

SOCIB New Ocean Observing and Forecasting in Educational Activities

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2nd Ocean Observers Workshop – 2021
29 November - 1 December



MINISTERIO
DE CIENCIA
E INNOVACIÓN



CSIC
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS



GOVERN
ILLES
BALEARS

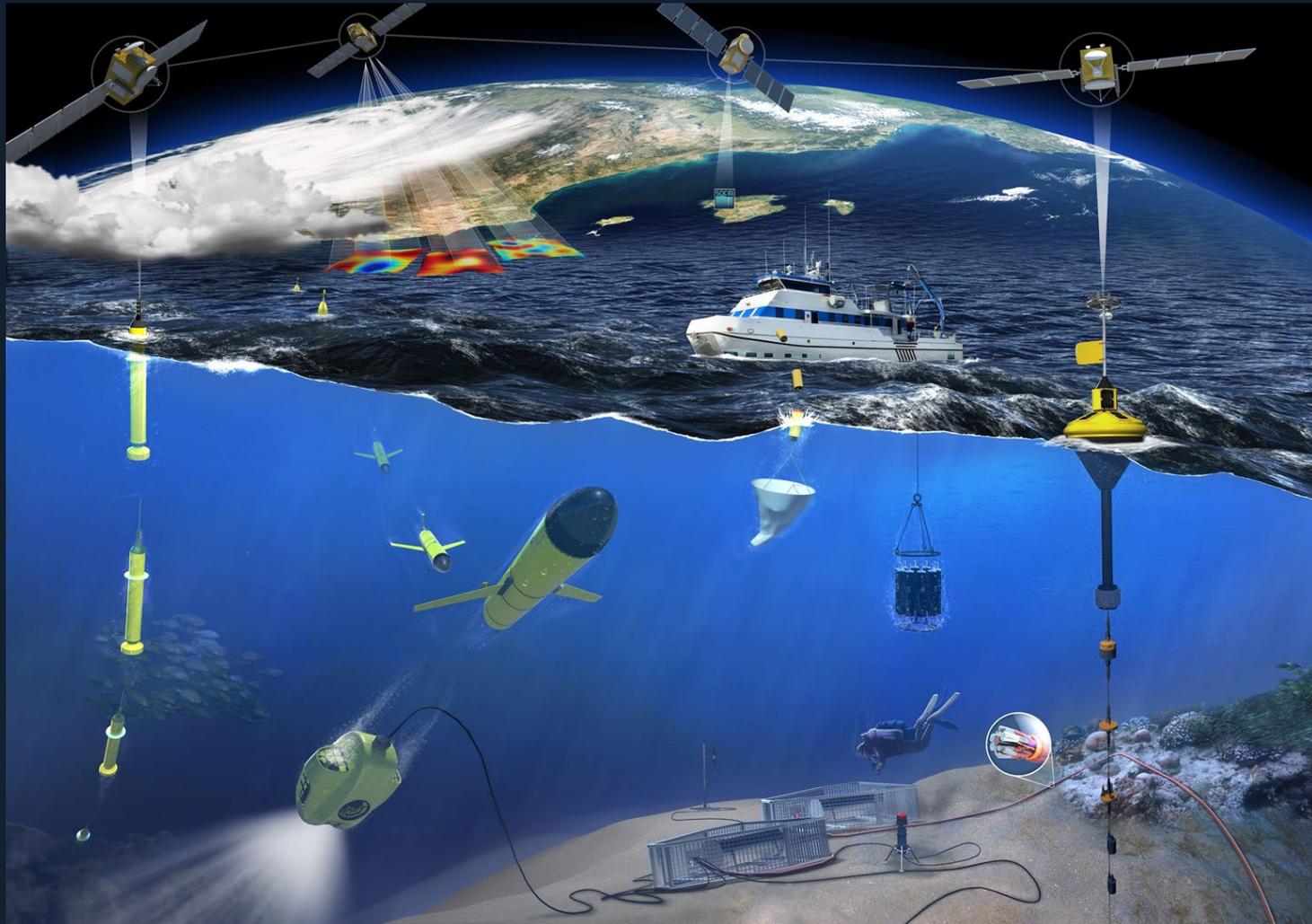


KEY MESSAGES



- Ocean observatories are key infrastructures for research and integrated ocean and coastal management in support of sustainability goals. However, they are still largely unknown by society.
- Enhanced communication and outreach initiatives are needed for engaging society, and especially the educational community and new generations.
- Formal learning is possibly one of the best ways to disseminate knowledge, new technologies, and the work of institutions devoted to R&D&I.

