WATER MEMORY: Mapping the Cultural & Environmental Heritage of Venice

Introduction

Water Memory Venice is a digital-heritage project that explores how the identity of Venice has been shaped by water, memory, and urban transformation. Built around a **custom set of 30 historically significant points** across the city, the project re-imagines Venice through the lenses of cultural memory, mobility, environmental change, and human experience. Each point represents a different layer of Venice's past—ranging from maritime trade and migration to spiritual life, architecture, social rituals, and intangible heritage.

This prototype was developed with the goal of creating an accessible, narrative-driven platform that connects **geography, history, and digital storytelling**. The project is intentionally designed to be **expandable**, allowing new stories, routes, datasets, and multimedia layers to be added over time.

UNESCO Water Memory Alignment

The project conceptually aligns with UNESCO's broader efforts to document and preserve **water-related cultural heritage**, including lagoon ecosystems, maritime traditions, and historical water infrastructures.
Through its interactive map and narrative layers, Water Memory Venice aims to:

- Highlight the city's evolving relationship with water
- Preserve local memory and intangible heritage
- Support sustainable heritage interpretation
- Demonstrate how digital tools can bridge research, storytelling, and public engagement

This alignment positions the project as a strong candidate for future collaboration, academic research, and institutional partnerships.

What Makes This Project Unique

✔ 30 Custom-Curated Cultural Points

Each selected point is based on thematic relevance—not tourism clichés—making the map an interpretative tool rather than a simple guide.

✔ Interdisciplinary Digital-Humanities Approach

The project integrates mapping, heritage studies, history, environmental humanities, and lightweight software development.

✔ Narrative-Driven Architecture

Every location can host an expandable narrative format:

- short text
- archival references
- images
- AI-enhanced audio narration (planned)
- thematic routes (trade, migration, rituals, architecture, lagoon ecology)

✔ Designed for Future Growth

This is a scalable prototype: additional layers—oral history, TEI/XML archival encoding, environmental datasets, or multimedia storytelling—can be integrated at any stage.

4. Vision

Water Memory Venice aims to evolve into a **public-facing digital atlas** where local memory, historical research, and technological interpretation converge. Its long-term goal is to offer a meaningful digital experience that enables users to navigate Venice not only spatially, but emotionally—through stories shaped by water.

- To visualize how water shaped urban life, social relations, trade, and cross-cultural encounters.
- To provide an educational tool for cultural institutions, researchers, and the public.

Key Features of the Project

✔ Interactive Map (Leaflet.js)

- Historical canal routes
- Freshwater wells and fountains (pozzi)
- Lagoon navigation paths
- Port infrastructure (Rialto, Arsenale, San Marco basin)

✔ Archival Integration (TEI/XML)

- Metadata for historical documents
- Links to specific archival items
- Encoded descriptions of water-related structures

✔ Storytelling & Narratives

- "A Day on the Lagoon in the 1500s"
- "Venice's Wells and Water Scarcity"
- "Ottoman Merchants in the Grand Canal"
- "Environmental Memory: High-tide histories (Acqua Alta)"

Data Sources

- **Archivio di Stato di Venezia** (public descriptions, notarial entries, maps)
- **Open historical maps** (Wikimedia Commons / GeoTIFF)
- **Scientific publications** on Venetian hydrology
- **Public datasets** from the Venice Municipality (open data)
- **Historical literature & traveler accounts**

No copyrighted images or restricted documents are used.
Only public-domain or open-access materials are referenced.

Methodology

(1) Archival Reading

Identification of historical water-related documents:

- Notarial texts
- Port records
- Maps
- Engineering plans
- Travel diaries

(2) TEI/XML Encoding

- Encoding person-place links (e.g., merchants, wells, markets)
- Georeferencing archival mentions
- Structuring metadata for digital use

(3) GIS + Mapping

- Plotting canals, wells, lagoon routes
- Historical layers vs. modern geography
- Creating interactive markers and pop-ups

(4) Web Visualisation

- Leaflet.js for interactive map
- Timeline.js or flowmaps for historical flow visualisations

Target Audience

- Digital heritage researchers
- Cultural institutions
- Environmental historians
- Students of DH, archaeology, architecture
- Public audiences interested in Venice

Technology Stack

- **HTML / CSS / JavaScript**
- **Leaflet.js** (interactive mapping)
- **GeoJSON** (spatial data)
- **TEI/XML** (text encoding)
- **GitHub Pages** (hosting)

Why This Project Matters

- Venice is a city where water is not only infrastructure — it is **memory**.
- The project preserves endangered heritage in accessible digital formats.
- Strengthens cultural-environmental awareness (Acqua Alta, lagoon threats).
- Serves as a model for other Mediterranean "water memory" projects.

