

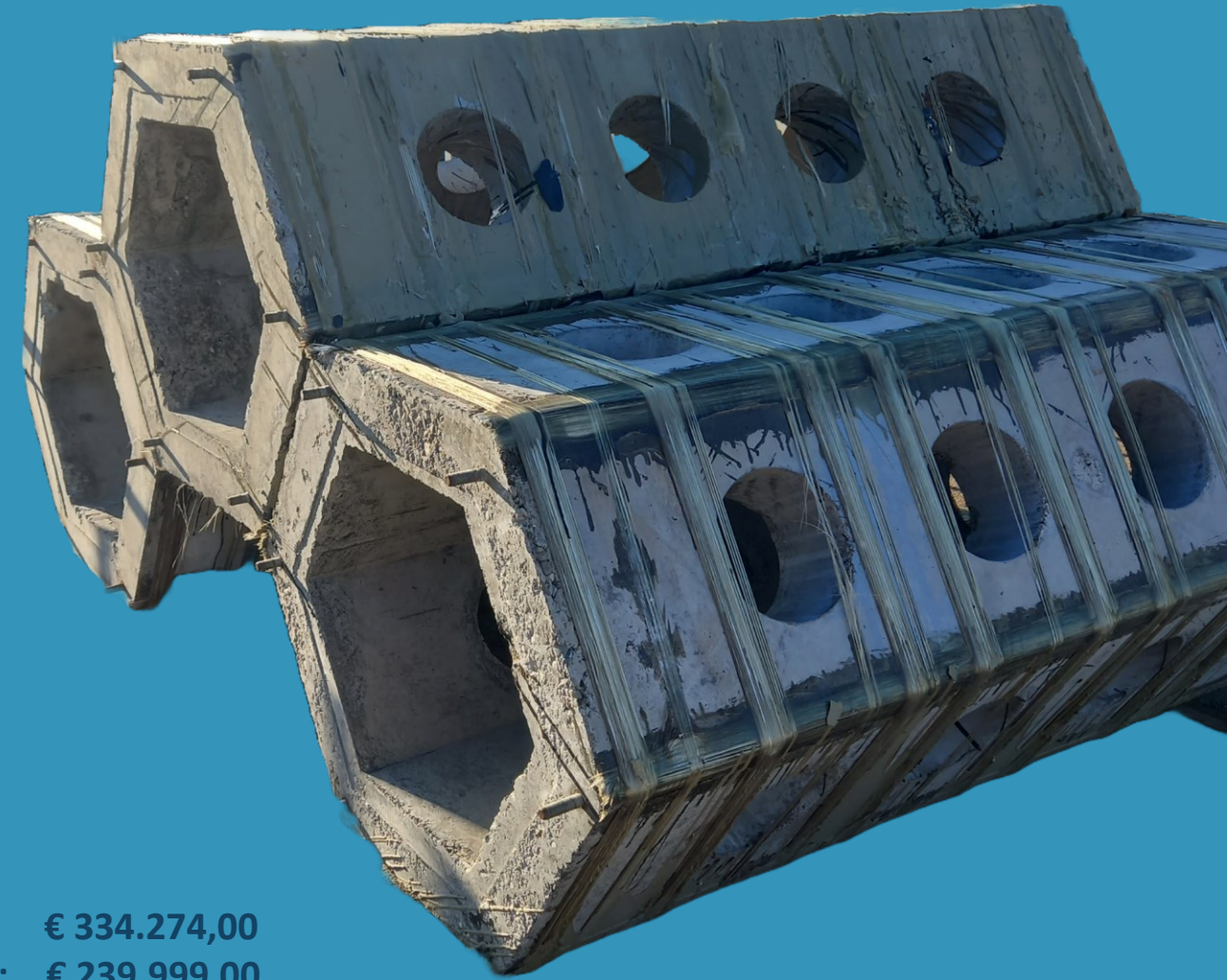
## Project Presentation

# SiaivER

SEA COASTLINE PROTECTION  
AGAINST CLIMATE CHANGE,  
ENABLING CONCRETE HIVES WITH  
INCREASED "PERFORMANCES"

