

Integrating Adaptation into Conservation Planning : An example from western Tanzania

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the Jane Goodall Institute

The Nature Conservancy

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Conservation Projects and Protected Areas of Western Tanzania

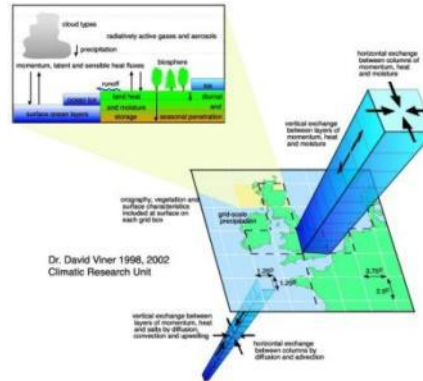
Ecosystems of the Greater Gombe Ecosystem and Greater Mahale Ecosystem



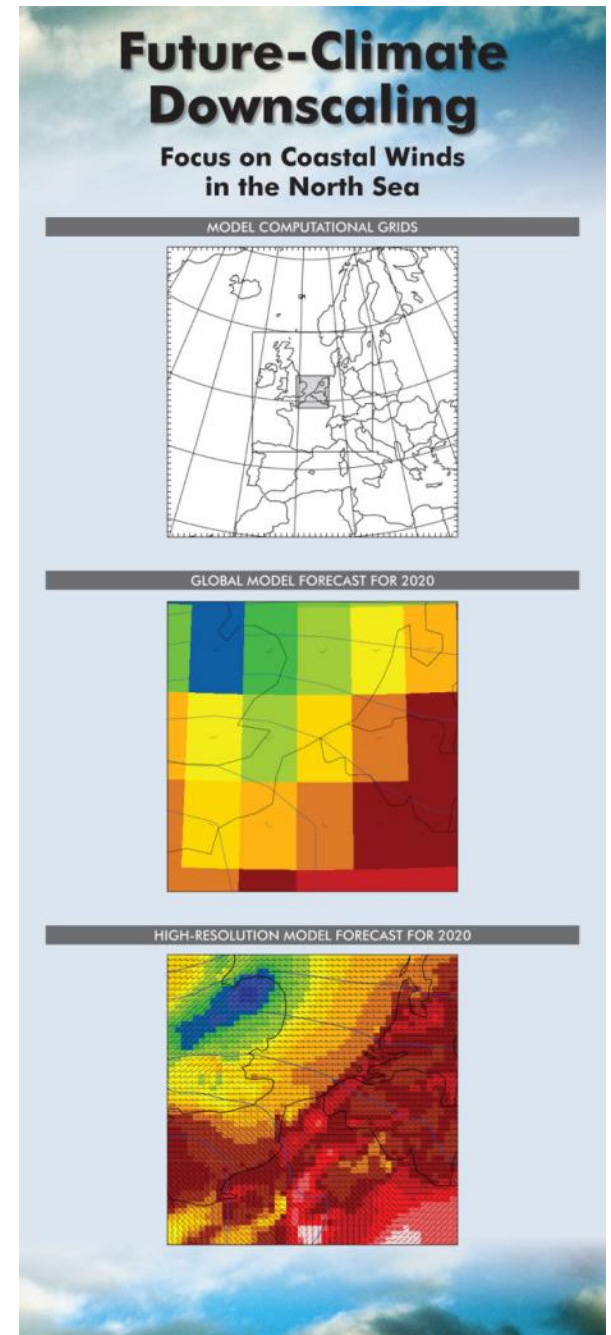




Future Climate Projections



- Temperatures will continue to rise, across all seasons
- Annual rainfall may not vary, but changes in frequency, intensity & predictability
- Wet seasons will become wetter; dry seasons will become drier
- Despite increased rainfall, it will become more arid





