

Forecasts of Pelagic Sargassum Blooms and Transports in the Intra-Americas Sea and Tropical Atlantic: Improving a Prototype Decision-making Tool

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What *Sargassum*?

Sargassum fluitans



Sargassum natans



Photo credit: Amy Sinuda of Sea Education Association

The Good and the Bad



Photo courtesy: Tracey Villareal (U. Texas)

- *Sargassum* provide food and shade to many animals (fish, young turtles, shrimp, crab, etc.) and serves as an important ecosystem habitat, and it also supports sand dunes and shoreline stabilization
- “The golden floating rainforest of the Atlantic Ocean” (The Sargasso Sea Alliance)

The Good and the Bad



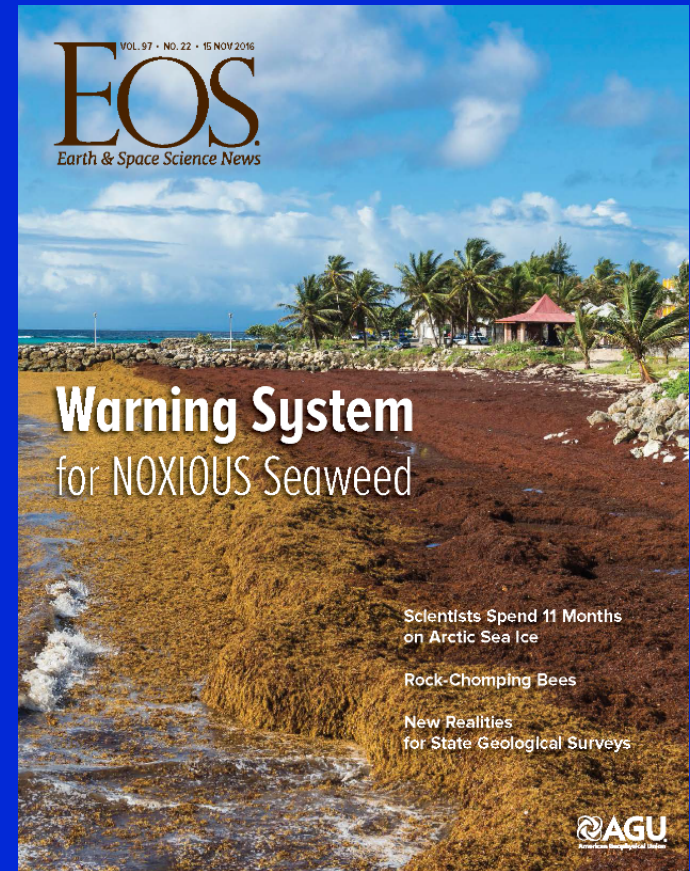
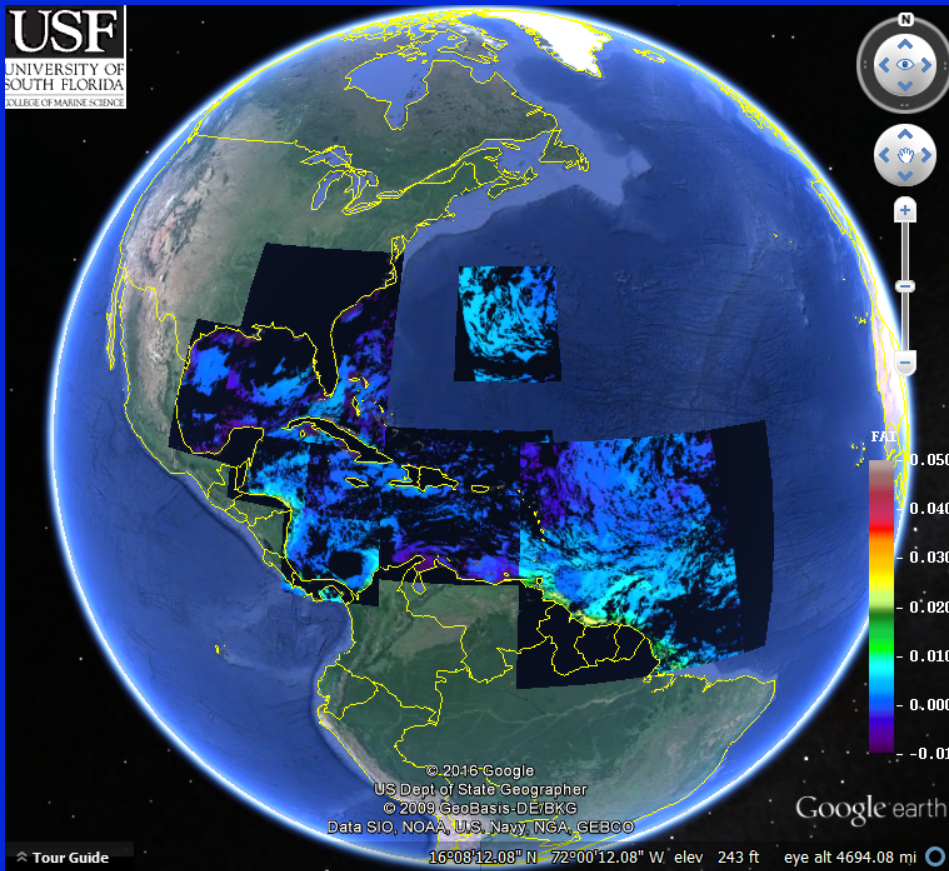
Sargassum beaching in the Caribbean (photo courtesy of Jean-Philippe Maréchal)

