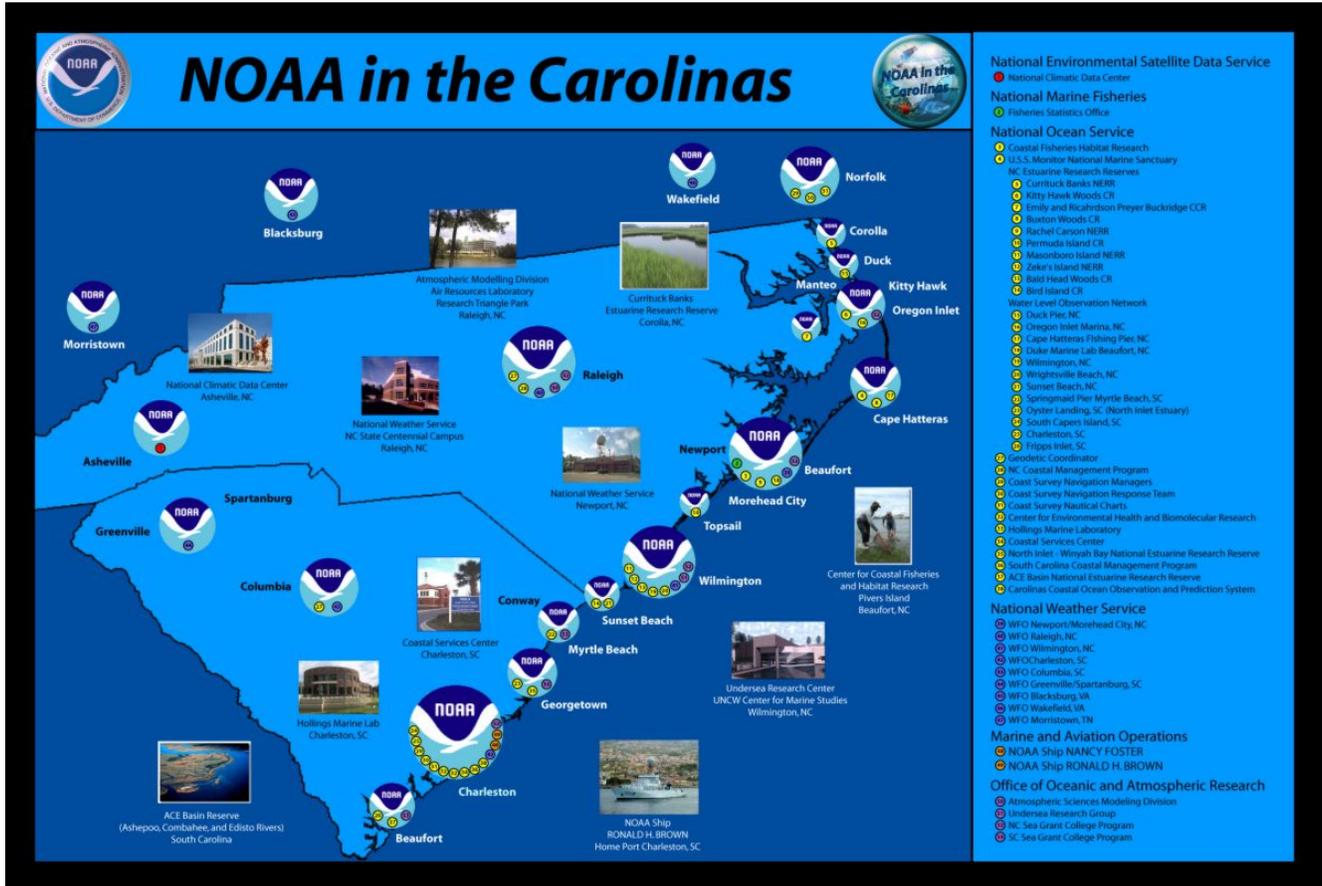


NOAA IN THE CAROLINAS: Regional "OneNOAA" Collaboration



REPORT FROM 2007 ANNUAL MEETING
 NOAA Coastal Services Center
 Charleston, SC
 February 28 – March 1, 2007

EXECUTIVE SUMMARY

National Oceanic and Atmospheric Administration (NOAA) strategic and operating plans are founded on close working relationships inside and outside NOAA at the national, regional and local levels. Vice Admiral Conrad Lautenbacher, NOAA administrator, expresses a *OneNOAA* vision, wherein program planning and execution are not constrained by bureaucratic “stovepipes.” The core objective of *OneNOAA* is to provide the most efficient and effective products and services for the nation.

