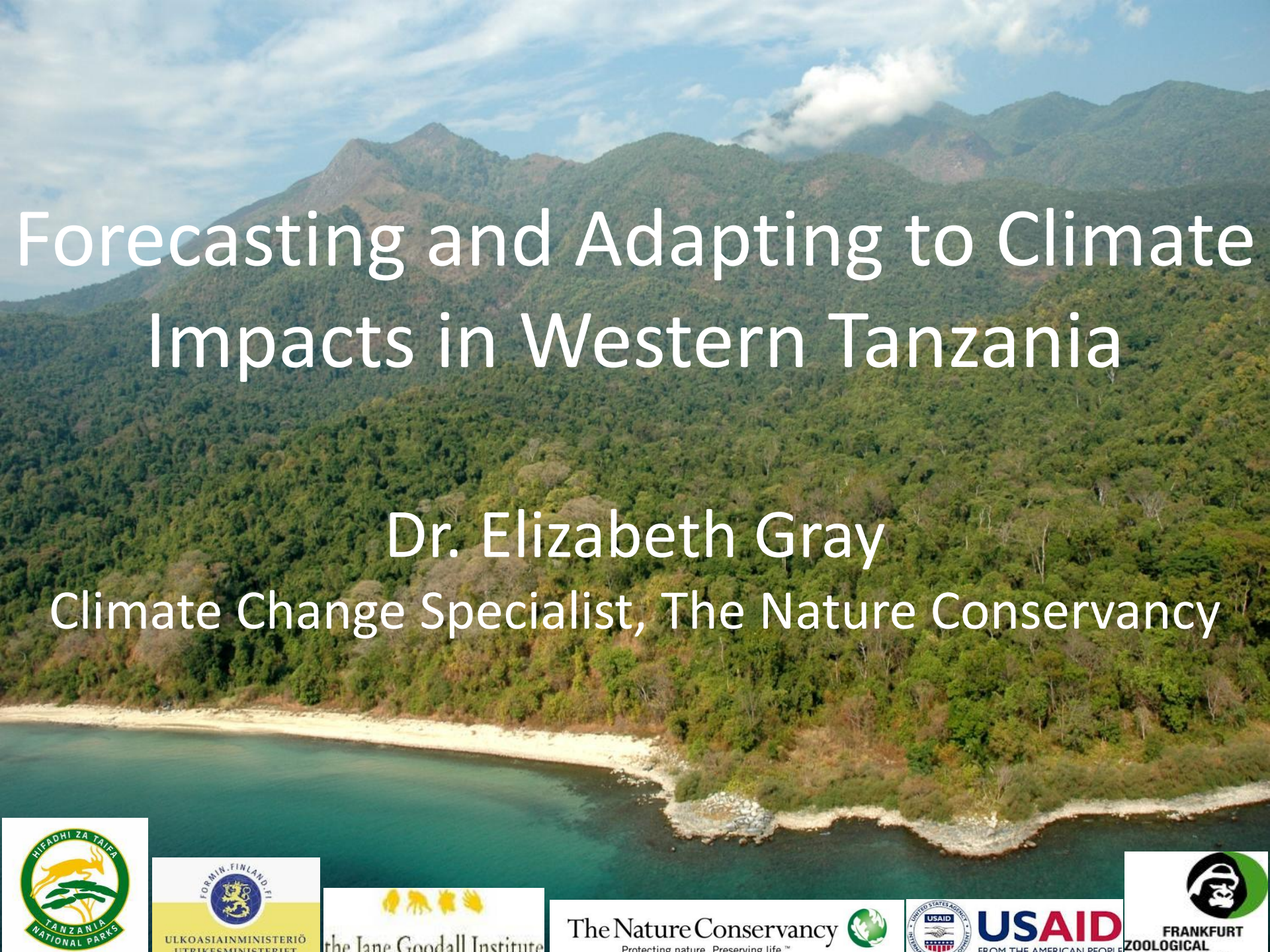

Forecasting and Adapting to Climate Impacts in Western Tanzania

Dr. Elizabeth Gray

Climate Change Specialist, The Nature Conservancy

