Sustainable Practices in Tourism and Hospitality During Christmas

Managing Peak-Season Demand Without Compromising Quality

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Abstract

Christmas is an important period for hotels, restaurants, attractions and destinations, but increased visitor numbers and festive consumption can place pressure on energy, water, food supplies, transport, waste systems and employees. This report analyses how tourism and hospitality businesses can respond to higher seasonal demand while maintaining reliable, welcoming and high-quality service. It focuses on three operational areas: waste reduction, energy and water conservation, and sustainable sourcing. The report uses a secondary-research methodology and draws on the Global Sustainable Tourism Council's hotel criteria, the United Nations Environment Programme's Food Waste Index, the OECD's analysis of tourism seasonality, the European Commission's sustainable tourism policy material and recent WRAP research on festive food behaviour. The evidence shows why peak periods require advance planning: seasonal demand is predictable to a degree, yet occupancy, menu choices and guest behaviour can still fluctuate. WRAP's January 2026 survey found that 16% of food bought for main Christmas meals was estimated to be wasted, while 47% of respondents considered some Christmas food waste inevitable. These are household estimates rather than hotel measurements, but they illustrate the festive abundance mindset that food-service businesses also need to manage. The report argues that sustainability should be treated as an operational quality issue. Forecasting, flexible menus, portion choice, local supplier partnerships, smart building controls, staff training and clear guest communication can reduce impacts without making the celebration feel less generous. It concludes with a practical seasonal management plan and indicators for evaluating results.

1. Introduction

Christmas creates a distinctive operating environment for tourism and hospitality. Hotels may host family gatherings, leisure visitors, seasonal markets and corporate events. Restaurants often serve special menus, while destinations attract visitors for decorations, concerts, shopping and winter experiences. For many businesses, this period offers an important opportunity to increase revenue and strengthen relationships with customers. At the same time, the pressure of high demand can expose weaknesses in staffing, purchasing, waste management, energy use and service consistency.

The challenge is not simply that more people travel or eat out. Christmas can change how people consume. Guests may expect elaborate decorations, generous portions, frequent buffet replenishment, longer opening hours and additional heating or lighting. Businesses may order extra food to avoid running out, use temporary packaging for takeaway meals and rely on additional deliveries. If these decisions are not planned carefully, a successful festive season can generate unnecessary waste and higher environmental costs.

This report examines how tourism and hospitality businesses can adopt sustainable practices during Christmas while protecting the quality of the guest experience. It follows Option 2 in the assignment brief and focuses on waste reduction, energy conservation and sustainable sourcing. The main question is: how can businesses manage the environmental pressures associated with festive demand without reducing comfort, choice, safety or service standards?

The report is structured around a literature review, methodology, findings, discussion, recommendations and conclusion. It considers the environmental, social and economic dimensions of sustainability and uses examples from published evidence. The analysis distinguishes between direct evidence about hospitality operations and broader consumer or

tourism data. This distinction matters because household Christmas food-waste estimates should not be presented as if they were measurements from hotels or restaurants.

2. Literature Review

2.1 Sustainability in tourism and hospitality

Sustainable tourism seeks to manage environmental, economic and socio-cultural impacts while meeting the needs of visitors, businesses, the environment and host communities. In hospitality, sustainability is practical as well as strategic. It affects purchasing, food preparation, laundry, heating, cooling, lighting, transport, cleaning products, waste collection, staff conditions and relationships with local suppliers. The three dimensions are connected: environmental efficiency can reduce costs, local procurement can support community livelihoods, and decent working conditions can improve service reliability.

The GSTC hotel criteria offer a structured way to translate sustainability into hotel management. They cover environmentally preferable purchasing, efficient purchasing, energy conservation, water conservation, greenhouse-gas emissions and solid waste. They also address decent work and community benefits. For example, the criteria expect hotels to monitor energy and water use, set reduction goals, guide staff and guests, and measure waste so that it can be reduced, reused or recycled (GSTC, 2022). This framework is particularly relevant during Christmas because seasonal operations can increase resource use in a short period.