Not everything is going to get worse



Evergreen Forest



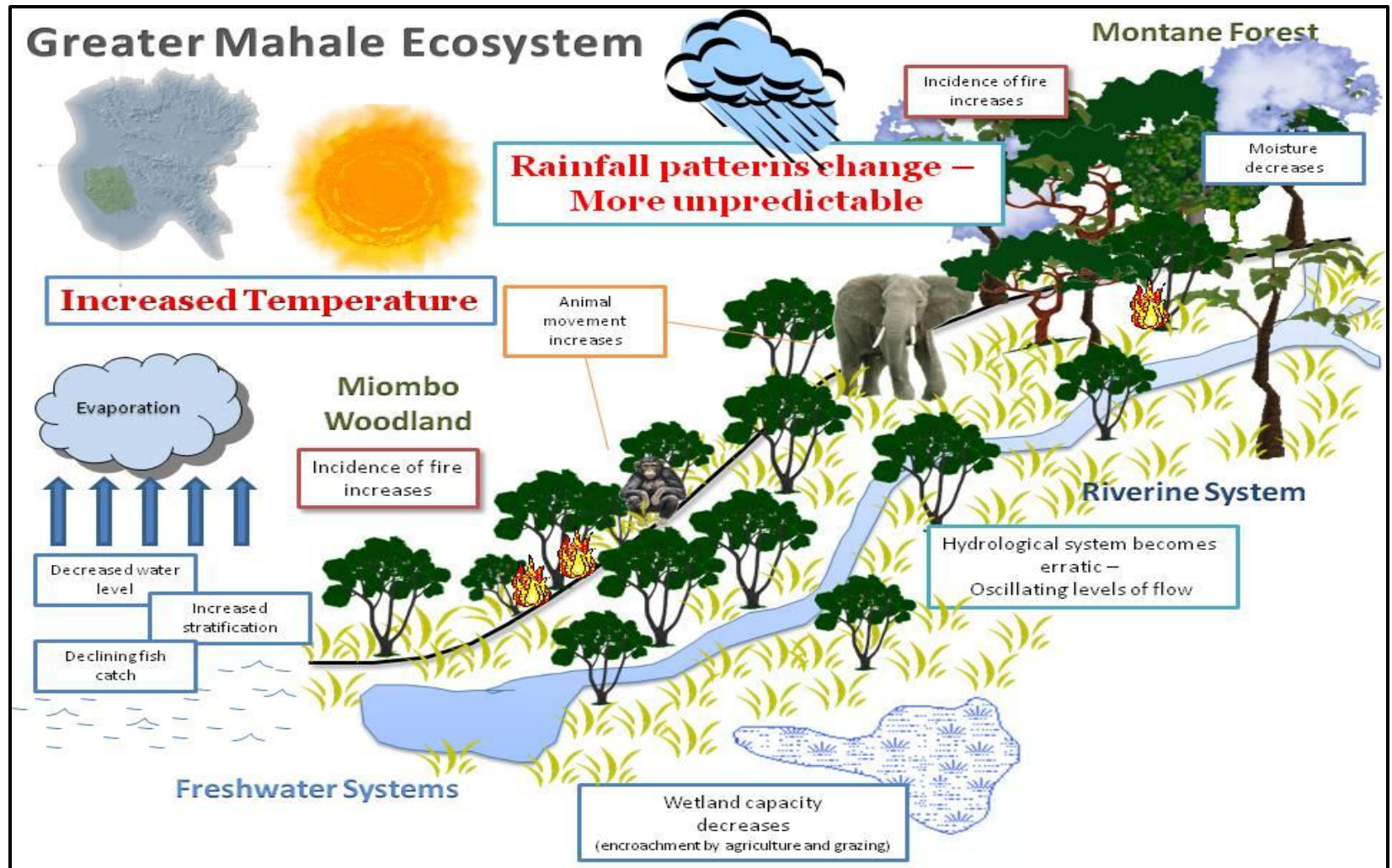
Miombo woodland



Bamboo forest



Use both sides of your brain



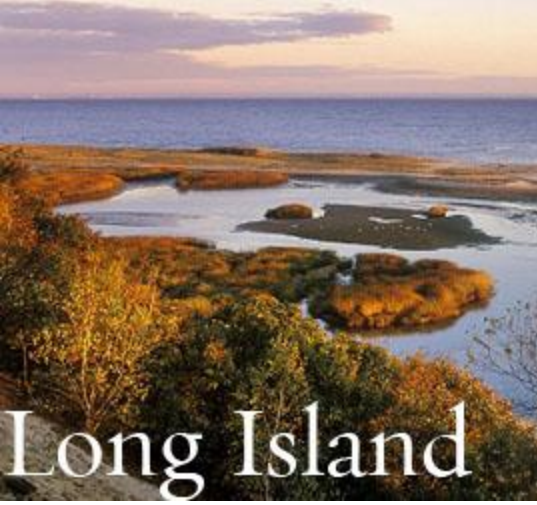
Articulate specific predictions

System	Climate factor	Hypothesis of Change
Miombo woodland	Increased temperature (1-2°C by 2050); Change in the frequency, timing & intensity of rainfall	Increased temperature and more variable and intense rainfall will affect soil moisture and hydrological cycles, changing woodland structure and composition and leading to a rise in fire frequency/incidence, leading to the shrinking of miombo woodland.
Lake Tanganyika	Water temperature increase Changes in the seasonality and intensity of rainfall	With higher water temperature and reduced seasonal rainfall, Lake Tanganyika will become more shallow and more stratified, resulting in less upwelling which will impair fish production.