HIFADHI ZA TAIFA TANZANIA NATIONAL PARKS

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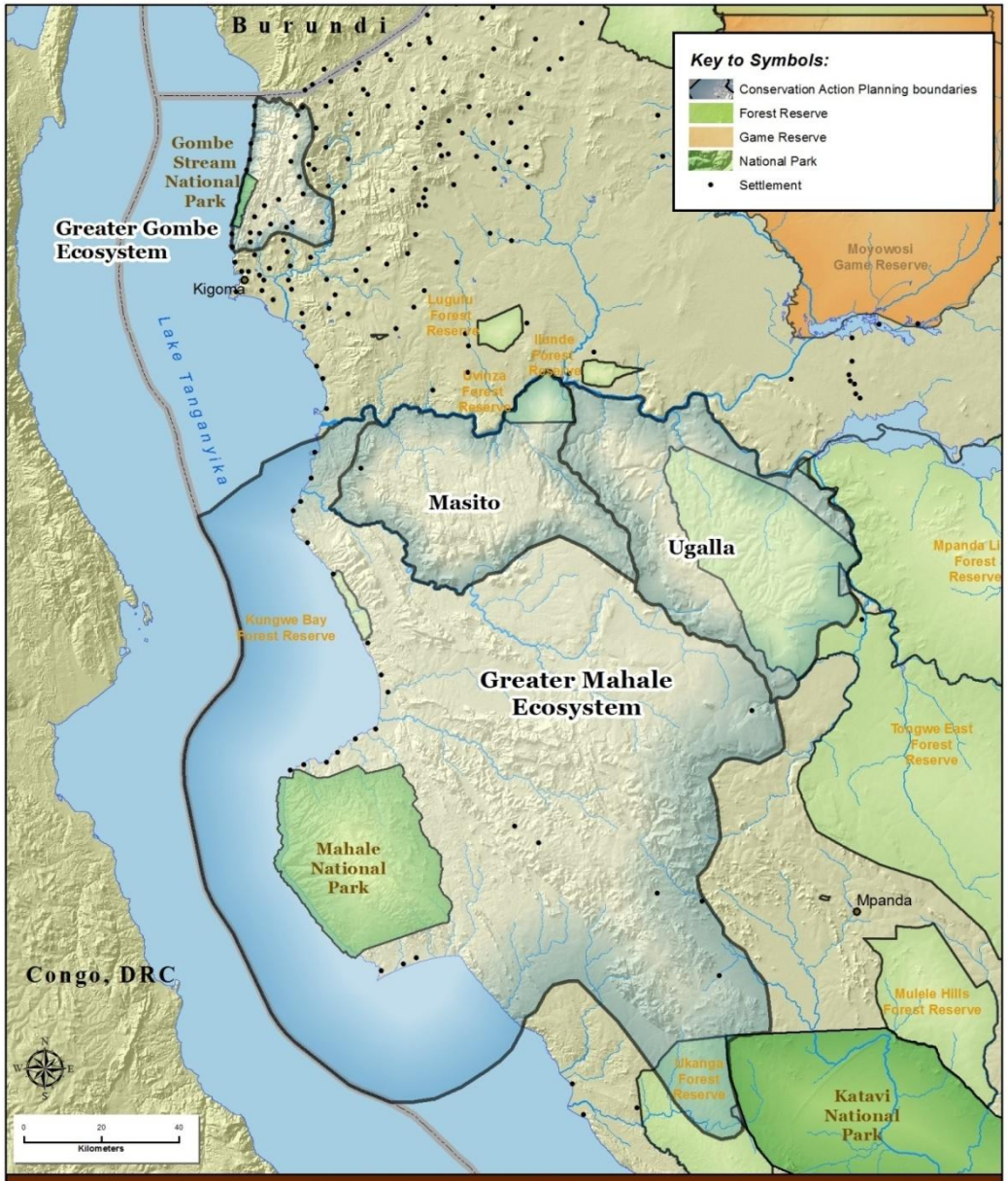


