

Lesson Plan 1

Target Audience

VET Trainers

Goal (50-60 words)

This lesson plan will help trainees identify and understand current waste management practices in the tourism sector and the environmental and health risks associated with poor waste management. Trainers will equip their students with the knowledge to recognise common types of tourism waste and to understand the critical impacts of poor waste management on ecosystems and communities.

Objectives (1-3 Objectives)

Upon completion of this lesson, trainees will be able to:

- Identify the most common waste generated within tourism activities, such as plastic, organic waste, or other types of material.
- Analyse the environmental and health risks arising due to inappropriate waste management in tourism regarding potential impacts on wildlife, ecosystems, and host communities.

Optional Theoretical Background (200-400 words)

Types of waste and current practices

Tourism produces significant amounts of wastes that range from plastics to organic wastes to hazardous materials. The most common is solid waste such as plastic bottles, food wrappers, paper products, and packaging materials. Food waste is another major issue, with hotels, restaurants, and other hospitality services producing high volumes of organic wastes through overproduction and consumer leftovers. Other hazardous wastes, including the batteries, cleaning chemicals, and electronic waste, also pose a serious environmental impact challenge caused by improper disposal.

Current tourism waste management practices often focus on the principles of "Reduce, Reuse, Recycle" or 3Rs. Most of these tourism businesses apply the principles to minimize waste generation. These include reducing at source, reusing whenever possible, and the recycling of materials like plastic, paper, and glass. Waste segregation is another widely used practice, where waste is categorized into organic, recyclable, and non-recyclable materials, making recycling more efficient and reducing the volume of waste that ends up in landfills. More recently, composting by some eco-hotels and -lodges turns organic waste into nutrient-rich soil for landscaping purposes or local farmers. Additionally, with growing concerns about plastic pollution, many tourism operators are shifting towards plastic-free initiatives by eliminating single-use plastics like straws, cups, and bags, replacing them with more environmentally friendly alternatives.

Despite these positive steps, waste management continues to be one of the biggest challenges for the tourism industry. Practices vary significantly between destinations due to differences in local regulations, infrastructure availability, and levels of awareness among businesses and visitors. The high costs of implementing sustainable waste management solutions can also be a limiting factor, particularly for small- and medium-sized tourism operators. Again, the lack of training and awareness by tourism businesses and tourists has led to many not fully comprehending the harm caused by improper waste disposal or the benefits that come along with adopting sustainability.

The concept of the circular economy is gaining ground in tourism, with the aim of minimizing disposal by reusing resources and materials in a continuous loop, extracting the maximum value from them and ultimately reducing waste generation. On the other hand, significant progress with regard to green certification or eco-labels, such as the [Green Key](#) or [EU Ecolabel](#), is a good indication of the commitment of tourism businesses to work toward waste management and other eco-friendly best practices. Digital innovations are also playing their role in this area, with new tools and apps aimed at helping businesses track and manage their waste flows in real time, hence leading to effective strategies for waste reduction.

The trainer should have information on the type of waste generated through each sub-sector of tourism, such as single-use plastics generated by the accommodation sector; food waste related to restaurants; and litter related to outdoor activities. The trainer should also be familiar with current waste management strategies like the "Reduce, Reuse, Recycle" approach, waste segregation, composting, and emerging trends such as circular economy models and green certifications.

Environmental and health hazards

Poor waste management within tourism poses serious risks both to the environment and human health. The environmental ones include land, water, and air pollution, likely to result in a harmful effect on wildlife as well as harm to ecosystems. For instance, plastic wastes that enter into water courses into the ocean make it so highly polluted, thus threatening the life of aquatic organisms. Moreover, organic wastes, if not disposed of properly, could attract pests that may lead to diseases that equally affect the local community and tourists' health. These risks are important for the trainers to understand in order to show how valuable managing wastes sustainably is to their trainees.

Lesson Plan Details

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| Lesson Plan title | Understanding current situation and risks |
| 21st Century Skills | <ul style="list-style-type: none"> ● Critical Thinking (through analysing environmental and health risks) ● Collaboration (in group activities) ● Communication (through presentations and discussions) ● Problem-solving (in classifying and addressing waste management practices) ● Decision making (evaluating the effectiveness of different waste reduction methods) |
| Duration | <p>Total: 95 minutes.</p> <ul style="list-style-type: none"> ● Activity 1: 30 minutes ● Activity 2: 25 minutes ● Scenario: 40 minutes |
| Classroom setting | <ul style="list-style-type: none"> ● Activity 1: in groups ● Activity 2: in groups ● Scenario: in groups |
| Required material/resources | <ul style="list-style-type: none"> ● Activity 1: case study handouts, access to online resources ● Activity 2: markers, scenario cards ● Scenario: handouts with the scenario description |
| Prerequisites | <ul style="list-style-type: none"> ● Basic understanding of environmental issues related to tourism. ● Familiarity with key concepts of sustainability and ecological impact. |
| Final Assessment (if applicable) | Group project: design a waste management plan for a hypothetical tourism business, focusing on sustainability (consider using the scenario activity to develop the plan accordingly). |
| Additional resources | European Capital and Green Pioneer of Smart Tourism website for best practices and additional resources. |
| References | <ul style="list-style-type: none"> ● Peeters, P., Çakmak, E., & Guiver, J. (2024). <i>Current issues in tourism: Mitigating climate change in sustainable tourism research</i>. Tourism Management, Vol. 100 |

