




**Presented at the FIG Working Week 2023,  
28 May - 1 June 2023 in Orlando, Florida, USA**

# FIG WORKING WEEK 2023

**28 May - 1 June 2023 Orlando Florida USA**

*Protecting  
Our World,  
Conquering  
New Frontiers*



**BLUE  
SURVEYING**

And the environmental goals  
of sustainable development



Organized By



Enrico Rispoli – Italy - CLGE Vice President  
Maria Grazia Scorza – Italy – CLGE Advisor

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For this reason, almost all the nations of the world are increasingly committed to implementing policies that respect the environment and sustainable development

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**By Blue Surveying is generally meant the whole natural, geographic, hydrographic, anthropological and cultural system referred to water in the earth in general and in Europe in particular.**

**Seas, oceans and their coasts are essential for human activities and rights, but also for the climate.**

**Water is an essential resource!**

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UN

Agenda 2030 and SDGs

(Sustainable Development Goals)

the environmental objectives of sustainable development

there are 17 goals for 2030 agreed by the UN as part of the Global Agenda for Sustainable Development, approved in September 2015



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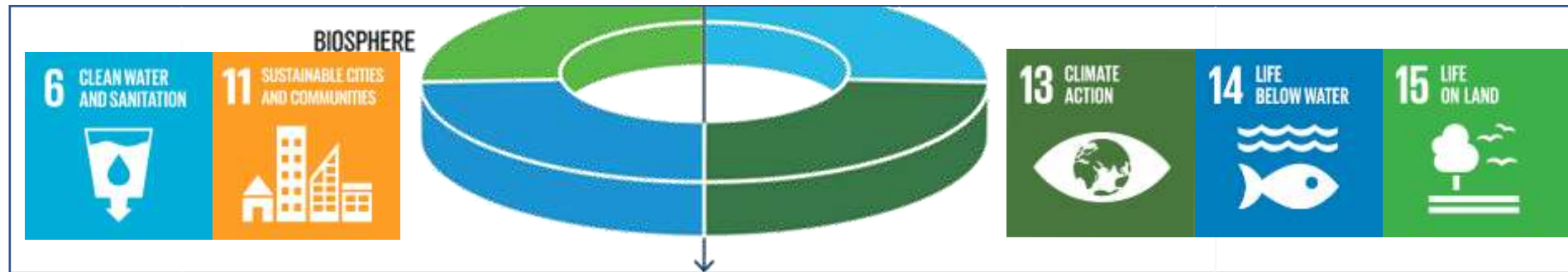
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What are those related to surveying and water?

## What are those related to surveying and water?

In accordance with the CLGE 2022 Blue Surveying theme, we can highlight the SDGs and macro-groups related to the Biosphere (SDGs 6, 11, 13, 14, 15).



- SDG 6 - Clean water and sanitation**
- SDG 11 – Sustainable Cities and Community**
- SDG 13 – Climate action**
- SDG 14 – Life below water**
- SDG 15 – Life on land**

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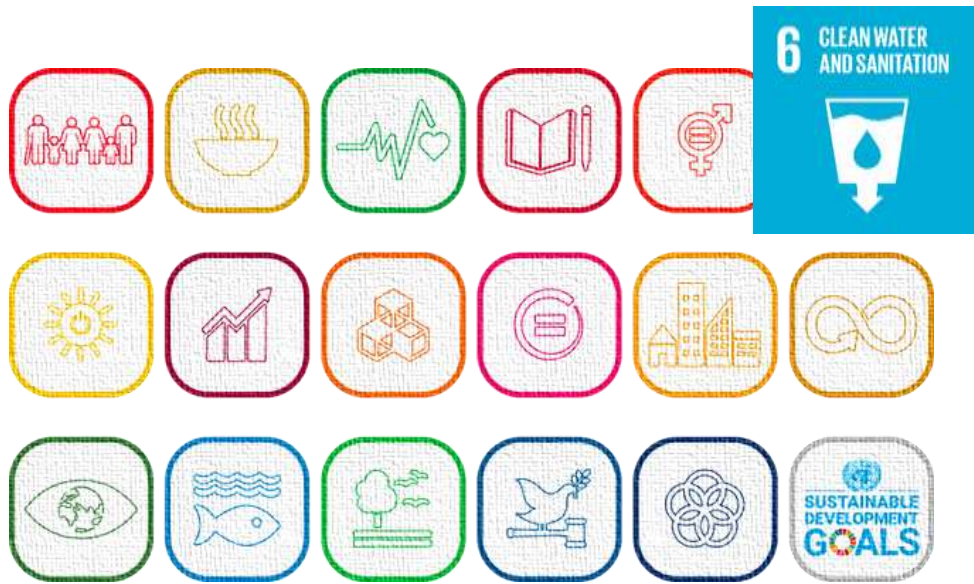


To be permeating and effective, these criteria must be integrated with the criteria ESG - Environmental, Social, Governance-which allow to measure the ability of companies to adhere to those standards that are now considered necessary for sustainable and ethical development.

