











Susan Russell-Robinson
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OCB-OA OAPI Workshop, Sept. 17-20, 2013

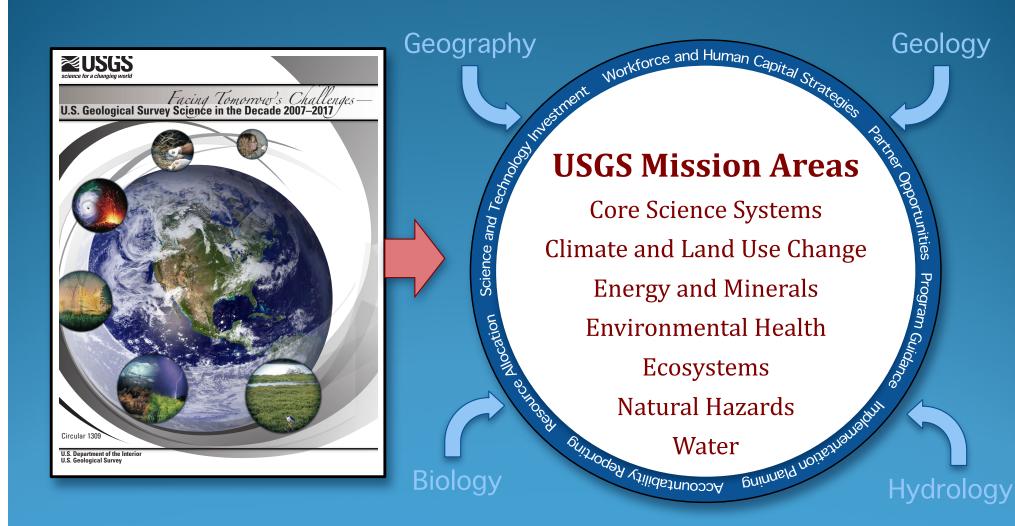






USGS Structure

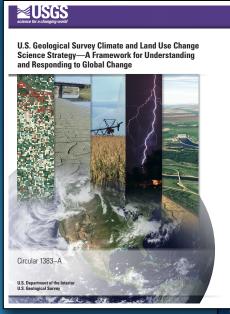
In 2010, USGS management and budget structure was realigned from a discipline based structure to an issue-based organization to reflect the Bureau science strategy...





USGS OA Guidance

Guidance for USGS OA research is defined in Mission Area Science Strategies...



Workforce and Human Capital Strategies

Partner Opportunitie

TS

SGS Mission Areas

Climate and Land Use Change

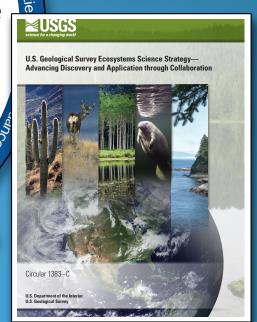
Energy and Minerals Environmental Health

Ecosystems

Natural Hazards

Water

Accountability Reporting

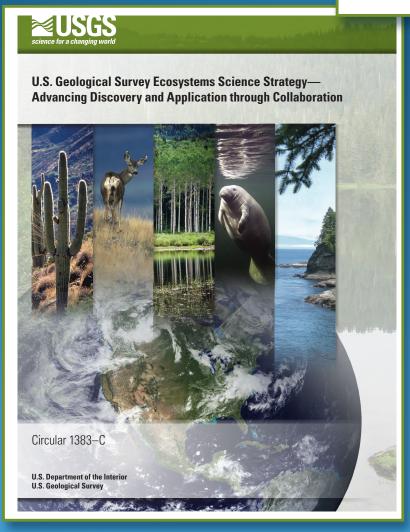




USGS OA Guidance

Science strategies define priority societal issues, goals, strategic approach, and proposed actions...

Ecosystems



Priority Societal Issue

"Adaptation to & mitigation of ecological effects of climate change, sea level rise, nitrogen deposition, and the acidification of soils, freshwaters and oceans"

Goal 2

"Advance understanding of how drivers influence ecosystem change"

Strategic Approach

"Advance understanding of how drivers influence ecosystem change"

Proposed Action

"Investigate the impacts of acidification on ecosystems including the magnitude of anthropogenic acidification and connections to the degradation of...marine systems at regional to global scales, and...the impact of more acidic ocean waters on carbonate secreting organisms such as corals and other invertebrates...through collaborations with other government and academic efforts..."



USGS OA Guidance

Science strategies define priority societal issues, goals, strategic approach, and proposed actions...

Climate and Land Use Change



U.S. Geological Survey Climate and Land Use Change Science Strategy—A Framework for Understanding and Responding to Global Change



Goal 1

"Improve understanding of past global changes in support of policy and management decisions"

Major Question

"What were the causes, durations, levels of greenhouse gases and ocean acidification, and environmental characteristics of past warm climate episodes?"

Goal 2

"Improve understanding and prediction of the global carbon cycle"

Strategic Action

Short term: "Improve understanding of effects of elevated CO₂ concentrations on ocean acidification"

Long term: "Synthesize studies of ocean acidification and its impacts"



USGS Program Role



Science strategies for mission areas are used by DOI for program guidance and implementation planning...