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| | <ul style="list-style-type: none"> ● Buckley, R. (2012). <i>Sustainable Tourism: Research and Reality</i>. Annals of Tourism Research, Vol. 39, Issue 2. ● Bartolozzi, P. (2023, June 29). European certifications for sustainable tourism. Skal Europe area committee. https://www.skaleurope.org/news/european-certifications-for-sustainable-tourism/#:~:text=Sustainable%20tourism%20has%20emerged%20as%20a%20vital%20aspect,have%20reduced%20their%20environmental%20impact.%20...%20Mais%20itens ● Integrating Circular Economy Principles in Tourism. UN Tourism. https://www.unwto.org/sustainable-development/circular-economy/#:~:text=For%20tourism%20destinations%2C%20the%20circular%20economy%20offers%20the,creating%20a%20virtuous%20circle%20between%20businesses%20and%20territories. |
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Lesson Plan for Activities & Scenarios #1 (include 1-3 activities & 1-2 scenarios)

Activity 1: Case study analysis

This activity aims for trainees to analyse the environmental and health risks associated with poor waste management in tourism.

Step 1 (5 minutes): divide your trainees into groups and assign each group a case study related to unsustainable tourism. Examples below:

Case study 1. Maya Bay, Thailand

Maya Bay, made famous by the movie *The Beach*, became a victim of overtourism.
Environmental impact – *Coral bleaching, loss of biodiversity, marine pollution, and disruption to the natural habitat of marine species.*

Case study 2. Mount Everest, Nepal

As one of the most popular trekking and climbing destinations, Mount Everest has faced significant environmental challenges due to unsustainable tourism.
Environmental Impact – *Accumulation of waste such as discarded oxygen canisters, food packaging, and human waste, causing environmental degradation and health risks to nearby communities.*

Case study 3. Venice, Italy

Venice faces severe overtourism, with nearly 120,000 visitors a day. Similar case studies: Reykjavik and Dubrovnik with similar impacts of overtourism.

Environmental Impact – pollution and erosion.

Case study 4. Great Barrier Reef, Australia

Tourism, alongside climate change and pollution, has posed a major threat to the Great Barrier Reef, one of the world's most biodiverse ecosystems.

Environmental Impact – Unregulated tourism activities, such as diving and boating, caused physical damage to coral reefs and marine life, loss of marine biodiversity.

Step 2 (15 minutes): instruct groups to research the case study, identify the key environmental risks, and discuss the broader impact on the local environment.

Step 3 (10 minutes): each group presents their findings to the class.

Activity 2: Types of tourism waste

This activity aims to enable trainees to identify the common types of waste generated by tourism activities.

Step 1 (5 minutes): brief explanation of the various waste types commonly generated in the tourism sector, such as plastics, organic waste, and hazardous materials.

Step 2 (10 minutes): divide into groups and assign each group a tourism sector (e.g., hotel, restaurant, beach resort). Each group will list the types of waste typically generated in their sector.

Step 3 (10 minutes): groups summarize their discussions and share key insights with the class.

Scenario: Tackling waste management challenges in coastal tourism destinations

More waste is being generated at this popular coastal destination, contribution to by tourism activities. Plastic bottles, food wrappers, and other forms of wastes that are left from tourists can be seen scattered on the beach. The local government has made attempts through the provision of waste bins and recycling programs, but the problem still seems to persist. Concerns are raised over the possible long-term effect on marine life, pollution, and with respect to the image of the destination as a clean eco-friendly location.

Learning assignment

Trainer presents briefly the scenario to the class and describes the destination and waste challenges. In small groups, learners will analyse the scenario by identifying the main types of waste generated and the risks associated with each (e.g., pollution, damage to marine ecosystems, and economic impacts).

Each group should present their findings and suggest solutions to the class, focusing on creative ideas and perhaps mentioning some of the challenges they could encounter in the implementation of such strategies.