**SPOKE 5**

PARTNERS:  
**GEMINI IMPIANTI SRL & CSCON SRL**



Total Cost: € 334.274,00  
Contribution: € 239.999,00

# PROJECT PARTNERS:



- **Small Enterprise, Machinery for Construction**
- **Sector: Special machinery for construction**
- **Role: Design, production, and assembly of the pilot line**

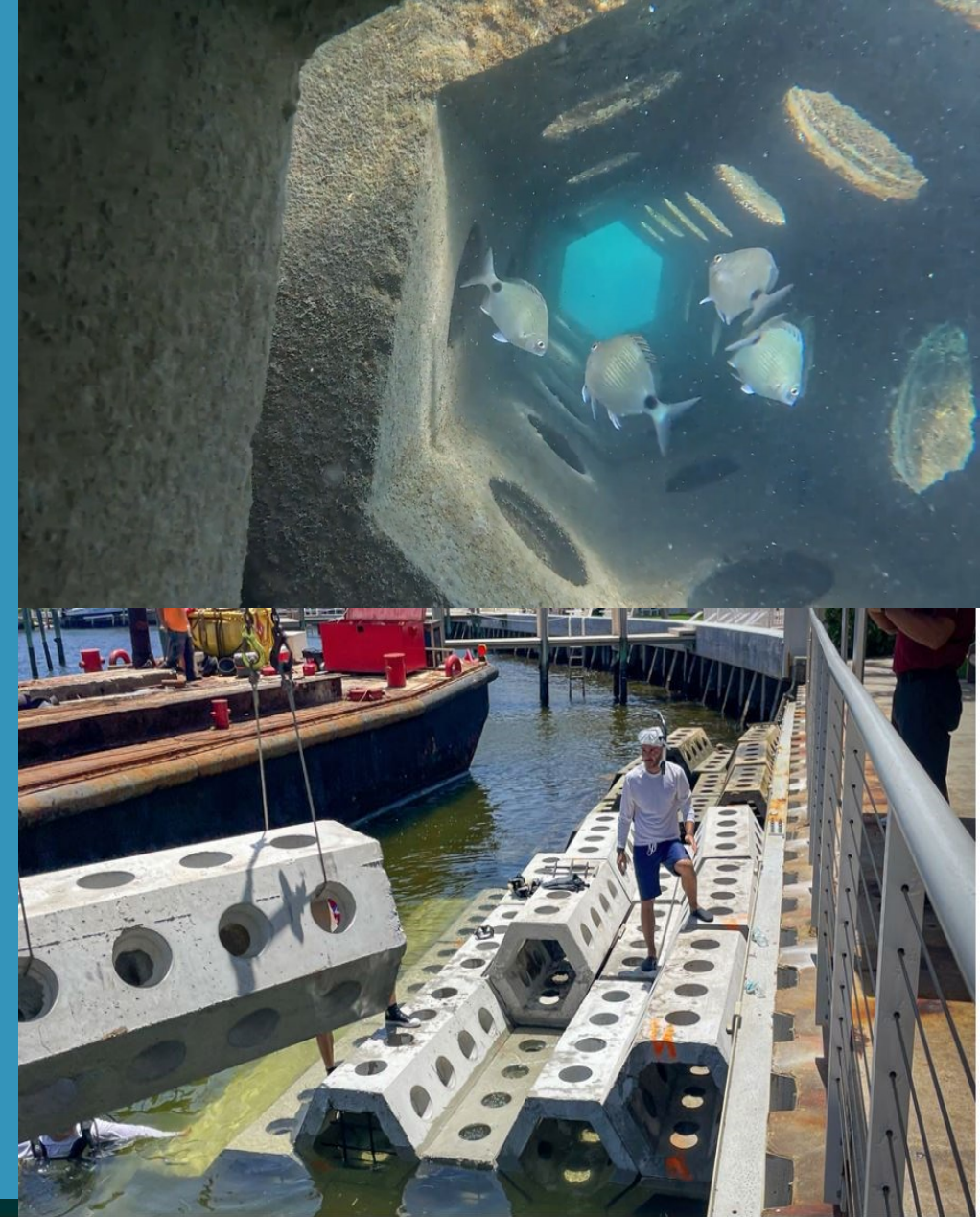


- **Microenterprise, Intellectual Property & Engineering**
- **Sector: Intellectual Property & Engineering**
- **Role: FEM/CAE engineering, modeling, product marketing**

il progetto si riferisce alla creazione ed allo sviluppo di un nuovo sistema anti erosivo costale modulare.