Planned Extensions (Future Work)

- Ottoman–Venetian maritime route visualisation
- Multilingual narrative interface (EN-IT-TR)
- Integration with StoryMapJS
- Collaboration with archives & universities
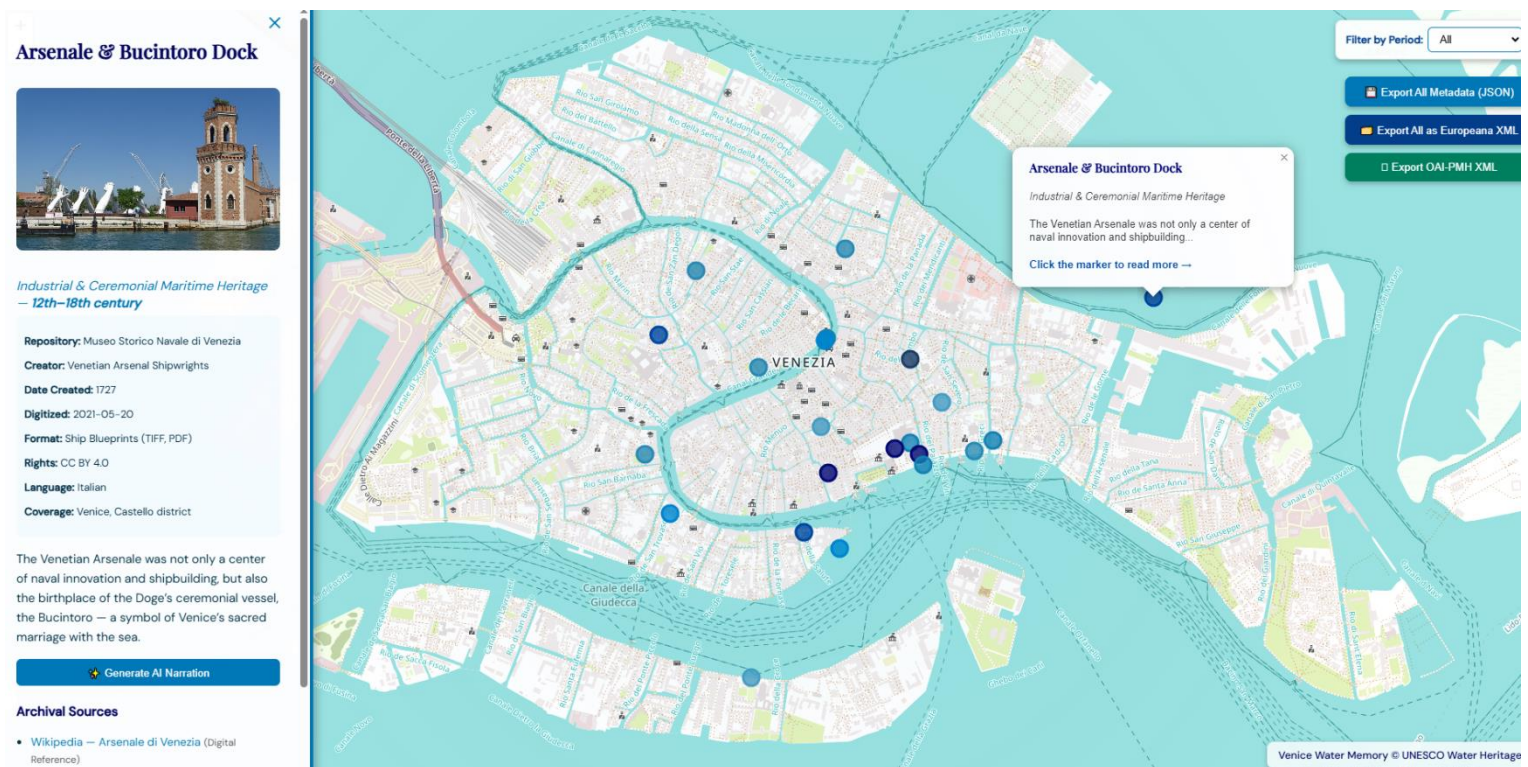- VR/AR prototypes (optional future phase)