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## Sustainable Development Goal 6 on water and sanitation

seeks to ensure safe drinking water and sanitation for all, focusing on the sustainable management of water resources, wastewater and ecosystems, and acknowledging the importance of an enabling environment.





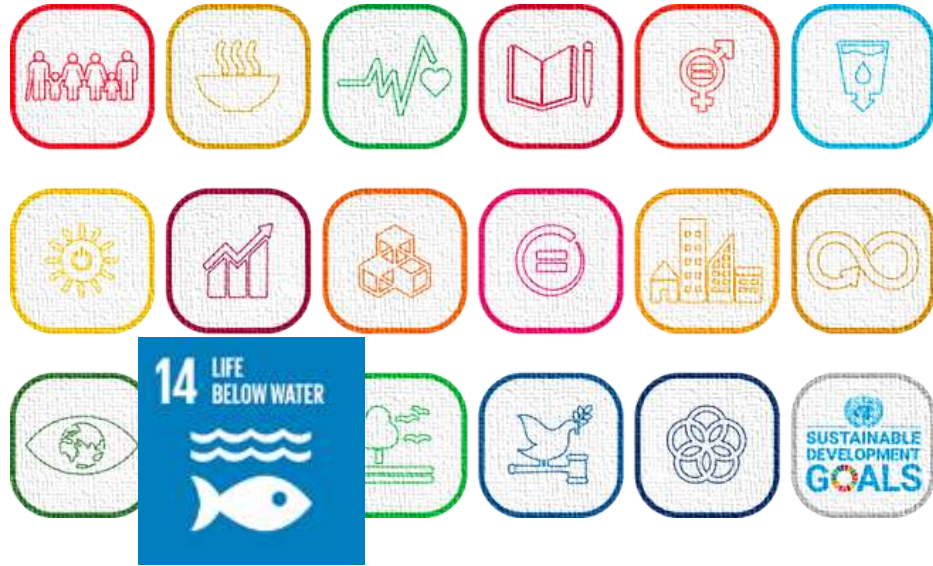
## Sustainable Development Goal 11

Make cities inclusive, safe, resilient and sustainable. The world is becoming increasingly urbanized. Since 2007, more than half the world's population has been living in cities, and that share is projected to rise to 60 per cent by 2030.

## Sustainable Development Goal 13

take urgent action in order to combat climate change and its impacts. The contributing countries to this SDG are making plans to prioritize food security and production, terrestrial and wetland ecosystems, freshwater resources, human health, and key economic sectors and services.





## Sustainable Development Goal 14

Conserve and sustainably use the oceans, seas and marine resources. The ocean drives global systems that make the Earth habitable for humankind.



## Sustainable Development Goal 15

protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss

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What are the opportunities to be protagonists?

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**Mobilization must involve young people above all**



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**Interventions for sustainable development include new skills in surveying**

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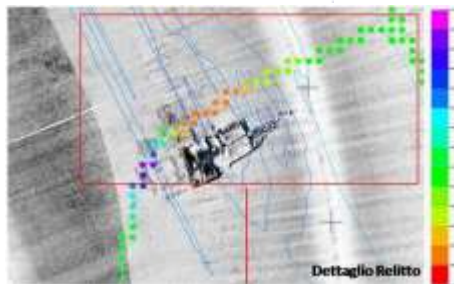


**With our experience we must look to the future with enthusiasm of youth and their imagination and encourage every possibility of collaboration**



The contribution of surveyors to the implementation of these programs involves the implementation of projects with eco-sustainable and feasible solutions.

