

# Harnessing Climate & SDGs Synergies

to Recover Better and  
Stronger from the  
Covid-19 Pandemic

Webinar 3: Going Forward with  
Climate & SDGs synergies

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# OCEANS

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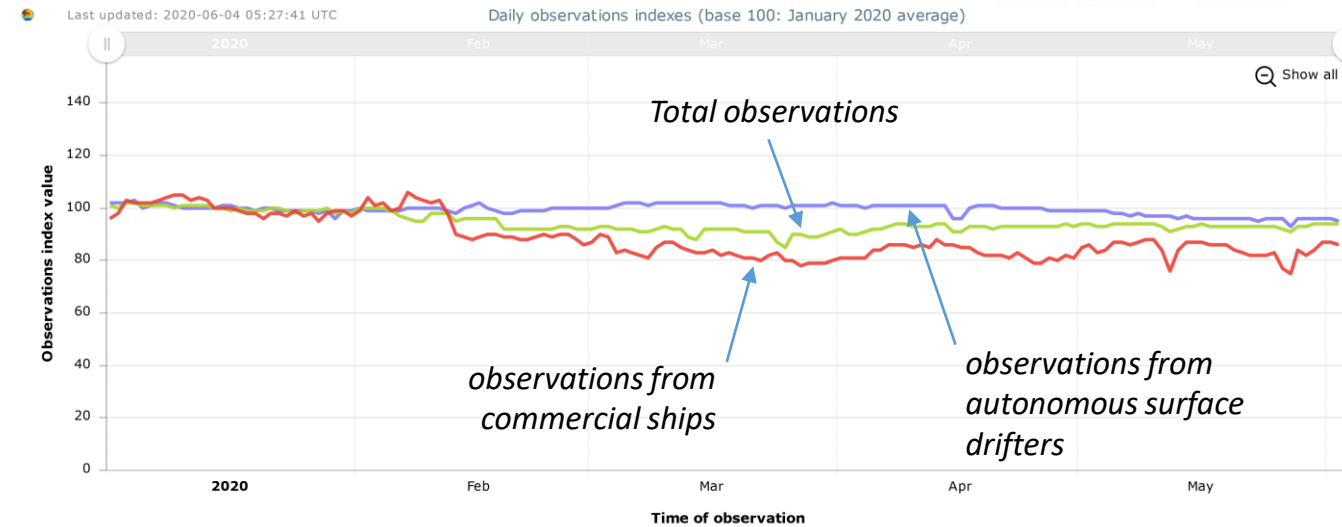
# GOOS survey on COVID-19 impact on the observing system



Limited immediate impact on data flow



- **GLOSS:** maintaining function
- **SOT-ASAP:** decreased data but maintaining function
- **SOT-SOOP:** data stream is impacted in the near term
- **SOT VOS:** data flow decreased (~15%)
- **Argo:** deployments impacted
- **DBCP Drifters:** maintained for now
- **OceanSITES:** major risks appear to be unfolding, complex
- **DBCP Moored buoys:** some data flow affected
- **OceanGliders:** heavily impacted in the near term, uncertainty remains
- **GO-SHIP:** major impacts to long established observing lines