2.2 Seasonality and peak demand

Seasonality is a recurring feature of tourism. Demand changes because of climate, school holidays, public holidays, events and visitor preferences. The OECD (2026) notes that concentrated demand can strain infrastructure and communities during peak periods, while leaving capacity underused in quieter months. Across OECD countries, around 40% of tourist

nights are concentrated in the three busiest months. This figure is not specific to Christmas, but it demonstrates the wider structural challenge of seasonal concentration.

The UN Tourism discussion of seasonality identifies overcrowding, high prices and inadequate infrastructure during peak periods, alongside weaker services and employment opportunities in low seasons (UN Tourism, n.d.). Christmas is not the peak season for every destination: it is especially important in city-break markets, winter destinations and places with strong family or cultural travel traditions. The effect is therefore location-specific. Nevertheless, its predictable timing gives businesses an opportunity to prepare purchasing, staffing, energy settings and waste services in advance.

2.3 Waste reduction and food management

Food waste is a major sustainability concern because resources used to produce, process, transport, store and prepare food are wasted when food is discarded. The UNEP Food Waste Index Report 2024 provides a framework for measuring food waste across households, retail and food service, and highlights the importance of better measurement and public-private collaboration (UNEP, 2024). Hotels and restaurants should distinguish preparation waste, spoilage, buffet leftovers and plate waste because each has different causes and solutions.

Christmas can intensify the risk of overproduction. Hospitality businesses may fear disappointing guests if a dish runs out, so they prepare more than demand requires. Buffets create a further challenge: visual abundance is part of the experience, but large displays can leave food unused. Smaller batches, more frequent replenishment, flexible portion sizes and accurate forecasting can protect the appearance and availability of food while reducing waste. Safe donation or redistribution may be appropriate where local food-safety rules and logistics allow, but prevention remains preferable to disposal.

2.4 Energy and water conservation

Hotels use energy for heating, hot water, lighting, kitchens, laundry, lifts, ventilation and guest technology. Winter conditions can increase heating demand, while festive lighting and extended restaurant hours add further loads. Energy conservation should begin with measurement and building management rather than asking guests to tolerate uncomfortable rooms. Smart thermostats, efficient boilers, LED lighting, door and window maintenance, heat recovery and occupancy-based controls can reduce unnecessary consumption while preserving comfort.

Water use also rises through guest showers, laundry, kitchens, cleaning and leisure facilities. Water-saving fixtures, leak detection, efficient dishwashers and laundry scheduling can reduce demand. However, conservation must be sensitive to local conditions and guest expectations. A weak shower or poorly maintained bathroom is not an acceptable sustainability outcome. The operational goal is to remove avoidable use, not to make the service noticeably inferior.

2.5 Sustainable sourcing and local value

Sustainable sourcing considers environmental impact, origin, production methods, packaging, animal welfare, labour conditions and supplier reliability. During Christmas, menus often include seasonal and traditional dishes. Local and seasonal ingredients can reduce some transport impacts, support local producers and create a stronger sense of place. Yet “local” does not automatically mean lower impact: production methods, storage, transport efficiency and seasonality also matter. Businesses should assess suppliers on evidence rather than distance alone.

The GSTC criteria encourage purchasing policies that favour sustainable suppliers and products and reduce unnecessary packaging (GSTC, 2022). In a peak period, supplier resilience is as important as sustainability credentials. Hotels should agree volumes and delivery schedules

early, establish backup suppliers and communicate realistic menu availability. A sourcing policy that cannot cope with Christmas demand may lead to emergency purchasing and inconsistent quality.

2.6 Quality management during festive operations

Quality in hospitality includes reliability, responsiveness, assurance, empathy and the physical environment. During Christmas, guests may have heightened expectations because they are celebrating a special occasion or paying premium seasonal prices. A sustainable measure succeeds only if it fits the service promise. For example, reusable tableware should be hygienic and attractive; smaller buffet batches should be replenished quickly; and energy controls should maintain a comfortable temperature. Staff training and clear responsibilities help ensure that sustainability practices remain consistent when operations become busy.

3. Methodology

The report uses a desk-based qualitative approach. It reviews official policy and industry frameworks, company-independent research and recent evidence about festive consumption. The main sources include the GSTC hotel criteria, UNEP's Food Waste Index Report 2024, OECD Tourism Trends and Policies 2026, UN Tourism material on seasonality, European Commission sustainable tourism guidance and WRAP's November 2026 report, The Festive Food Opportunity.

