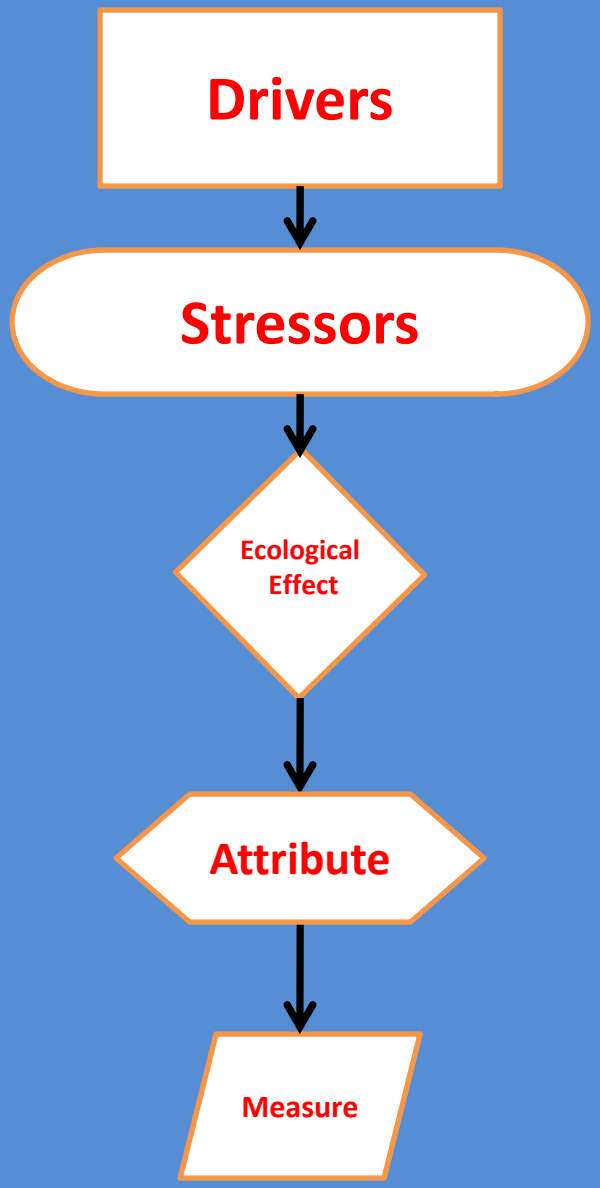