Be critical and think broadly

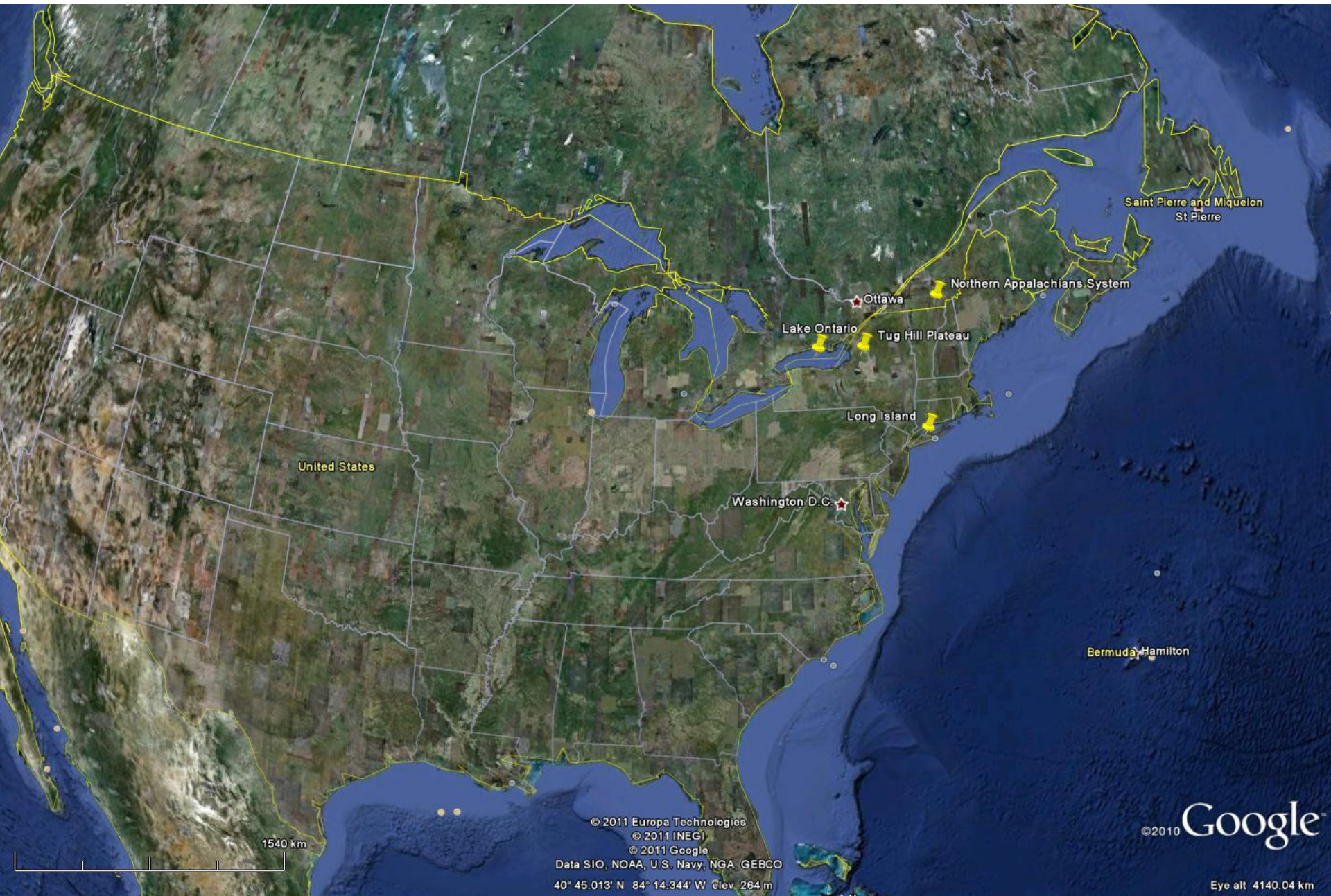


Tug Hill



Long Island

New York Climate Clinic



United States

Saint Pierre and Miquelon
St Pierre

Northern Appalachians System

Ottawa

Lake Ontario

Tug Hill Plateau

Long Island

Washington D.C.

Bermuda Hamilton

1540 km