Sources were selected because they address at least one of the report's main themes: seasonal demand, food waste, resource efficiency, procurement or service quality. The evidence was compared thematically and translated into operational implications for hotels and restaurants. The report does not present a primary survey or claim to measure the performance of a particular

hotel. Recommendations are therefore proposed management actions rather than findings from a field experiment.

There are limitations. Some sources concern households or tourism at a national level rather than Christmas operations in hotels. WRAP's survey is UK-specific and uses self-reported estimates from a quota-based, non-probability sample. The OECD's seasonality data cover tourism more broadly, not the Christmas period alone. These sources are useful for understanding context, but they cannot be treated as direct measurements of hotel performance. Businesses should collect their own property-level data before setting targets.

4. Findings

4.1 Festive demand creates predictable but uneven pressure

Christmas is a recurring event, so businesses can anticipate the broad timing of demand. However, the exact number of guests, meal choices, dietary requirements and arrival patterns can change. A hotel may have high room occupancy but variable restaurant demand if guests eat elsewhere. A restaurant may experience a rush at one sitting and quieter service later. Planning based only on last year's total sales can therefore lead to over-ordering or shortages.

The OECD's (2026) finding that around 40% of tourist nights across OECD countries occur in the three busiest months illustrates the broader pressure created by seasonal concentration. UN Tourism also emphasises that seasonality can place strain on infrastructure and local services. For Christmas businesses, this means environmental planning should extend beyond the hotel building. Deliveries, public transport, waste collection, local water systems and employee commuting can all be affected by peak demand.

4.2 Food waste and the festive abundance mindset

WRAP's 2026 report provides a useful picture of festive food attitudes in the United Kingdom.

Based on a January 2026 survey of 4,149 adults, it estimates that 16% of food purchased for main Christmas meals was wasted. The report also found that 47% of respondents agreed that some food waste at Christmas is inevitable, while 39% said providing enough food for family and guests was more important than worrying about food waste. At the same time, 70% said they made a conscious effort to use leftovers (WRAP, 2026).

These are household findings, not hospitality waste measurements. Still, they reveal a tension that restaurants and hotels should recognise: abundance is associated with generosity and celebration, while waste reduction can be seen as a competing priority. A hotel buffet that looks sparse may be judged negatively even if it prevents waste. The practical response is not to remove choice, but to present food intelligently. Smaller serving dishes, frequent replenishment, flexible portions and attractive use of seasonal ingredients can maintain a generous appearance without preparing excessive quantities.

UNEP (2024) argues that food waste measurement is essential for establishing baselines and tracking progress. For hospitality businesses, measuring waste by source is more useful than recording only the total weight sent away. Preparation waste may indicate poor forecasting or kitchen practices; spoilage may indicate purchasing or storage problems; buffet leftovers may reflect batch size; and plate waste may relate to portion size or guest preferences. Each requires a different response.

4.3 Energy use during Christmas

Winter heating can be a significant operational requirement in colder destinations. Hotels also use energy for festive decorations, extended restaurant hours, event spaces, laundry and kitchens. Poorly controlled heating in empty rooms or public areas can increase consumption without

improving guest comfort. Similarly, decorative lighting can be attractive but does not need to remain on in unoccupied spaces throughout the night.

The GSTC hotel criteria recommend monitoring total energy use and energy per tourist night, setting goals, increasing renewable energy where possible and guiding staff and guests (GSTC, 2022). This suggests a practical approach: use occupancy-linked controls, maintain heating systems, install efficient lighting, schedule decorative displays and monitor energy per occupied room. Staff should be trained to identify equipment left running unnecessarily. These measures can be implemented without asking guests to accept cold rooms or reduced access to facilities.

4.4 Water use, laundry and cleaning

Christmas occupancy can increase showering, laundry, dishwashing and cleaning requirements. High turnover between guests can create pressure to process linen quickly. Efficient washing machines, appropriate load sizes, low-flow fixtures and prompt leak repairs can reduce water use. Linen-reuse programmes may also help, but they should be presented as a choice and supported by clear housekeeping procedures. Guest trust can be damaged if a reuse request is used as a reason to skip necessary cleaning.