NOAA in the Carolinas (NinC) is a *OneNOAA* collaboration. On-going NinC objectives include: to better serve public needs through more efficient, effective, and accessible NOAA services and products; to understand and embrace a *OneNOAA* vision; and enhance the regional role in NOAA’s Program Planning, Budgeting, and Execution System (PPBES).

The **2007 third annual NOAA in the Carolinas meeting was held February 28 to March 1, 2007 at the NOAA Coastal Services Center, Charleston, SC.** Regional NOAA offices and programs in the Carolinas collaborate on many interdisciplinary projects, for example: improving rip current safety, developing better flood and storm-surge models, predicting climate change impacts, and identifying changing coastal demographics and impacts on the coastal environment. The agenda included: 1) *plenary presentations* to educate the region on NOAA’s new regionalization program, including the Southeast and Caribbean Regional Team (SECART) efforts (formerly the South Atlantic Regional Team), and on the Coastal and Inland Flood Observation and Warning (CIFLOW) system; and 2) *moderated working groups* to contribute to SECART plans and improve CIFLOW products and services.

Seventy-three participants came from eleven states, all NOAA line offices, and multiple extramural partner organizations. **The meeting served to improve understanding of NinC/SECART integration.** These efforts are complementary, not exclusionary. SECART provides guidance and information, facilitates dialogue and connections within region, and is an avenue for PPBES input involving the region. NinC serves as an extramural connection to SECART. The meeting served to provide valuable **new depth and scope to CIFLOW**, a current Sea Grant regional project and PPBES 2011 initiative promoted during previous NinC meetings.

Next steps include:

- Add all meeting results to the NinC Web site—<http://www.carolinas.noaa.gov>;
- Present results via SECART to the NOAA Executive Oversight Group for NOAA regionalization efforts; and
- Add input (objectives, outcomes) to the CIFLOW Sea Grant project and PPBES initiative.

NOAA in the Carolinas Steering Committee:

NC: Andy Shepard, NOAA Undersea Research Center- Southeast Region; Jack Thigpen, NC Sea Grant; Tom Kriehn, Darin Figurskey, NOAA Weather Service; Aleta Hohn, David Evans, NOAA Fisheries; Adam Smith, NESDIS/NCDC-Asheville; Rebecca Ellin, NC NERRS
SC: Jeff Payne, NOAA Coastal Services Center; Bob Bacon, SC Sea Grant

<http://www.carolinas.noaa.gov>, Webmaster-- Rich Bandy, NWS WFO Newport, NC

GLOSSARY OF ACRONYMS

Note: This list is compilation from 2004-2007 meetings.

AOP	Annual Operating Plan
Caro-COOPS	Carolinas Coastal Ocean Observing and Prediction System
CCMAH	Cooperative Center for Marine Animal Health
CIFLOW	Coastal Inland Flood Observation and Warning Project
CORMP	Coastal Ocean Research and Monitoring Program
COTS	NOAA Coastal Observation Technology System
CSC	NOAA Coastal Services Center
CWISE	Climate and Weather Impacts on Society and Environment
DEM	Digital Elevation Maps
DENR	NC Department of Environment and Natural Resources
DNR	SC Department of Natural Resources
DoD	Department of Defense
FEMA	Federal Emergency Management Association
FIRM	Flood Insurance Rate Maps
GIS	Geographic Information System
IOOS	Integrated Ocean Observing System
LIDAR	Light Detection and Ranging
NCCOS	NOAA Centers for Coastal Ocean Service
NCDC	National Climatic Data Center
NCDCM	NC Division of Coastal Management
NCFMP	North Carolina Floodplain Mapping Program
NCSU	North Carolina State University
NDBC	NOAA National Data Buoy Center
NERON	NOAA Environmental Real-time Observations Network
NERRS	National Estuarine Research Reserve System
NESDIS	NOAA National Environmental Satellite and Data Information Service
NGS	NOAA Geodetic Survey
NMFS	NOAA Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOS	NOAA Ocean Service
NPS	National Park Service
NSSL	NOAA National Severe Storms Lab
NURP	NOAA Undersea Research Program
NWLON	NOS National Water Level Observing Network
NWS	National Weather Service
OAR	NOAA Office of Oceans and Atmospheric Research
PPBES	Program Planning, Budgeting, and Execution System
SART	South Atlantic Regional Team—OneNOAA planning group for NC, SC, GA and Puerto Rico/USVI
SEACOOS	Southeast Atlantic Coastal Ocean Observing System
SECOORA	Southeast Coastal Ocean Observations Regional Association
SEFC	NMFS Southeast Regional Fisheries Center
SERFC	Southeast River Forecast Center
SG	Sea Grant
SP	Strategic Plan
SWMP	NERRS System-Wide Monitoring Program
UNC-CH	University of North Carolina at Chapel Hill
UNCW	University of North Carolina at Wilmington
USACOE	US Army Corps of Engineers
USC	University of South Carolina
USGS	US Geological Survey
WFO	Weather Forecast Office

