

MACCAFERRI



HELLOMAC HYDRO

Unlock the Future of Hydraulic Protection



Since 2020, Maccaferri has **embarked on a journey** towards embracing **IoT technologies**. We initiated this path by developing **the first HELLOMAC**, a pioneering project designed to enhance our rockfall protection systems by making them smart.

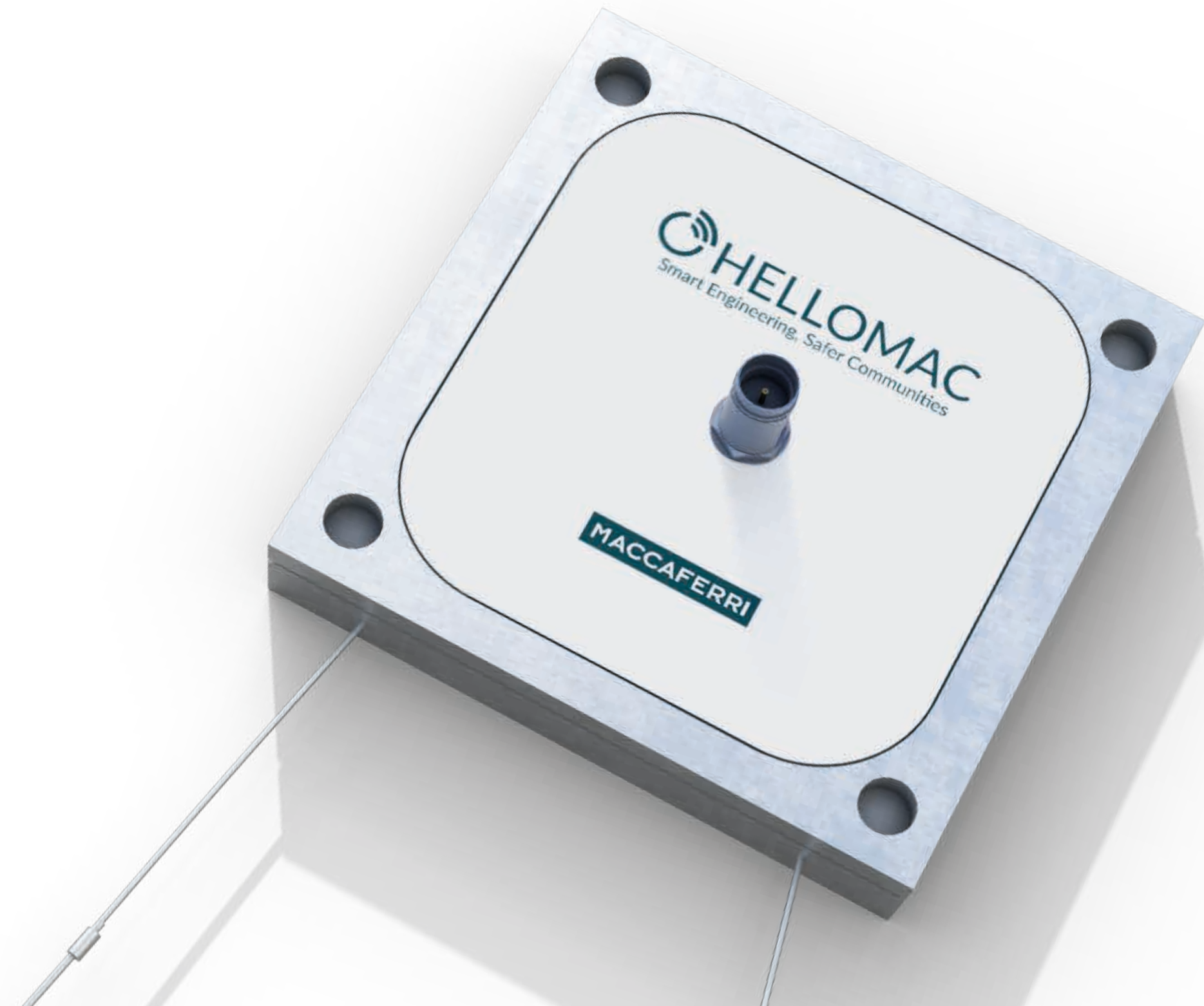
This innovation led to the creation of a comprehensive protection system equipped with early warning capabilities, **setting a new standard in environmental safety** and technological integration in our industry.