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Data SIO, NOAA, U.S. Navy, NGA, GEBCO
40° 45.013' N 84° 14.344' W Elev. 264 m

©2010 Google

Eye alt 4140.04 km

Tug Hill



Tug Hill
Rider.com



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FRIENDLY TAVERNS
COUNTRY LODGING.**

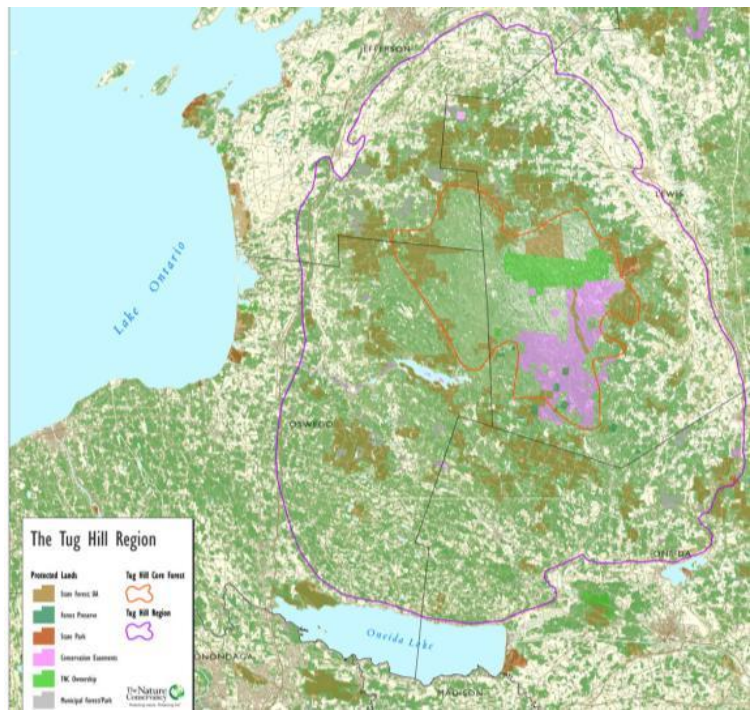


Existing threats & conditions made worse by climate change...