Grazie alle innovazioni in fase di sviluppo e al design «esagonale», permette:

- **Ripopolamento biologico** e ricreazione di ambienti naturali compromessi;
- **Attenuazione idrodinamica adattabile**: la forma esagonale, forata radialmente, risulta “impilabile” e adattabile alla conformazione della installazione da realizzare;
- **Invisibilità**, in caso di installazioni in spiaggia;
- **Riduzione peso** (rispetto ai sistemi a gravità e ogni altra alternativa possibile): ridotti costi installazione e ridotto problema di insabbiamento, quando installati su fondi sabbiosi.
- **Aumento prestazioni meccaniche e durabilità**: grazie all’applicazione di un brevetto, messo a disposizione da una startup regionale (FSC), i moduli si realizzano in calcestruzzo privo di rinforzo in acciaio, con una C-footprint che è ridotta del 90% e una durata in ambienti marini aumentata di un fattore 10 (no degradazione attesa fino a 1000 anni)

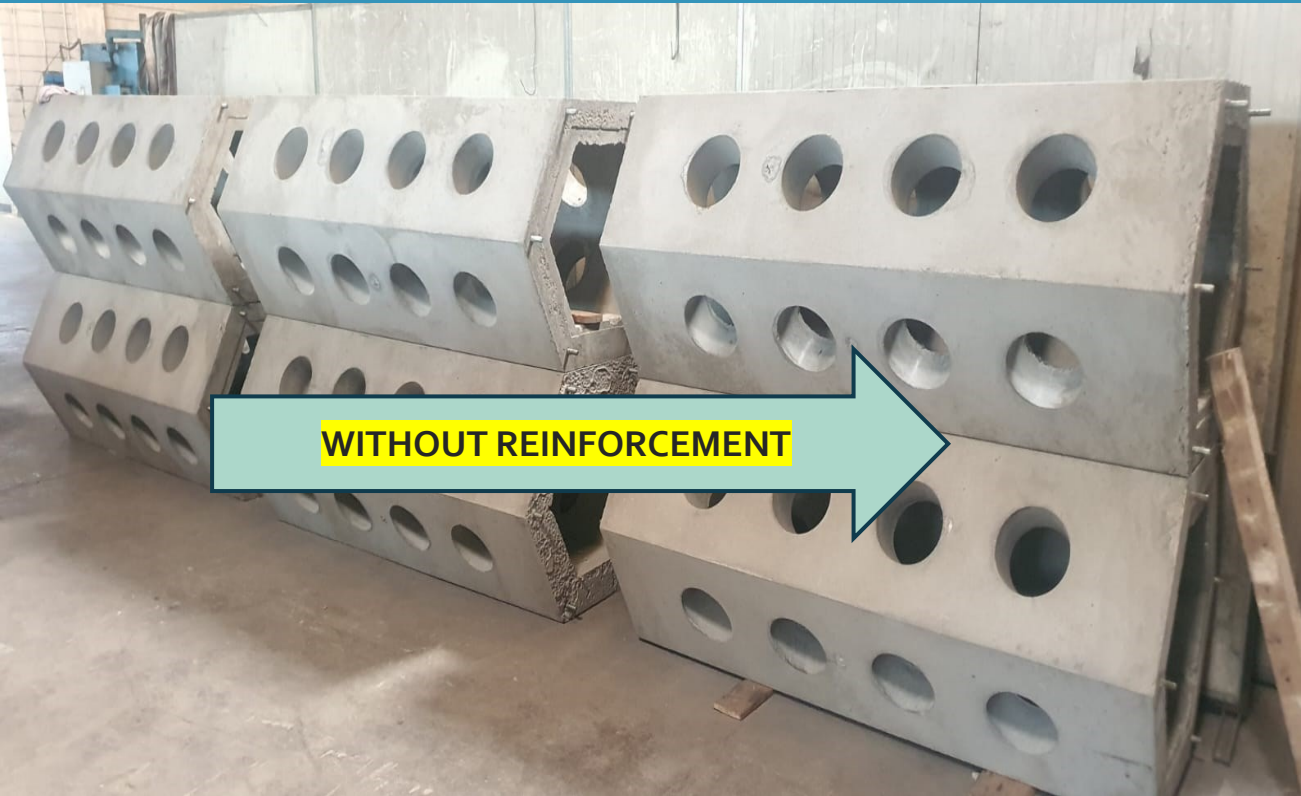




# RESEARCH & INNOVATION PARTNER



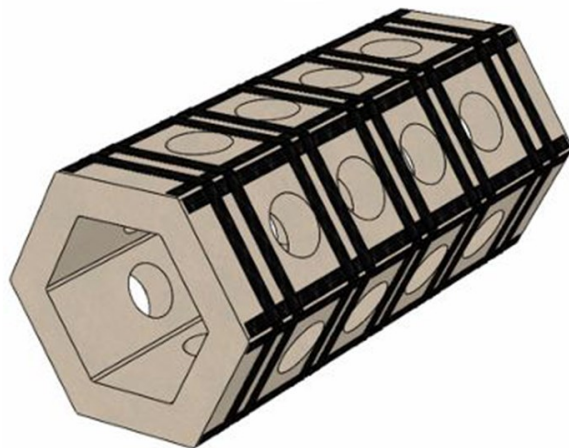
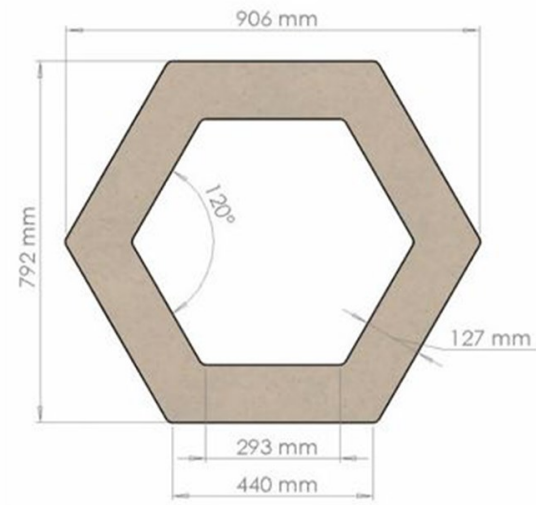
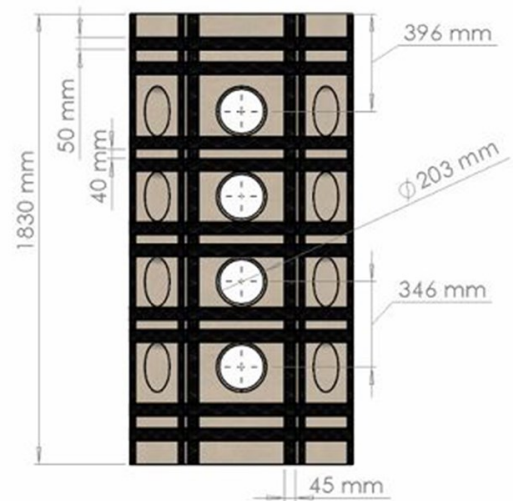
LOCATION: EMILIA ROMAGNA  
IN-KIND COLLABORATION ,PATENT LICENSING  
IP HOLDER OF POST- COMPRESSION  
TECHNOLOGY