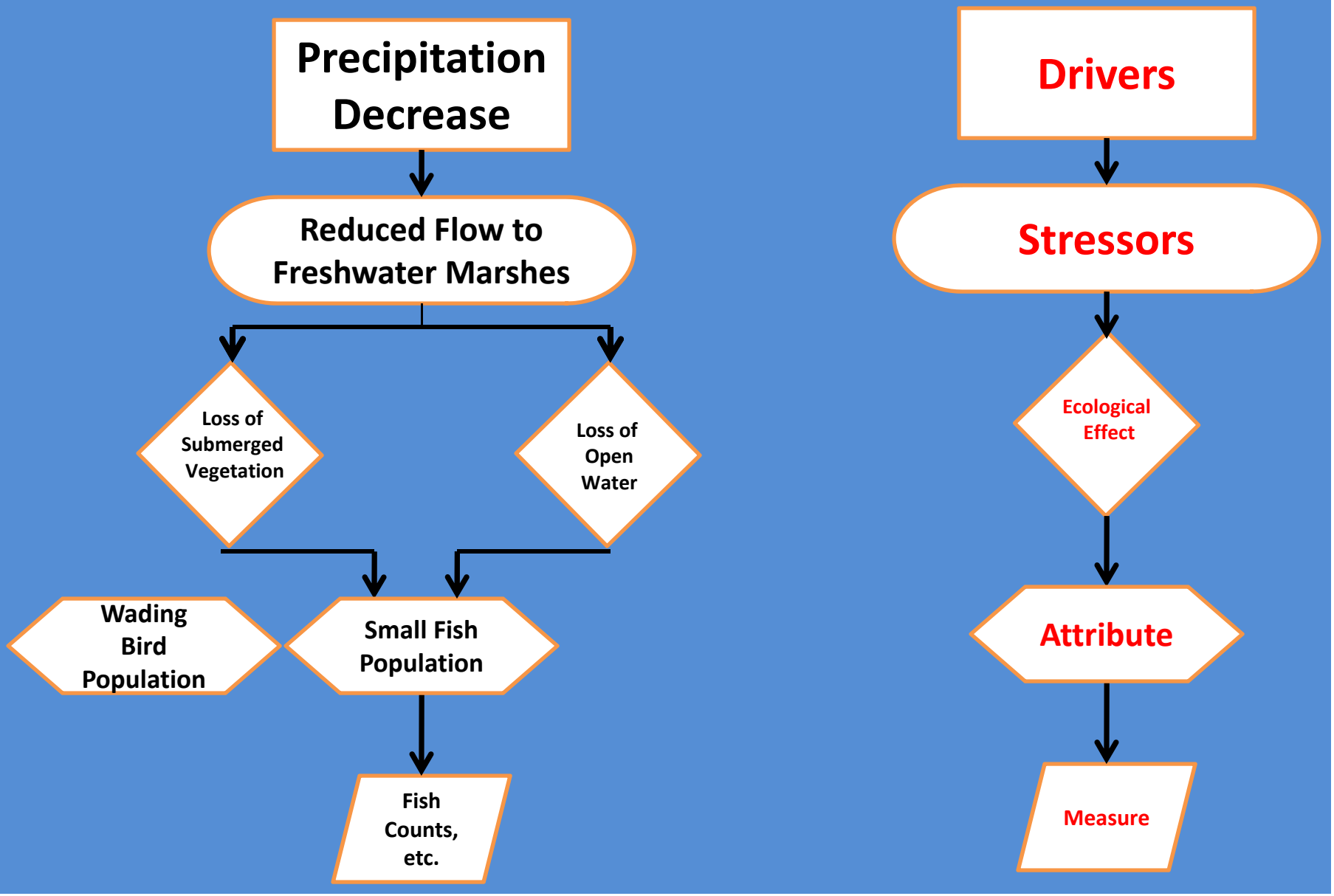
Conceptual Ecological Models