•Projects relevant to OA and mission objectives are threaded among multiple programs.





•CMGP and other USGS programs will be using Mission Science Strategies to help define program priorities and future directions.











...from tropics to poles

Visit our website

http://coastal.er.usgs.gov/ ocean-acidification/







Photo by: B. Schmoker, Polar TREC



Coral Reefs: Caribbean & S. FL



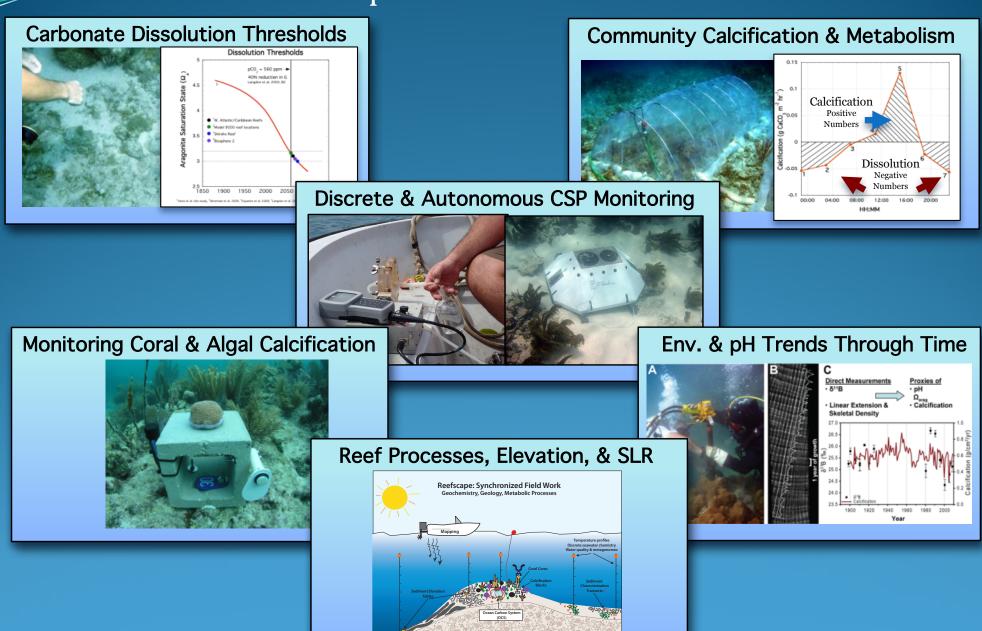






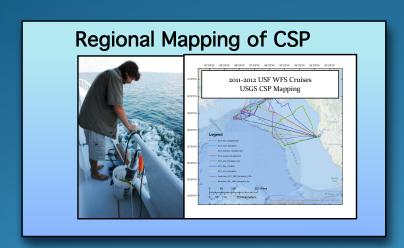


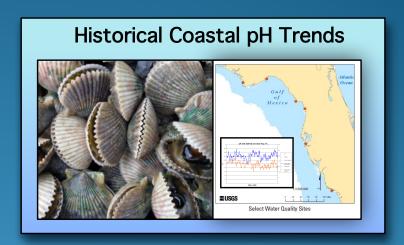
Tropics & South Florida





Gulf of Mexico & West Florida Shelf









Arctic Ocean

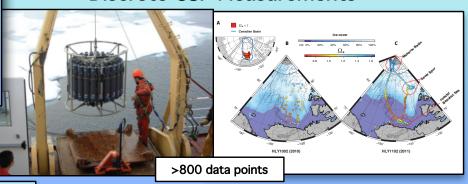
2010 & 2011 Research Cruises



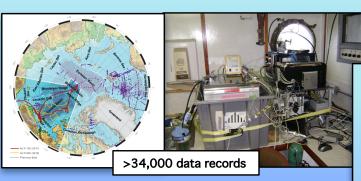
In partnership with Extended Continental Shelf Project (Law of the Sea)

USCGC Healy

Discrete CSP Measurements



Autonomous, Underway CSP Monitoring



Development of CO2calc Carbon Calculator





Platforms Windows Mac Osx iOS

*Recipient of USGS Shoemaker Award





USGS Coordination















- •<u>Arctic Ocean</u> UNCLOS, NOAA, UNH, USCG, Canadian Geological Survey, USF, LDEO
- •GOM/FL Shelf- USF, NCAR, UGA, FDEP, FWRI, NOAA, UDEL



•<u>Tropics</u> - NASA, NOAA, FWRI, USF, UM-RSMAS, LDEO, Eckerd College, Dalhousie U., NASA UAV Collaborative, ENP, BNP, VINP, FKNMS



•USGS role in IWG-OA

- •Development of the strategic plan for the FOARAM act
- •Planning for and participation in development of implementation plan
- •Participating in 6 of the 7 priority themes to guide Federal activities (1, 2, 4, 5, 6, & 7).













USGS Future Plans









•Ability to maintain current efforts will depend on budget outcomes over the next several years.



•Future directions supported by USGS will be in response to opportunities for collaborative efforts toward shared goals that build on existing activities.



- •Continued support for scientists to engage in research discussions to help guide science directions.
- •Foster existing partnerships & continue to pursue joint opportunities.