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BACKGROUND

The National Oceanic and Atmospheric Administration (NOAA) strategic and operating plans are founded on close working relationships both inside and outside NOAA at the national, regional and local levels. Vice Admiral Conrad Lautenbacher, NOAA administrator, expresses this as the *OneNOAA* vision, wherein program planning and execution are not constrained by bureaucratic “stovepipes.” The core objective of a corporate *OneNOAA* is to provide the most efficient and effective products and services for the public.

NOAA offices and programs in North and South Carolina have collaborated on many cross line office, interdisciplinary projects, for example: improving rip current safety, developing better flood and storm-surge models, predicting climate change impacts, and identifying changing coastal demographics and impacts on the coastal environment. In 2004 and 2005, NOAA representatives in North and South Carolina conducted annual meetings in Wilmington and Asheville, NC, to highlight NOAA partnership efforts, and to recommend new potential research and outreach efforts. The resulting reports are available online at the new *NOAA in the Carolinas* Web site (<http://www.carolinas.noaa.gov/>).

Following the 2004 and 2005 meetings, NOAA in the Carolinas Steering Committee members summarized meeting results for the NOAA Goal Team and Line Office leaders at presentations in Silver Spring. The leadership endorsed the grass-roots regional approach to *OneNOAA*, encouraged the team to expand regionally, and integrate its activities with the emerging Southeast and Caribbean Regional Team (renamed from the South Atlantic Regional Team), part of the NOAA regionalization initiative headed by the office of Policy, Planning and Integration.

PURPOSE

The *NOAA in the Carolinas* (NinC) mission is to promote a *OneNOAA* vision by improving regional communication and coordination, building partnerships that enhance the value of NOAA products and services, and increasing public access to NOAA resources. For more information on this on-going initiative, visit the *NOAA in the Carolinas* Web site at <http://www.carolinas.noaa.gov>.

The purpose of the 2007 meeting was to promote interest of NOAA partners from the broader southeast region to promote consistency with NOAA’s emerging collaboration framework in the Southeast and Caribbean region that also includes Georgia, the Caribbean, and Florida. Table 1 includes specific meeting objectives and expected outcomes. The agenda included:

- Keynote addresses by NOAA management regarding priorities for our region, including how NinC can better support the *OneNOAA* vision and regional collaboration strategy
- Discussion of existing, and exploration of new *OneNOAA* collaborative efforts in the region
- Working sessions to help shape a specific regional initiative, the Coastal and Inland Flood Observation and Warning (CIFLOW) system.

Table 1. 2007 NinC annual meeting objectives and expected outcomes.

OBJECTIVE	OUTCOMES
1. Build regional team (expansion to new states, cross-region invitees)	<ul style="list-style-type: none"> Meeting report and presentations on Web (http://www.carolinas.noaa.gov) Familiar and stronger regional team
2. Understand/support <i>OneNOAA</i> & PPBES:	
2A. Introduction to new NOAA-wide regionalization program (SECART) and feedback on SECART near-term activities	<ul style="list-style-type: none"> Feedback on SECART proposed plans Better understanding of NinC/SECART integration
2B. Identify potential new PPBES submission & near-term partnerships	<ul style="list-style-type: none"> CIFLOW product suite, including new elements Tools to improve OneNOAA outreach
3. Improve products/services: support CIFLOW (understand, enhance, promote, use)	<ul style="list-style-type: none"> CIFLOW product suite, including new elements

OUTCOMES AND RECOMMENDATIONS

This report will be posted at the NOAA in the Carolinas Web site, <http://www.carolinas.noaa.gov>. The final agenda is in Appendix B. Notes from the first breakout group are included in Appendix C. Other meeting materials including all presentations and CIFLOW breakout group materials are available online at <http://www.nssl.noaa.gov/projects/ciflow/carolinas07>.

