

The GEO Coastal Zone Community of Practice

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GEOSS in the Americas Forum
On Coastal Zone Management

Washington, D.C., USA
20 November 2009



NOAA Satellites and Information

National Environmental Satellite, Data, and Information Service



GEO Coastal Zone Community of Practice (CZCP)

- Global, regional and local trends in natural processes and human demands on coastal ecosystems jeopardize the ability of these ecosystems to support commerce, living resources, recreation and habitation.
- In this context, improved, integrated and sustained coastal observing capabilities are required to better support user information needs.
- GEOSS provides a valuable framework/mechanism to help implement these capabilities, and under the auspices of GEO, a *Coastal Zone Community of Practice (CZCP)* was initiated in 2006 by the IGOS Coastal Theme.

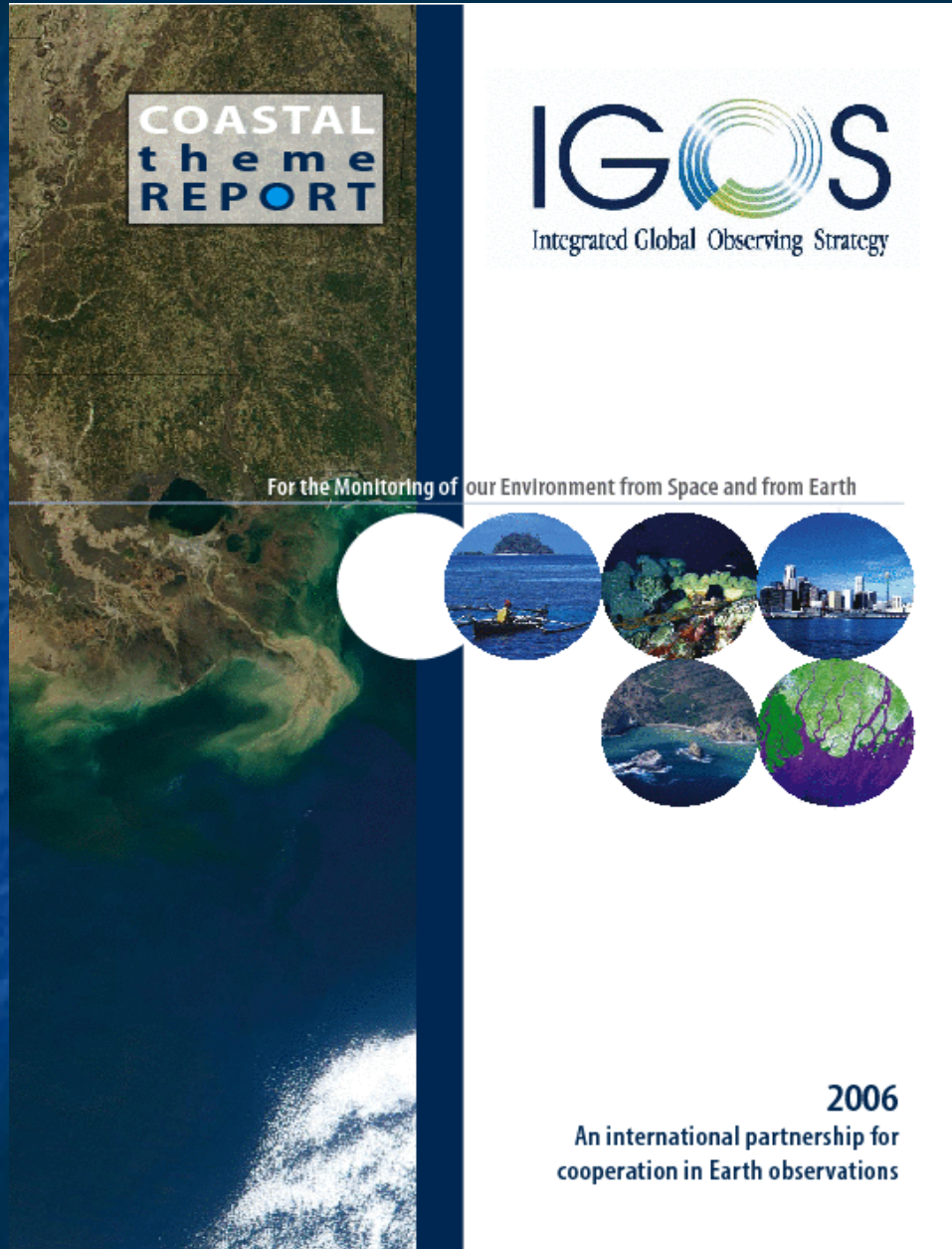
Figure 1.1. The Coastal Zone: Where inputs from land, sea, air and people converge



Heavily developed coast of Cancun, Mexico mostly for international tourism. Image credit: © Wolcott Henry 2001.

Image source: www.marinephotobank.org.