Conservation Projects and Protected Areas of Western Tanzania

Ecosystems of the Greater Gombe Ecosystem and Greater Mahale Ecosystem

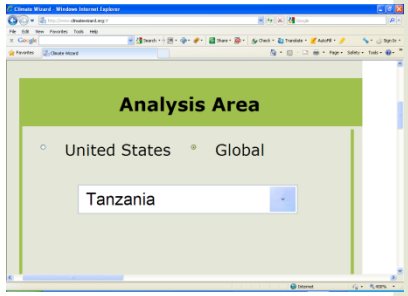






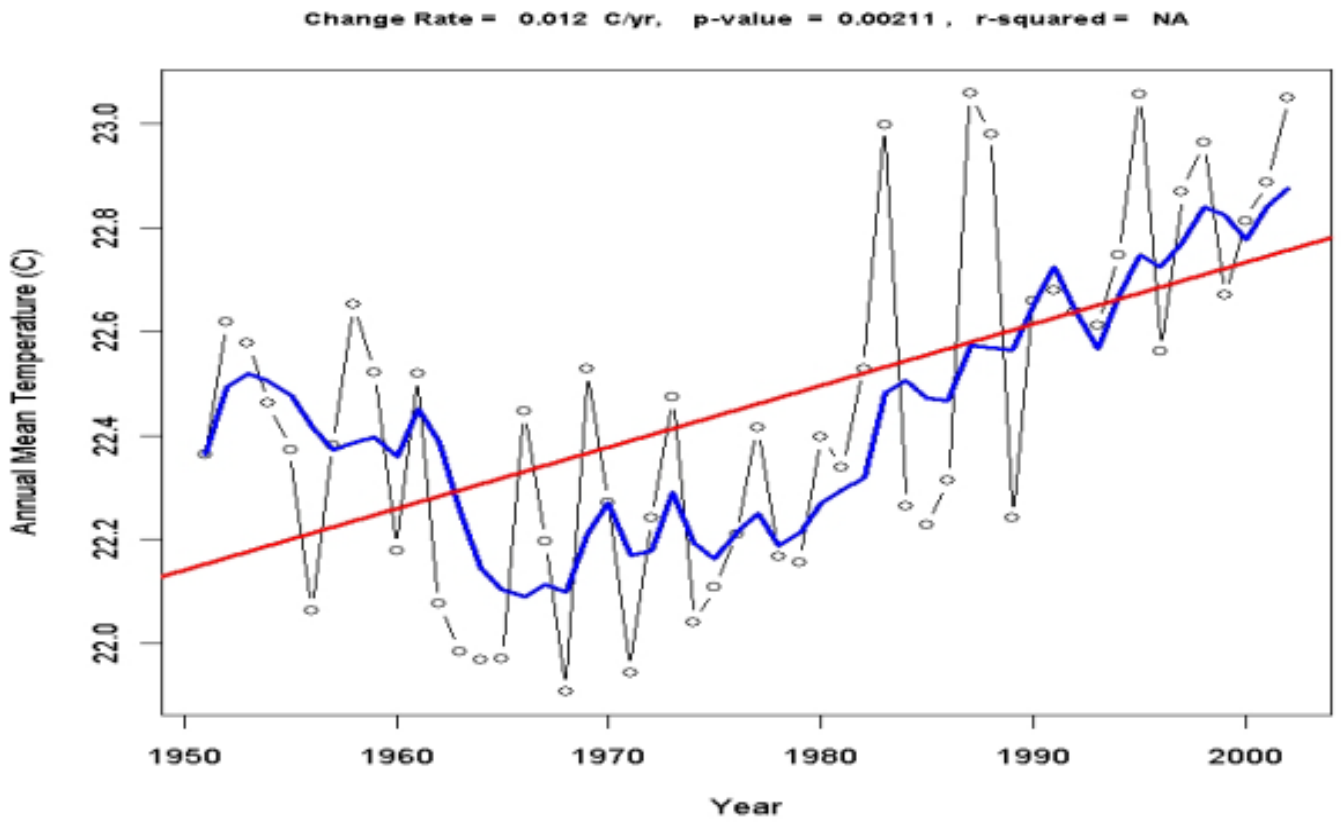


© Tim Davenport / WCS



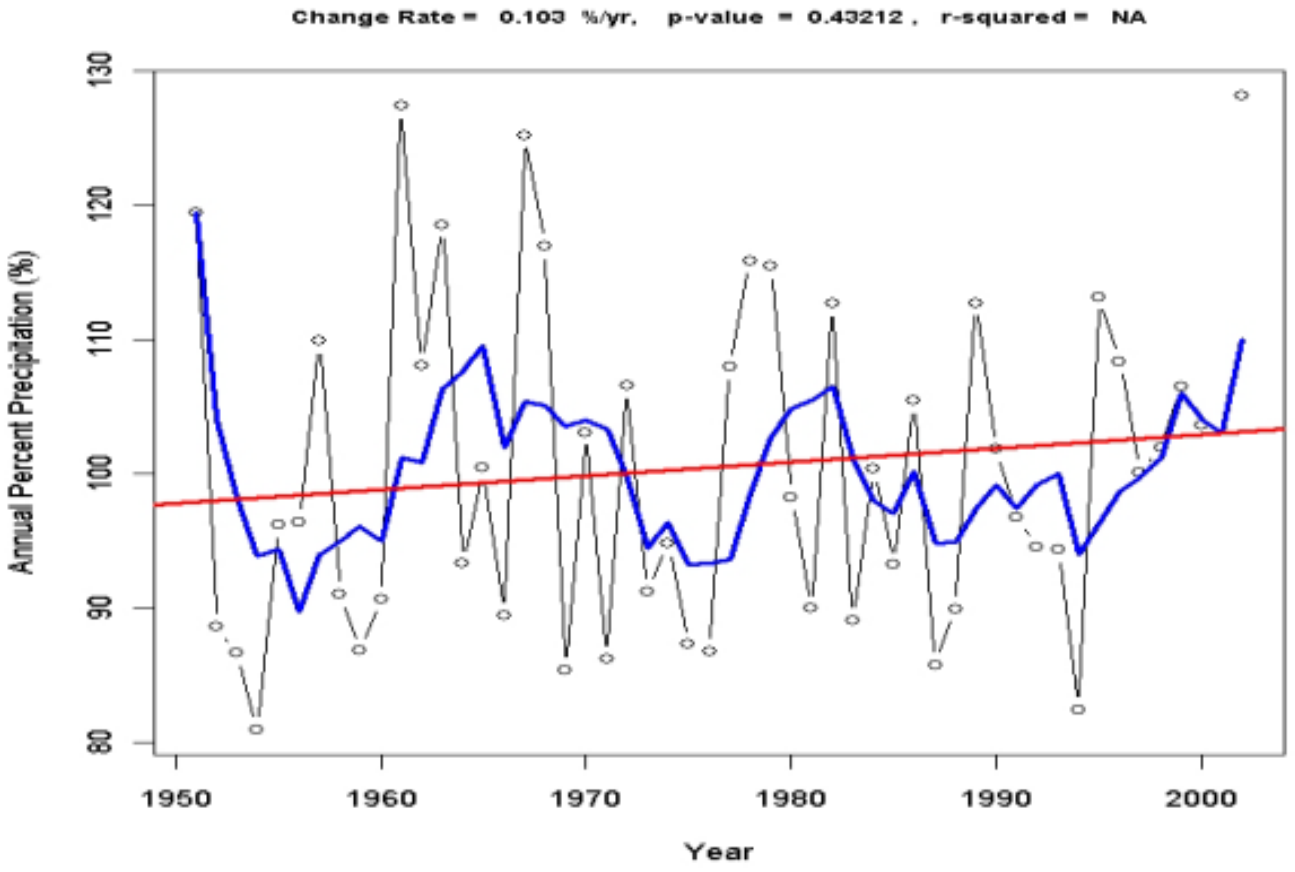
http://ClimateWizard.org

Average yearly temperature since 1950s



Map produced by ClimateWizard (c) University of Washington and The Nature Conservancy, 2009.
Base climate data from the Climate Research Unit (TS 2.10), University of East Anglia, UK, http://www.cru.uea.ac.uk