Water conservation should be adapted to the destination. A hotel in a water-stressed area may need stronger measures than one in a water-abundant region. The GSTC framework's emphasis on assessing water risk and measuring consumption per guest night is therefore more useful than applying one universal target to every property.

4.5 Sustainable sourcing and festive menus

Festive menus can create opportunities for local sourcing, seasonal produce and plant-forward choices. A hotel might work with nearby farms, bakeries and producers to design a menu around ingredients available in the region. This can support local businesses and give guests a stronger

connection to the destination. However, suppliers must meet food safety, traceability, volume and delivery requirements. A sudden increase in demand can make small suppliers vulnerable if orders are changed at short notice.

Businesses should agree realistic quantities and delivery windows in advance and maintain contingency arrangements. Menu flexibility is useful: dishes can be designed around ingredients with reliable seasonal availability, while clear communication helps guests understand substitutions. Sustainable sourcing should also consider packaging and labour standards, not only the geographic origin of food.

4.6 Employees and service quality

The festive period can involve longer shifts, temporary staff, unfamiliar procedures and emotionally demanding customer interactions. Employees are central to sustainable operations because they control replenishment, sorting, cleaning, equipment settings and guest communication. If staff are rushed or inadequately trained, waste separation may be inconsistent, energy controls may be ignored and service errors may increase.

Quality and sustainability therefore depend on decent working conditions, clear staffing plans, training and realistic workloads. A business that relies on exhausted staff to deliver a premium festive experience is unlikely to maintain consistent quality. The GSTC criteria include decent work and regular training, reinforcing the point that social sustainability is part of responsible hotel management.

5. Discussion

The findings suggest that Christmas sustainability is primarily a planning and service-design challenge. Businesses know when the festive period is approaching, but they must translate that knowledge into accurate purchasing, staffing, energy settings and waste arrangements. The

OECD and UN Tourism evidence shows that seasonal concentration creates pressures beyond the individual business. A hotel cannot solve destination congestion or municipal waste capacity alone, but it can coordinate with suppliers, local authorities and transport providers.

Food waste is a particularly clear example of the relationship between guest expectations and operational decisions. The WRAP findings show that many people want to avoid waste but also feel pressure to provide plenty. In hospitality, this can translate into oversized portions, large buffet displays and cautious overproduction. A useful response is to separate the emotional promise of abundance from the physical quantity of food prepared. Attractive presentation, frequent replenishment and a choice of portion sizes can preserve the feeling of generosity while reducing surplus.

Energy and water initiatives should follow the same principle. Guests do not need to experience lower comfort for a hotel to use less energy or water. Building controls, maintenance and efficient equipment can reduce resource demand behind the scenes. Guest participation can help, but the main responsibility rests with the operator. Messages about turning off lights or reusing towels should complement—not replace—investment in efficient systems.

Sustainable sourcing creates both opportunity and risk. Local seasonal products can make a festive menu distinctive and retain more spending in the destination. Yet businesses should avoid treating local sourcing as a slogan. They need evidence about production, transport, packaging, labour and supplier capacity. A resilient procurement plan includes backup options that meet the same quality and sustainability requirements.

A critical issue is measurement. Total energy or waste may rise simply because more guests are staying. For this reason, businesses should report absolute totals as well as intensity measures such as kWh per occupied room, litres per guest night and kilograms of food waste per cover.

They should also monitor quality indicators: guest satisfaction, complaints, food availability, cleanliness and employee feedback. A reduction in resource use that coincides with poorer service is not a successful outcome.

Finally, sustainability communication should be positive and specific. Guests are more likely to cooperate when they understand the benefit and do not feel blamed. For example, a menu can explain that ingredients are seasonal and locally sourced, while a buffet sign can encourage smaller first servings and second helpings. The message should make responsible choices feel normal and convenient rather than turning a holiday meal into a lesson.