## Lessons learned:

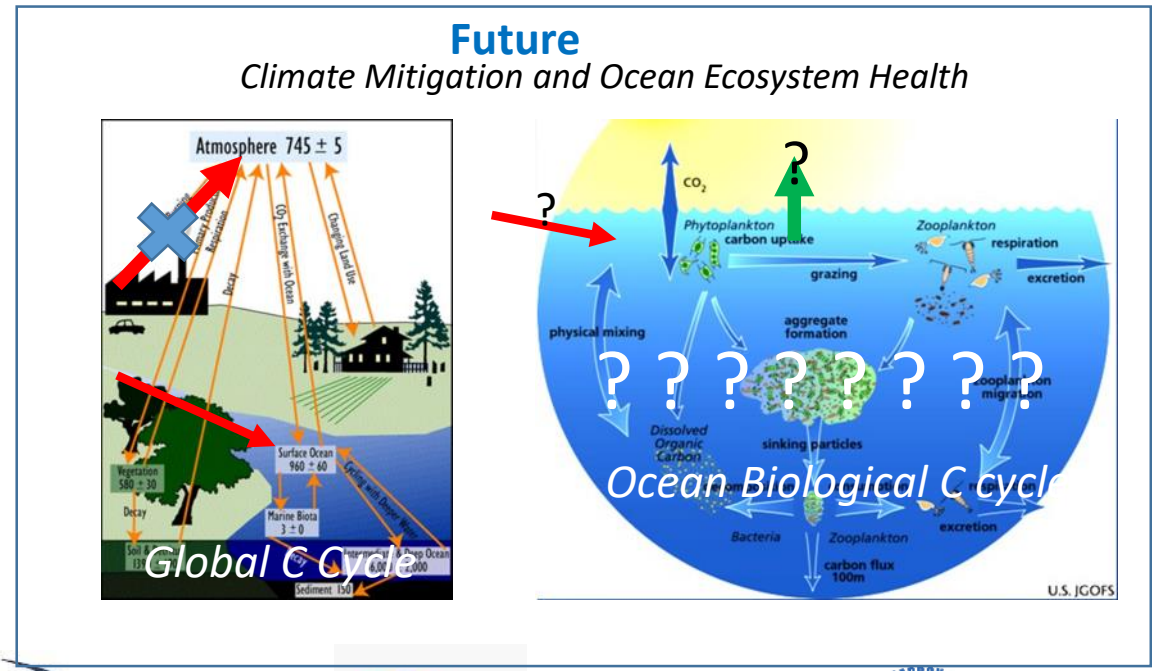
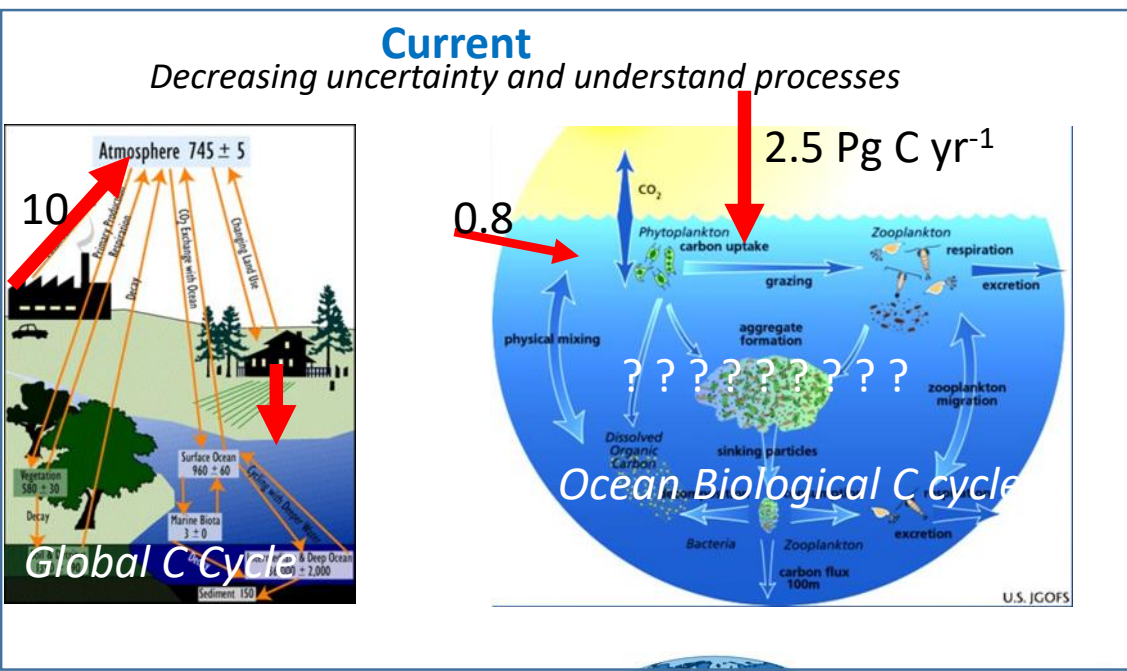
- Autonomous platforms and sensors are key
- Need increased international cooperation, sharing of resources such as ship-time
- Prioritize sustained observations can allow them to operate under different conditions

Courtesy:  
Toste Tanhua,  
GOOS



# Investing in... Integrated Ocean Carbon Research, IOC-R

- Will the ocean uptake of anthropogenic carbon dioxide (CO<sub>2</sub>) continue as primarily an abiotic process?
- What is the role of biology in the ocean carbon cycle?
- What are the exchanges of carbon between the land-ocean continuum and how are they evolving over time?
- How are humans altering the ocean carbon cycle, and what are the feedbacks?





*Review*

# **Ocean Acidification and Human Health**

Laura J. Falkenberg <sup>1,\*</sup>, Richard G.J. Bellerby <sup>2,3</sup>, Sean D. Connell <sup>4</sup>, Lora E. Fleming <sup>5</sup>,  
Bruce Maycock <sup>5</sup>, Bayden D. Russell <sup>6</sup>, Francis J. Sullivan <sup>7</sup> and Sam Dupont <sup>8</sup>

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## **Pathway of Ocean Acidification Impact**

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**Pathway 1—malnutrition and poisoning via altered food quantity and quality**

- Reduced quantity
  - Impaired nutritional composition
  - Chemical contamination (pollutants)
  - Redistribution and accumulation of natural toxins
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**Pathway 2—respiratory issues via impaired air quality**

- Enhanced aerosolization of natural toxins
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**Pathway 3—mental health impacts via modification of natural spaces**

- Loss of livelihoods
  - Disruption of nature-based recreation, exercise, and connection
  - Reduced social connections
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**Pathway 4—decreased opportunity to develop and obtain medical resources via loss of biodiversity**

- Loss of source of potential medical resources
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# 2021–2030 United Nations Decade of Ocean Science for Sustainable Development

THANK YOU



**2021**  
**2030** United Nations Decade  
of Ocean Science  
for Sustainable Development