УДК 745.9

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SUSTAINABLE FLORAL DESIGN: REDUCING ENVIRONMENTAL IMPACT IN EVENTS AND EVERYDAY LIFE

Annotation: Floral design plays an essential role in both everyday aesthetics and large-scale event experiences. However, traditional floristry practices often involve significant environmental costs, including the use of non-biodegradable materials, imported flowers, and chemical preservatives. This article explores the evolution of sustainable floral design as a response to growing ecological concerns. Drawing on professional experience and current global practices, the study examines alternative materials, methods, and ethical approaches that reduce waste and carbon emissions. The article emphasizes how florists can act as agents of change by adopting eco-conscious practices and promoting sustainability within the floral industry. As global awareness of sustainability grows, demand for eco-friendly floral services is rapidly increasing.

Keywords: sustainable floristry, event design, eco-friendly materials, floral foam alternatives, local flowers, circular design, environmental responsibility

Introduction

In recent years, the floral design industry has faced increasing scrutiny over its environmental impact. From wedding installations and corporate events to everyday bouquets, traditional floral practices often rely on imported flowers, chemical treatments, and single-use plastics. These approaches, while visually stunning, contribute to significant waste generation, carbon emissions, and pollution. As awareness of climate change and ecological degradation grows, both

florists and clients are rethinking the way flowers are sourced, arranged, and disposed of.

Sustainable floral design emerges not only as an ethical response to environmental challenges, but also as a creative opportunity to rethink aesthetics and materials in harmony with nature. It invites a shift in mindset — from disposable beauty to mindful artistry. By integrating sustainable strategies into their practice, florists can reduce harm to the planet while offering clients meaningful, modern, and responsible floral experiences.

This article explores the key environmental issues in traditional floristry and highlights practical, forward-thinking alternatives. Based on professional experience and industry research, it examines how design choices — from flower sourcing to construction techniques — can align with ecological values without sacrificing artistic integrity.

Methods

This study employed the following methods:

- Literature review: Analysis of contemporary scientific and professional literature on sustainable floristry, eco-friendly materials, and industry practices.
- Comparative analysis: Evaluation of traditional versus sustainable techniques based on personal experience as a floral designer in the United States (Miami and New York).
- Qualitative observation and case studies: Regular discussions with fellow florists from various regions (including California), sharing experiences at professional events and within online communities.
- Practical assessment: Implementation and evaluation of sustainable methods in personal projects-such as eliminating floral foam, using sphagnum

moss and chicken wire, and prioritizing reusable and natural materials-along with feedback from clients and colleagues.

These methods made it possible to identify the real-world challenges and opportunities for transitioning to sustainable floristry in the U.S. market, as well as to assess the influence of the professional community on the adoption of eco-friendly practices.

1. Environmental Challenges in the Floral Industry

The floral industry, while dedicated to creating beauty, has historically relied on materials and practices that harm the environment. As sustainability becomes a global priority, florists must confront the less visible consequences of their work. This section outlines the main environmental challenges in traditional floristry, focusing on chemical use, plastic waste, and carbon emissions — three key areas where change is urgently needed.

1.1. Chemical Use and Soil Degradation

Cut flowers are among the most chemically treated agricultural products in the world. In order to survive long shipping times and remain visually appealing, flowers are often sprayed with a cocktail of pesticides, fungicides, and preservatives — many of which are banned for use on food crops due to their toxicity (Stewart, 2007).

For instance, flowers imported from Colombia or Ecuador are treated with methyl bromide, a known ozone-depleting substance. These chemicals not only harm the health of workers who apply them (many of whom are women in vulnerable communities), but also lead to soil degradation and water contamination in the regions where flowers are grown (Pimentel, 2005).

Even after arrival, chemically treated flowers can still emit volatile organic compounds (VOCs), potentially affecting indoor air quality — a largely overlooked issue in event spaces and homes.

1.2. The Problem with Floral Foam

One of the most widely used tools in floral design is floral foam, also known by the brand name “Oasis.” While convenient and effective in holding stems in place, floral foam is a petroleum-based plastic product that breaks down into microplastics. These microplastics can enter waterways during disposal and are nearly impossible to remove from the environment (RHS, 2020).

Additionally, floral foam is non-biodegradable and cannot be composted, meaning it contributes directly to landfill waste. According to a 2019 study published by the Royal Horticultural Society, a single floral installation can produce several pounds of non-recyclable waste solely from floral foam.

