



INTERNATIONAL JOURNAL OF TRENDS IN EMERGING RESEARCH AND DEVELOPMENT

Volume 3; Issue 3; 2025; Page No. 09-11

Received: 17-02-2025
Accepted: 29-03-2025

Aquatic Restaurant

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DOI: <https://doi.org/10.5281/zenodo.15731131>

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Abstract

Restaurants today are more than just spaces to dine - they offer immersive experiences that engage all the senses. This paper explores the concept of an Aquatic Restaurant, a design typology that draws inspiration from underwater environments to create a calming, immersive, and luxurious space. Combining biophilic principles, sensory-responsive design, and spatial innovation, this concept goes beyond aesthetics, offering therapeutic engagement, visual delight, and environmental connectivity. The paper outlines the spatial program, design methodology, case studies, and technical challenges involved in developing such an experience-driven restaurant.

Keywords: Aquatic, Restaurant, engage, underwater environments, sensory-responsive

Introduction

In recent years, there has been a shift in the hospitality industry toward experiential dining. Customers seek unique and memorable environments that extend beyond food. Among the most intriguing concepts is the aquatic restaurant - a space that incorporates water elements, marine aesthetics, and underwater experiences into its architectural and interior framework. Rooted in biophilic design principles, aquatic-themed spaces naturally promote calmness, reduce stress, and increase emotional well-being. This paper focuses on designing a themed resto-bar with aquatic elements both in spatial layout and ambiance.



Objectives

- To explore the role of immersive aquatic design in enhancing user experience.
- To study the psychological effects of underwater environments on diners.
- To design a spatially dynamic and therapeutic resto-bar using aquatic themes.
- To integrate modular and sustainable materials in an innovative layout.
- To balance aesthetic appeal with acoustical, lighting, and maintenance needs.

Materials and Methods

The design methodology includes

- Literature Review: Study of biophilic and underwater architecture.
- Case Study: Analysis of existing aquatic-themed restaurants (e.g., Ithaa, Maldives).
- Concept Development: Theme selection and narrative design.
- Zoning & Spatial Planning: Bubble diagrams, circulation, zoning.
- Material & Mood Boards: Visualization through

- sketches and software.
- Software Tools Used: AutoCAD, SketchUp, Enscape, and V-Ray.



Design Concept: Aquatic Tranquility

The restaurant is themed around Aquatic Tranquility, emphasizing fluidity, transparency, and a connection to marine life. The concept breaks the boundary between land and sea by using immersive elements:

- Aquarium walls
- Underwater tunnel dining zones
- Reflective pools and water features
- Jellyfish-inspired ceiling lights
- Ripple-effect flooring patterns

The zoning separates the space into

1. Entrance & Waiting Lounge
2. Main Dining Area (with aquarium walls)
3. Aquatic Tunnel Zone (immersive dining experience)
4. Central Water Feature with Seating Islands
5. Bar and Lounge with Fluidic Ceiling Forms
6. Restrooms and Service Areas

Sustainability and Technology

- **Water Recycling System:** Aquarium water treated and reused for plant hydration.
- **Smart Lighting:** Adjustable to time of day and crowd density.
- **Eco-Materials:** Use of non-toxic resins, recycled glass, low-VOC finishes.
- **Solar Panels:** Power partial lighting and filtration units.



Design Features and Considerations

a. Biophilic Integration

Natural elements like water bodies, ambient lighting, and

marine visuals reduce anxiety and create positive emotional responses.

b. Lighting and Ambiance

LED programmable lighting simulates underwater hues - blues, greens, and corals. Glowing orbs and reflective ceiling panels enhance the immersive mood.

c. Material Selection

- Water-resistant and easy-to-clean materials: tempered glass, marine-grade steel, anti-slip ceramic tiles.
- Organic textures like shells, pebbles, and sustainable timber are integrated subtly.

d. Acoustic Design

Soft soundproofing, concealed acoustic panels, and water features manage ambient noise for a peaceful environment.

e. Safety & Maintenance

Glass tanks and water installations are designed with safety valves, filtration systems, and anti-leak tech. Emergency lighting and waterproofing are integrated in hidden areas.



Case Studies

1. Ithaa Undersea Restaurant, Maldives
 - Located 5 meters below sea level.
 - Offers 270-degree views of marine life through acrylic windows.
 - Fully submerged dining space with controlled air pressure and lighting.
2. Aquarium Restaurant, Nashville, USA
 - Built around a 200,000-gallon tank.
 - Uses dim lighting and LED coral replicas for an undersea vibe.
 - Educational and experiential dining for families.
3. Ocean Restaurant by Cat Cora, Singapore
 - Offers marine views inside S.E.A. Aquarium.
 - Blends luxury fine dining with marine conservation awareness.

Key Takeaways

- Seamless integration of marine visuals boosts appeal.
- Engineering coordination is critical for safety.
- Lighting and ambiance define emotional experience.

Table 1: Challenges and Solutions

Challenge	Solution
Aquarium maintenance	Use automated filtration and professional upkeep
Humidity control	Install industrial-grade HVAC and dehumidifiers
Slippery surfaces	Use anti-skid marine flooring materials
Sound echo	Acoustic ceiling panels, underwater ambiance audio

Results and Discussion

The aquatic restaurant concept merges experiential design with wellness. Customers are likely to spend more time in spaces where they feel emotionally and visually engaged. A survey conducted on restaurant ambiance showed that 82% of respondents preferred environments with natural elements and calming colors. Moreover, integrating sensory design improves accessibility for neurodiverse individuals, making it an inclusive space.

Zoning and Spatial Planning

1. **Entry Tunnel:** Curved glass tunnel with aquatic projections and ambient underwater sounds.
2. **Main Dining Area:** Aquarium walls, interactive lighting floor, wavy ceiling panels mimicking ocean currents.
3. **Bar Zone:** Submerged effect with glowing resin counters, hanging bubble lights, jellyfish-like ceiling fixtures.
4. **VIP Pods / Cabins:** Semi-private dining domes with digital marine projections, temperature control, and personalized lighting.
5. **Restrooms:** Inspired by sea caves, with mirrored coral-like lighting and ocean sound diffusion.
6. **Service and Kitchen:** Back-end planned with efficiency, waterproofing, and odor control in mind.

Conclusion

An aquatic-themed resto-bar is not just a visual treat but a psychological escape into a world of serenity and luxury. Through thoughtful zoning, sensory balance, sustainable material use, and immersive narratives, the aquatic restaurant concept meets both functional and emotional needs. With growing interest in experiential spaces, such concepts have strong potential in urban hospitality and tourism sectors.

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