Obj. 1-- Build regional team (expansion to new states, cross-region invitees):

Seventy-three participants attended from nine states and all NOAA line offices (Figure 1; Appendix A), plus extramural partners from many agencies (state and other federal). The meeting expanded invitations beyond Carolinas, which was helpful for creating more regional awareness and people connections.

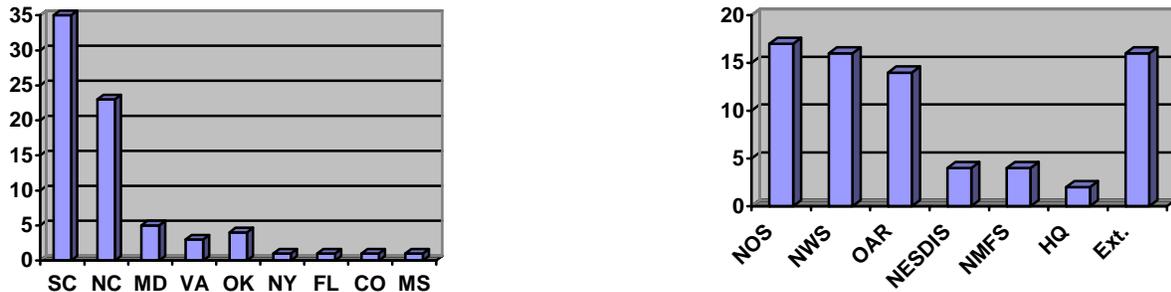


Figure 1. 2007 meeting included seventy-three (73) participants from eight states (left) and all NOAA line offices (right), plus extramural partners from several regional agencies; see complete list of participants in Appendix A.

Obj. 2a-- Introduction to new NOAA-wide regionalization program (SART) and feedback on SART near-term activities:

The meeting provided an opportunity for the NOAA SECART to elicit feedback from the NinC partners concerning NOAA's regional collaboration framework and specifically the SECART draft work plan. On the first morning, plenary talks included (posted at <http://www.nssl.noaa.gov/projects/ciflow/carolinas07>) for:

- Meeting Objectives and History of NinC – Andrew Shepard, Director, National Undersea Research Center, University of North Carolina
- Overview of NOAA’s Regional Collaboration Framework – Dr. Paul Doremus, NOAA Program Planning and Integration
- Initiation of NOAA’s Southeast and Caribbean Regional Team (SART) – Dr. Jeffrey Payne, Deputy Director, NOAA Coastal Services Center and Lead, NOAA SECART

At mid-morning, breakout sessions related to SECART were convened. The desired outcomes for this breakout session were discussed with the audience and four breakout groups were assembled that were aligned with NOAA Priority Area Task initiatives:

- Integrated Water Resource Services
- Hazard Resilient Coastal Communities
- Integrated Ecosystem Assessments
- Outreach and Communications

Each group reported out on their work. The desired outcomes were:

1. Participants add value to current characterization of Southeast and Caribbean regional trends, issues, and opportunities
2. Participants develop list of partnership opportunities requiring coordination and integration (enhance existing and identify new); consider regional needs and opportunities for regional execution of NOAA Priority Area Task objectives

Each group evaluated work done by the SECART up to that point in time, commenting on the characterization of regional trends, the identification of important regional issues, and the opportunities by NOAA and its partners to address those issues (all notes are included in Appendix C).

The SECART feedback process with NinC is a first step and provided immediate improvements and understanding needed to:

- Understand NOAA’s regional – as contrasted with national – scope and purpose;
- Optimize extramural partner and constituent input to NOAA emerging regional plans including timely access to information; and
- Improve education, outreach and communications related to OneNOAA regionalization construct including definitions, e.g., “Priority Area Task Teams”, “partners”, and various NOAA planning documents.

The meeting served to improve understanding of NinC/SECART integration. These efforts are complementary, not exclusionary. SECART provides guidance and information, facilitates dialogue and connections within region, and is an avenue for PPBES input involving region. NinC serves as an extramural connection to SECART.