6. Recommendations: A Practical Christmas Sustainability Plan

For smaller independent businesses, the plan can be scaled to available resources. A simple spreadsheet for daily covers, purchasing, food waste and utility readings is better than an expensive system that staff cannot maintain. The owner or duty manager can review the figures weekly and agree one practical improvement at a time. Larger hotel groups may use automated building systems and central dashboards, but the underlying principle is the same: collect information consistently, assign responsibility and use the evidence to make decisions before the next peak service.

A useful distinction is between prevention and compensation. A business may purchase renewable electricity or support an offset project, but these actions should not distract from reducing avoidable demand in the first place. During Christmas, the priority should be to avoid heating empty spaces, prevent unnecessary food preparation, reduce packaging and plan deliveries efficiently. Any remaining emissions or waste should be managed transparently and in accordance with credible standards. This hierarchy helps avoid the impression that a festive

event can be labelled sustainable simply because the business has funded a separate environmental activity.

Businesses should also consider accessibility and inclusion when redesigning seasonal services. Digital-only menus, self-service systems or reduced staffing may create difficulties for some older guests, people with disabilities or visitors who do not speak the local language. A sustainable service should remain usable by different groups. Clear printed information, staff assistance and accessible facilities can be maintained alongside resource-efficient systems. In this sense, service quality is not a luxury added after environmental planning; it is part of the test of whether a sustainability measure is genuinely well designed.

The strongest evaluation combines operational and experiential evidence. A hotel should not judge a smaller buffet solely by kilograms of food saved; it should also check whether dishes remain available, queues remain reasonable and guests feel that the meal is generous. Likewise, a lower heating bill should be considered alongside room-temperature complaints and maintenance records. A seasonal review that brings together kitchen, housekeeping, engineering, procurement, human resources and front-office teams can identify trade-offs early and prevent one department’s savings from becoming another department’s service problem.

1. Build a festive demand forecast. Use reservations, historic occupancy, event bookings, weather patterns and dietary requests to forecast room, restaurant and banquet demand. Update forecasts daily during the busiest period. Share likely volumes with suppliers and kitchen teams, and set a clear process for adjusting orders when bookings change.

2. Measure food waste by source. Weigh preparation waste, spoilage, buffet leftovers and plate waste separately. Record the number of meals served so that waste can be calculated per cover. Review results at the end of each service and use them to adjust batch sizes, recipes and portion

options. Where safe and legally permitted, arrange redistribution of suitable surplus food with an established local partner.

3. Redesign buffet and festive menu service. Use smaller serving vessels and replenish more frequently. Offer half portions or flexible sides, keep popular dishes available and explain seasonal substitutions. Use whole ingredients where possible and plan cross-utilisation of ingredients across dishes without compromising food safety or menu quality.

4. Reduce energy use without reducing comfort. Check boilers, heating controls, insulation, doors and windows before the season begins. Use occupancy-linked temperature controls in bedrooms and meeting rooms. Replace inefficient decorative lighting with LEDs and set timers for displays. Monitor energy per occupied room and investigate unusual spikes promptly.

5. Manage water and laundry efficiently. Repair leaks, use efficient dishwashers and washing machines, train staff on correct load sizes and review laundry schedules. Offer linen reuse as a genuine guest choice, while maintaining full hygiene and cleaning standards. Set water targets that reflect local water risk rather than using a single target for all destinations.

6. Create a responsible festive procurement plan. Prioritise seasonal products and suppliers with credible environmental and labour practices. Agree delivery schedules and volumes early, reduce unnecessary packaging and use reusable transport crates where feasible. Identify backup suppliers and establish quality checks so that sustainability commitments remain realistic during demand peaks.

7. Protect employee wellbeing and service consistency. Prepare rotas early, brief temporary staff, provide clear waste and energy procedures and appoint a supervisor for each operational area. Schedule breaks and provide a simple route for staff to report shortages, equipment faults or unsafe practices. Employee feedback should be reviewed alongside guest feedback.

8. Communicate simply with guests. Use concise menu descriptions, clear recycling points and friendly prompts about portion choice and leftovers. Explain the reason for linen options and local sourcing. Avoid guilt-based messages or exaggerated environmental claims. Provide accessible alternatives for guests with disabilities, dietary requirements or language needs.