We have firmly believed in this project
from the start, and now we're ready to do more



All our solutions are designed to enhance safety and efficiency in civil engineering. By integrating **smart early warning systems**, we can elevate these solutions to new levels of intelligence and effectiveness, contributing to empower communities and their well-being.

At the heart of our vision for HELLOMAC lies a commitment to **pioneering smart innovations** that elevate safety across **diverse applications**. Within this framework, **HELLOMAC Hydro** represents a specialized suite of solutions developed for **hydraulic protection**, addressing the challenges of erosion control, water level variations, and water quality assessment.



Smart Engineering

HELLOMAC Hydro for Smart Bridge Monitoring and Smart Quay Monitoring

5 seconds

Instant signal transmission,
to ensure timely alerts

5 years

Long-lasting battery,
no external power needed

5 km

Wide range of seamless data
transmission, always connected

5 networks

GPRS, 4G, Satellite, Lorawan, Wifi.
High connectivity guaranteed



Smart Engineering

HELLOMAC Hydro for Smart Bank Protection

Wireless

Free of connections.
No strings attached

Plug&Play

No setup hassle.
No installation risks.

Less than 5 minutes

Installed in no time.
Ready to monitor

Unlimited coverage

Extended monitoring network,
no limits to connectivity.



Smart Engineering