Obj. 2b-- Identify potential new PPBES submission & near-term partnerships:

The breakouts included discussion of many new partnership opportunities (Appendix C) that address Southeastern and Caribbean regional priorities, for example:

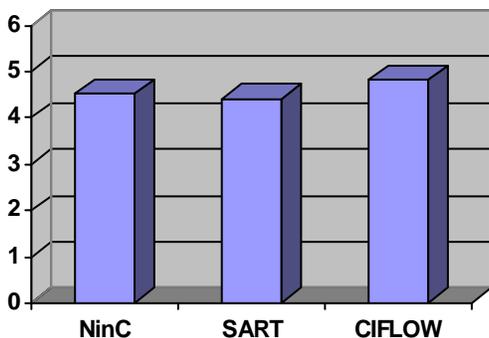
- Integrate states and federal **hydrological data, products, and services**, driven by local (including sub-regional) scale needs, similar to Oklahoma Mesonet (<http://www.mesonet.ou.edu>)
- Conduct **hazard resilience** assessment and measurement (e.g., Columbia U. example-- <http://www.earthinstitute.columbia.edu/e-newsletter/2003/march03/caracas.html>) including community resiliency index (towns, people, ecosystems), baseline assessments, and resilience pilot projects
- Build upon existing NOAA regional framework for **Ecosystem Approach to Management** region, e.g., South Atlantic Fishery Management Council Fishery Ecosystem Plan and Management Information System.
- Improve outreach both in and outside NOAA, e.g., develop and host “One-NOAA Day” and consider developing SECART Regional website – similar to NOAA in Carolinas.

Obj. 3-- Improve products/services for CIFLOW (understand, enhance, promote, use):

CIFLOW investigators mediated the CIFLOW breakouts. Complete working group reports are included at <http://www.nssl.noaa.gov/projects/ciflow/carolinas07>. Following are example recommendations:

- Distributed modeling: develop models for tidal creeks; archive calibration artifacts; develop transition plan from research prototype to operations
- Storm surge: Increase horizontal resolution; develop consensus of output format; work with the USGS on wave run-up
- Water quality: Develop needs assessment of water quality/ecosystem management community; establish testbed pilot project to test models and products with partners who have immediate management needs and can contribute relevant datasets (e.g., NERRs, USGS, Lower Cape Fear Program)
- Coastal applications: Combine work with CWISE and train a neural network application to help classify types of sea breeze, then help predict convective initiation leading to thunderstorm development.
- QPE: Deploy HMT in the Carolinas to make research observations and models available to the operational forecasters in real time; examine and validate use of mean field radar bias as compared to local or gauge based bias routines; examine and deploy ability to employ gauge-based bias and/or sector-based bias to QPEs; demonstrate and deploy into operations the ability to use grid QPE and QPFs into FFMP; quantify the uncertainties associated with gauge measurements in the Carolinas.

Evaluations:



Overall response to the meeting was above average (Figure 2). Twenty-seven evaluations were returned; mean rank was good to very good for how the meeting served to enhance awareness of NOAA in the Carolinas, SECART, and CIFLOW.

Figure 2. Evaluation results from 27 surveys. Mean score for how meeting enhanced awareness of NinC, SART, and CIFLOW; 1=poor, 2=fair, 3=satisfactory, 4=good, 5=very good, 6=excellent.

NEXT STEPS

Led by the NinC steering committee, the following NOAA in the Carolinas actions are anticipated over the coming year:

- Post meeting report and presentations on Web (May 2007)
- Improve CI-FLOW product suite, including new elements, and add to PPBES submission and Sea Grant project; see plenaries and CI-FLOW breakouts for details (posted at <http://www.nssl.noaa.gov/projects/ciflow/carolinas07>)
- Provide continuing feedback to SECART:
 - Establish broader regional network and communication to enhance planning input to NOAA and implementation capacity
 - Input to next meeting of SECART (scheduled June 4-6, 2007)
- Present results to NOAA management
 - SECART role in continuing regional process and integration with NinC – present to the NOAA Executive Oversight Group (date T.B.D.)

Following the meeting, several related activities occurred:

- **NOAA continues to move forward with its regional collaboration framework:**
 - Regional Teams and Priority Area Task Teams continue to refine '07-'08 work plans.
 - NOAA is working to enhance the usability of NOAA assets information by regions through integrating NOAA personnel and facilities information.
 - NOAA outreach and communications Priority Area Task Team has worked with the regional teams to establish several key elements:
 1. An internal strategic communications plan for regional collaboration
 2. A draft process to engage extramural partners formally in regional collaboration
 3. A 6-page primer for communicating regional externally; plus region-specific 1-page primers.
- **Regional input to NOAA's PPBES process is underway:**
 - The SECART utilized NinC meeting input for its participation in developing the NOAA Annual Guidance Memorandum.
 - Other points for regional input to the PPBES include the goal portfolio analysis, integrated priorities list, and line office annual operating plans.
 - NOAA is convened a broad stakeholders meeting on May 23, 2007 that also involved regional team leads.