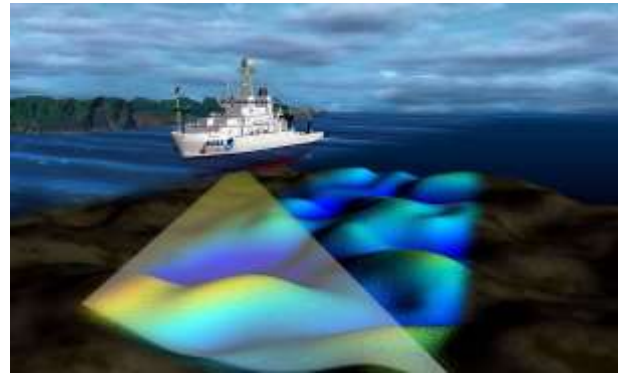
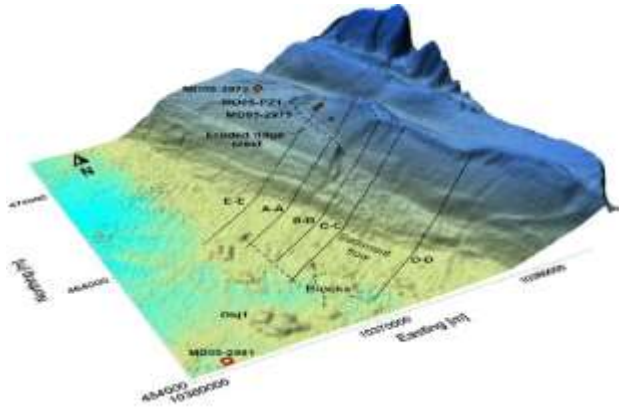
- Survey and monitoring of coastal erosion;
- Shore nourishments are projects where the coastal system is fed with sediments (sand) from a source (borrow area) at a sufficient distance from the project area so that coastal hydrodynamics remain unaffected.



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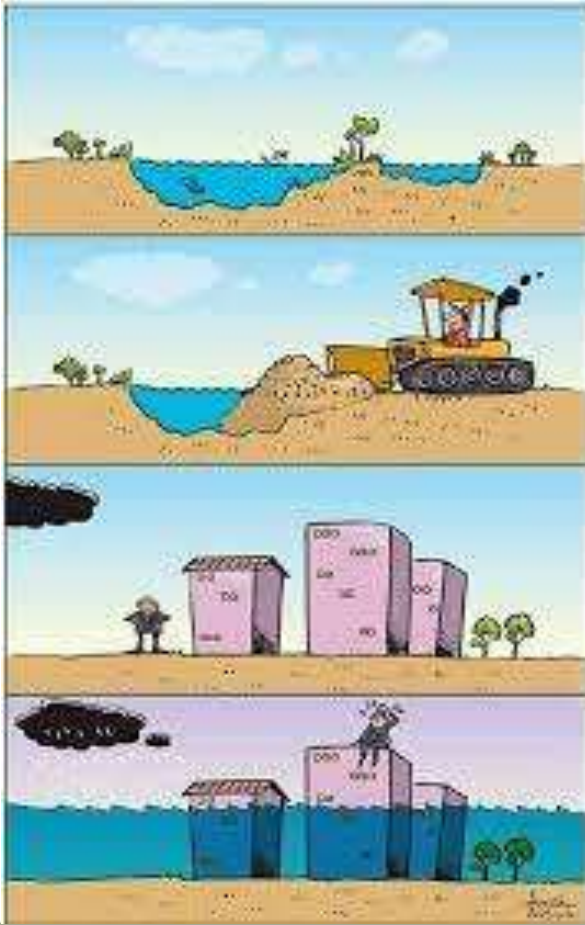


**Bathymetry not only as a search measure for obstacles under the sea surface, but above all to verify how wave motions change the state of the soil under the seas and oceans and how to mitigate the problems**

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The prevention of hydrogeological instability  
The monitoring of river flows is very important,  
the activity aimed at calculating how much the  
overbuilding of the soil used by the inhabited  
centers can modify the natural ability of the  
slopes to disperse water without creating  
flooding.





**Hydraulic invariance or hydrological invariance could be so effective as to mitigate the impacts and save the territory**

**human intervention with buildings distributed throughout the territory limits more and more the areas intended for agriculture, natural areas and woods, subtracting vital spaces from the normal flow of water**

