

**SWOT for TIDE GAUGE TASK TEAM**

**EuroGOOS Integration Workshop, Brussels, November 19-20, 2019**



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European Global Ocean  
Observing System

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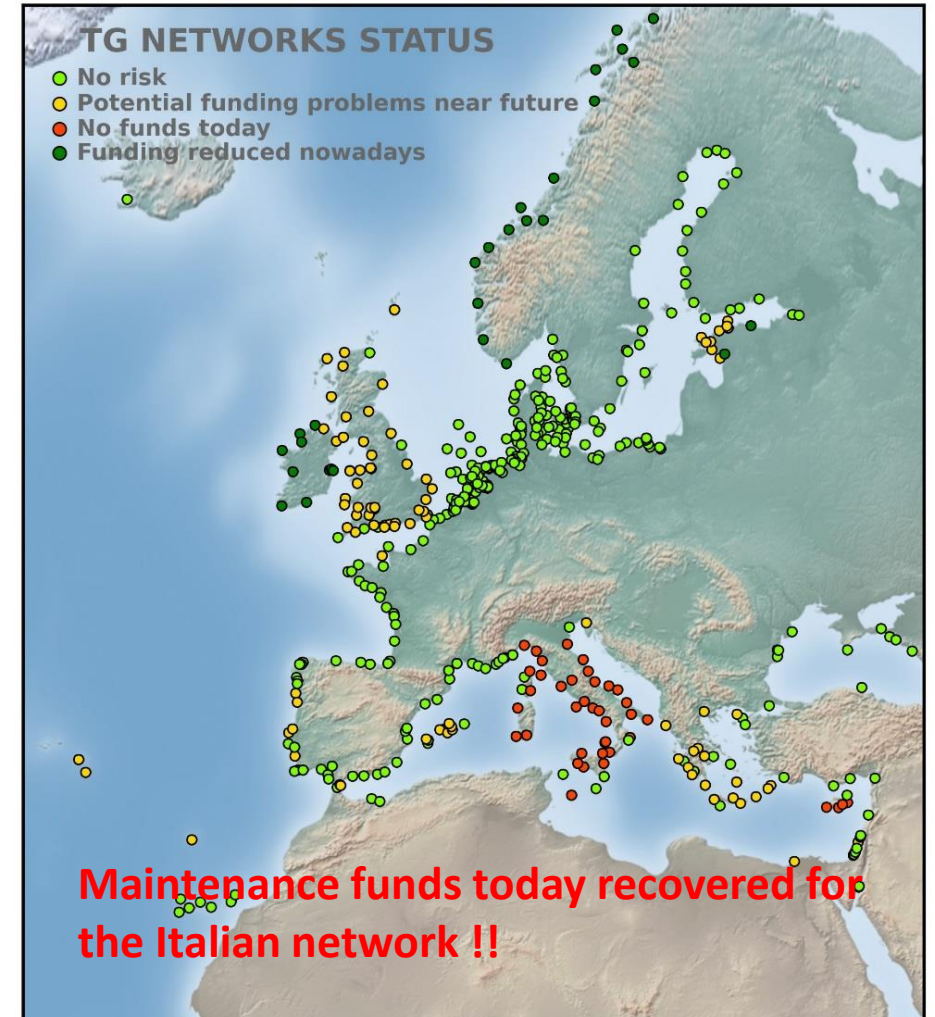
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## Integration workshop SWOT Tide Gauge Task Team

### Strengths:

- European sea level community recover by integrating sea level scientists, tide gauge operators, data aggregators and users
- Multi-purpose approach: dealing with the needs and requirements of the tide gauge stations for different applications: operational oceanography, tides (hydrography), mean sea level rise, datums definitions, model validation, altimetry calibration, harbour operations, storm surge and tsunami warning...
- “Laboratory” for discussion of new technologies, data flow/processing, and downstream services based on tide gauge data that could be exported to the ROOS'es and from Europe to the global network
- Connection with the Global Sea Level Observing System: GLOSS
- Support with tide gauge expertise to CMEMS InSitu TAC
- Detection and support of sustainability/funding problems of national tide gauge networks



### Weaknesses:

Of the tide gauge network:

- Lack of human resources and funding for in-situ maintenance, upgrade and operation in many countries
- Recovery of old long time series at some locations
- Need to identify redundancies and duplicates in national networks and data portals
- Difficult access to all required metadata
- Access to tide gauge data from North Africa stations (data policy problems)
- Management and quality control of the increased volume of data due to today lower sampling requirements (tsunamis, meteotsunamis, extreme sea levels)

Of the Task Team:

