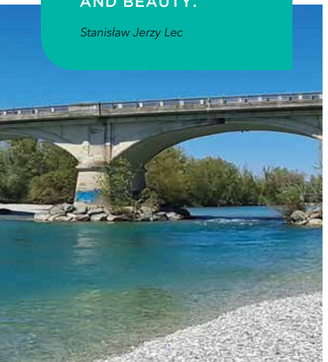
Beyond its upper course-where it flows torrentially through the extraordinary landscape of the Trenta Valley with its bends, ravines, gorges, and waterfalls — the riverbed widens past Bovec into its middle course. In its lower stretch, the river reveals its full majesty, displaying its distinctive emerald-green waters. After entering Italian territory at Gorizia, the river's influence becomes so profound that it gives its name to the surrounding area: the Isontino. Finally, the river shapes the natural landscape, winding through lush vegetation and creating graceful meandering bends before flowing into the sea.

> EVERY BRIDGE SHOULD UNITE TWO SHORES. USEFULNESS AND BEAUTY.
>
> *Stanisław Jerzy Lec*



Like all rivers, the Isonzo-Soča creates a natural divide in the territory. Over the centuries, people have connected its banks by building bridges, combining artistry and engineering ingenuity. This exhibition showcases these bridges — presenting their history, construction techniques, materials, and future prospects. It takes visitors on a journey through the territory nourished by this river, revealing its rich social, political, and cultural heritage.
The exhibition traces recurring cycles of destruction and renewal — from the barbarian invasions to the devastating World Wars — as repeated conflicts led to these bridges being demolished and rebuilt.

CONSIGLIO NAZIONALE DEGLI INGEGNERI

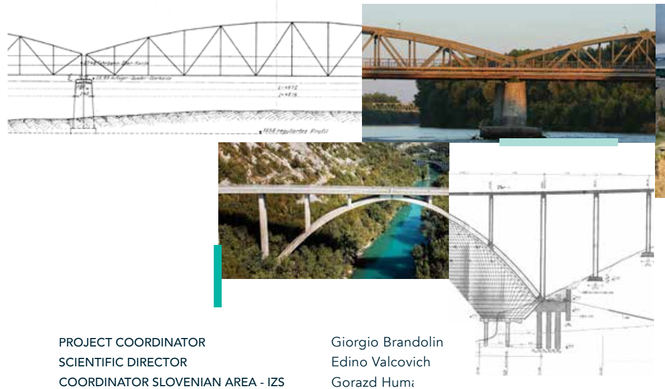
REGIONE AUTONOMA FRIULI VENEZIA GIULIA

IO SONO FRIULI VENEZIA GIULIA

COMUNE DI GORIZIA

MESTNA OBČINA NOVA GORICA

GO! 2025 NOVA GORICA GORIZIA



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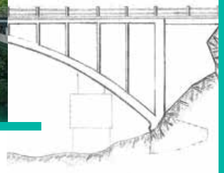
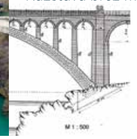
Una mostra senza confini



Razstava brez meja



THE ISONZO RIVER AND ITS BRIDGES

History, engineering, architecture, environment, landscape

ORDINE DEGLI INGEGNERI PROVINCIA DI GORIZIA

IZS

A story,
that of bridges,
that needs
to be told
through the eyes
of engineers,
those men and women
whose task it is
to design them,
adapt them to new needs,
repair them and,
when necessary,
tell their story.

> OF EVERYTHING
> THAT MAN ERECTS
> AND BUILDS
> IN HIS URGE FOR LIVING
> NOTHING IS IN MY EYES
> MORE VALUABLE
> THAN BRIDGES.
> THEY ARE MORE IMPORTANT
> THAN HOUSES,
> MORE SACRED
> THAN SHRINES.
> AND THEY DO NOT SERVE
> FOR ANYTHING SECRET
> OR BAD.
>
> *Ivo Andrić*

THE ISONZO RIVER
AND ITS BRIDGES

History, engineering, architecture, environment, landscape

The Isonzo-Soča River stretches some 136 kilometres from its source in Slovenia's Trenta Valley — winding through nearly 100 kilometres of Slovenian territory before continuing its journey across 40 kilometres of Italian territory — until it flows into the Gulf of Trieste. Along its course, the river passes through Bovec, Kobarid, Tolmin, Solkan, Nova Gorica, Gorizia, Gradisca, Sagrado, Fogliano, San Pier d'Isonzo, Fiumicello, San Canzian d'Isonzo and Staranzano.

SLOVENIA

1. Beruna Bridge
2. Napoleon Bridge
3. Most na Soči Bridge
4. Ajba Rail Bridge
5. Kanal Bridge
6. Deskle Road Bridge
7. Solkan Railway Bridge
8. Osimo Road Bridge
9. Solkan Footbridge

ITALIA

10. Piuma Bridge
11. Piedimonte Footbridge
12. Gorizia Railway Bridge
13. Ponte 9 Agosto Bridge
14. SR117 Regional Road Bridge
15. Villesse-Gorizia Motorway Bridge (A34)
16. Mainizza Roman Bridge
17. Gradisca Poggio III Armata Single-Lane Bridge
18. Sagrado Bridge
19. Sagrado Railway Bridge
20. Palmanova-Trieste Motorway Bridge (A4)
21. Pieris Railway Bridge
22. Pieris SS14 State Road Bridge
23. Monfalcone-Grado Regional Road Bridge