SOCIB NEW OCEAN OBSERVATION TECHNOLOGIES: DRIVERS OF CHANGE



NEW TECHNOLOGIES & PARADIGM SHIFT: OCEAN OBSERVATION & DATA AVAILABILITY

From single platform ship-based
observation

To multi-platform
observing systems

Platform-centric systems



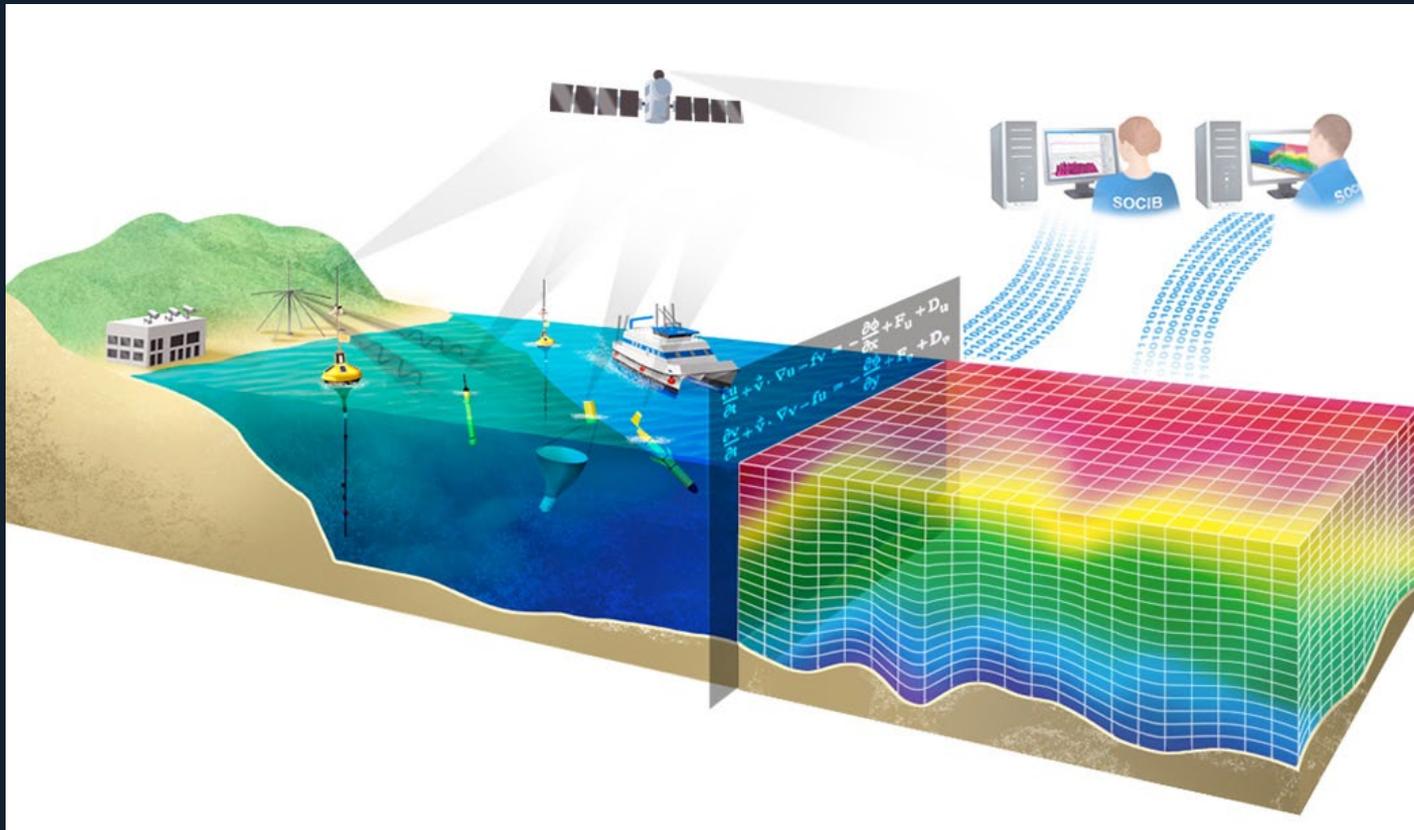
Network-distributed systems



Adapted from Steve Chien, JPL-NASA.

“A single ship can only be in one place at one time. We need to be present in multiple places in multiple times,” John Delaney, Nature, Sept. 25, 2013.

