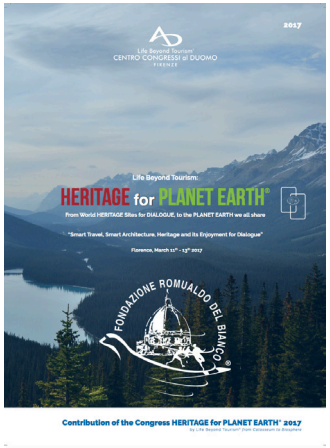
Forest landscape restoration (FLR) is the long-term process of regaining ecological functions and enhancing human well-being in deforested and degraded lands. Ultimately, FLR is the process of restoring *"the goods, services and ecological processes that forests can provide at the broader landscape level as opposed to solely promoting increased tree cover at a particular location"* (Maginnis & Jackson, 2002).

Forest landscape restoration is founded upon several guiding principles:

- **Restore functionality** – Restore the functionality of a landscape, making it better able to provide a rich habitat, prevent erosion and flooding, and withstand the impacts of climate change and other disturbances.
- **Focus on landscapes** – Consider and restore entire landscapes as opposed to individual sites. This typically entails balancing a mosaic of inter-dependent land uses, which include but are not limited to: agriculture, protected areas, agroforestry systems, well managed planted forests, ecological corridors, riparian plantings and areas set aside for natural regeneration.
- **Allow for multiple benefits** – Aim to generate a suite of ecosystem goods and services by intelligently and appropriately introducing trees and other woody plants within the landscape. This may involve planting trees on agricultural land to enhance food production, reduce erosion, provide shade and produce firewood, or trees may be planted to create a closed-canopy forest that sequesters large amounts of carbon, protects downstream water supplies and provides rich wildlife habitat.
- **Leverage suite of strategies** – Consider the wide range of eligible technical strategies – from natural regeneration to tree planting – for restoring forest landscapes.
- **Involve stakeholders** – Actively engage local stakeholders in deciding restoration goals, implementation methods and trade-offs. Restoration processes must respect their rights to land and resources, align with their land management practices and provide them with benefits.
- **Tailor strategies to local conditions** – Adapt restoration strategies to local social, economic and ecological contexts; there is no "one size fits all".
- **Avoid further reduction of natural forest cover or other natural ecosystems** – Address ongoing loss and aim to prevent further conversion of primary and secondary natural forest and other ecosystems.
- **Adaptively manage** – Be prepared to adjust a restoration strategy over time as environmental conditions, knowledge and societal values change. Leverage continuous monitoring and learning, and make adjustments as restoration progresses.

HERITAGE FOR PLANET EARTH®
Fondazione Romualdo Del Bianco

source: Fondazione Romualdo Del Bianco, Heritage for Planet Earth, 2017



For the awareness-raising among young people about the importance of heritage for dialogue and for preserving the health of the Planet Earth

#heritage
#travel
#interculturaldialogue

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www.urban-waste.eu

www.veniceandlagoon.net

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