WITHOUT REINFORCEMENT



WITH REINFORCEMENT



GEOMETRY of the SIAIVER until with REINFORCEMENT details

# VIDEO WRAPPING

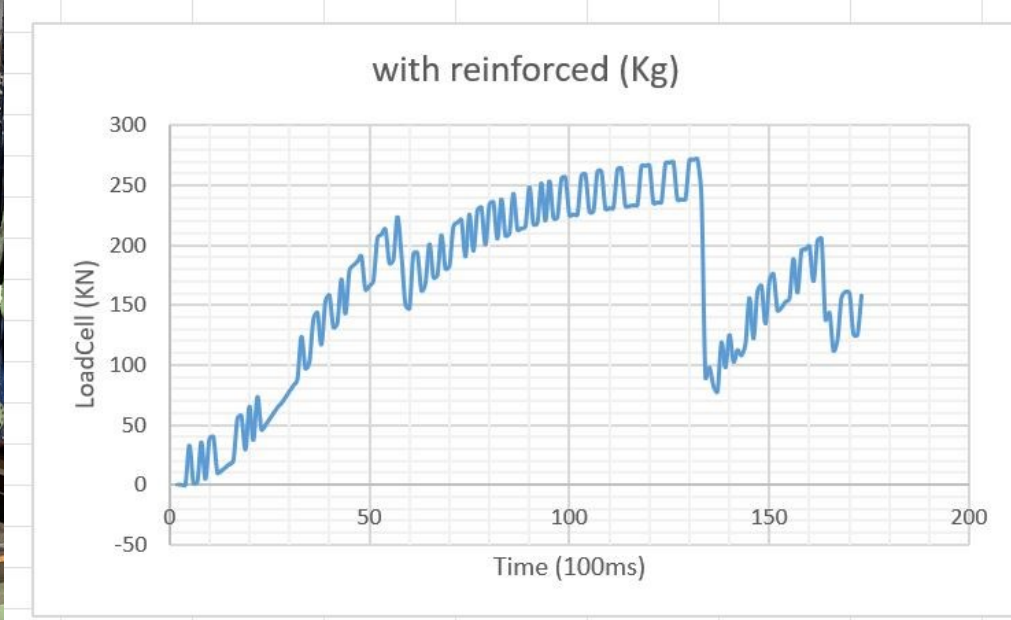


