

Oceanographic data at your fingertips: the SOCIB App for smartphones

1 What is SOCIB?

SOCIB is a multi-platform Marine Research Infrastructure located in the Mediterranean Sea and made up of various facilities:

- 1 the coastal research vessel
- 2 the HF radar
- 3 the gliders
- 4 the Lagrangian platforms (profiling buoys and surface drifters)
- 5 the fixed stations (oceanographic buoys, weather and sea level stations)
- 6 the beach monitoring (beach cameras and coastal stations)
- 7 the modelling and forecast (waves and hydrodynamics)

The goal is to provide access to all the data generated by these facilities through an user-friendly app running on smartphones.

2 Technology

The app relies on the SOCIB Data Discovery Service (<http://apps.socib.es/DataDiscovery/index.jsp>), a layer of RESTful web services.

These web services allow the client to:

- obtain a list of fixed stations or deployments (active and archived),
- extract measurements for a given platform or a selected variable,
- obtain a time series for a given data product.



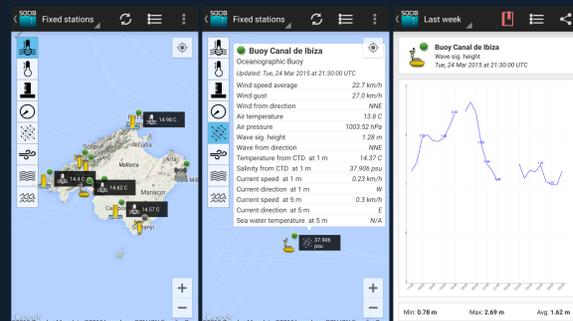
3 Facilities

All the data acquired by SOCIB facilities are presented with the platform locations and the most recent measurements.

Fixed stations

Current observations from different fixed stations, as well as time series for the last day, week or month are provided.

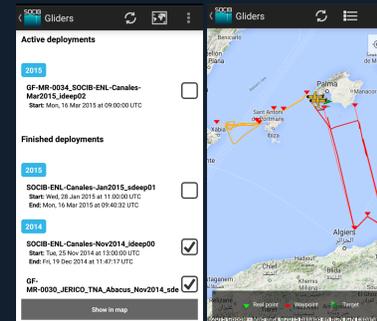
The user can easily share the data in social media and save his favourite variables.



Gliders

All the glider missions performed by SOCIB are listed. On the map, the way-points and the current positions can be visualised.

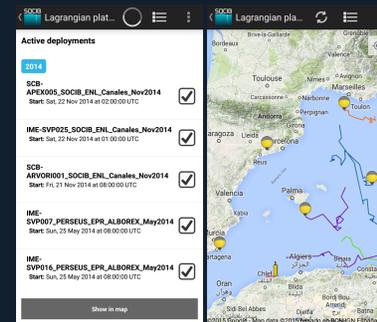
The figure shows an example of two missions performed in November 2014.



Lagrangian platforms

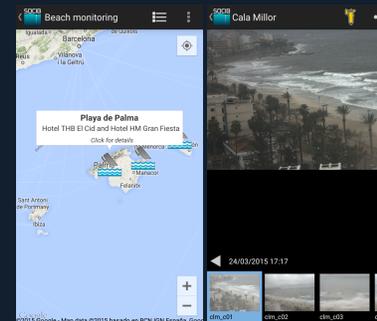
Similarly to the gliders, the drifters and profilers can be displayed on the map. Only the positions for the last 30 days are shown.

When the user taps on a buoy, a window with additional information opens.



Beach monitoring

Real-time images are provided for Playa de Palma, Calla Millor and Son Bou (see map for locations). The image shows a snapshot at Calla Millor on March 24, 2015.



Research Vessel

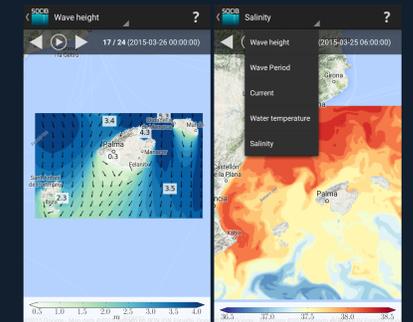
All the missions performed by SOCIB Research Vessel can be visualised. If a mission is on-going, the positions are shown in near-real time.

The Alborex mission (May 2014) south of Cartagena is shown as an example.



Forecast

Wave and hydrodynamic models provide 3-day forecasts of various variables such as: wave height and period, sea water temperature and salinity, currents, ...



HF Radar

The HF radar system provides the currents in the eastern part of the Ibiza Channel.

The last day of data is provided, with one image per hour.



4 Where to get the app?



<https://play.google.com/store/apps/details?id=com.socib>



<http://itunes.apple.com/es/app/socib/id482542716?mt=8>

Other applications developed by SOCIB Data Centre are available at <http://apps.socib.es/>.

5 Future work

The goal to provide an easy access to all the data managed by SOCIB through a mobile app was met.

Other apps for specific user profiles (sailors, surfers, tourists) may be developed.

Feedback and suggestions can be sent to

via info@socib.es or via [@SOCIB_data](https://twitter.com/SOCIB_data)