North Atlantic LCC Briefing

Recommendations for assessing improvements in coastal resilience from projects within the DOI Hurricane Sandy Mitigation and Resiliency Program

The DOI Metrics Expert Group

October 28, 2014

Federal-Wide Goal:

"Quantifying benefits of resilience projects and calculating resilience project return on investment in order to better inform future public spending"

Federal Disaster Recovery Coordination Workplan, 2013

DOI Metrics Expert Group

- What is the DOI Metrics Expert Group?

  - Team of scientists and socio-economists charged by DOI to scope an assessment of changes in coastal resilience resulting from DOI-sponsored projects.

  - Individually, they are experts on the measurement of resilience and vulnerability in the coastal zone for specific land and water features (and experts on ecosystem services)

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- Short-hand of the DMEG Goals:
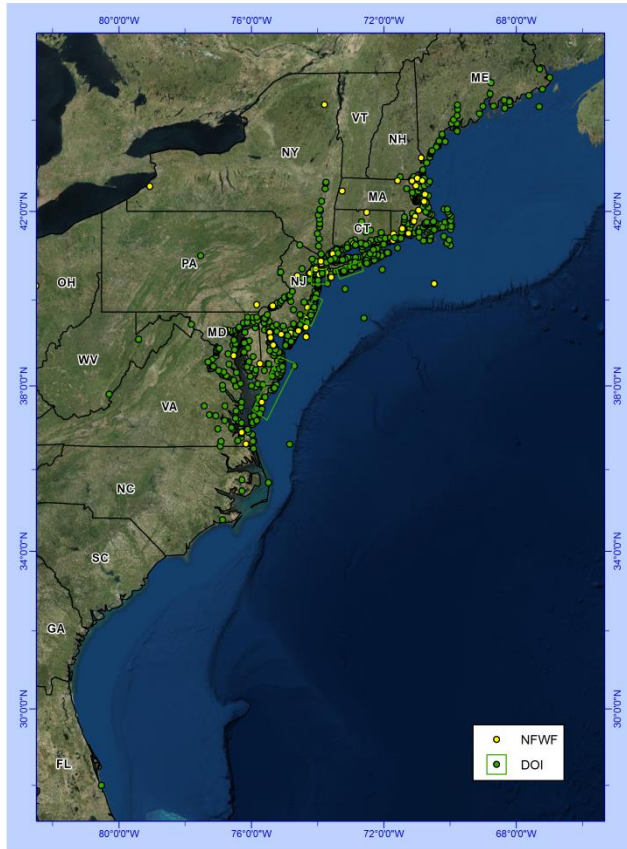
- Define the scope and strategy for a DOI resilience assessment

- Select core metrics for subsets of projects (140 projects reviewed)

- Determine data and information gaps (Baseline data, Gaps in understanding; gaps in methodology)

- Recommended post-assessment measurements

- Phase 2: Identify metrics for individual projects, and recommend immediate actions to fill gaps.

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- Some bounding conditions for the DMEG process:

  - Need recommendations on filling baseline data and study gaps: immediate action on projects underway

  - Metrics and measurements recommendations should be seamless with other resilience assessment efforts if possible (NOAA and USACE participating)

  - Need to use current or historical measurements where possible for early trends detection

  - Strive for metrics that allow comparison among projects with similar goals

  - Strive for an integrated, systems-level assessment

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- First products completed (past 2 months):

    - A spreadsheet of first-draft recommended metrics for measuring resilience in specific coastal features, at project and regional scales

    - Grouping of the DOI projects into common categories for assigning metrics and comparing results

    - A recommended assessment strategy for DOI projects

    - A recommended strategy for filling gaps in data and understanding required for the assessment

    - A recommended strategy for earliest detection of resilience improvement from project activity, and for tracking changes in coastal resilience over time

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- Some Important Conclusions:

  - Metrics can be developed to detect resilience change for projects grouped by key coastal features.

  - A baseline of data is essential, integrating new and existing data to enable detection of trends

  - Socio-economic metrics of coastal resilience are still in early development and need refinement.

  - A common, collaborative data-management and sharing strategy with clear protocols is missing, and is critical

  - Detection of changes in resilience by 2016 is highly unlikely- alternative strategies are necessary.
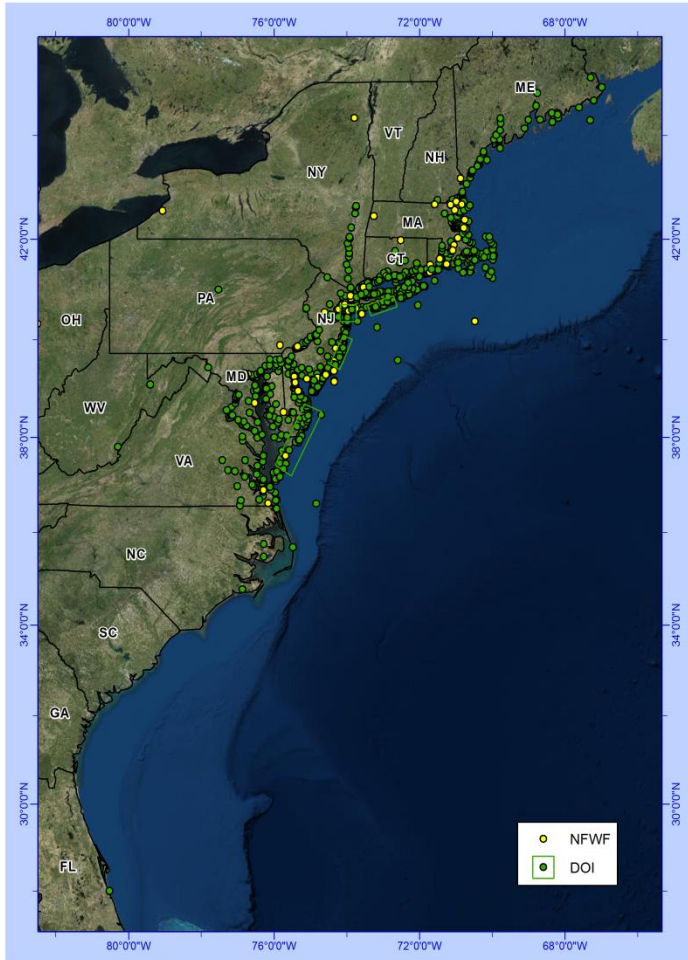
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- Next steps:

  - Refine the report, map tool, and metrics for sharing with other resilience efforts (i.e. peer review/revision)

  - Formally establish the DMEG with additional partners to expand collaboration on resilience metrics

  - Define standard methods for core metrics to establish regional and project-scale resilience baselines, and begin filling data/ knowledge gaps this Fall

  - Outline analysis strategy for the assessment process

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- Primary Recommendation:

Center-point of DOI-funded
Sandy Projects, 2013-15

- Establish multi-scale, pre- and post-project monitoring. Without it we won't be able to detect or assess changes in coastal resilience resulting from the DOI projects and programs.

- Efficient monitoring strategies, using alternative accelerated-assessment methods described in the report, can limit the expense of this essential post-project capability.

DOI Metrics Expert Group

DMEG Initiating Team

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