IGOS-P Coastal Theme Report



- Published January 2006, IOC
- <http://www.ioc-goos.org/content/view/14/28/>
- Also see related article:
Christian et al., *Opportunities and Challenges of Establishing Coastal Observing Systems, Estuaries and Coasts*, 29(5):871-875. 2006

GEO Coastal Zone Community of Practice (CZCP)

The GEO Coastal Zone Community of Practice (CZCP) objectives are to:

- Engage coastal users (e.g., managers and decision makers) and data providers to collaborate in the specification of requirements for *in situ* & remote coastal observations and derived Information products (variables to monitor, time-space resolution, accuracy, rate, forms and delivery methods in which data and derived products are needed);
- Evaluate current and projected observational capabilities against these requirements, identifying gaps, redundancies and activities that need to be strengthened;
- Promote the development of workshops and “proof of concept” pilot projects that both address these gaps and enable data integration for the provision of new or improved decision support tools;
- Promote development or strengthening of networks of institutions globally, regionally, and across Communities of Practice (CPs) that contribute to and benefit from GEOSS;
- Advise the GEO User Interface Committee, other CPs and GEO on matters relating to coastal zone observations and related societal benefits, and identify priority needs as well as areas for linkage, collaboration and support.

GEO Coastal Zone Community of Practice (CZCP)

CZCP membership/interests:

CZCP has broad, open membership with many GEO member nations represented as well as various coastal interests and applications (e.g., sea level rise & inundation; water quality; habitat, resource and integrated coastal area management). All are welcome and encouraged to participate!

CZCP Leadership:

Co-Chairs: Paul DiGiacomo and Hans-Peter Plag

CZCP Workshop Series:

Chaired by Michael Bruno plus regional Co-Chairs for individual workshops

GEO Coastal Zone Community of Practice (CZCP)

Present coordination, developmental & support activities of the CZCP include:

- * Organizing a series of Regional Workshops under the title: “**GEOSS Support for Decision-Making in the Coastal Zone: Managing and Mitigating the Impacts of Human Activities and Natural Hazards in the Coastal Zone**”;
- * Developing a community web page with access to relevant information, data & products – highlighting and addressing gaps and facilitating/enabling data integration for the provision of new or improved decision support tools;
- * Liaison to other relevant GEO Tasks, Participating Organizations (e.g., GOOS, GTOS), Committees & activities;
- * Support and Stimulation of Pilot Projects (e.g., ChloroGIN) and technical activities (e.g., Remote Sensing of Water Quality in Nearshore Coastal & Inland Waters);
- * General user outreach and engagement activities – meetings, workshops, conferences et al.

CZCP Regional Workshops

1) *Mediterranean*: “Observing System Requirements for Managing and Mitigating the Impacts of Human Activities and Coastal Inundation in the Mediterranean Region”, June 9-13, 2008, Athens, Greece; Report available at: <http://www.czcp.org>

Upcoming:

2) *Africa*: “Decision-Making Support For Coastal Zone Management, Water Resources and Climate Change In Africa”; 15-17 February 2010, Cotonou, Benin

3) *Americas*: Building on GEOSS in the Americas activities, the CZCP is working to develop a CZCP Americas Regional Workshop for later next year, potentially October 2010 in Puerto Rico – further discussion this afternoon.

4) *North Africa*: Follow up recommendation from the Athens Workshop; main goal - understanding decision processes and GEOSS decision support in Southern Mediterranean countries; working on overcoming funding challenges; still TBD.

5) *Asia*: Potential focus on coastal mega cities; very early planning stages.....

Harmful Algal Blooms – Operational Monitoring and Forecasting



Gulf of Mexico Harmful Algal Bloom Bulletin

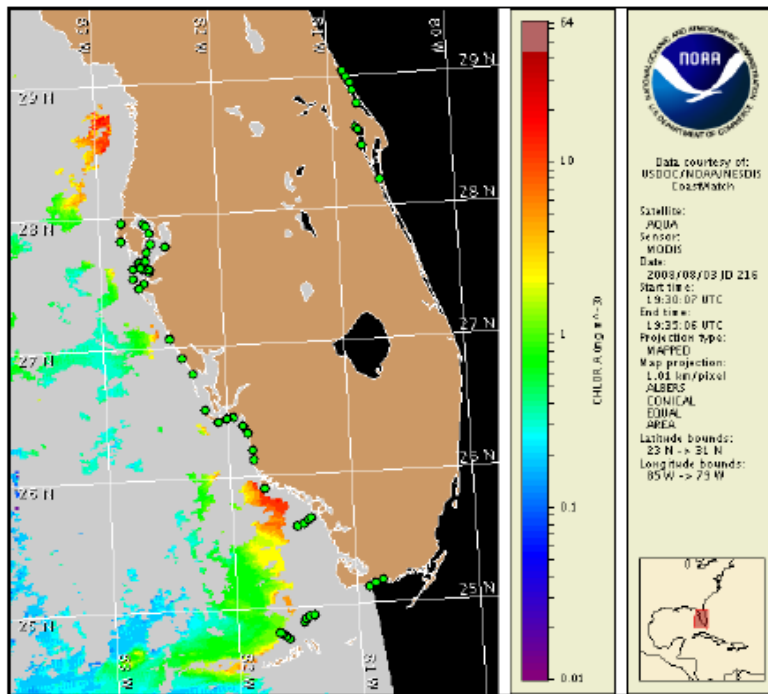
Region: South Florida

4 August 2008

NOAA Ocean Service

NOAA Satellites and Information Service

Last bulletin: July 28, 2008



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from July 25 to 31 shown as red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS bulletin guide:

http://www.csc.noaa.gov/crs/hab/habfs_bulletin_guide.pdf

Please note the following restrictions on all SeaWiFS imagery derived from CoastWatch.