Contact & Author

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IMAGES FROM THE PROJECT:

San Zaccaria Flooded Crypt
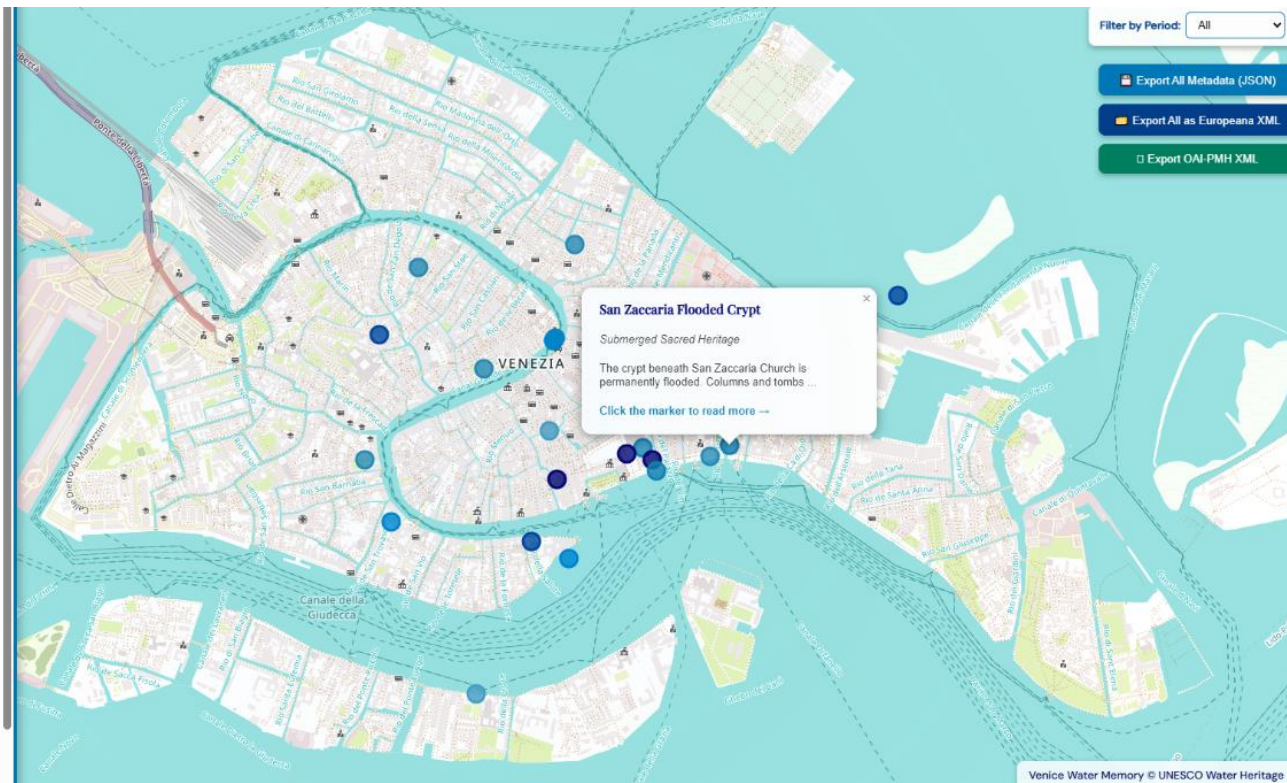

Submerged Sacred Heritage — 15th century

Repository: Parrocchia di San Zaccaria Archive

Creator: Antonio Gambello & Mauro Codussi

Date Created: 1458–1515

Digitized: 2021-06-12

Format: Architectural Photos (JPEG)

Rights: CC BY 4.0

Language: Italian

Coverage: Venice, Castello

The crypt beneath San Zaccaria Church is permanently flooded. Columns and tombs are reflected in water, blending sacred architecture with lagoon tides in a haunting scene.

[✦ Generate AI Narration]

Archival Sources

- Atlas Obscura — The Flooded Crypt of San Zaccaria (Visual & Contextual Record)
- Chorus Venezia — Museum and Crypt of San

Filter by Period: [All]

[🔖 Export All Metadata (JSON)]

[📧 Export All as Europeana XML]

[⬜ Export OAI-PMH XML]

San Zaccaria Flooded Crypt ✕

Submerged Sacred Heritage

The crypt beneath San Zaccaria Church is permanently flooded. Columns and tombs ...