# VIDEO TESTING \_ WITH REINFORCEMENT





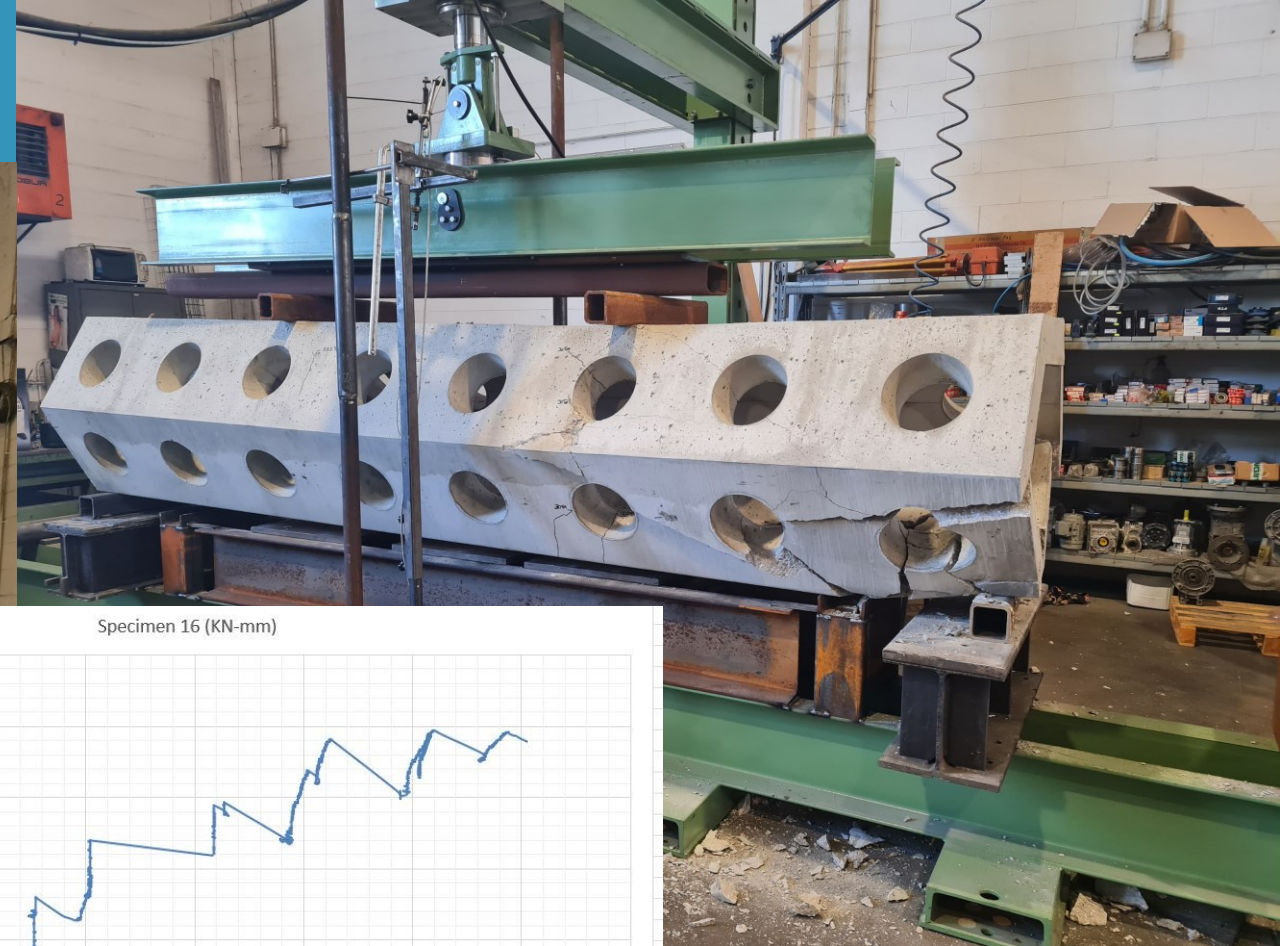
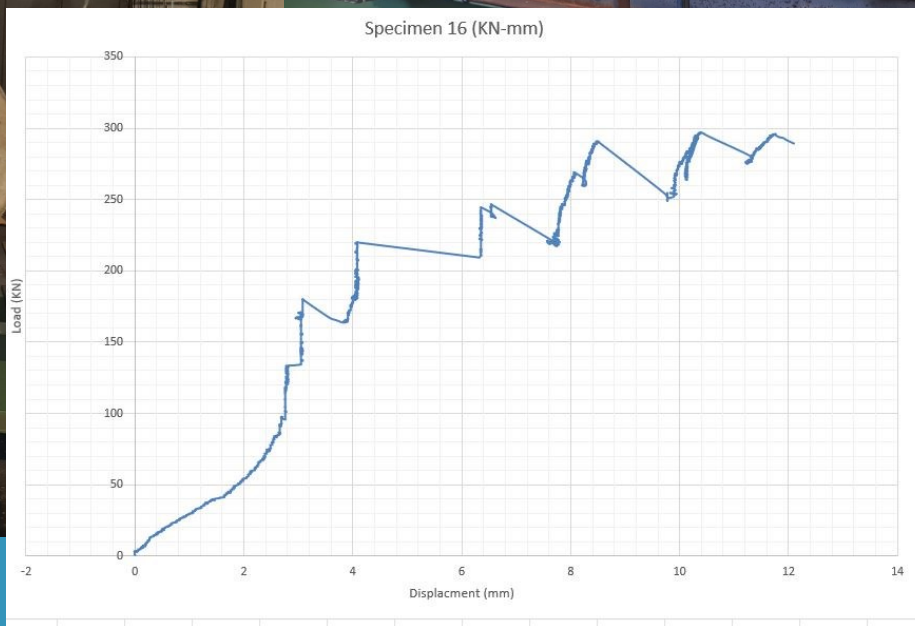
## PICTURE TESTING \_ WITH REINFORCEMENT