Excessive *Sargassum* beaching is bad

- Smells bad, attracts insects,
- Smother turtle nesting sites
- Cause sea turtle and fish mortality
- Negative impact on tourism and economy
- Requires physical removal

Satellite-based near real-time *Sargassum* Watch System (SaWS)

<http://optics.marine.usf.edu/projects/SaWS.html>

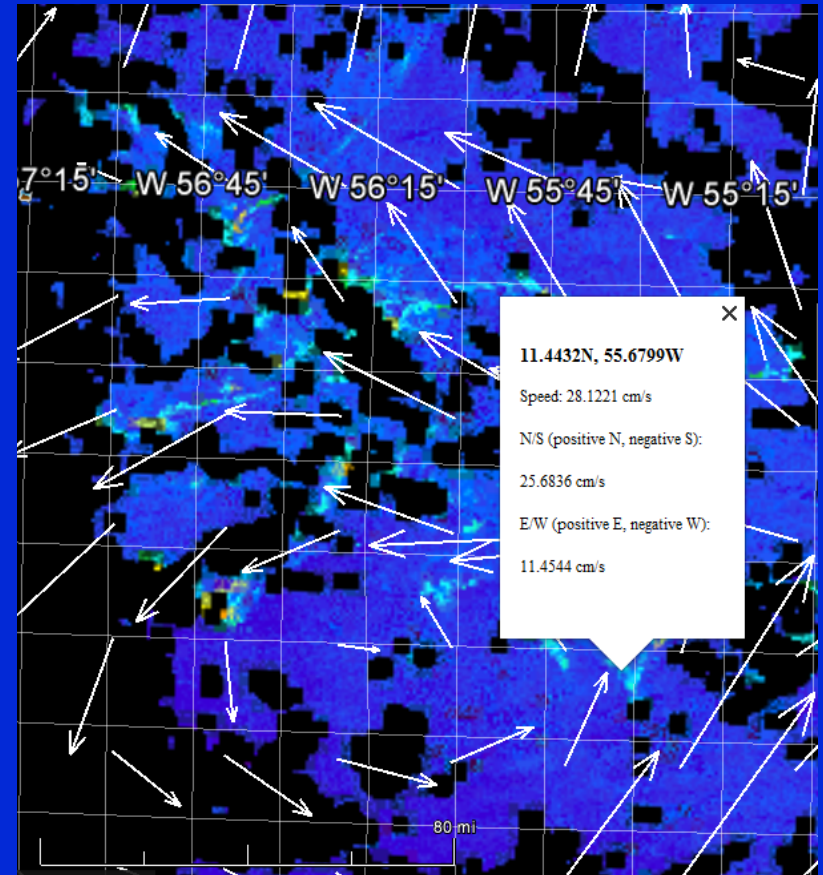
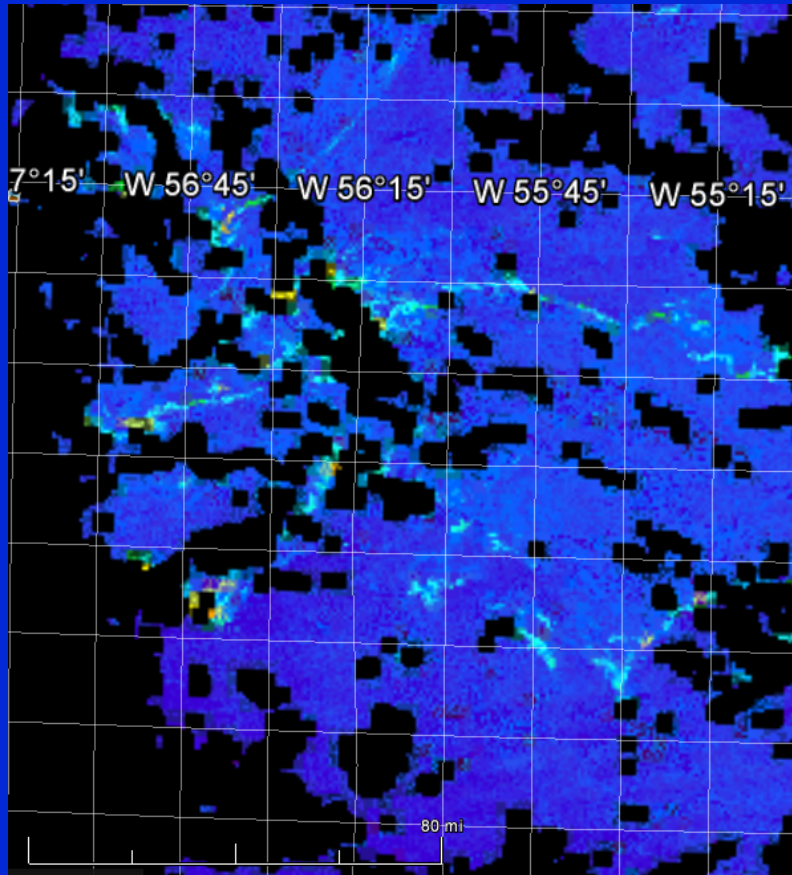