HELLOMAC Hydro for Water Quality Monitoring

7 parameters

Water quality monitored
from every angle

3 years of data

8GB of data stored,
always available

5 networks

GPRS, 4G, Satellite, Lorawan, Wifi.
High connectivity guaranteed

Powered by solar energy

With an extra battery for 7 days
of power - no sun needed

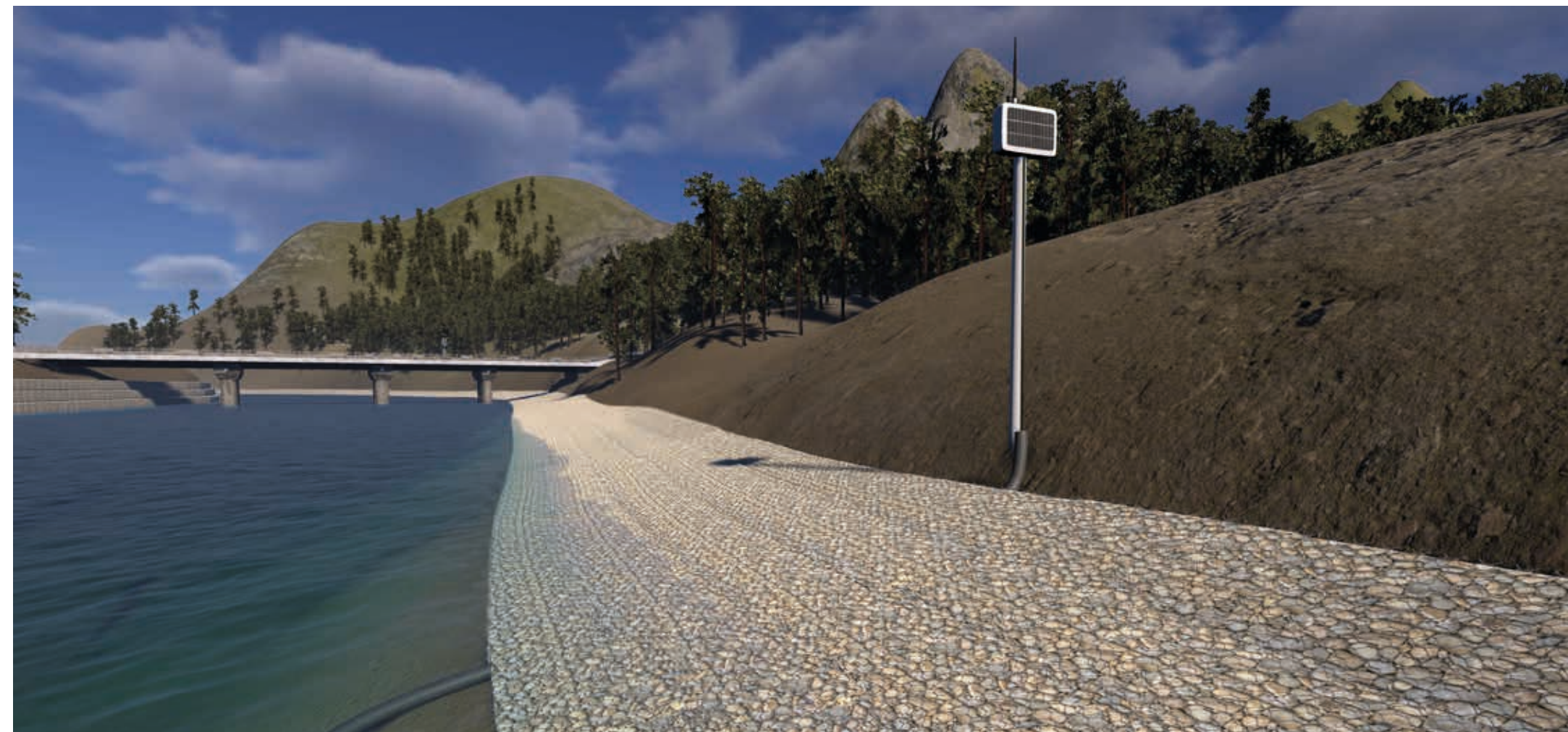


Safer Communities

SMART BANK PROTECTION

HELLOMAC Hydro makes **gabions** and **mattresses** **smart**, by integrating a simple, non-invasive sensor that triggers an alert when **water levels** exceed a predefined safety threshold.

In addition to providing physical erosion protection, the gabions and mattresses become cost-effective solutions to **enhance flood warning capabilities**. By enabling the installation of **multiple alert points** along the river, it provides an additional layer of protection, especially valuable in areas where frequent updates to discharge scales or regular maintenance are challenging. In the face of increasingly extreme weather events, HELLOMAC Hydro helps **safeguard people and infrastructure** with minimal effort and maximum impact.



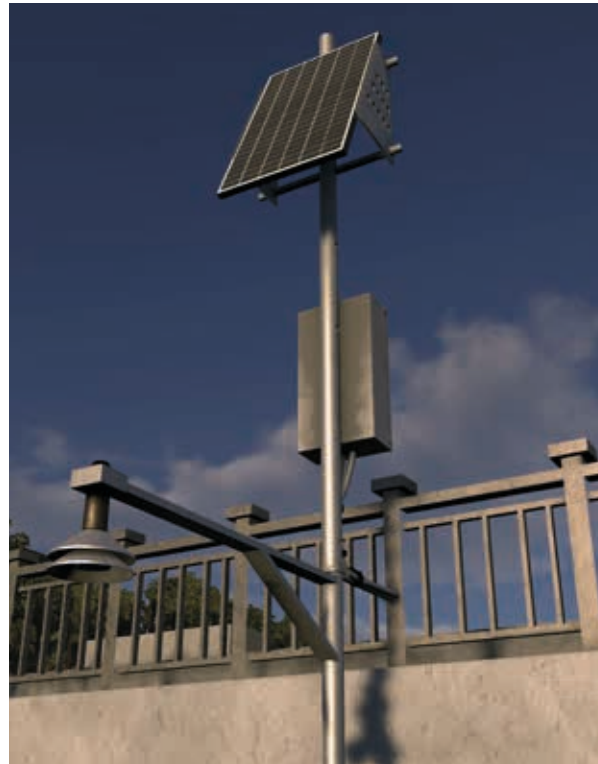
Maccaferri offers a full spectrum of high-performance, tested solutions for hydraulic works, ranging from riverbank protection to riverbed stabilization at bridge piers and quay protection in port areas, now empowered by IoT, for smarter protection and real-time awareness.