9. Work with the destination. Coordinate with waste contractors, local food redistribution organisations, public transport providers and destination-management bodies. Share forecasts where appropriate and support visitor information that encourages public transport, respectful behaviour and visits beyond the busiest locations.

10. Review performance after the season. Compare results with the previous Christmas and with the business's baseline. Evaluate waste, energy, water, procurement, guest satisfaction, complaints and employee feedback. Record what worked, what failed and what should be changed before the next festive season.

7. Conclusion

Christmas brings valuable opportunities for tourism and hospitality businesses, but it also intensifies pressure on resources, suppliers, employees and local infrastructure. The report has shown that sustainable operations are not incompatible with a high-quality festive experience. Food waste can be reduced through better forecasting, smaller batches and flexible portions. Energy can be managed through efficient equipment and occupancy-based controls. Water can be conserved through maintenance and efficient laundry without compromising hygiene. Sustainable sourcing can support local value when it is planned around reliable suppliers and clear standards.

The evidence also shows why the issue requires care. Festive consumers may value abundance, and seasonal demand can be difficult to predict precisely. WRAP's 2026 household findings

illustrate this tension, while UNEP, GSTC, OECD and UN Tourism provide broader frameworks for measurement and seasonal management. These sources do not provide a direct measurement of Christmas hotel performance, so each business must collect its own operational data.

The main conclusion is that sustainability should be integrated into the quality system rather than added as a separate festive campaign. A successful approach protects guest comfort, food safety, choice and service while reducing avoidable environmental impacts and treating employees and suppliers fairly. Businesses that plan early, measure honestly and learn after each season can make Christmas both memorable and more responsible.

References

European Commission. (2025, July 16). Communication toolkit: Sustainable tourism. https://transport.ec.europa.eu/tourism/communication-toolkit_en

Global Sustainable Tourism Council. (2022). GSTC industry criteria for hotels. https://www.gstcouncil.org/wp-content/uploads/GSTC-Industry-Criteria-for-Hotels-2022.pdf

Organisation for Economic Co-operation and Development. (2026). Tourism trends, performance and outlook: OECD tourism trends and policies 2026. https://www.oecd.org/en/publications/oecd-tourism-trends-and-policies-2026_3fd3cd75-en/full-report/tourism-trends-performance-and-outlook_e87d10cf.html

United Nations Environment Programme. (2024). Food waste index report 2024. https://wedocs.unep.org/handle/20.500.11822/45230

UN Tourism. (n.d.). Tourism seasonality. https://www.untourism.int/sustainable-development/unwto-international-network-of-sustainable-tourism-observatories/tools-tourism-seasonality

WRAP. (2026, November). The festive food opportunity: Helping households make their feast go further. https://publications.wrap.ngo/2026-11/festive-food-opportunity-2026/

Appendix A. Suggested Christmas performance dashboard

- Food waste: kilograms per service and grams per meal cover, split by preparation, spoilage, buffet and plate waste.
- Energy: kWh per occupied room and per event guest; record heating and lighting anomalies.
- Water: litres per guest night and per meal cover, with local water-stress context.
- Procurement: percentage of spend on seasonal/local/certified products; packaging and supplier delivery reliability.
- Quality: guest satisfaction, complaint themes, food availability, cleanliness and service waiting times.
- Workforce: staff hours, overtime, training completion, absence and employee feedback.

Appendix B. Seasonal implementation timeline

- 8–12 weeks before Christmas: review previous-year data, forecast demand, agree supplier volumes, check maintenance and confirm waste collection arrangements.
- 4–8 weeks before Christmas: finalise menus, train permanent and temporary staff, test energy controls and confirm redistribution partners.
- During the season: update forecasts daily, weigh waste after each service, check resource dashboards and collect guest and staff feedback.
- Within 4 weeks after the season: analyse results, compare quality and sustainability indicators, document lessons and set next-year targets.

Appendix C. Evidence limitations

- WRAP (2026) reports UK household attitudes and self-estimated food waste, not measured waste from hotels or restaurants. OECD (2026) reports broader tourism seasonality rather than Christmas-only figures. These sources are used to explain context and consumer pressures, not to claim direct hotel-level outcomes. Businesses should establish their own baselines and report their methods.