

United Nations Decade

FIME

Anderson et al. (2019)

Ardhuin et al. (2019a)

Bange et al. (2019)

Bax et al. (2019)

Canonico et al. (2019)

Domingues et al. (2019)

Observing Air-Sea Interactions Strategy (OASIS) is harmonizing

Estes et al. (2021) Penny et al. (2019) community recommendations Pinardi et al. (2019) WEATHER Powers et al. (2019) from OceanObs'19 and UN Arico et al. (2021) Bax et al. (2018) Decade Laboratories... Benson et al. (2018) Cronin et al. (2019) Cronin et al. (2021) Fennel et al. (2019) ...into three Grand Ideas Foltz et al. (2019) Hermes et al. (2019) Maximenko et al. (2019) Smith et al. (2019) Speich et al. (2019 Wanninkhof et al. (2019) Centurioni et al. (2019 Groom et al. (2019) Harcourt et al. (2019) Jamet et al. (2019) Muelbert et al. (2019) Muller-Karger et al. (2018) Newman et al. (2019) Lombard et al. (2019) Marandino et al. (2022) Kent et al. (2019) O'Carroll et al. (2019) steinhoff et al. (2019) Swart et al. (2019) Villas Bôas et al. (2019) Ardhuin et al. (2019b) Bourassa et al. (2019) Ciani et al. (2019) Grand Idea #2 Gentemann et al. (2020) Satellites optimized Gommenginger et al. (2019) Morrow et al. (2019) Rodríguez et al. (2019) Shutler et al. (2020) Vinogradova et al. (2019) Meinig et al. (2019) Pearlman et al. (2019) Sabine et al. (2020) SCOR Working Group 154 (2020) Smith et al. (2019) Wang et al. (2019)visit: airseaobs.org Image: Sarah Battle/NOAA

Improved Earth system (including ecosystem) forecasts for a predicted, clean, accessible, healthy, safe & productive ocean

CLIMATE

Improved ocean information serving stakeholders around the world

Grand Idea #3 Improved models & understanding of air-sea interaction processes

Developing an Observing Air-Sea Interactions Strategy (OASIS) for the global ocean to serve the global community

The Observing Air-Sea Interactions Strategy (OASIS) seeks to create a sea change in observations of air-sea interactions, working to develop a practical, integrated approach for observing air-sea interactions globally for improved Earth system forecasts, CO₂ uptake assessments called for by the Paris Agreement, and invaluable surface ocean information for decision makers. OASIS uses a community approach to harmonize observational strategies through capacity development and leveraging of multidisciplinary activities, providing knowledge to promote healthy oceans and the blue economy. Our "Theory of Change" relies upon leveraged multidisciplinary activities, partnerships and capacity strengthening to develop three interlinked Grand Ideas: #1 a globally distributed network of mobile air-sea observing platforms built around an expanded array of long-term time series stations; #2 a satellite network, with high spatial and temporal resolution, optimized for measuring air-sea fluxes; and #3 improved representation of air-sea coupling in a hierarchy of Earth system models. Through OASIS, we hope that the world gains a better understanding of the delicate balances that govern weather, climate, the carbon cycle, and the ocean environment, and a better understanding of how to maintain these balances for the benefit of all. To get involved in OASIS activities and help promote a predicted, safe, clean, healthy, resilient, accessible, and productive ocean, visit https://airseaobs.org/get-involved

for air-sea fluxes

Grand Idea #1 A globally distributed in situ air-sea observing network

built around an expanded array of time series stations





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Seb Swart Christa Marandino U. Gothenburg GEOMAR OASIS co-chair OASIS co-chair

"Best practices are all about efficient sharing of information and learning. Collaboration and community are central. OASIS can be a focal point in this, bringing together air-sea interaction practitioners from around the world."

-- Jack Reeves Eyre, Former Theme Team ECOP co-lead





"Our aim is to tackle the grand challenge of standardising air-sea flux terminology, making flux data products and open source code findable and accessible, and elevating the visibility from observation to user data."

-- Marcel du Plessis Theme Team ECOP co-lead



Theory of Change



"A Safe Ocean for Small Island Developing **States** is just one of many societally relevant outcomes of a holistic OASIS strategy" -- R. Venkatesan

From Venkatesan et al. (2022) "Air-Sea Observations for a Safe Ocean, with focus on Small Island **Developing States**"



"OASIS-relevant process studies, which ensure interoperability of observations, & model improvements, are being planned by several international groups around the world in key regions of the global ocean, offering opportunities for multidisciplinary research and data sharing." – Charles Addey Theme Team ECOP co-lead

OASIS-relevant (potential) future Process Studies





Monthly USV Webinar Series for developing the CoP for the USV Network for GOOS is building community – Contact **Ruth Patterson** ruth.patterson@cdu.edu.au https://airseaobs.org/resources /webinars



Uncrewed Surface Vehicle Network for a remote, data-limited Global Ocean Observing System Update on an emerging network for OCG

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OASIS **Observing Air Sea Interaction Strategy** https://airseaobs.org/

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