Safer Communities

SMART BRIDGE MONITORING

HELLOMAC Hydro is an early warning system designed to enhance the safety of bridges by providing comprehensive protection for their piers against **erosion and water level changes**.

The solution features a **lightweight, compact, and easy-to-install** device connected to the riverbed near the bridge pier. This device **detects erosion** and, if it exceeds a defined threshold, sends a **real-time alert**, enabling prompt action to prevent damage. Additionally, the system includes an **ultrasonic water level sensor** that can be installed on the bridge abutment at around 6 meters height, ensuring early detection of rising water levels. By integrating these components, HELLOMAC Hydro offers an **all-in-one, innovative**, and low-maintenance solution that provides reliable safety for bridges.



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Safer Communities

SMART QUAY MONITORING

HELLOMAC Hydro provides an advanced solution to enhance the **safety of ports** by **protecting quay structures from erosion**. The system features a lightweight, compact, and easy-to-install device connected to the seabed near the quay. It monitors erosion levels and sends a real-time alert if erosion exceeds a threshold set by the client, enabling prompt action to **prevent structural damage**.

By integrating this early warning system, HELLOMAC Hydro offers an innovative and low-maintenance solution that ensures the **long-term stability** and safety of port infrastructure, helping to maintain operational continuity and protect critical assets.



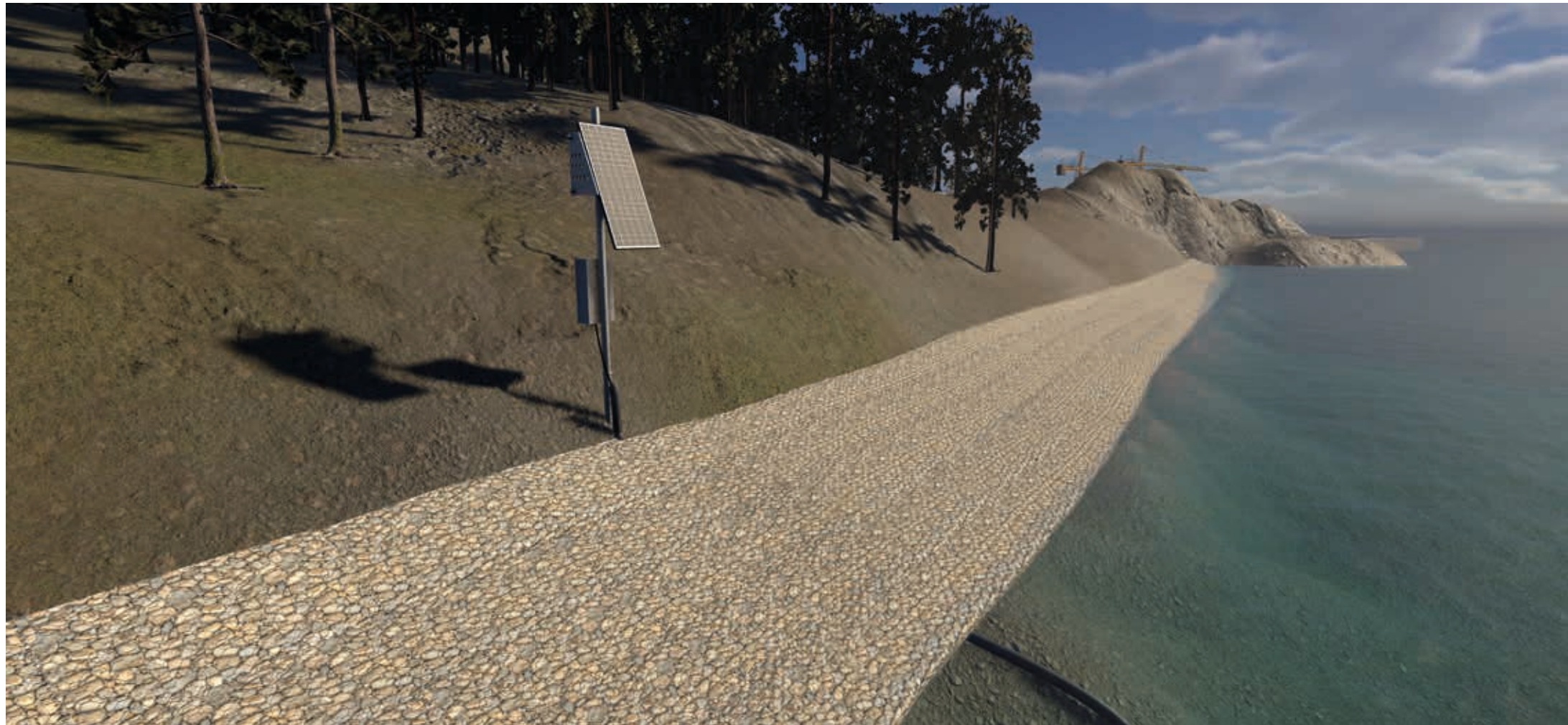
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Safer Communities