1. Data are restricted to civil marine applications only; i.e. federal, state, and local government use/distribution is permitted.
2. Image products may be published in newspapers. Any other publishing arrangements must receive GeoEye approval via the CoastWatch Program.

Conditions Report

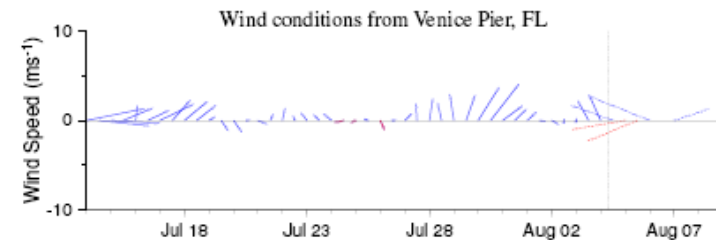
There is currently no indication of a harmful algal bloom at the coast in southwest Florida. No impacts are expected alongshore southwest Florida today through Sunday, August 10.

Analysis

There is currently no indication of a harmful algal bloom at the coast in southwest Florida. No *Karenia brevis* was found in samples collected last week between Pinellas County and the Florida Keys (FWRI, MML, SCHD; 7/30-8/1). Cloud cover has obscured recent satellite imagery, limiting analysis. Imagery from July 31 continued to show patches of elevated to high chlorophyll alongshore SW Florida due to confirmed non-harmful algae. Dead fish have been reported in the upper Tampa Bay, but are not due to *K. brevis* (FWRI, 08/01). Upwelling conditions are possible through Wednesday, August 6, however bloom formation alongshore is unlikely. No impacts are expected along the coast through Sunday, August 10.

Please note that SeaWiFS imagery is temporarily unavailable for display on this bulletin due to technical difficulties; MODIS imagery is shown on pages 1 and 2 of this bulletin.

Fenstermacher, Fisher



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

Wind Analysis

SW Florida: Southeast to easterly winds today through Wednesday, with onshore winds in the afternoon (5-10 kts; 3-5 m/s). Southwesterlies Thursday and Friday (5-10 kts; 3-5 m/s)

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA CoastWatch bulletin archive: http://coastwatch.noaa.gov/hab/bulletins_ns.htm

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

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http://czcp.org/ igos coastal theme report

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Coastal Zone Community of Practice CZCP

*Our mission:
Empowering integrated coastal zone management through Earth observations*

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Citation

Coastal zones are areas of particular ecological, social, and economic value where many conflicting interests need to be resolved in order to ensure a sustainable development of this highly complex environment. Humanity has always shown a special interest in the coastal zone and a large fraction of the human population traditionally settles in or close to the coastal zone. Recent increases in coastal urban population and changes in land-use practices have led to rapid and large changes in sediment supplies and increases in nutrient, pollutant and pathogen loadings to coastal waters. Climate-induced changes in sea level are likely to increase the risk of inundation in many parts of the coastal zone. The on-going and anticipated changes pose serious risks to human health and the capacity of ecosystems to support products and services critical to the survival and well being of human populations, in developed and developing nations alike.

The *Coastal Zone Community of Practice (CZCP)* supports the *Group on Earth Observations (GEO)* in its goal to provide observations required for informed decisions concerning the coastal zone. High and immediate priorities for GEOSS are improved forecasts of sea-level rise and associated increases in coastal inundation that may be exacerbated by increases in the frequency of extreme weather.



The IGOS-P Coastal Zone Theme Report: The Theme Report provides the basis for the work of the GEO Coastal Zone Community of Practice.

Latest News:

[15 October 2009] **CZCP will meet on November 20, 2009:** The CZCP is scheduled to meet on November 20, 2009 in Washington, D.C. The CZCP meeting will take place in the Canadian Embassy after the GEOSS in the Americas meeting at the same location. For more information, visit the [CZCP Meetings Page](#) and/or contact the [CZCP Co-chairs](#).

Future CZCP Plans and Activities

- Build on the legacy of the IGOS-P Coastal Theme
- Continue to implement the recommendations of the Theme Report
- Update the Theme Report as necessary/appropriate
- Continue the series of CZCP Regional Workshops
- Work with GOOS and GTOS, and contribute to implementation and build out of the global and regional coastal observing networks
- Improved coordination & linkage with Coral Reef user communities
- Facilitate development of pilot projects and other collaborative linkages (e.g., remote sensing of coastal and inland water quality)
- Improve user linkages and coordination, communication & outreach efforts
- Further develop and populate the CZCP Web Page
- Facilitate data access/sharing; transitions from research to operations
- Address funding and implementation issues and concerns