APPENDIX A: PARTICIPANTS



Figure 3. 2007 NinC meeting participants.

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NOAA in Carolinas 2007 Annual Meeting

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APPENDIX B: AGENDA

NOAA in the Carolinas Third Annual Meeting NOAA Coastal Services Center, Charleston, SC February 27 – March 1, 2007

February 27, Tuesday

6:00 p.m. – 8:00 p.m. **NinC Reception at the Renaissance Charleston Hotel**, 68 Wentworth St, Charleston, SC

February 28, Wednesday

8:30 a.m. Welcome participants – Margaret Davidson

8:45 a.m. Meeting objectives and history of NinC – Andrew Shepard

9:05 a.m. NinC and NOAA 200th Anniversary – Tom Kriehn

9:15 a.m. – 10:30 a.m. ***Regional Planning***

- 9:15 – Overview of NOAA's Regional Collaboration Framework – Paul Doremus
- 9:45 – Initiation of NOAA's South Atlantic Regional Team – Jeff Payne
- 10:10 – Plenary discussion

10:50 a.m. Charge to breakout sessions – Jeff Payne

- Desired outcomes: Input to current characterization of South Atlantic regional trends, issues, and opportunities; list of partnership opportunities for regional execution of NOAA Priority Area Task objectives requiring coordination and integration

11:00 a.m. Begin breakout session – address outcome 1

12:00 p.m. Lunch and view NOAA 200th Anniversary video

1:00 p.m. Begin breakout session – address outcome 2

2:00 p.m. Reports from breakout sessions

3:15 p.m. – 5:30 p.m. ***Coastal and Inland Flood Observation and Warning System (CI-FLOW)***

- 3:15 – History of NOAA and NCSU NC storm surge and inundation partnership: Origins of CI-FLOW – Len Pietrafesa
- 3:30 – Motivation of CI-FLOW – Ron Baird
- 3:45 – Overview of CI-FLOW: A coupled model system – Kevin Kelleher
- 4:00 – QPE component – Ken Howard
- 4:15 – OHD distributed model effort – Geoff Bonnin
- 4:30 – NSSL distributed model effort – J.J. Gourley
- 5:00 – NOAA Hydromet Testbed (HMT) & CI-FLOW – Tim Schneider

March 1, Thursday

8:00 a.m. NCSU activity overview – Len Pietrafesa

8:05 a.m. Wind Modeling w/WRF – Shaowu

8:20 a.m. Storm Surge Modeling – Machuan

8:35 a.m. Water Quality Modeling – Meng

9:00 a.m. Charge to and begin CI-FLOW breakout sessions – Kelleher

10:30 a.m. Reports from breakout sessions

11:30 a.m. – 12:00 p.m. ***Wrap up, next steps, evaluation, and adjourn*** – Jeff Payne

APPENDIX C: BREAKOUT GROUP NOTES

I. Integrated Water Resource Services Breakout

Observations on Major Trends in the Southeast and Caribbean Region

- Discussion of SA Team bullets: increased population, gentrification, and vulnerability; transformation of economic base; expectations for ecosystem services
- Highlight changing social demographics and effects on vulnerability; speaks to need for targeted education
- Cultural sensitivities around water issues; suggesting need for sub-regional approaches to service delivery
- Language and cultural barriers
- Increased expectations but decreased understanding of ecosystem services
- New external drivers:
 1. Climate change – Sea level rise, storm intensification, freshwater delivery to the coast
 2. Quantity and quality of freshwater delivery to coast – expected commodification of water (no longer a resource, but a limited commodity)

Observations on NOAA's Mission Challenges

- Tailoring specific messages to specific constituent groups
- Develop a better understanding of regional hydrology (water budget) as a baseline – full hydrologic cycle, mountains to the coast
- Mechanism to link needs assessment, policy formulation, product and service development and delivery
- Concerns about responsiveness of PPBES process to regional needs
- Need for flexibility, adaptability, speed in addressing concerns at the sub-regional level