WATER QUALITY MONITORING

HELLOMAC Hydro Solutions integrate structural protection with **advanced environmental monitoring**. The solution offers a versatile **water quality kit** with a multiparametric probe capable of measuring key parameters such as pH, conductivity, redox, dissolved oxygen, temperature, turbidity and piezometric level.

Seamlessly **integrated into gabions and mattresses** that protect riverbanks, the system provides real-time alerts when thresholds are exceeded. This makes it an ideal choice near construction sites along rivers, where it ensures both structural protection and environmental compliance, safeguarding infrastructure and ecosystems alike.



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Elevate your monitoring, make it Plus

Combine your HELLOMAC Hydro with our kit Plus.

CLIMA CONTROL KIT

Take environmental monitoring to the next level with the Clima Control Kit. This all-in-one solution measures rainfall, temperature, and air humidity, providing real-time insights into key environmental conditions.

Compact and solar-powered, this innovative meteorological station seamlessly integrates with HELLOMAC Hydro to deliver accurate and timely data. Designed for ease of use and efficiency, the Clima Control Kit ensures you're always one step ahead in safeguarding the environment.



LOCAL ALERT KIT

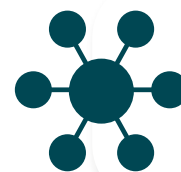
HELLOMAC Hydro is all about **enhancing safety**, and this Plus Kit takes it further by integrating signaling panels, sirens and gates.

Directly connected to the HELLOMAC Hydro's early warning system, it **automatically triggers alerts to block roads near rivers and bridges** when dangerous conditions are detected. With real-time monitoring and immediate action, this Kit Plus ensures rapid response, maximizing safety for infrastructure and the community.



Real-time insights at your fingertips

Forget everything else. Monitor it all from one screen.



DON'T BUY EXTRA DATA LOGGERS. ONE IS ALL YOU NEED

Choose your kit, and it will arrive ready to integrate with your HELLOMAC data logger



COMPLETE CONTROL, ALL IN ONE APP

Monitor your daily data and your early warnings from the HELLOMAC App



CUT THE CORDS. GO FULLY WIRELESS!