THE ISONZO POLISHED ME
IN ITS CURRENT
LIKE ONE OF ITS OWN
STONES

I HOISTED MYSELF
UP AND WENT
LIKE AN ACROBAT
OVER THE WATER

I SQUATTED DOWN
NEAR MY CLOTHES
FOUL WITH WAR
AND LIKE A BEDOUIN
BOWED DOWN TO RECEIVE
THE SUN

THIS IS THE ISONZO
AND HERE I HAVE
BEST KNOWN MYSELF TO BE
AN OBEDIENT NERVE
OF THE UNIVERSE

From "Rivers" by Giuseppe Ungaretti,
written in Cotici on 16 August 1916
Translated by Patrick Creagh (1930 - 2012)

GLOSSARY

AN EASY-TO-USE REFERENCE TOOL FOR VISITORS

Bridge: An engineered structure composed of a complex combination of interconnected technical elements that joins two riverbanks. Similar structures match bridges in construction complexity but fulfill different functions:

- **Flyovers** which are road passovers that cross other roads
- **Elevated roadways** which pass over parts of urban areas
- **Railway bridges** which enable trains to cross
- **Footbridges** which accommodate pedestrians and cyclists

Bridges can be classified by their primary construction material:

- **Wooden bridges**
- **Stone bridges**
- **Reinforced concrete bridges**
- **Prestressed reinforced concrete bridges**
- **Steel bridges**

Regarding the static structural types, bridges can be classified as:

- **Girder bridges** consisting of one or more beams anchored to support piers
- **Arch bridges** featuring an arch structure that serves as the primary load-bearing element
- **Frame bridges** utilising an articulated system of load-bearing components;
- **Trestle bridges** comprising a main girder supported by two struts
- **Cable-stayed bridges** where stay cables extend from the towers to support the structural deck
- **Suspension bridges** where steel cables form a catenary curve between pylons or towers, supporting the deck with vertical hangers.

Regarding the combination of different structural models:

- **Bridges that integrate arch and beam** where the two elements coexist and work together structurally.

Abutments: Terminal support structures that anchor the bridge's structural elements and direct force loads to the banks.

Arch: a curved structure made of steel, reinforced concrete, wood, or other materials that exerts thrust at its base and anchors firmly to its supports. The deck attaches to the arch at varying heights, creating three distinct types: deck arch bridges, through-arch bridges, and half-through arch bridges.

Beams: longitudinal structural elements made of various materials (wood, steel, reinforced concrete, prestressed concrete) with different construction forms (truss, T-shaped, double-T, etc.) that define their structural behaviour.

Bridge length: the total length of the bridge structure.

Centering: a temporary structure, often of complex construction, that supports a curved load-bearing structure during building. The building materials (stone, bricks, reinforced concrete) rest on this framework until the structure becomes self-supporting.

Chord: the width of an arch at the piers.

Crossbeam: a structural element (beam) set perpendicular to the main beams; it acts as a secondary support structure in a system of longitudinal elements (main beams).

Deck: The horizontal element that forms the bridge's surface, consisting of a structural component (main beam or beams), connecting layers, and surface finish.

Deck span: the total distance between two ground support points of a bridge. This can refer to either the arch chord or the deck span.

Expansion joint: a connecting element between deck sections that allows the structure to expand and contract with temperature changes.

Footbridge: a structure designed exclusively for pedestrian and bicycle traffic.

Foundations: base structures that distribute the bridge's weight to the ground. They can be either direct or indirect (using piles). In suspension bridges, the foundation blocks — also called anchorages — specifically anchor the structural cables to the ground.

Hangers: metal cables that anchor (suspend) the structural deck to the structural cable, thus forming the suspension system.

Piers, Pillars, Pylons: vertical structural elements that support and transfer the bridge load to the foundation system. These elements serve as the bridge's intermediate support structures. They may also be called intermediate bridge structures.

Pier cap: technical element that provides support between the bridge deck and pier/pillar.

Piers: technical elements that connect the deck to the underlying supporting structure.

Rise: the vertical distance between the highest point on the intrados and the chord.

Roadway width: the total width of the bridge deck that encompasses pedestrian walkways, bicycle paths, road shoulders, driving lanes, and safety zones.

Span: the distance between two consecutive piers, which are the points where the loads from the upper structure are transferred to the ground.

Stay cables: Steel cables that extend diagonally from the towers to directly support the bridge deck.

Structural Bearings: devices made of specialised materials and mechanisms that transfer loads between the bridge deck and the pier caps.

Structural cable: A high-strength flexible steel component that serves as the main structural element of a suspension bridge. The cable, supported by towers or pylons, takes a catenary shape when unloaded and shifts to a parabolic form when bearing weight.

Support: elements that restrict the movement or position of a structural element (like a beam) using various types of support (fixed, simple, roller, or pinned).

Towers or Pylons: linear structures with heights proportional to the bridge span length. They rise above the deck, and in suspension bridges, they support the main structural cable, which holds the deck through vertical hangers. In cable-stayed bridges, they anchor the stays that directly support the deck.

Truss structure: complex framework of beams joined together at points called nodes, following the rigid geometry of the triangle. The vertical elements are called posts, the inclined ones diagonals, and the horizontal ones chords.

Tie: a linear element made of wood or reinforced concrete that supports rails in rail infrastructures.