

Integrated Ecosystem Assessment ACT Draft Work Plan

West Coast Governors' Agreement Action 3.2:

Assess physical, biological, chemical, and socio-economic factors in ecosystem health across the West Coast to establish standards and indicators for ocean health.

Work plan summary

The Integrated Ecosystem Assessment (IEA) Work Plan describes the steps for conducting pilot projects of four smaller-scale regional IEAs (R-IEAs) that will contribute toward the development of the West Coast IEA (WC-IEA) for the California Current Large Marine Ecosystem. The R-IEAs will be structured to evaluate a range of management objectives that are representative of the issues facing coastal communities in Washington, Oregon, and California, contribute to the process for integrating complex datasets, provide the foundation for expanding to broader geographical areas, and to make comparisons among different regions of the coast.

The WC-IEA and R-IEAs will establish and work with a harmonized set of standards and indicators for ocean health including metrics for ecological integrity, ecosystem services, and socioeconomic conditions. The WC-IEA will identify indicators and address management issues, risk analysis, and ecological forecasting of the effects of different management strategies for the larger California Current Large Marine Ecosystem. Four Regional-IEAs are currently under consideration, each with distinctive management issues and characteristic ecosystem attributes, some of which may be directly transferable among the different regions. Information generated by the R-IEAs will be drawn together, assimilated, and used to address data gaps in the WC-IEA. The WC-IEA assembly process also will require development of new and innovative tools to address scale and coordinating inputs and outputs from the R-IEAs.

The four pilot projects currently being considered for Regional-IEAs are: (1) Puget Sound; (2) Coastal Oregon; (3) Northern California; and (4) Central California. These regions have been selected because they are broadly representative of the diversity of coastal environments, marine ecosystems, and human communities that occur within the California Current LME. In addition, the regions are influenced by different management issues, including urban development and conservation of at-risk salmonid stocks, conflicts over marine use for wave energy and commercial fishing, designation of marine protected areas, accelerated losses of tidal wetlands in response to harbor improvements, and efforts to develop responsible and sustainable fishing in coastal communities. The distinctive characteristics of these marine ecosystems and their associated coastal communities and stakeholder groups pose different types of challenges and opportunities for the development of R-IEAs, and we anticipate that they will provide a fruitful and productive test-bed for new ideas and innovative approaches for the integration and analysis of seemingly disparate datasets. The four regions are also united in their effort to work together with the federal, tribal, and state agencies, academic institutions, community groups and stakeholders, and by the commitment of substantial institutional support in the form of long-standing partnerships and programs.

Major work plan tasks

The major tasks included in the work plan are summarized below. The table provided for each task briefly describes efforts the team intends to conduct or pursue with existing resources as well as identifying the tasks that would require additional resources to complete. Please refer to the complete work plan for details on all major tasks and cost estimates.

1. WCGA IEA Work Plan

Description The draft WCGA IEA work plan will be finalized after incorporating public comments and posted on the WCGA website.

| With Existing Resources... | With Additional Resources... |
|--|-------------------------------------|
| <ul style="list-style-type: none">• Finalize WCGA IEA Work Plan• Explore expansion of IEA ACT membership and collaborations with EBM-related groups (e.g., NOAA, TNC, West Coast EBM Network, and others) | |

2. West Coast IEA Workshop

Description Plan and sponsor a West Coast IEA Workshop to introduce participants to the concept of IEAs, discuss recommendations provided by the steering committee for a West Coast IEA, and initiate establishment Regional IEAs.

| With Existing Resources... | With Additional Resources... |
|---|---|
| <ul style="list-style-type: none">• Establish Steering Committee to refine management objectives, select operational objectives, and develop performance measures for an IEA• Plan workshop – develop draft agenda, outcomes and products, and venue | <ul style="list-style-type: none">• Finalize agenda, select venue, invite participants and convene the West Coast IEA Workshop• Solicit and engage new members that can provide technical support and ecological risk analysis and forecast modeling expertise for the West Coast IEA Task Team• Discuss early lessons learned about engaging the scientific community and general public in IEA development with IEA practitioners in other U.S. regions |

3. Selection of Regional IEA Pilot Projects

Description Finalize selection of the Regional IEA Pilot Projects.

| With Existing Resources... | With Additional Resources... |
|--|---|
| <ul style="list-style-type: none">• Identify leads for R-IEA pilot projects that will work with IEA ACT to develop work statements and goals for each of the | <ul style="list-style-type: none">• Develop criteria, interviews, site visits for initial evaluation to assess programmatic success for each R-IEA pilot projects• Generate and deliver comments and |

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| regions | recommendations to strengthen and improve the approach proposed for R-IEA pilot projects |
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4. Implementation of Regional IEA Pilot Projects

Description Establish and implement Regional-IEAs.

| With Existing Resources... | With Additional Resources... |
|---|---|
| Additional resources are needed to accomplish this task | <ul style="list-style-type: none"> • Complete scoping of pertinent management issues and establish ecosystem objectives related to spatial and temporal scales • Host local planning meetings at R-IEA pilot project sites to develop R-IEA • Conduct an ecological risk analysis to evaluate the sensitivity of the key indicators to anthropogenic stressors and natural processes, and to appraise coastal ecosystem resiliency • Integrate multiple indicators to assess the current status of the ecosystem relative to historic conditions and identified targets • Coordinate with NOAA on the use of ecosystem simulation models • Initiate process to integrate and assemble information from R-IEA pilot projects into broader-scale, west coast-wide IEA |

5. Assemble Regional-IEAs into Broader-Scale, West Coast IEA

Description Initiate assembling of information from R-IEAs that can be used in development of the broader, West Coast-IEA.

| With Existing Resources... | With Additional Resources... |
|---|--|
| Additional resources are needed to accomplish this task | <ul style="list-style-type: none"> • Identify the geographic limits of the R-IEAs to address the 'scaling up' issue to the broader WC-IEA • Develop matrix of issues, potential solutions, and relevant coastal locations and identify the goals and objectives for the broader-scale WC-IEA • Synthesize IEA information to merge conceptual models and risk analyses and incorporate new model components that address linkages across the R-IEAs • Coordinate with NOAA's WC-IEA activities to inform and ensure harmonization of the R-IEAs to scale up to the California Current Ecosystem assessment |

6. Coast-wide evaluation of coastal management decisions

Description Conduct a coordinated, coast-wide evaluation of coastal management decisions to learn of effectiveness and trade-offs between the various management actions.

| With Existing Resources... | With Additional Resources... |
|--|---|
| Additional resources are required to accomplish this task. | <ul style="list-style-type: none">• Synthesize information from broader-scale ecosystem indicators and socioeconomic metrics to identify changes in indicator status and trends, and to inform on the effectiveness of any tri-state management decisions• Evaluate management decisions that affect coast-wide resources to assess ecosystem status and to recommend changes to indicators, thresholds, and risk analysis models, as needed relative to EBM goals |