A fully wireless system connecting your HELLOMAC Hydro and your data logger

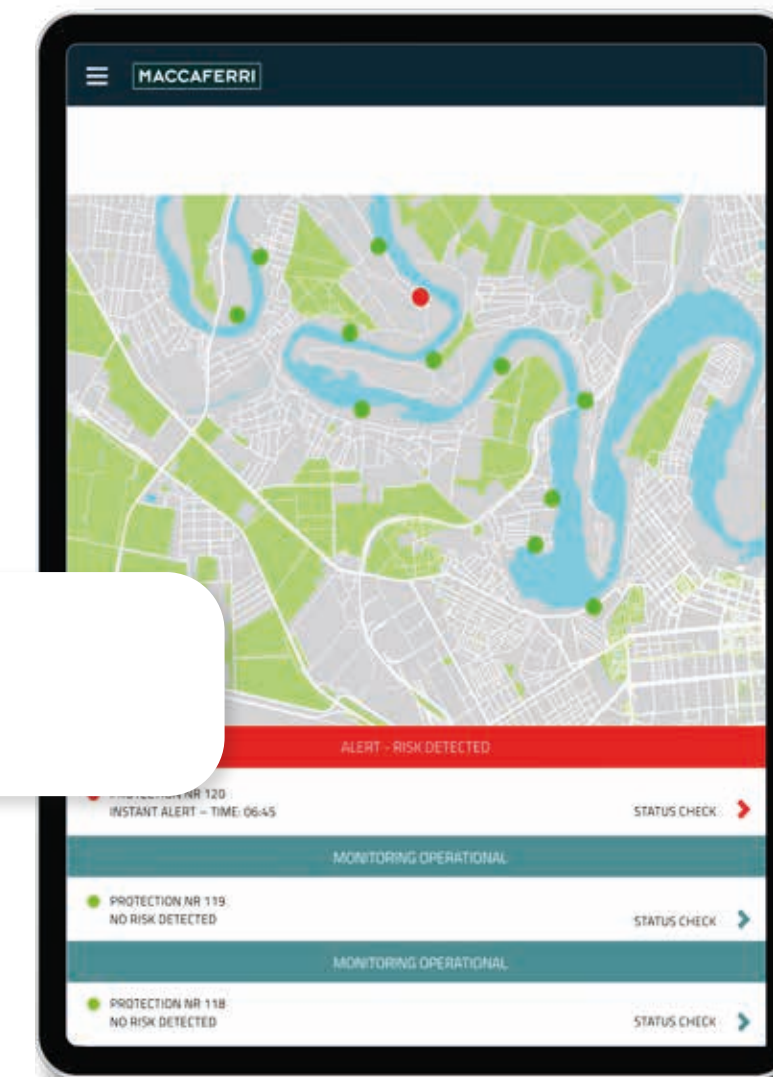
Always in the know with the HELLOMAC app.



CHECK THE MAP!

Monitor your hydraulic protection and sensors anytime, anywhere.

Download the HELLOMAC App
on the App Store and on Google Play



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Engineering a Better Solution

Maccaferri's motto is 'Engineering a Better Solution'; We do not merely supply products, but work in partnership with our clients, offering technical expertise to deliver versatile, cost effective and environmentally sound solutions. We aim to build mutually beneficial relationships with clients through the quality of our service and solutions.

GLOBAL ENGINEERS

In the second half of the 19th century, we invented Gabions and dramatically changed the civil engineering landscape. We are still changing today. We work every day to find better solutions for our clients at every degree of latitude and longitude. Our worldwide network grows through innovation and diversification of sectors of activity and through an increasing range of high quality and environmentally friendly products and applications.

OFFICINE MACCAFERRI GROUP PROFILE

Founded in 1879, our Group soon became a worldwide reference in the design and development of advanced solutions, with offices in over 70 subsidiaries and 20 factories worldwide

Our mission is to pursue excellence through continuous improvement, while delivering to customers engineered solutions that are innovative, advanced and environmentally friendly. We are committed to outstanding safety, quality and sustainability, to create value for all stakeholders as well as our communities.

MACCAFERRI APPLICATIONS

 **RETAINING WALLS & SOIL REINFORCEMENT**

 **SOIL STABILISATION & PAVEMENTS**

 **DRAINAGE OF STRUCTURES**

 **FENCING & WIRE**

 **HYDRAULIC WORKS**

 **BASAL REINFORCEMENT**

 **TUNNELLING***

 **AQUACULTURE NETS/CAGES**

 **ROCKFALL PROTECTION & SNOW BARRIERS**

 **COASTAL PROTECTION, MARINE STRUCTURES & PIPELINE PROTECTION**

 **LANDSCAPE & ARCHITECTURE**

 **CONCRETE FLOORING, PRECAST & OTHER USES***

 **EROSION CONTROL**

 **ENVIRONMENT, DEWATERING & LANDFILLS**

 **SAFETY & NOISE BARRIERS**

 **INDUSTRIAL MANUFACTURING**

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