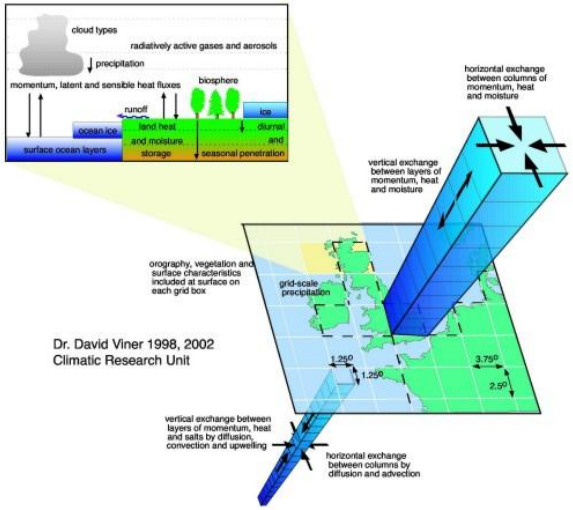
Average yearly rainfall since 1950s

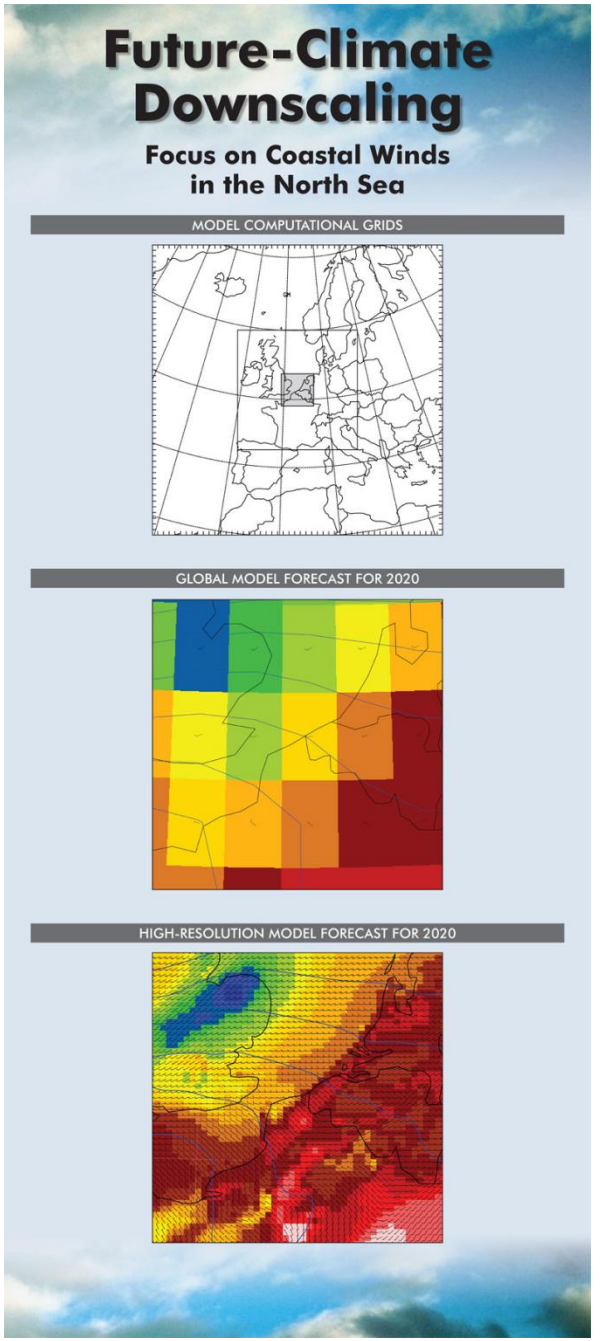


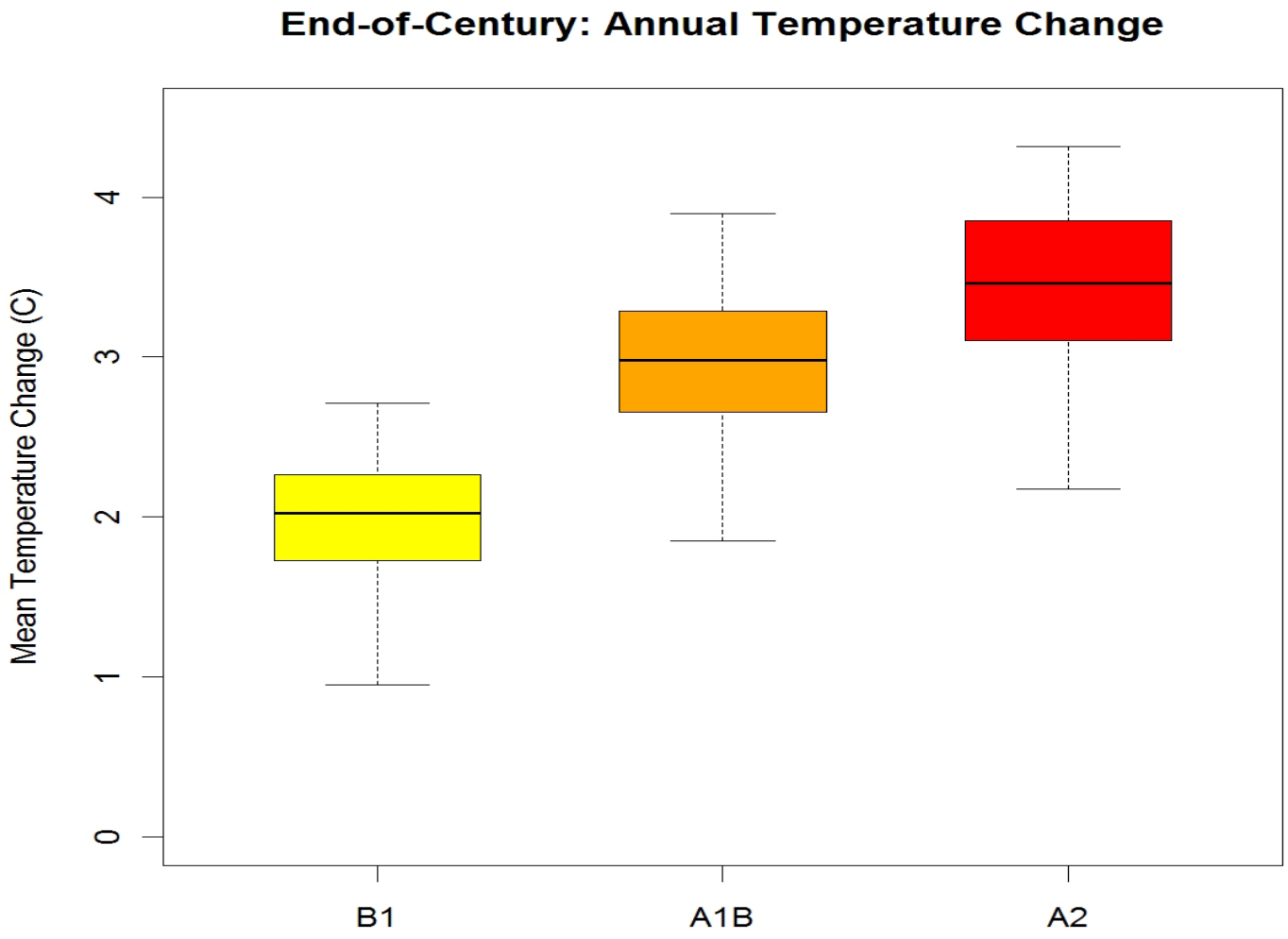
Map produced by ClimateWizard (c) University of Washington and The Nature Conservancy, 2009.
Base climate data from the Climate Research Unit (TS 2.10), University of East Anglia, UK, http://www.cru.uea.ac.uk