SOCIB APPROACH TO OCEAN OBSERVING & FORECASTING



Scientific excellence with impact on society

FROM SCIENCE TO SOCIETY: RRI STRATEGY

SOCIB provides data, resources, knowledge and advice to policy makers, industry, researchers, and the educational sector



**MARINE &
COASTAL
RESEARCH**



**MARITIME
SAFETY**



MARINE SPORTS



**BEACH &
COASTAL
COMMUNITIES**



**COASTAL
PROTECTION,
PLANNING &
GOVERNANCE**



**SUSTAINABLE
MARINE
ECOSYSTEMS**



**PORTS &
SHIPPING**



**MSP, ICZM &
OCEAN
MANAGEMENT**



**SUSTAINABILITY
OF ISLANDS &
CLIMATE CHANGE**



**MARINE
EDUCATION &
OCEAN LITERACY**

FROM SCIENCE TO SOCIETY: SOCIB MARINE EDUCATION & OCEAN LITERACY EFFORTS



Almost all of the societal goals of the Ocean Decade require integrated and sustained ocean observation



SOCIB commitment: To disseminate our research activities and promote ocean literacy, fully aligned with the SDG14 of the 2030 Agenda and the United Nations Decade of Ocean Science for Sustainable Development (2021-2030)



FROM SCIENCE TO SOCIETY: EDUCATION & PUBLIC ENGAGEMENT ACTIVITIES

Aligned with SOCIB Research and Observing Mission and with the goal of **sharing** knowledge, SOCIB promotes ocean literacy by **conducting educational activities to discover, learn, raise awareness, inspire, and empower society** towards protecting the Mediterranean Sea and the global ocean



Events and trainings

On-site and online activities for all audiences

83 events & activities

285,645 participants



Contests

Online activities for all audiences

4 nationwide contests

3,494 participants



Educational resources

Focussing on the educational community

76 resources & materials

3 languages



Media mentions

Research results, products, data, services and activities

1,314 news

FROM SCIENCE TO SOCIETY: OCEAN LITERACY TEACHING RESOURCES

www.socib.es



SOCIB

General information, research and news

www.followtheglider.e



“Follow the glider”

New marine technologies for ocean observation in the classroom

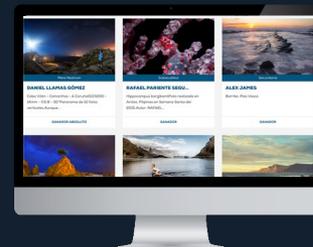
www.medcllic.e



MEDCLIC

Mediterranean Sea research and Oceanography for all audiences

www.medcllicphoto.es



“MEDCLIC Ocean”

Photo contest featuring our beautiful ocean

www.lamardeciencia.es



“The Sea of Science”

Contest raising awareness about the role of science in ocean conservation

717 photos, 2,000 drawings, and 128 videos about science and the ocean



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FOLLOW THE GLIDER

A DIGITAL EDUCATIONAL TOOL FOR TEACHERS AND STUDENTS



Follow the Glider web-based **educational tool** aimed at secondary school teachers and students to find out what underwater robots are and gain awareness of their importance for ocean research and conservation. In addition, “Follow the Glider” related outreach activities such as workshops are meant to engage a large audience and to bring knowledge on gliders to the teaching community.

<https://followtheglider.socib.es/>

39.892 web visits

15.036 users

SOCIB OUTREACH ACTIVITIES: 2015-2021



16 Follow the glider workshops
541 participants
(students and general public)



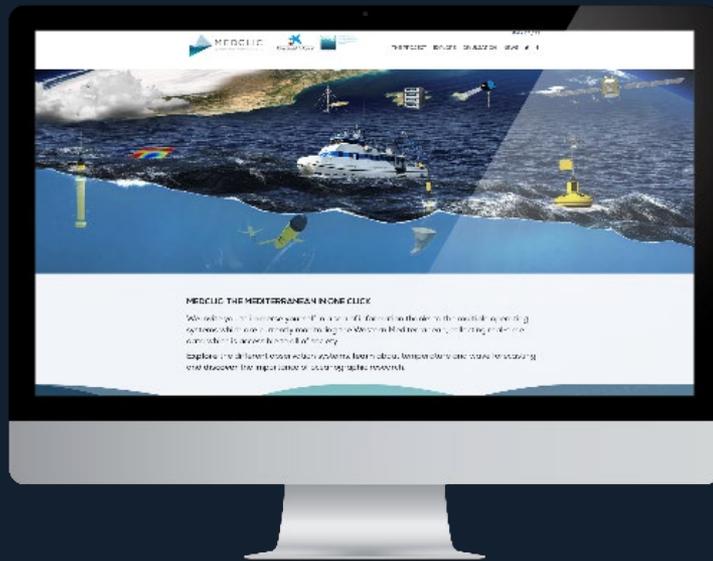
6 scientific fairs
23.832 participants
(students and general public)



