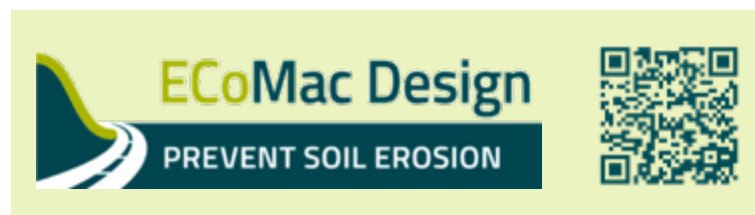


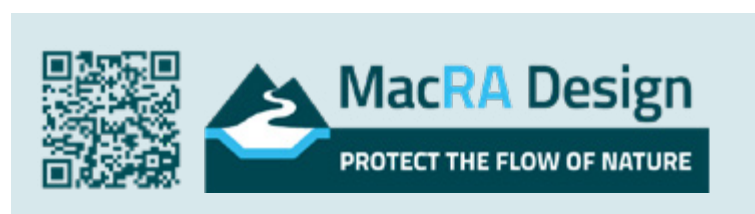
PIONEERING DESIGN SOFTWARE FOR ENGINEERING EXCELLENCE

Maccaferri has decades of experience in developing design software tailored to civil, geotechnical, and hydraulic engineering needs. These tools, including MacRA, EcoMac, and others, are specifically designed to simplify and optimize the engineering process, enabling precise product selection for applications such as erosion control and hydraulic works.

Built on rigorous research, testing, and practical expertise, Maccaferri's software combines technical reliability with user-friendly interfaces, empowering engineers to create efficient, sustainable, and cost-effective designs. These tools streamline workflows, reduce design time, and ensure compliance with technical standards. Through continuous innovation and professional support, Maccaferri has become a global leader and trusted partner for complex engineering challenges.



The ECoMac Design is a suite of software tools used for designing Erosion Control applications. It has been developed to assist users in selecting Maccaferri products that are specifically designed and tested for erosion control purposes.



The MacRA Design is a suite of software tools used for designing river works and erosion control applications. It has been developed to assist users in selecting Maccaferri solutions that are specifically designed and tested for hydraulic engineering challenges.



Maccaferri Ltd
T: +(44) 01865 770 555
E: info.uk@maccaferri.com

www.maccaferri.com/uk

Republic of Ireland Maccaferri Partner - Geostrong
T: +(353) 01885 1662
E: Sales@geostrong.net

www.geostrong.net



Engineering a Better Solution

Maccaferri's motto is 'Engineering a Better Solution'. We don't 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 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 it 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 STABILIZATION & 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 |

The images represented are merely for illustrative purposes and are not to be considered as technical prescriptions or instructions of the products herein

© Officine Maccaferri S.p.A.



EROSION CONTROL DESIGN SOLUTIONS

ON SLOPE DESIGN CONDITIONS

The design of On Slope conditions focuses on stabilizing slopes and preventing erosion from water runoff. Maccaferri offers a wide range of solutions including biodegradable mats, turf reinforcement mats and other geosynthetics to protect slopes and support vegetation growth.

The EcoMac software helps users select the best products, simplifying design and optimizing erosion control performance.



1.

Define the project location and related data (R)



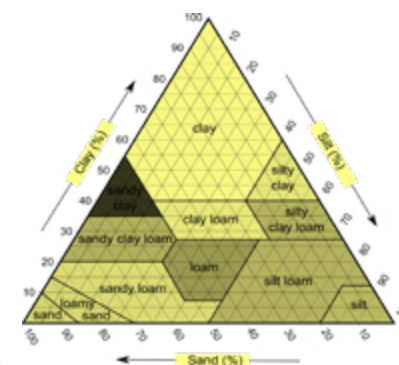
2.

Define the project geometry (LS)

-  [Horizontal Length \$\lambda\$ \[m\]](#)
To define the Length factor L
-  [Inclination \$\lambda\$ \[°\]](#)
To define the Steepness factor S
-  [Land area \[m²\]](#)
Extension of the project area

3.

Define the type of soil (K)



4.

Apply the RUSLE formula

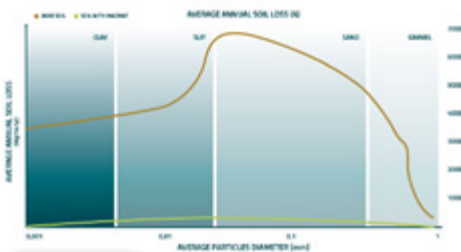
$$A = R * K * LS * C * PM$$

Project location Geometry 1 for Civil engineering project

Soil fractions Soil protection factor (Tests outcomes)

7.

Determine the soil saving with MacMat R



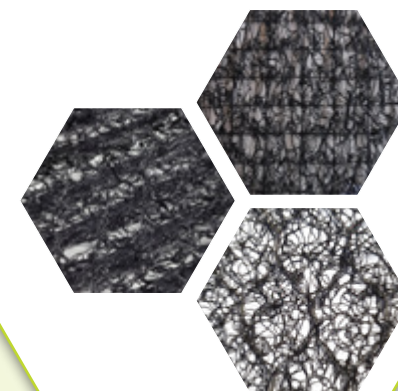
Up to **98%**
reduction of soil loss



FIND OUT MORE!

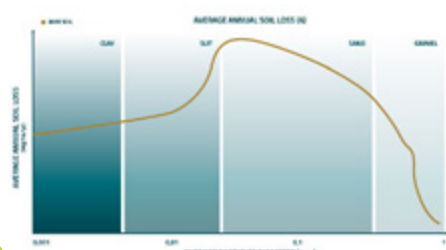
6.

Select the Maccaferri Erosion Control Product



5.

Determine the Average Annual Soil Loss (A)



Installation Check

Define the actions on MacMat R during the installation

Define the design period

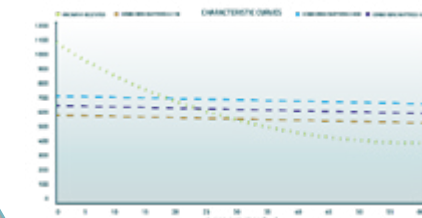
MECHANICAL CHECK OF BOTH METHODS

Mechanical Check

Select the grade of MacMat R according to the n. of pins and slope inclination

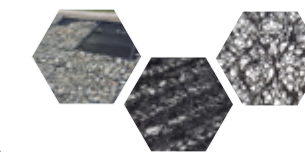
4.

Compare the Flow Shear Stress (τ) with the Allowable Shear Stress (τ_{all})



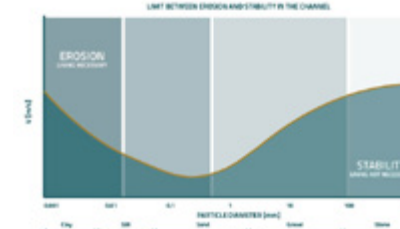
3.

Select the Maccaferri Erosion Control Product



2.

Compare the Flow Velocity (V) with the Allowable Velocity (V_{all})



1.

Define the Channel Geometry and calculate the Flow Velocity (V)

-  [Flow shear stress \(\$\tau\$ \)](#)
-  [Flow Velocity \(V\)](#)