Satellite-based near real-time *Sargassum* Watch System (SaWS)

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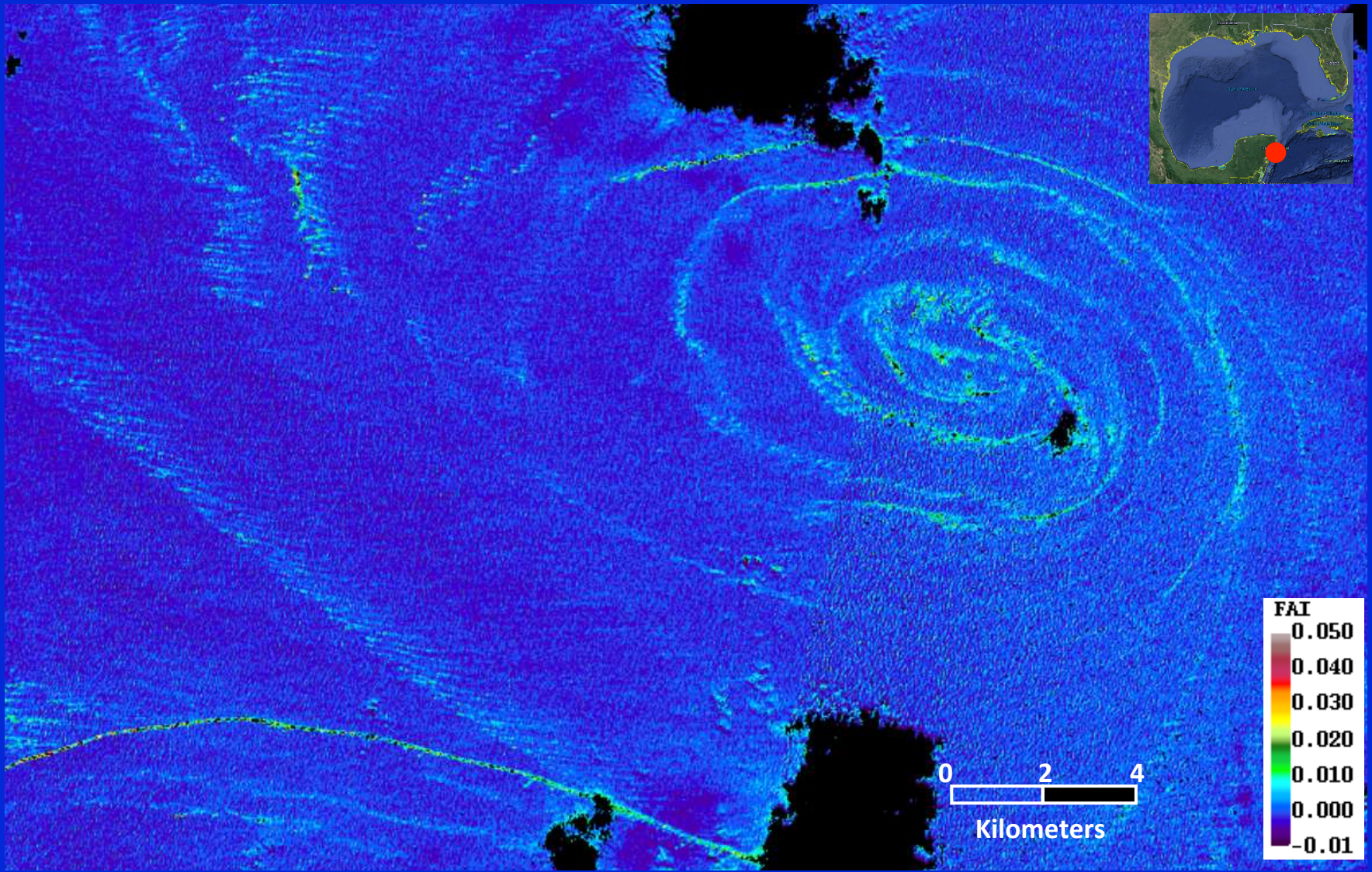
Bring image to Google Earth