Click the marker to read more →

VENEZIA

Canale della Giudecca

Venice Water Memory © UNESCO Water Heritage

Punta della Dogana

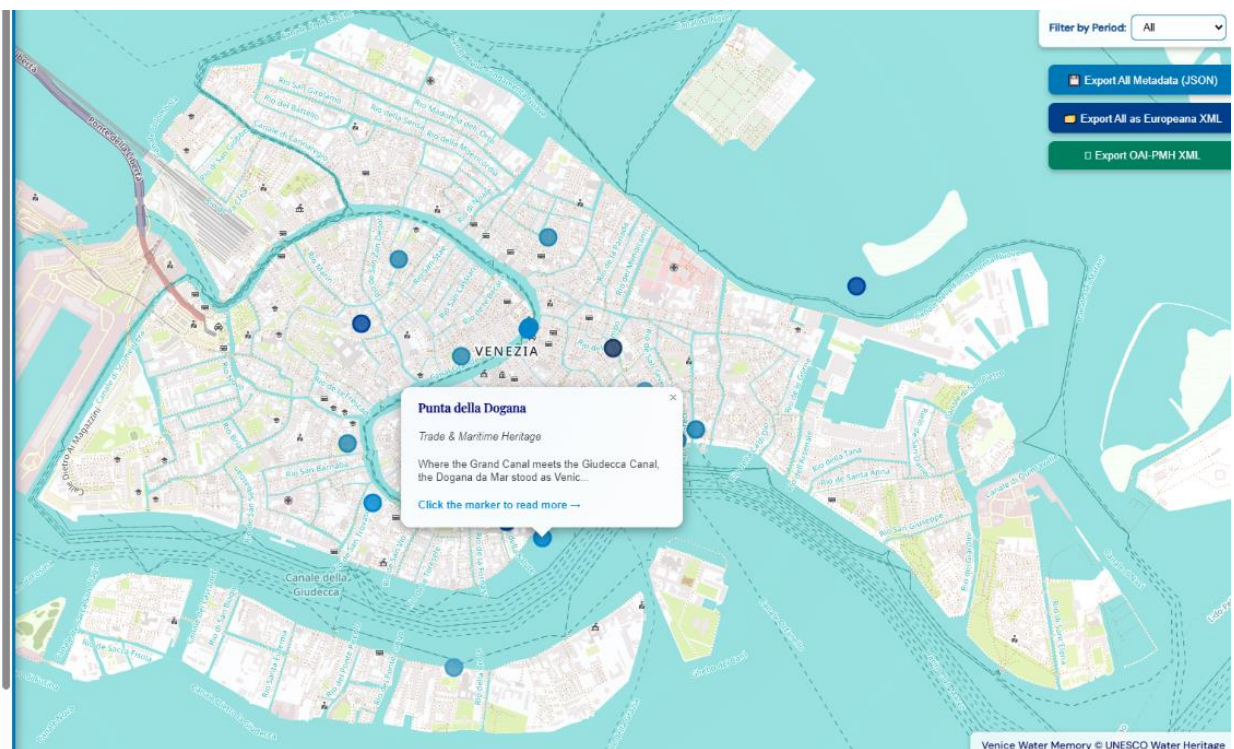*Trade & Maritime Heritage — 15th–19th century*

Repository: Archivio di Stato di Venezia

Creator: Venetian Republic Customs Office

Date Created: 1677

Digitized: 2021-06-08

Format: Tax Registers (PDF)

Rights: Public Domain

Language: Italian

Coverage: Venice, Dorsoduro

Where the Grand Canal meets the Giudecca Canal, the Dogana da Mar stood as Venice's maritime customs point. Here, incoming ships were inspected, taxed, and recorded in water-bound ledgers.

[✦ Generate AI Narration]

Archival Sources

- Wikipedia — Punta della Dogana (Digital Reference)

Filter by Period: [All]

[🔖 Export All Metadata (JSON)]

[📧 Export All as Europeana XML]

[⬜ Export OAI-PMH XML]

VENEZIA

Punta della Dogana ✕

Trade & Maritime Heritage

Where the Grand Canal meets the Giudecca Canal, the Dogana da Mar stood as Venic...

Click the marker to read more →

Canale della Giudecca

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