Tug Hill

...re-energized strategies for resilient forests and wetlands

Restore structure & diversity to forest

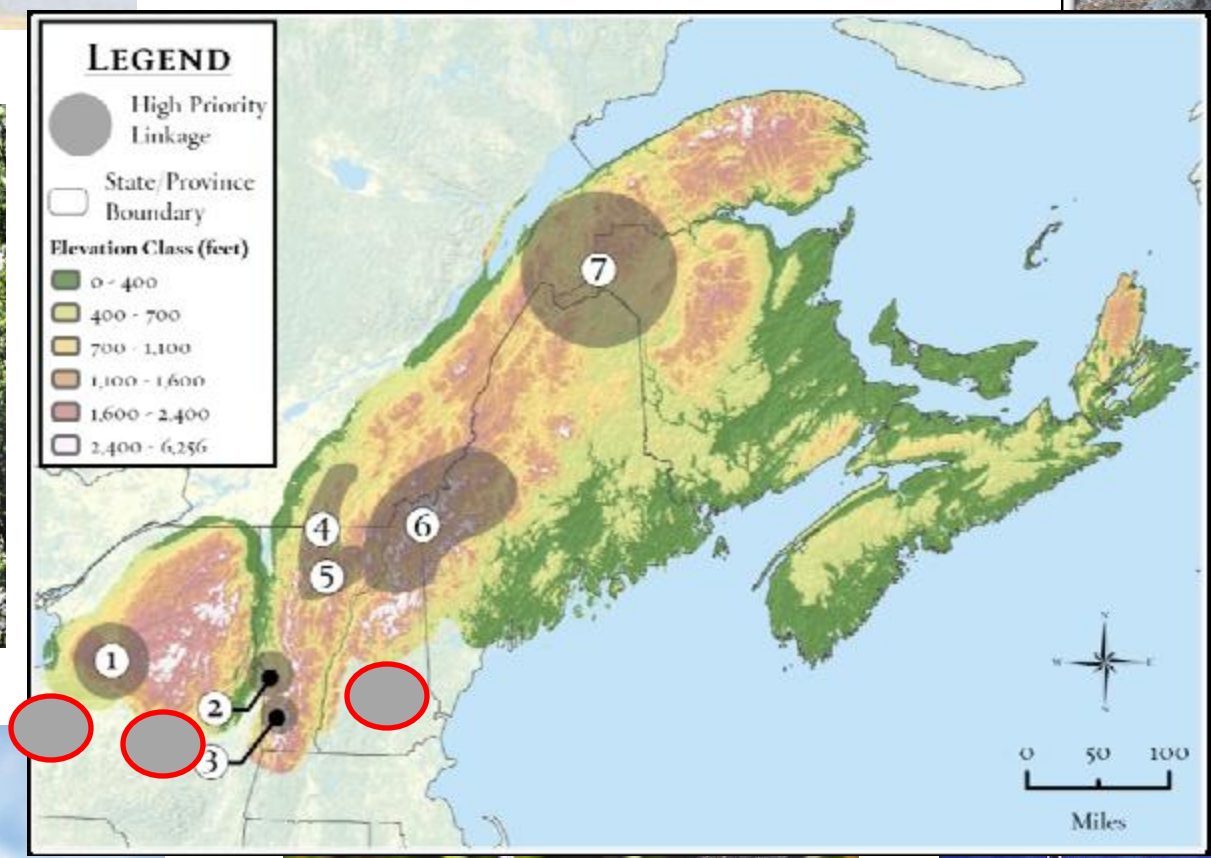


Partner with forest companies & landowners to improve practices across whole region