Opportunities

- Regional integration of data, products, and services, driven by local (including sub-regional) scale needs
- Regional needs for data and understanding (at range of time/space scales)
 - Hydrological baseline data
 - Monitoring and assessment
 - Forecasts of water quantity and quality
 - Regional education and outreach for the public (Mesonet example-- <http://hydrolab.arsusda.gov/sgp97/explan/section8.html>)
 - Tie-ins with existing efforts – National Integrated Drought Information System, National Water Quality Monitoring Network

II. Hazard Resilient Coastal Communities Breakout

Observations on Major Trends in the Southeast and Caribbean Region

- **Increased population, urbanization, gentrification, and vulnerability:**
 - Add diversity as a term
 - Recognize issues of considerable socio-economic variability
 - Most vulnerable are those who are less affluent
 - Gentrification: occurs mainly along the coast (e.g. Charleston)

- **Transformation of economic base and infrastructure:**
 - Is population growth keeping up with infrastructure?
 - Diversity is increasing considerably, contributes to vulnerability

- **Increased societal expectations for ecosystem services:**
 - Citizens not necessarily familiar with hazardous events
 - Public may have unrealistic forecast expectations (e.g., strong confidence in 3-day hurricane tracks, intensity)
 - Expectations for ecosystem services and managed risk from the government
 - Invasive species may become more of a problem
 - Hazards impacting natural buffers, which affect ecosystem services and have economic ramifications

Observations on NOAA's Mission Challenges

- **Use of ecosystem approaches to management (EAM) and tools such as integrated ecosystem assessments:**
 - Better understand course of NOAA's development of tools for EAM and why

- **Exposure to extreme and chronic hazards threaten community resilience:**
 - Sea level rise (climate change)
 - Increasing coastal storms
 - Drought (increasing coastal salinity)
 - Public health – increase in diseases (water born, algal bloom, proliferation of jelly fish, etc.)
 - Suggest a tool NOAA could develop to improve community resilience

Opportunities

- Healthy ecosystems are important to resilient communities
- There are different understandings of the terms “hazard resilience” and “ecosystem services”
- **Develop data and information in focus areas...**
 - Uninformed population, address lack of societal understanding of coastal changes and vulnerabilities
 - Improve linkages between communities and ecosystems/natural resources
 - Stress links between researchers and information providers
 - Increasing importance of human health arena and new sets of partners
 - Change “socioeconomic” to “economics and socio-cultural”
 - Climate change and variability

- **Conduct resilience assessment and measurement...**
 - Resilience is being assessed (Columbia U. for example)
 - Community resiliency index – towns, people, ecosystems
 - Develop baseline assessments as part of the index
 - Resilience pilots should focus on specific needs
 - Different groups use different indicators differently – specific to geography
- **Accelerate hazards forecasting, visualization, analysis, and modeling...**
 - Impacts forecasting
 - Storm surge and coastal flooding
 - Visualization of impacts
 - Communicating uncertainty in forecasting
 - Communicating impacts to society and increasing communication on potential impacts (probabilistic forecasting)
 - Could include ecological modeling and human health hazards
 - Switch order to be: analysis, modeling, forecasting, visualization
 - Regional team should expand and accelerate community interest
 - Create connectivity in hindcasts, nowcasts, forecasts – there are many models out there and we seem to be moving towards a plug and play modeling system
- **Support design and implementation of policies and adaptive management alternatives and tools to mitigate impacts of hazards...**
 - Mitigating the potential and actual impacts plus adaptive alternatives (tools to soften the blow, pre- and post-event)
 - Explore NOAA facilities and employee risk assessment: there are several NOAA buildings we should study for exposure; key to planning for the future in building infrastructure
- **Develop processes for linking resilience concepts and applications to decision-makers...**
 - Emergency management visualization tools
 - Decision makers can be all the way down to the individual (i.e., families)

