Ocean Futures

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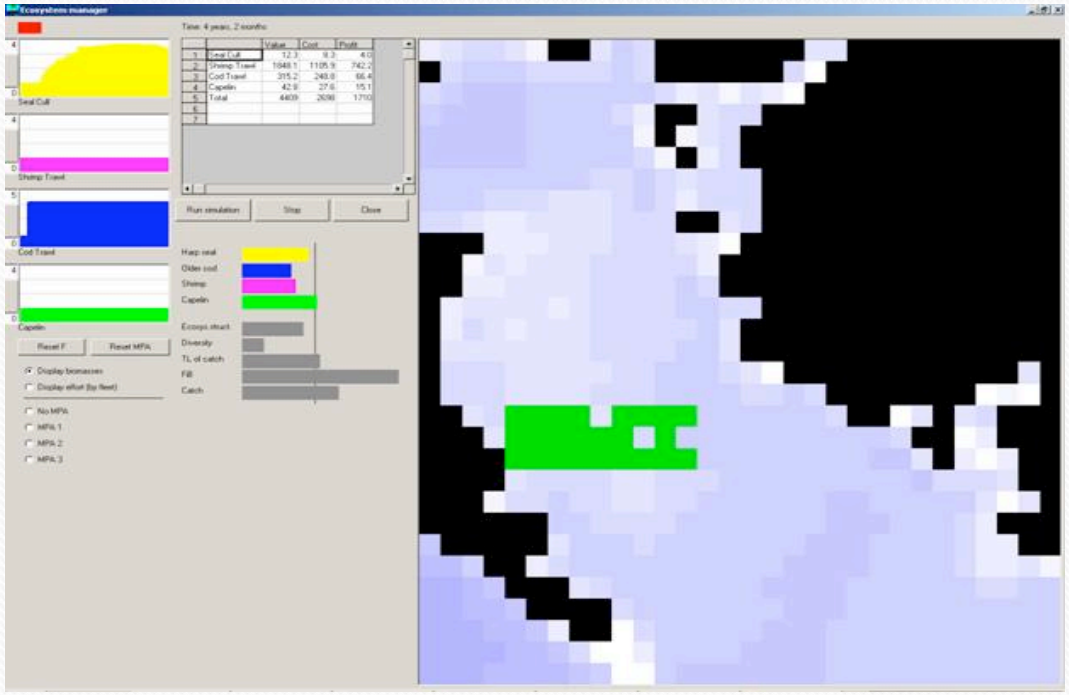
CPCS 533

Info. Viz.

Introduction (Ecopath)

- Ecopath with Ecosim
  - Ecosystem modeling tool;
  - Describes an ecosystem
    - Snapshot
    - Time dynamic
    - Spacial dynamics
  - Scientifically recognized;

Introduction



Dataset

- Initial:
  - Individual Scenario
    - Set variables
      - Fishing effort (4)
      - Marine protected areas (4)
    - Output variables
      - Value, Cost, Profit per fishery (4)
      - Biodiversity (4)
  - Scenario comparison
    - Value, Cost, Profit
    - Biodiversity

- Now:
  - Catch (4)
  - Biomass(4)
  - Cost(3)
  - Effort(3)

Background

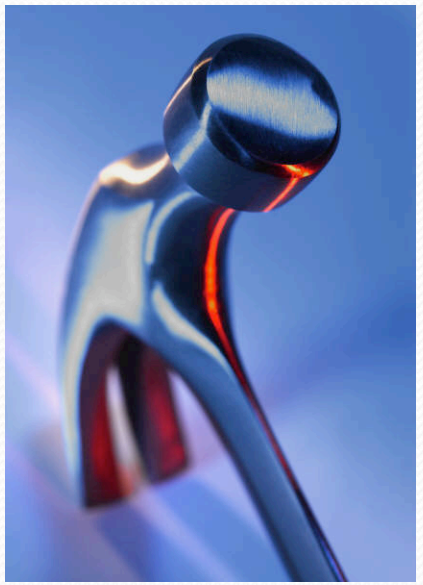
- Equation calculator (ESRI)
- Small multiples (Tufte)
- Lens
  - Layers
  - Saturation

Usage

- By scientist
  - A lot expert audience;
  - Benefits general audience.
- GOALS: Comparison
  - between different simulations;
  - between time;
  - between variables.

Demo

Components/Libraries



- Toolbox
  - Users can visualize type of data;
  - Visually flat;
  - Spacing/Alignment/grouping.
- Tool units
  - Layered information for small area;
  - Icons representation.
- Equation
  - Visualize and Mechanize creation;
  - Argued to help memory;
  - Instant feed back of data;
  - Use of 3D where needed.

Components/Libraries

- Small Multiples (Maps)
  - Good overview.
- Small Multiples (Graphs)
  - FREEBEE! By ZedGraph
- Scalable to larger data
  - Future ability to zoom in.
- Lensing
  - For each data set;
  - For sum equation.

Strengths/Weakness

- Weakness:
  - Lacks full functionality;
  - Slow;
  - Bad Legend scale;
  - Equation model can be strengthen

What I learned

- Concepts are just _ the battle
- Nitty gritty
- Viztools are great, but are to specialized

- Overall:
  - POTENTIAL