Working hypothesis via a conceptual model



Conceptual Ecological Models

Drivers: **The major external driving forces that have large-scale influences on natural systems. Drivers can be natural forces (e.g., sea level rise) or anthropogenic .**

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Stressors: **The physical or chemical changes that occur within natural systems that are brought about by the drivers, and which are directly responsible for significant changes in the biological components, patterns and relationships in natural systems.**

Ecological effects:

The biological responses caused by the stressors. The links in the conceptual models between one or more stressors and the ecological effects and attributes are diagrammatic representations of the working hypotheses that explain the changes that have occurred in the ecosystems.

Ecological effects:

Attributes:

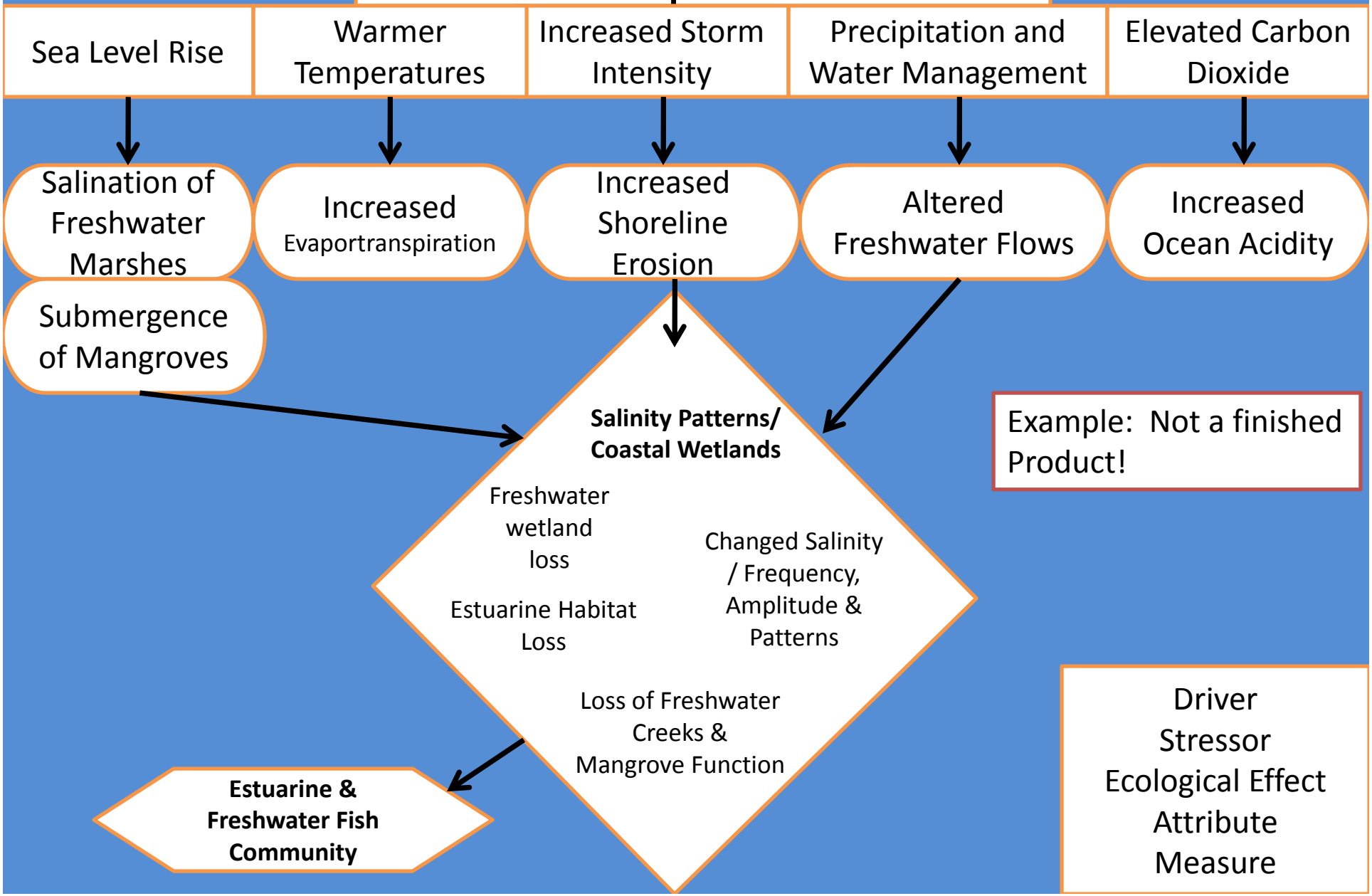
A parsimonious subset of all potential biological elements or components of natural systems, which are representative of the overall ecological conditions of the system.

