

COASTAL ALTIMETRY PROGRESSES TOWARD APPLICATIONS

3rd Workshop, European Space Agency;
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Recognizing that the Coastal Zone is of strategic importance and that would benefit from enhanced satellite altimetry, a first workshop, which took place in Silver Spring, U.S.A. in February 2008, charted the course to promote its use in the Coastal Zone (see W. H. Smith et al., *Eos*, 89(40), 380, 2008). The second workshop, hosted in Pisa in November 2008, represented a consolidation of the rapid progress made in the field (see J. Benveniste et al., *Eos*, 90(26), 225, 2009), also thanks to projects such as COASTALT (funded by the European Space Agency (ESA)) and PISTACH (funded by Centre National d'Etudes Spatiales (CNES), France).

The 3rd Coastal Altimetry workshop, hosted by ESA with support from CNES, the National Oceanography Centre, Southampton (U.K.), the National Oceanic and Atmospheric Administration (U.S.A.) and the Consiglio Nazionale delle Ricerche (Italy), was designed to review the latest advances in retrieving altimeter data in the Coastal Zone and to strengthen the links between the coastal altimetry community and the wider range of users, including scientists and those responsible for data integration. The workshop attracted eighty-six attendees representing a variety of expertise and disciplines from around 20 different countries on six continents.

The first and (overall) recommendation of the community is to develop local solutions driven by local requirements. Many local areas require special treatment and special consideration. Some areas have large tides, or a complex coastline, or will be more affected by sea level rise. But none of the problems that apply in one case are unique to the single case. They apply elsewhere too. Thus coastal altimetry requires global sharing of expertise as well as global products.

Therefore the recommendation extends to integrating many local solutions into a global approach to building a global coastal zone product, which will eventually become finely-tuned for every local coastal area. It is a challenge for the years to come. The construction and improvement of the global product will be incremental, adding gradually improved local solutions. It will require an active international collaboration, and continuation of this series of workshops.

The workshops should bring successful applications of altimetry in coastal regions to the attention of a wider group of coastal oceanographers, managers and the general public. They should be complemented by specific outreach and capacity building activities, to remove the impression that altimeter data cannot

be used in coastal regions, and replace it by a more complete understanding of the capabilities of altimeter data, both alone and in combination with other types of data and model fields.

Data from next-generation altimeters (especially Synthetic Aperture Radar/Delay-Doppler and possibly Ka-band) should be analysed as soon as they become available (early 2010), in order to derive and validate appropriate processing methods, adapted to the new observation techniques of these instruments.

Finally, the participants recommend the continuation of those initiatives (like PISTACH and COASTALT) aiming at the development and distribution of coastal altimetry products (from Jason-1, Topex/Poseidon and ERS-1/2 as well as Jason-2 and Envisat) and associated documentation.

Workshop agenda (including presentations) and a full report (including findings and recommendations) can be found at [http:// www.coastalt.eu](http://www.coastalt.eu). A summary of the report can be also found in the electronic supplement to this Eos issue ([http:// www .agu .org/eos elec/](http://www.agu.org/eos/elec/)).