# VIDEO\_WITHOUT REINFORCEMENT \_TEST 16



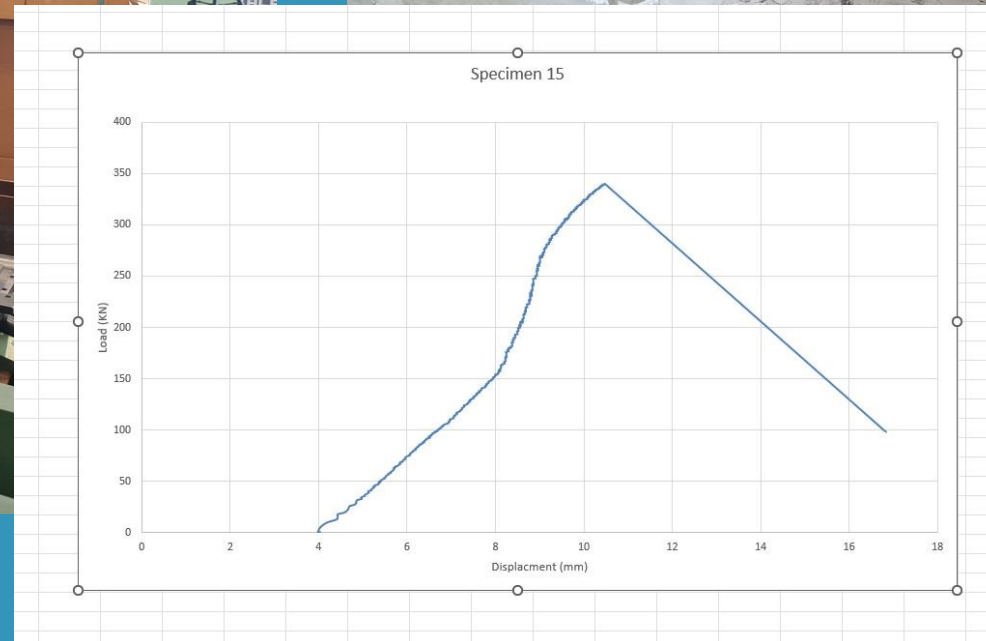
# PICTURES\_WITHOUT REINFORCEMENT\_TEST 16



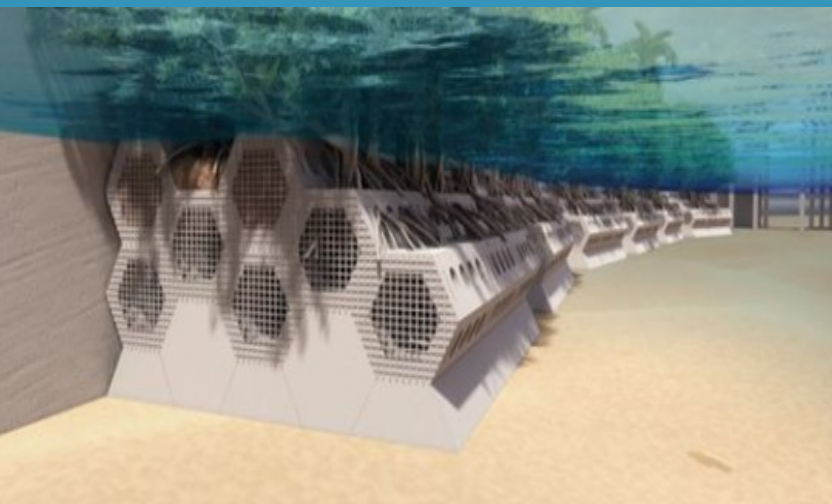
# VIDEO\_WITHOUT REINFORCEMENT\_TEST 15



# PICTURES\_WITHOUT REINFORCEMENT\_TEST 15



# KEY APPLICATION



**Coastal protection**  
**Beaches and River**  
**Biodiversity**  
**Storm surges**  
**Mitigation of climate change effects**

# Siaiver prova\_ Installazione



# CONCLUSION = INNOVATION + IMPACT

IT ENSURES  
EFFECTIVE WAVE  
ENERGY  
DISSIPATION OF  
INCOMING WAVES

HIGHER, STRONGER  
AND BETTER  
SOLUTION FOR  
PROTECTING  
MARINE LIFE.



Reduces C emissions, compared to any possible alternative, concrete is fully recyclable. No use of rare/toxic rm (raw materials)

STEEL –FREE STRUCTURAL COMPONENTS

CONCRETE AS A SUSTAINABLE ALTERNATIVE

SUPPORTING GLOBAL GREEN MANUFACTURING



# THANK YOU

## FOR INFO CONTACT:

Gemini Impianti srl    [WWW.GI-TECH.EU](http://WWW.GI-TECH.EU)  
CSCON srl    [WWW.CSCON.TECH](http://WWW.CSCON.TECH)



In collaborazione con