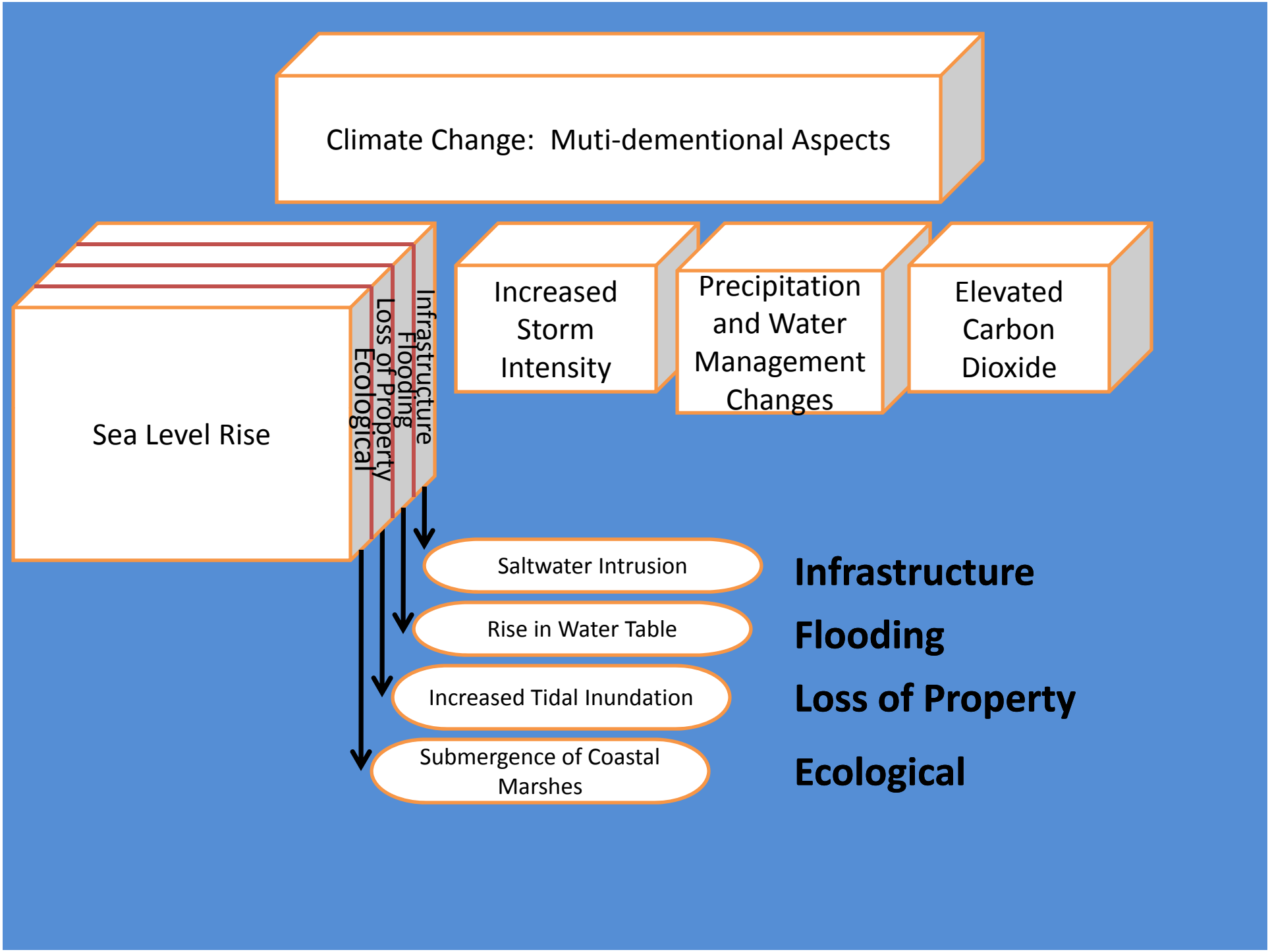
Attributes typically are populations, species, guilds, communities or processes. Attributes are selected to represent the known or hypothesized effects of the stressors (e.g., numbers of nesting wading birds), and the elements of the systems that have important human values (e.g., endangered species, sports fishing).

Measure

The specific feature(s) of each attribute to be monitored to determine how well that attribute is responding to projects designed to correct the adverse effects of the stressors (i.e., to determine the success of the project).

Climate Change: Ecological Aspects




Climate Change: Muti-dementional Aspects
Sea Level Rise
Infrastructure
Flooding
Loss of Property
Ecological
Increased Storm Intensity
Precipitation and Water Management Changes
Elevated Carbon Dioxide
Saltwater Intrusion
Rise in Water Table
Increased Tidal Inundation
Submergence of Coastal Marshes
Infrastructure
Flooding
Loss of Property
Ecological