GOOS Panel for Integrated Coastal Observations

The plan focuses on data and information requirements for adaptive, ecosystem-based approaches to managing, mitigating and adapting to the impacts of human activities, natural hazards and climate change. Priority phenomena of interest, products and applications are identified and associated observing system requirements are specified based on guidance from the Implementation Strategy for the Coastal Module, the IGOS Coastal Theme, the GOOS Regional Fora and Council and the GEO Coastal Zone Community of Practice, the Ocean Observations Panel for Climate (OOPC), and the coastal Panel of the Global Terrestrial Observing System. Recent advances in scientific understanding and technology are incorporated into recommended end-to-end solutions.

End-to-end solutions (observations and data telemetry ⬄ data management and communications ⬄ modeling and analysis) for the provision of data and information are rates and in forms required by decision makers are formulated for the following priority phenomena of interests:

• Exposure to waterborne pathogens and toxins produced by harmful algae,

• Impacts of coastal flooding on ecosystems and coastal communities,

• Coastal eutrophication,

• Ocean acidification,

• Loss and modification of biologically structured, benthic habitats, and

• Loss of harvestable living marine resources.

Specification of requirements for models and analyses, observations and data telemetry, and data management and communications for each end-to-end system begins with identifying user groups, high priority products, and applications for each of these phenomena. Products and applications are categorized in terms of the DPSIR model.

Step 1: Treat each end-to-end solution as a stand-alone system, independently of the other components and having its own unique purpose in terms of the products and applications it supports.

Step 2: Document interactions and synergies among the end-to-end systems.

Step 3: Formulate recommendations and observing system requirements for an integrated, system of systems.

Step 4: Recommend an action plan for global implementation of the coastal module of GOOS/GEOSS.