Add HYCOM surface current



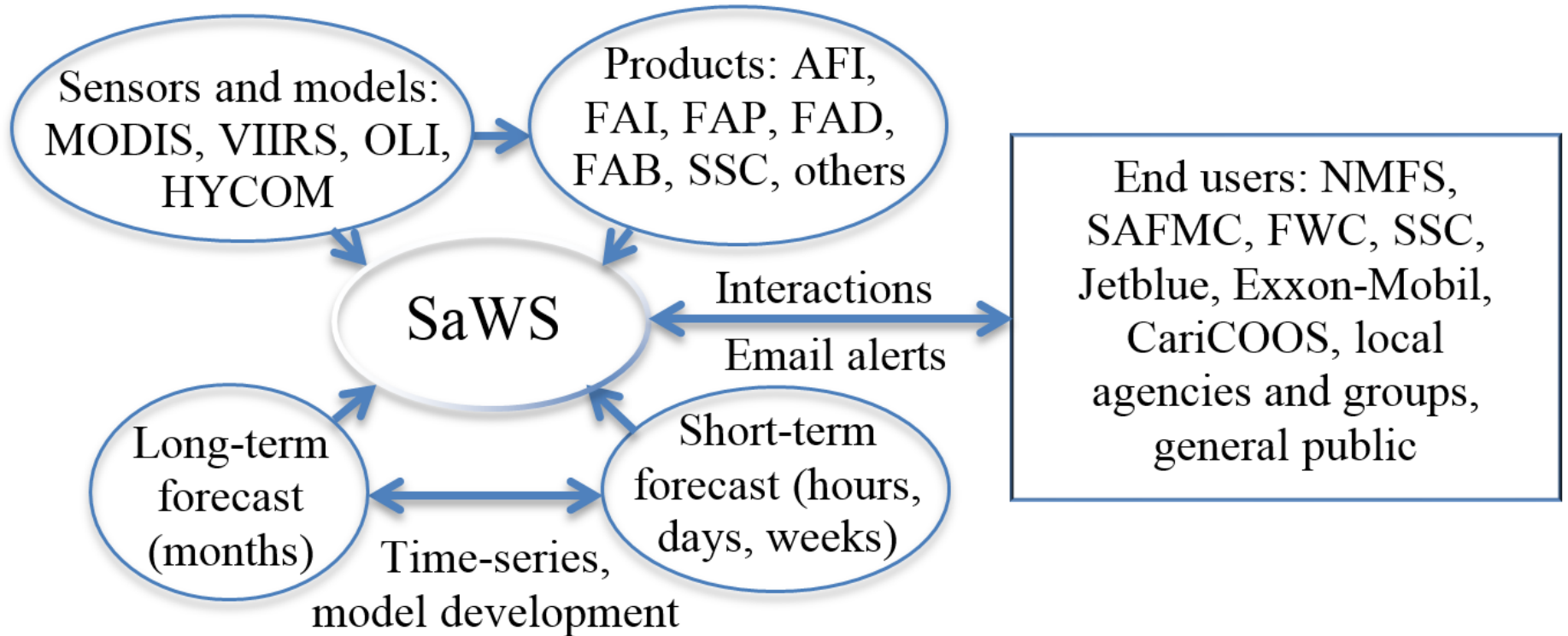
Landsat-8 FAI (not from SaWS)