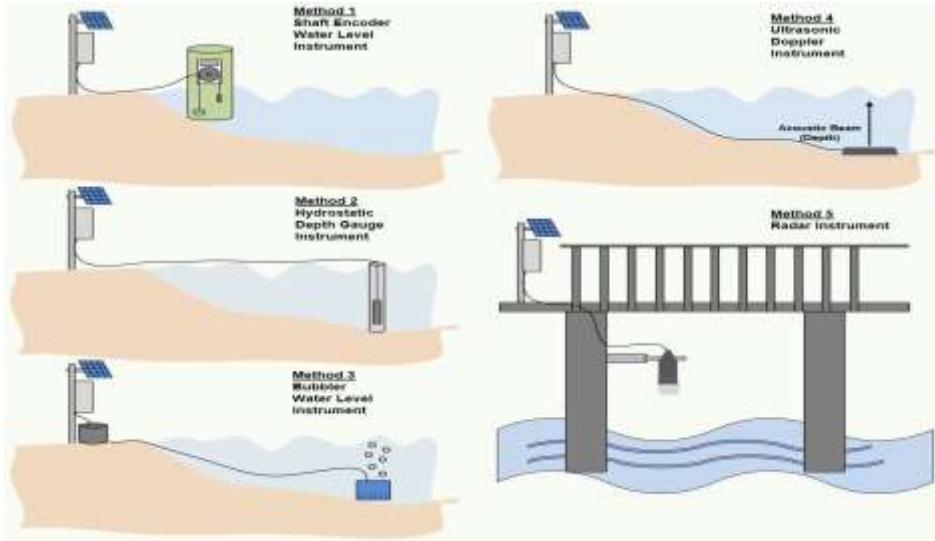
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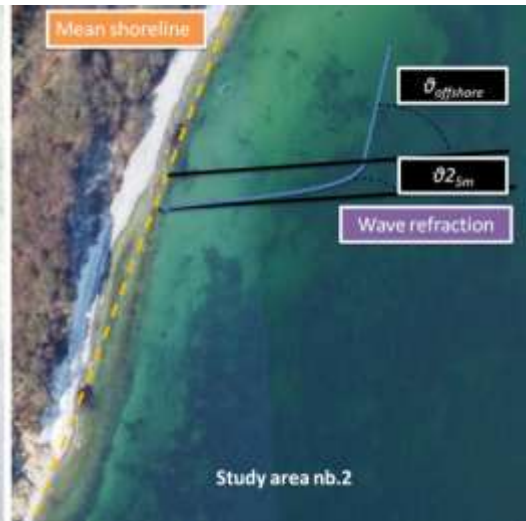
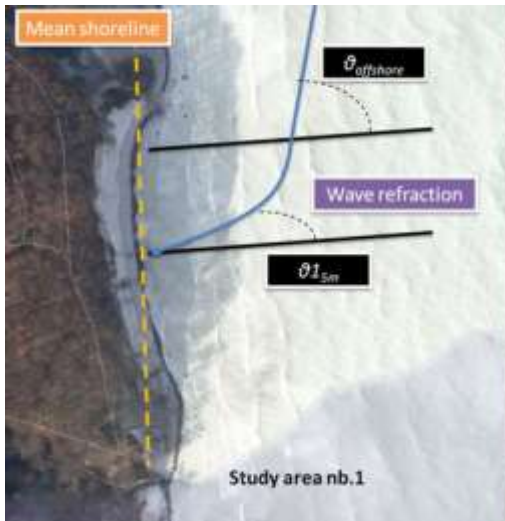
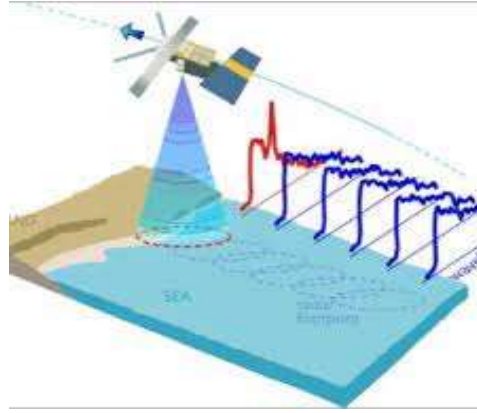


The new works that cement large spaces should be accompanied by a hydraulic invariance relationship that ensures that the flow of the collected water does not accentuate the normal flow and does not create disruption for built-up areas and for agriculture.



River level monitoring and control flood alarms and forecasts are one of the methods implemented with sensors connected to level monitoring stations. These control centers are responsible for issuing flood warnings and flood risk forecasts. Check the river levels near you, watch out for flood warnings, and make sure you stay safe on and around the water





**Precision measurement near the coastline**  
 Rock cliffs are a significant component of world coastal zones. However, rocky coasts and factors contributing to their erosion have not received as much attention as soft cliffs.



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## Sustainable Development Goals

**Water is an essential resource.**

Let conserve and sustainably use the oceans, seas and marine resources.

Blue Surveying to collaborate to drives global systems that make the Earth habitable for humankind.

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## Thank you For attention

Environmental goals of sustainable development



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