Despite increasing awareness, floral foam remains in widespread use, especially in large-scale event design where structural support is crucial. Florists must now weigh aesthetic ambition against ecological responsibility and explore viable alternatives.

1.3. Global Sourcing and Carbon Footprint

Another major environmental concern in floristry is the carbon footprint associated with flower transportation. The vast majority of flowers used in the United States are flown in from overseas — particularly from the Netherlands, Kenya, Ecuador, and Colombia — via refrigerated cargo planes. After air travel, flowers are transported by truck to distribution centers and then on to retailers, wedding planners, and florists (Rabobank, 2018).

This complex logistics chain significantly contributes to greenhouse gas emissions. A single Valentine’s Day shipment of roses from Colombia to the U.S. produces approximately 360,000 metric tons of CO_2, according to data from the International Council on Clean Transportation.

Local alternatives do exist, but often lack the same year-round availability and volume as international imports. As a result, many florists struggle to balance client expectations with the limitations of seasonal, regional agriculture.

1.4. Event Waste and Short Lifespan

Event florals — particularly for weddings, galas, and corporate events — are typically created for single-day use and then discarded. Even when biodegradable flowers are used, the surrounding materials (ribbons, foam, plastic wraps, etc.) often prevent composting or reuse.

It's estimated that the wedding industry in the U.S. alone produces over 1 billion pounds of garbage each year, with floral arrangements accounting for a large portion of this waste (Green Bride Guide, 2010). Without a plan for post-event donation or recycling, florals that could otherwise decompose naturally end up in landfills.

2. Approaches to Sustainable Floral Design

As awareness of environmental issues grows, florists and event designers are rethinking traditional methods and materials. Sustainable floral design isn't just a trend — it's a necessary response to a changing climate and the urgent need to reduce waste. Below are some of the most impactful strategies for making floral work more sustainable, both in everyday arrangements and large-scale installations.

2.1. Choosing Local and Seasonal Flowers

While the idea of sourcing local and seasonal flowers is central to sustainable floral design, the reality of accessing such blooms can vary greatly depending on geography, infrastructure, and climate. In theory, local flowers reduce transportation emissions, support small farms, and require fewer preservatives. However, in practice, this approach presents unique challenges — particularly in places like Florida.

In Miami, where I am currently based, growing flowers locally on a sustainable scale is difficult. There is limited governmental support for small-scale flower farming, and access to land is expensive. As a result, the few locally grown flowers available are often more costly than imported ones — including those flown in from Europe or South America. Local stems also tend to be in short supply, unable to meet the demands of full-scale event design.

By contrast, during my time living and working in New York, local flowers were a joy to work with — but only seasonally. In spring, summer, and early fall, we had access to incredible blooms like spirea, lilac, and peonies that were both affordable and of outstanding quality. We would order directly from growers and look forward to the start of the growing season. These stems were often more beautiful and long-lasting than their imported counterparts.

2.2 Eliminating Floral Foam and Embracing Sustainable Mechanics

Floral foam, available under various brands and in multiple forms (wet, dry, specialty), has long been a staple in the floral industry due to its convenience and ability to support intricate designs. The most widely recognized brand is Oasis, but the environmental concerns-such as non-biodegradability, microplastic pollution, and landfill accumulation apply to all floral foam products, regardless of manufacturer.

As awareness of these issues grows, florists are increasingly turning to sustainable alternatives for both everyday arrangements and large-scale event installations. Among professional mechanics, kenzan (also known as a pin frog) stands out for its precision and reusability. Originating from the Japanese art of Ikebana, the kenzan is a heavy metal base with sharp pins that securely hold stems in place. It is especially valued for bouquets and smaller arrangements where stability and control are essential.

For larger designs, chicken wire has become the most popular and versatile alternative. This flexible, reusable mesh allows florists to create stable structures for a wide variety of arrangements without generating synthetic waste. Its adaptability makes it suitable for both everyday floristry and event work.

Natural materials such as twigs, branches, vines, and moss are also gaining popularity as sustainable mechanics. These elements can be used to build organic frameworks that support stems, while compostable holders and moss-wrapped bases further reduce environmental impact and align with circular design principles.

In my own practice, I have fully eliminated floral foam from everyday floral work, opting instead for chicken wire or arranging flowers directly in vases without any internal mechanics. For bouquets and compact designs, I frequently use kenzan, appreciating its durability and professional precision. In event design, especially for table centerpieces, I have nearly phased out floral foam altogether. While completely eliminating foam from large-scale installations in Miami's climate remains a challenge, I am actively pursuing sustainable solutions that will allow for a full transition in the future.