Image off Mexico, near Cozumel



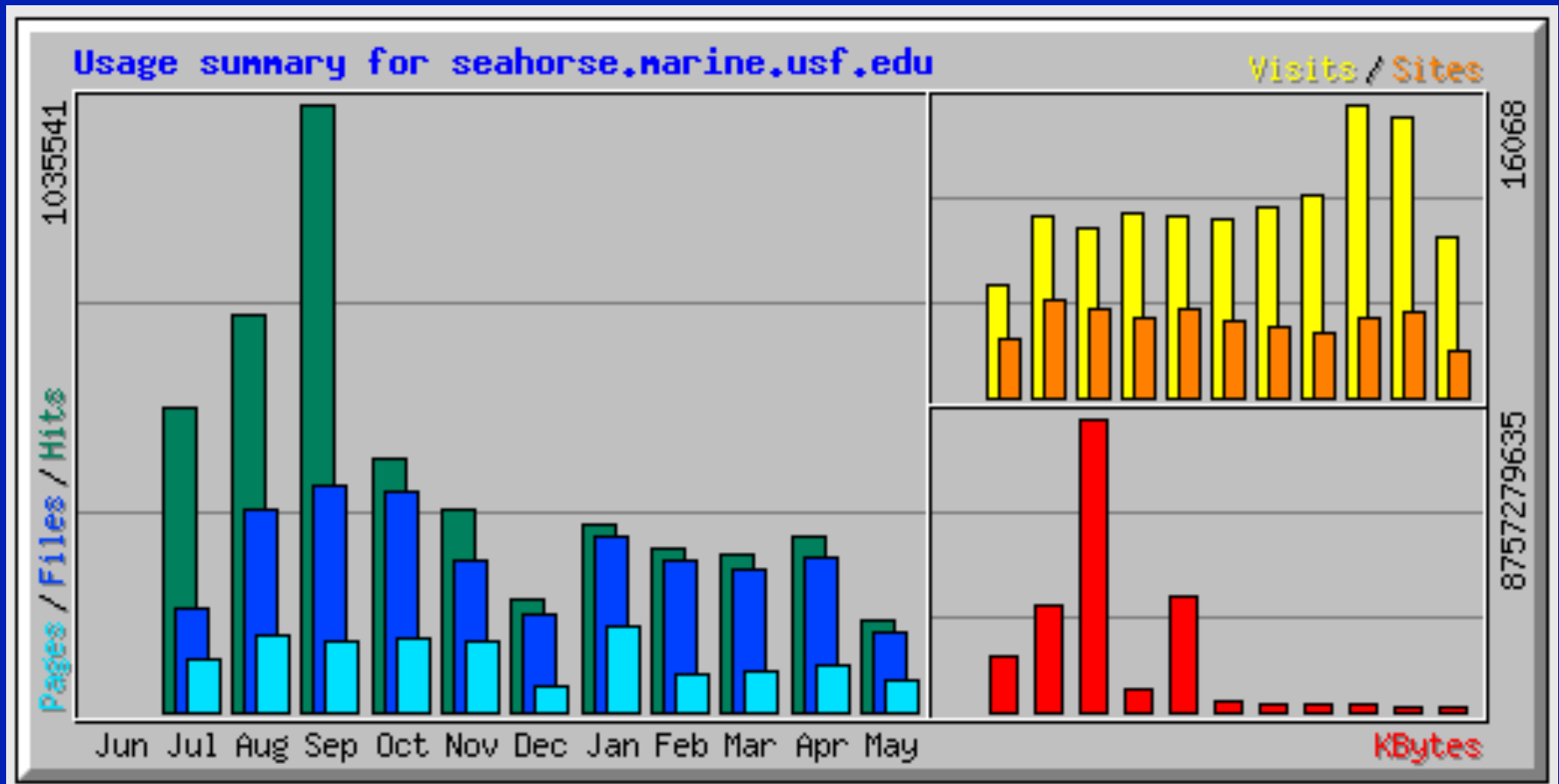
What's Next?

Improve SaWS through project tasks



Usage statistics

<http://optics.marine.usf.edu>



Summary

- A prototype SaWS has been established
- Its short-term and long-term forecasting capacity as well as usage will be enhanced through the new NASA project