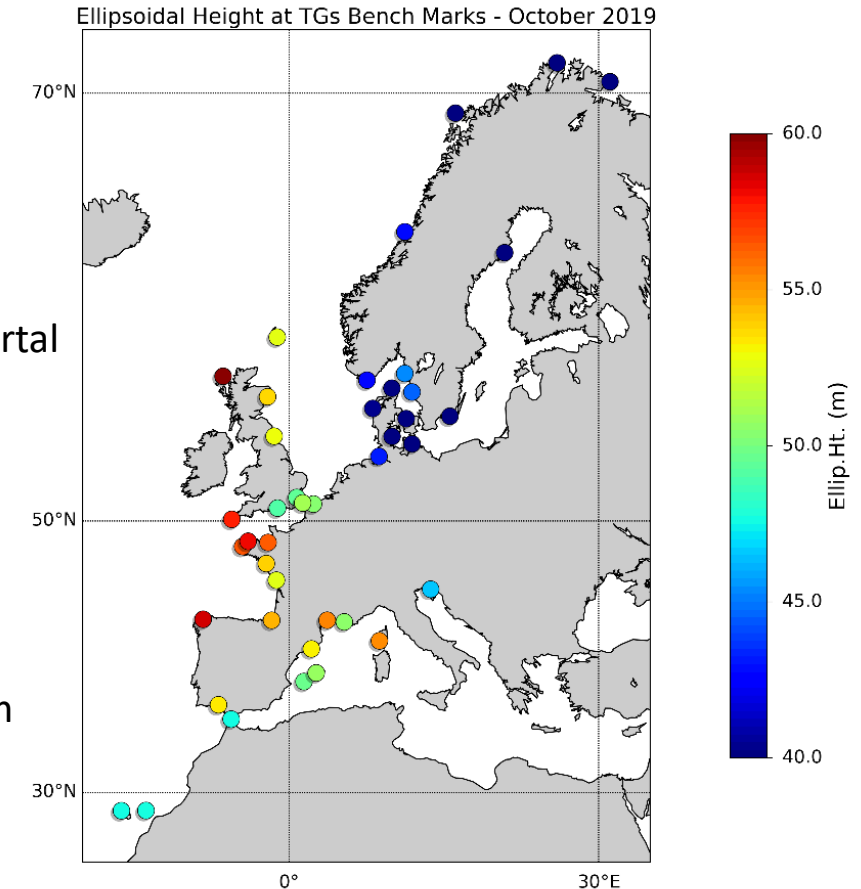
- Integration of all the actors: hundreds of tide gauges operating for decades (and increasing). The TGTT needs to involve more institutions and experts in the future
- Limited funding opportunities identified up to now (old network and technology)
- Lack of adequate representation/connection with other working groups, ROOS'es

### Opportunities:

- EuroSEA project: (tasks 3.5 and 5.1.1)
  - New developments on existing automatic quality control procedures
  - New GLOSS pilot station: low-cost/energy cons. station including GNSS multi-reflectometry (sea level + land motion continuous monitoring).
  - Update of existing inventories of tide gauges: new comprehensive metadata data portal
  - Detection of gaps/duplicates/redundancies in the different data portals
  - Improved access to vertical land motion for tide gauges co-located with GNSS (Permanent Service for Mean Sea Level)
  - Workshops/training courses involving the global sea level community
  
- New funding opportunity: European GNSS Agency call: EGNSS market-uptake 2019-2020 (Horizon 2020, work-programme 2018-2020): need of new downstream services that take benefit of Galileo program. Interesting opportunity for change of paradigm on coastal sea level measurements with GNSS multi-reflectometry technology)

### Synergies/prospects for cooperation :

Invited to participate in next MONGOOS meeting (Dec 19). Convenient for the future: other ROOS'es and WG's





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### **T**hreats:

- Lack of funding for activities
- Lack of sea level data expertise on implementation of derived downstream services and new research projects (loss of motivation and momentum of young scientists to focus on tide gauge technology and data exploitation)
- Loss of connection between scientists and data aggregation programs with tide gauge operators/institutions (national capabilities)
- Lack of formal collaboration between existing global and regional data aggregators
- Underestimation of the importance of tide gauge data by general purpose research and observation programs



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### How can the EuroGOOS Office better service the needs of the Tide Gauge Task Team?:

- Connection with the European Commission about the tide gauge network needs
- Information about European projects requiring use/improvement of the tide gauge network
- Support on the organization of meetings and teleconferences
- Distribution of circular letters
- Connection with other WG's and TT's
- Dissemination of the task team activities via EuroGOOS website
- Dissemination of surveys launched by the task team