

A FRAMEWORK FOR DISCUSSING POTENTIAL MANAGEMENT ACTIONS ASSOCIATED WITH CLIMATE CHANGE

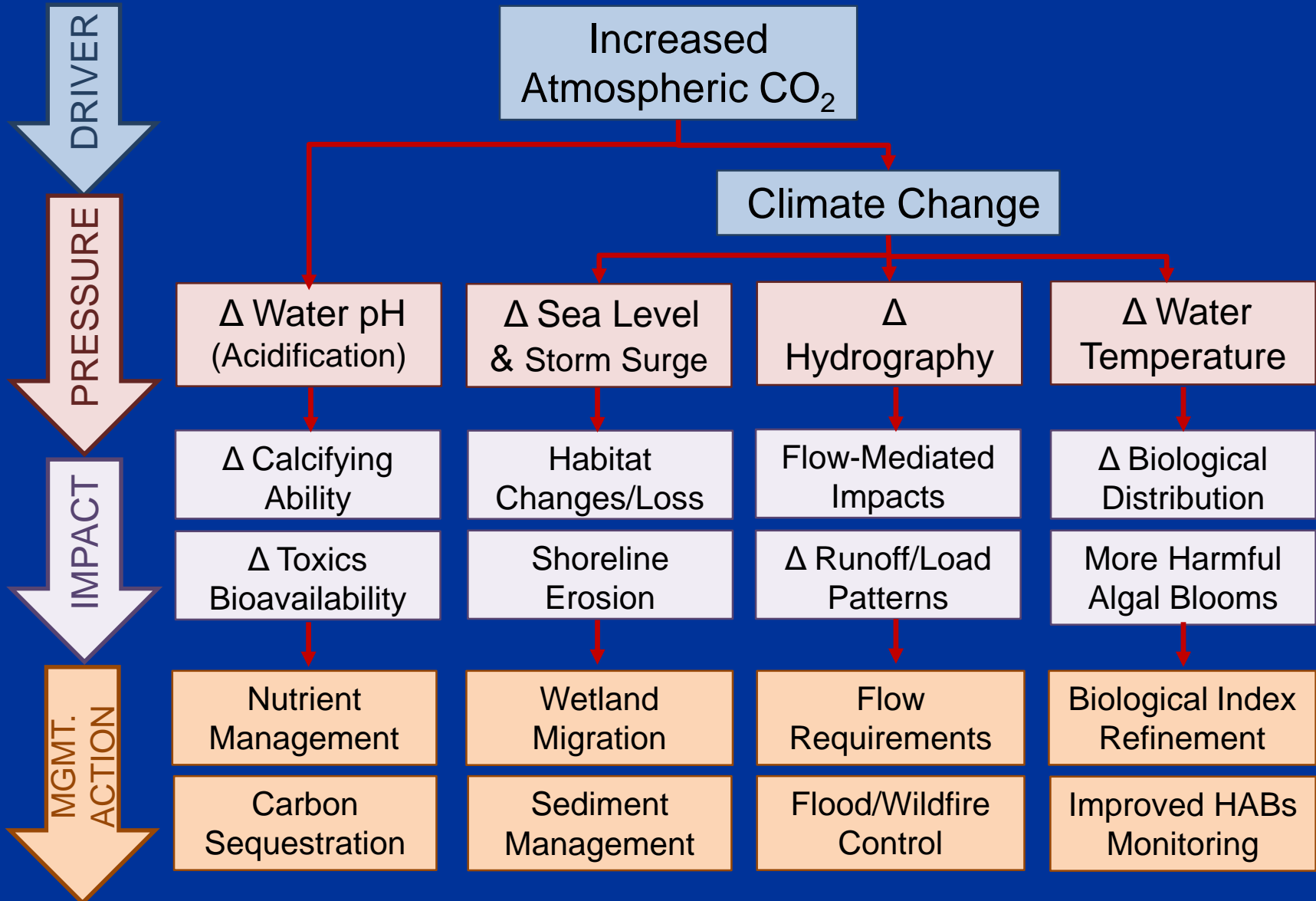


Presentation to the Regional Board 9 Climate Change Planning Body

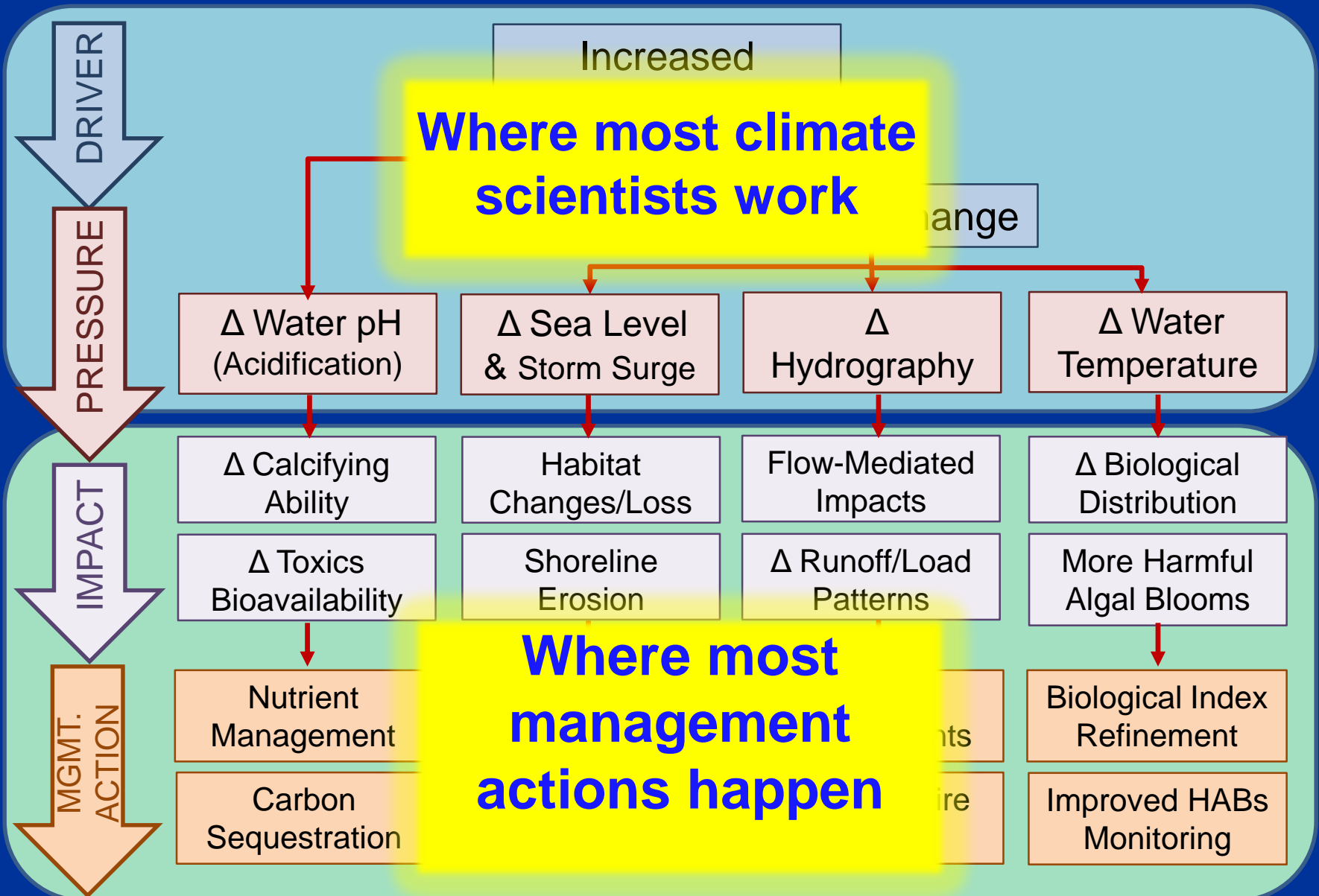
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February 9, 2018

CONCEPTUAL MODEL



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CONNECTING DRIVERS TO POTENTIAL MANAGEMENT ACTIONS

- **The goal of this meeting is to identify management activities appropriate at the Regional Board scale**
- **I will hope to stimulate that conversation by suggesting actions associated with each of the drivers**
 - Δ Sea level
 - Δ Water pH
 - Δ Hydrography
 - Δ Water temperature
- **Focus is on management actions**
 - However, many of these suggested actions will require research to support their implementation

Δ SEA LEVEL

- **Prioritize among wetlands for sea level rise mitigation**
 - Rising sea level will cause habitat conversion
 - Quantify the habitat value, risk and consequences of conversion, and cost/feasibility of implementing management options
- **Develop a sediment management strategy**
 - Current strategies focus on reducing sediment delivery to coastal embayments
 - Sea level rise adaptation may depend on increasing sediment supply
- **Develop a policy to address potential saltwater intrusion into groundwater basins**

Δ PH

- **Agree on biological acidification threshold targets**
 - Existing criteria (pH > 6.5) are 40 years out of date and meaningless
 - You can't manage toward a target if you don't have one
- **Determine whether limiting local nutrient inputs would yield a meaningful change relative to those targets**
- **Identify geographic areas at greatest/least risk of acidification**
 - Reprioritize beneficial uses for those areas based on that knowledge

Δ HYDROGRAPHY

- **Predict how flows will change with climate change**
 - Changing rainfall and snowmelt will affect the amount and timing of flow
 - Refine your beneficial uses based on knowledge of those changes
- **Define environmental flow requirements**
 - It's more than minimum flow for endangered species
 - This will become particularly important when considering 1211 waivers
- **Create climate-ready water quality criteria**
 - Water quality criteria are often based on biological endpoints
 - Changes in flow will affect biological expectations

Δ WATER TEMPERATURE

- **Create climate-ready water quality criteria**
 - Water quality criteria are often based on biological endpoints
 - Changes in temperature will affect biological expectations
- **Consider water quality criteria for new pathogens (e.g. Vibrio)**
 - Pathogens associated with warmer climates are migrating north
- **Develop a HABs monitoring and management strategy**
 - HABs like it hot and you are already seeing record blooms
 - You don't have much of a monitoring and management strategy for lakes and streams