STAYING CONNECTED

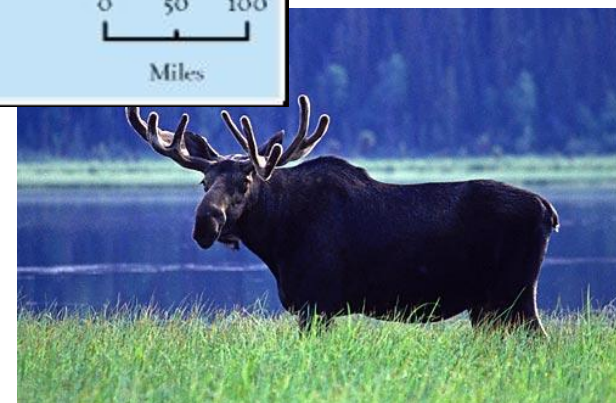
Northern Appalachians



Larry Colwell 2003



Jonathan Foster



Long Island



RI



LEGEND

- STREAM & RIVER TARGETS
- OCEAN SHORELINE TARGETS
- ESTUARINE TARGETS
- FRESHWATER WETLAND TARGETS
- TERRESTRIAL ECOSYSTEM TARGETS (UNDEVELOPED LAND COVER AREAS)



Long Island



Chris Pickerell

Lessons Learned

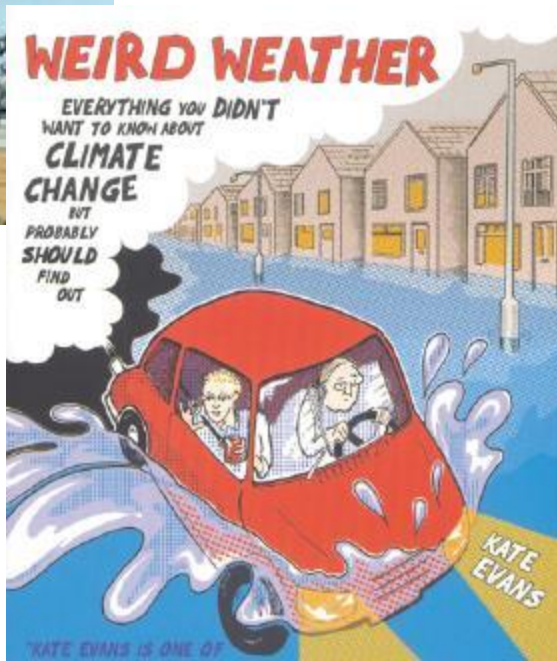
Despite uncertainty, we have enough information to develop scientifically credible hypotheses about potential climate impacts...

...and to start to working on adaptation

Lessons Learned

People are empowered by demystifying climate change

Before...

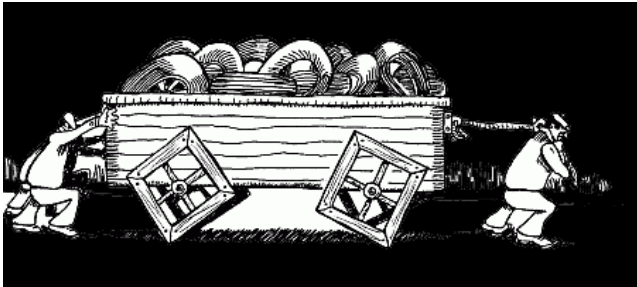


After!



Lessons Learned

Many good climate adaptation strategies are modifications of what teams are already doing...



...implementation often does not require a major overhaul of activities on the ground

Lessons Learned

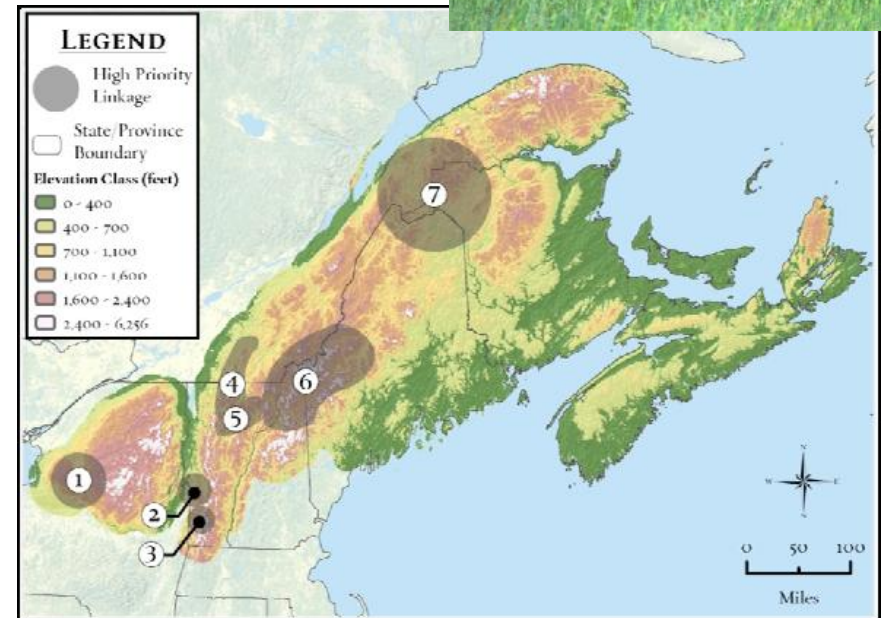
It is important to think about how people are going to respond to climate impacts