III. Integrated Ecosystem Assessments Breakout

Observations on Major Trends in the Southeast and Caribbean Region

- Need way to compile and organize data and make available at different levels
- Standardized approach for data management and visualization (e.g., “Thinkmap” used in Chesapeake Bay as pilot) -- NOAA-wide issue
- Information organization efforts need to be forward-looking
- For better modeling need better way to compartmentalize data (e.g., census blocks not suitable for watershed analysis)
- Trends in value of services will change as demand on services changes
- Approach in South Atlantic needs to consider that restoration is not as major an issue relative to other regions – in relative terms, the South Atlantic still has fairly healthy estuaries/ecosystems, but with increasing population and a trend of declining ecosystem services, the region should focus more on preventing ecosystem degradation than restoring ecosystems
- South Atlantic is in a better position better to be proactive instead of reactive – should have “No Net Loss” policy for ecosystems services, as degradation and alteration of ecosystem services in South Atlantic is starting to accelerate (e.g., refine and provide examples surrounding such issues as freshwater supply, wetland loss, fisheries decline, increase in impervious surfaces and runoff, fragmentation, beach closures, and shellfish closures)
- Increased “coastal” population is a major factor in the region
- Climate change and sea level rise should be added as trends affecting South Atlantic ecosystems and services (e.g., hydrologic modification and salt water intrusion)
- An additional trend in the region should be added to capture the “effect” and interactions of major trends (i.e., are we missing connections between current trends and degradation of the environment)
- Demographic changes may be just as important as population growth including trends and potential conflicts in attitudes brought about by changes in community composition and expectations to conduct livelihoods in traditional ways
- Consider trends in energy production and increasing energy demand, including planning for the effects on air quality (link between air and water – air emissions and eventual atmospheric deposition)
- Need to have regional economic development teams and interactions beyond NOAA (e.g. Chambers of Commerce) to allow optimization of coastal development and Integrated Ecosystem Assessments – if not we will continue to react to bad planning and development decisions.

Observations on NOAA’s Mission Challenges

- Challenges are logistical and include funding and capacity issues; methods and tools used in IEAs will depend on ecosystem you are working in and the problem at hand
- Current assessments are not targeted to bring about change; there are no specific drivers behind them, which leads to broad and general assessments; first issue is to work with problem formation including strategic decision-making processes
- Ecosystems of concern are too big and too broad in scale for standard IEA treatment

- Instead of static reports and assessments, we need “living” datasets and innovative tools that allow for “virtual” assessments where users can visualize and grab data at appropriate level to conduct assessments and make decisions (e.g., Thinkmap in Chesapeake Bay)
- There are a range of requirements to responsibly undertake IEAs:
 - Criteria to focus the purpose
 - Partner outside of NOAA to produce effective IEAs, particularly regarding the socio-economic pieces
 - Inventory existing datasets at a regional level including long historical records
 - Map the research being done and by whom
 - Understand what changes NOAA can measure
 - Identify and develop tools that can have broad application
 - Identify sources of ecosystem stressors
- IEAs should be more than an assessment of current conditions; they should also include forecasts of ecosystem changes, requiring the understanding of ecological processes
- Pilot IEAs should focus on preventing trends of declining ecosystem services
- Need to better communicate the regional needs and perspective to the Ecosystem Goal Team
- Important to work with management perspectives and existing regulations

Opportunities

- Increase attention on atmospheric component via air-water connection – will create new partnerships (e.g., within NOAA and with EPA)
- South Atlantic can be a model for integration, as IEAs require the integration of many disciplines, agencies, and partners
- Build upon existing NOAA regional framework for management in the region (e.g., South Atlantic Fishery Management Council)
- Build on existing data management and data observations as these are key to IEA development

IV. Outreach and Communications Breakout

Observations on Major Trends in the Southeast and Caribbean Region

- Address population diversification
- Address increasing role of local governance and regulations
- Specifically address changes in land use

Observations on NOAA's Mission Challenges

- Need to place an emphasis on:
 - Impacts on human health
 - Socio-economic impacts
 - Changes in communities from events unrelated to extreme and chronic hazards

Opportunities

- Develop a unified NOAA approach to coordinated outreach and in-reach efforts
- Clearly define “partners” and “stakeholders”
- Define “internal” vs. “external” in terms of partners
- Improve communications with external partners:
 - Add extramural partners to South Atlantic team membership
- Need internal listening sessions as much as external with constituents
- External listening sessions:
 - Need assessments of assessments prior to sessions (do homework before bugging people again and again for input)
 - Meetings must be focused with clearly defined objectives
 - Sessions should be targeted to specific groups
 - Make sessions issue oriented rather than “One NOAA” education oriented to increase relevance to target audiences
- Develop “One-NOAA Day”
- Develop SART Regional website – similar to NOAA in Carolinas
- Stress importance of full time regional coordinator position
- Develop inter-line office coordination of significant event assessments
- Develop and utilize One-NOAA Success Stories – e.g., Hurricane Katrina video documenting NOAA contributions as a whole