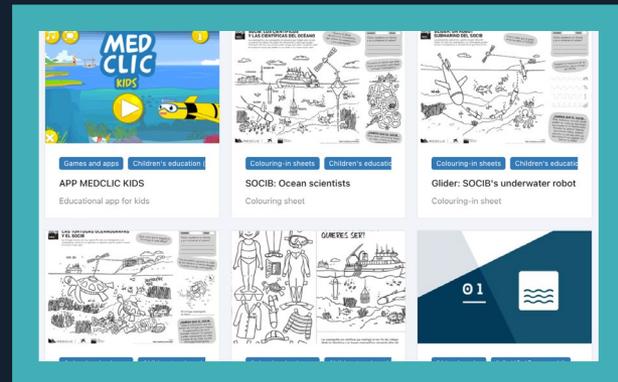
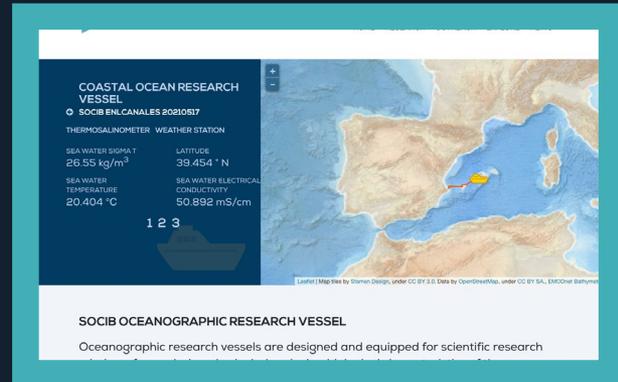
1 workshop for teachers
117 teachers

“MEDCLIC: THE MEDITERRANEAN IN ONE CLICK”

UNDERSTANDING AND FORECASTING OCEAN PROCESSES OCCURRING IN THE MEDITERRANEAN AND BRINGING THE OCEANOGRAPHY TO EVERYONE



www.medclic.es



“THE SEA OF SCIENCE”

AN ONLINE ARTWORK, VIDEO AND STORYTELLING NATIONWIDE CONTEST FOR STUDENTS INTERESTED IN SCIENCE, OCEANS, AND SUSTAINABILITY

What do kids and youth have to say about the ocean and what do they think about the role of science in ocean conservation?



www.lamardeciencia.es

2,899

Students

598

Schools

209

Teachers

2,159

Submitted works

3

Editions

330,000

Website visits

120,000

Unique visits

SCIENCE EDUCATION WORKSHOP: THE SEA AS A TEACHING RESOURCE

A NATIONWIDE 3-DAY WORKSHOP FOR PRIMARY AND SECONDARY SCHOOL TEACHERS THAT PROVIDES A GLOBAL FORUM TO SHARE AND EXCHANGE IDEAS, AND A WIDER NETWORK FOR FURTHER COLLABORATION

Updating teachers' knowledge and providing educational resources



300

Teachers

3

Editions

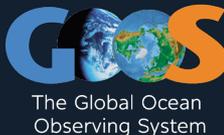
Official certification

SOCIB co-organises and leads marine science education workshops

CONNECTING OCEAN LITERACY AND ACKNOWLEDGING THE ROLE OF OCEAN OBSERVATORIES AROUND THE WORLD



“Unite for the ocean we need, for the future we want”, establishing networks of international collaboration to:



- Provide **visibility** and recognition to ocean observatories' dissemination efforts within the Ocean Literacy Framework.
- Foster the adaptation, translation and reuse of educational materials.
- Join efforts in collaborative projects or initiatives, encourage and strengthen regional, national and international partnerships.
- Contribute to the role of the SOCIB in the internationalisation of Ocean Literacy, in the context of the Ocean Decade.

TAKE-HOME MESSAGES

- Ocean observations are crucial for understanding the ocean system.
- Enhanced communication and outreach initiatives are needed to engage the educational community and new generations.
- Formal learning is one of the best possible manners to disseminate knowledge, new technologies, and the work of institutions devoted to marine R&D&I.
- The ocean is a cross-curricular education resource that can be encompassed by various subjects (not only science) and allows learning about values and ethics (environmental awareness, responsibility, citizen participation, etc.)
- Teaching ocean observatories' key role in classrooms also allows addressing content related to history, geography, economics, sustainability, traditions, etc.



THANK YOU,

Balearic Islands Coastal Observing and Forecasting System
(SOCIB)

“Researching the ocean, sharing the future”

Joaquín Tintoré @jtintoreocean
on behalf of all the SOCIB TEAM !



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