

# SOCONET, SOCAT, ICOS-OTC, ISOOS

(Rik Wanninkhof, NOAA/AOML, Miami)



OCB Working Group: Filling the gaps in observation-based estimates of air-sea carbon fluxes

Providing an operational foundation for sustained surface operations from a diverse community – Bottom up efforts

**ISOOS/OASIS:** Integrated Surface Ocean Observing system: A “Big Idea” from Ocean Obs-19 for a sustained surface ocean observing system of all physical, chemical, and biological parameters

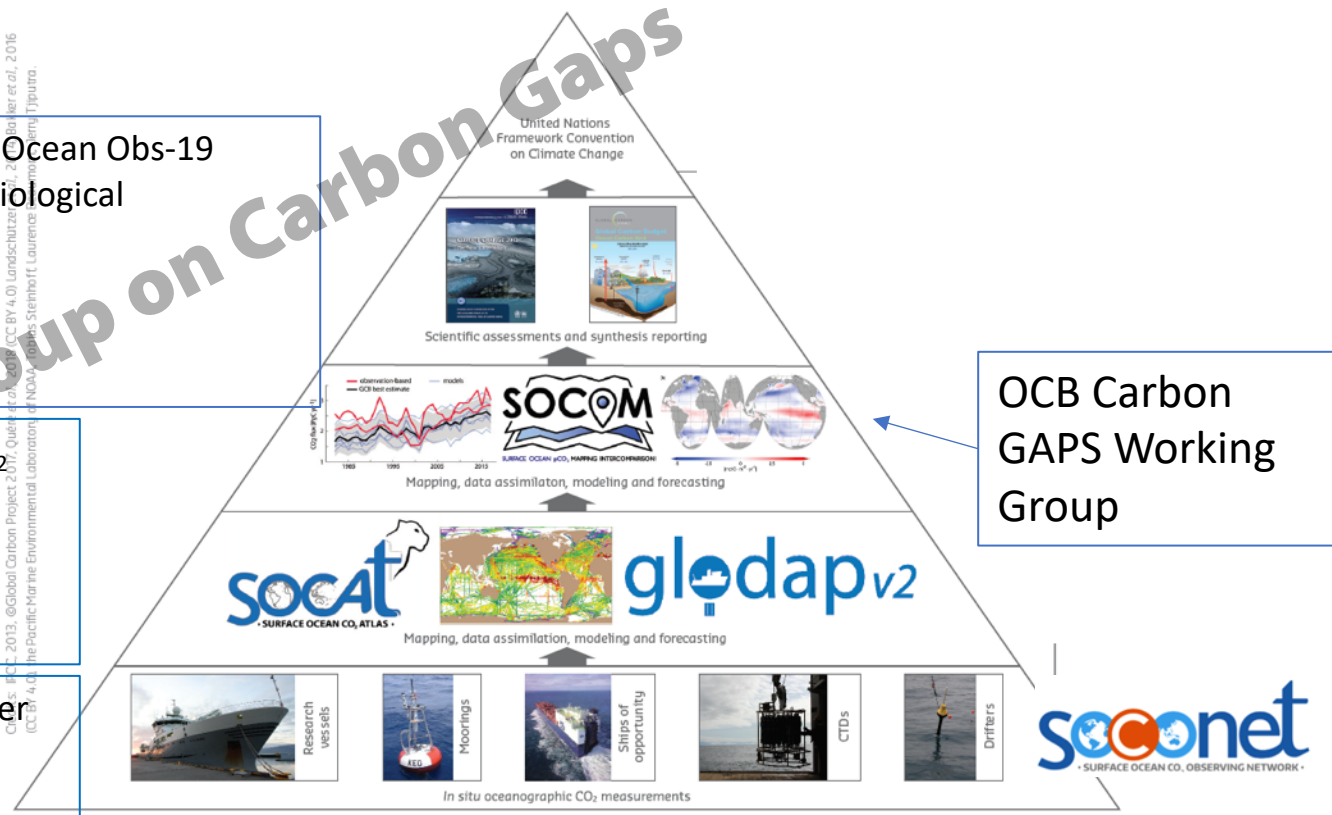
The Decade of Ocean Science for Sustainable Development;  
GOOS The Science We Need For The Ocean We Want]  
Step one: Observing Air-Sea Interaction Strategy (OASIS), SCOR WG

**SOCAT:** Collate, “homogenize” and higher level quality control of surface pCO<sub>2</sub> data; advocate for Best practices; assess overall quality of datasets ((± 2 μatm (A,B); ± 5 μatm (C,D); > ± 5 μatm (E))

Good data ingestion tools  
Aspirations: other surface water measurements; water column

**SOCONET:** Surface CO<sub>2</sub> reference network – Sustain and improve surface water CO<sub>2</sub> measurement good enough for air-sea CO<sub>2</sub> flux determinations (± 2 μatm water; 0.2 ppm air)

Regional network: ICOS-OTC: Integrated carbon observing system-Ocean Thematic Center A European Infrastructure project.  
OTC lead Richard Sanders- looking at ways to sustain (fund) global networks



OCB Carbon GAPS Working Group

Figure 2.2. The value chain that connects *in situ* oceanographic measurements of carbonate chemistry variables to climate negotiations.

Figure Courtesy D. Bakker, UEA