2.3 Sustainable Packaging and Reusable Materials

Packaging is a significant yet often overlooked source of waste in the floral industry. Traditional practices rely heavily on single-use plastics, synthetic ribbons, cellophane wraps, and non-recyclable containers — all of which contribute to landfill accumulation and environmental pollution. Transitioning to sustainable packaging not only reduces waste but also enhances the overall aesthetic and ethical value of floral arrangements.

Sustainable alternatives include:

- Natural fiber ribbons: Cotton, linen, jute, hemp, and occasionally silk provide biodegradable solutions for tying bouquets and decorating arrangements.

- Twine and raffia: These simple materials support rustic and minimalist styles, while aligning with eco-conscious values.
- Reusable containers: Glass, ceramic, and metal vases can be collected, sanitized, and reused for future orders or rentals. Even plastic tubes — commonly used for orchids and anthuriums — can be cleaned and repurposed as water sources in large-scale installations.
- Recycled and recyclable vessels: Containers made from recycled glass or plastic, as well as compostable pots, help close the loop on material use.
- Eco-friendly wrapping: Kraft paper, recyclable or compostable paper, and fabric wraps inspired by the Japanese furoshiki technique are elegant, reusable alternatives to plastic or foil.

The trend of encouraging clients to return containers and packaging for reuse is gaining traction among leading florists in the United States. This practice not only reduces waste but also fosters a sense of shared responsibility between florists and clients, further supporting the transition to a circular economy within the floral industry.

2.4. Reducing Waste and Repurposing Flowers

Floral waste is one of the most persistent environmental challenges in the industry, particularly in the context of events where large-scale arrangements are used only briefly. By the end of a celebration, hundreds of blooms may be discarded despite being in excellent condition. Implementing systems for repurposing or donating these flowers extends their life and reduces unnecessary landfill contribution.

One of the most effective strategies is encouraging clients to take arrangements home after an event. This practice not only minimizes waste but also leaves guests with a lasting, tangible memory.

In cases where reuse by guests isn't possible, donation is a powerful alternative. Flowers can be delivered to hospitals, hospices, care homes, or community centers, offering a meaningful second life while brightening someone else's day.

In the United States, several non-profit organizations such as Repeat Roses and Random Acts of Flowers specialize in collecting event flowers and redistributing them to hospitals, care facilities, and community centers. Partnering with such organizations can help florists maximize the positive impact of their work and ensure that arrangements bring joy to as many people as possible.

Reducing waste also includes rethinking how leftover materials - such as stems, and leaves - are sorted and composted. Creating a designated composting system or partnering with local composting initiatives can further minimize environmental impact.

By integrating repurposing and donation into floral design planning, florists not only reduce waste but also foster a culture of sustainability, compassion, and community engagement.

Results

The research and implementation of sustainable practices yielded the following results:

- Gradual elimination of floral foam proved feasible even for complex arrangements. For example, in a recent event, sphagnum moss and chicken wire were used to provide stability and reduce plastic waste.
- In regions with a strong local flower market (such as California and New York), there is a widespread shift among florists toward seasonal, locally grown flowers, which reduces carbon footprint and supports local growers.

- Even partial adoption of sustainable solutions-such as minimizing plastic packaging and reusing containers leads to waste reduction and is positively received by clients.
- Active discussion of eco-friendly methods among florists accelerates the spread of sustainable practices within the professional community.
- Main barriers include limited availability of local flowers in some regions and insufficient client awareness regarding the benefits of sustainable floristry.

Thus, even gradual integration of eco-friendly methods into everyday floral practice leads to a noticeable reduction in environmental impact and helps set a new standard in the industry.

Conclusion

A responsible approach in floral design isn't just a trend — it's a way to create beauty with greater awareness and care for the world around us. For me as a florist, it's become part of my philosophy: not only to think about the shape of a bouquet, but also about the trace it leaves behind.

It's not always easy — sourcing local flowers can be a challenge, and clients don't always embrace the idea of reusing materials or changing traditions. But with each project, each conversation, each bouquet, we help shift the perception of floristry — making it not only beautiful, but also honest.

Sustainability isn't the end of creativity. It's what makes it deeper, more thoughtful, and more real.

Continued innovation and collaboration within the floral industry will be essential for scaling sustainable practices and inspiring the next generation of florists.

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