Catherine O'Reilly via Picasa

Lessons Learned

Connectivity is key



Lessons Learned

*“Peer review was
GREAT.”*



“The peer review process has been fantastic. We should do this for every strategy, climate change related or not.”

Peer review strengthens the process and products



“The interaction with all the peers and partners really helped to lead to clear headed thinking on issues.”



Lessons Learned



Similarities of impacts and barriers around the world make for a rich set of adaptation work that we can learn from



Catherine O'Reilly via picasa

There are many challenges to implementation, but also many solutions

Challenges

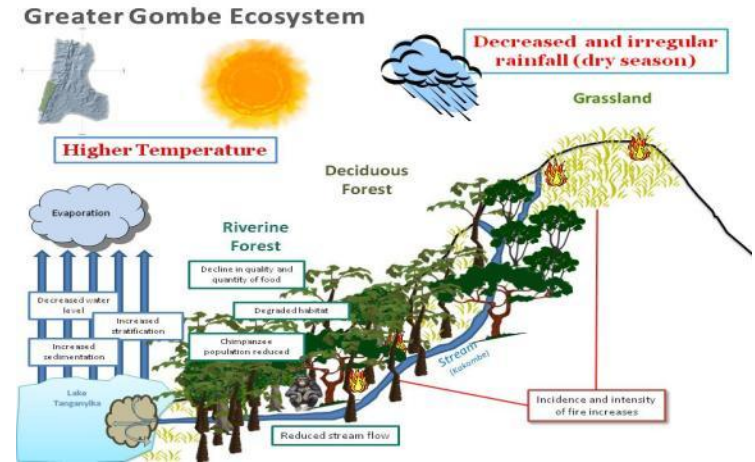
- People do not understand the impacts
- Common to focus on short-term rather than long-term needs
- Time and resources

Potential Solutions

- Use local examples to educate others
- Make long-term benefits clear and make them affordable in the short-term
- Collaborate with partners, including non-traditional ones – you don't have to do everything yourself!

Recommendations

- Develop a conceptual model



- Think through how people will respond to climate impacts



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- Include colleagues who have developed adaptation strategies in other geographies



Recommendations

- Choose the process that works for your team



- Include partners & outside perspectives early & often



- Don't sweat the small stuff
- Build off of what others have done

The Nature Conservancy
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NaturePeopleFuture.org
TNC's Knowledge Base for Climate Change Adaptation

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SEEK · EXPLORE · SHARE · THINK · ADJUST · ACT · IMPACT



And last but not least.....

Remember that we are developing hypotheses –

It's critical to monitor, evaluate and adjust over time

Useful Links

www.climatewizard.org

www.NaturePeopleFuture.org

<http://conpro.tnc.org/1735/>

www.conserveonline.org

A serene sunset scene over a large body of water. The sky transitions from a deep purple at the top to a lighter blue near the horizon. A bright, glowing sun is positioned in the upper left quadrant. On the horizon line to the right, a long, dark boat is visible. The foreground is dominated by the silhouettes of tall grasses and some dark foliage, partially obscuring the water's edge.

Questions and Suggestions?