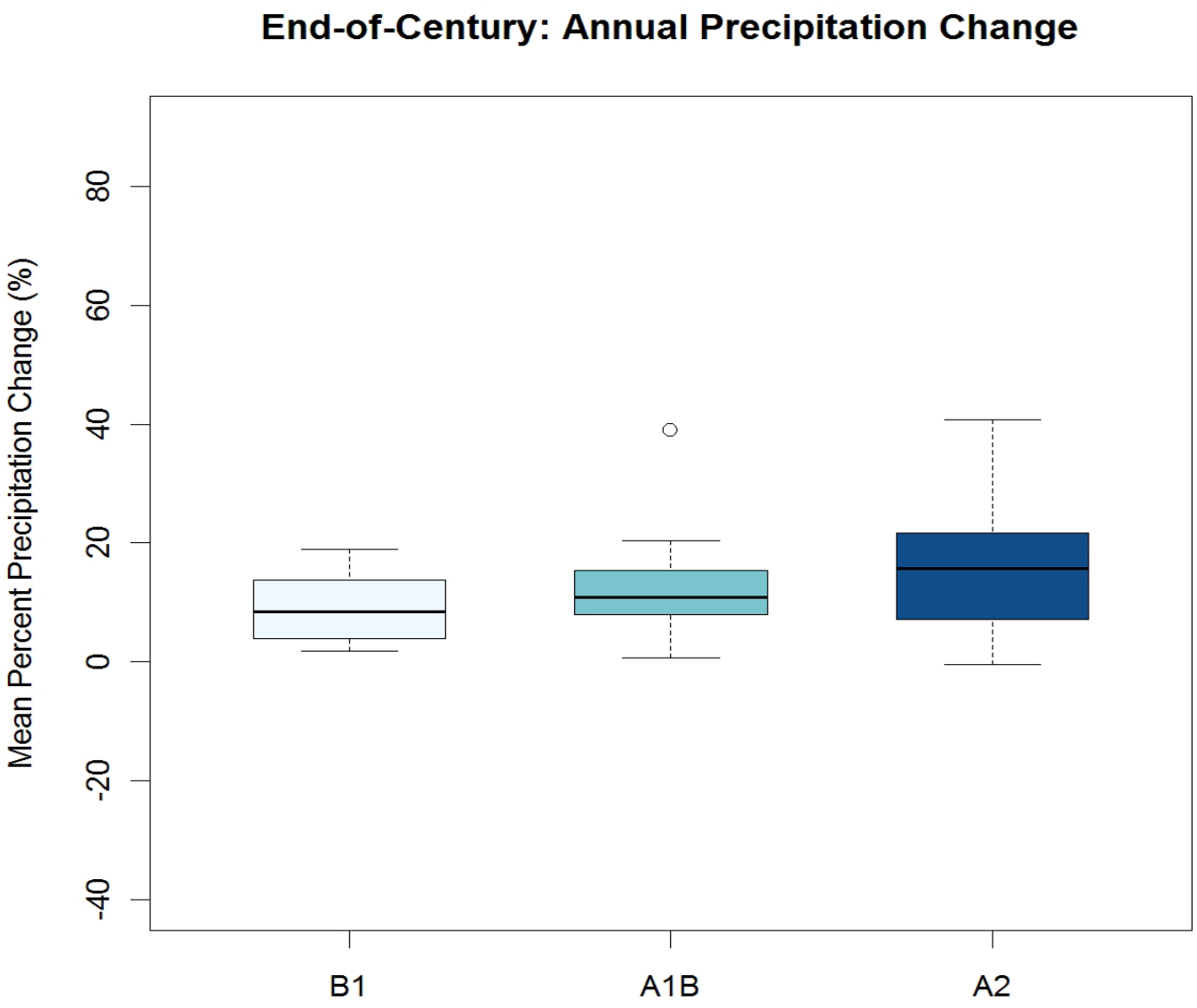
Future Climate Projections

- Use information about historical climate and statistical techniques to interpolate to finer spatial scale.



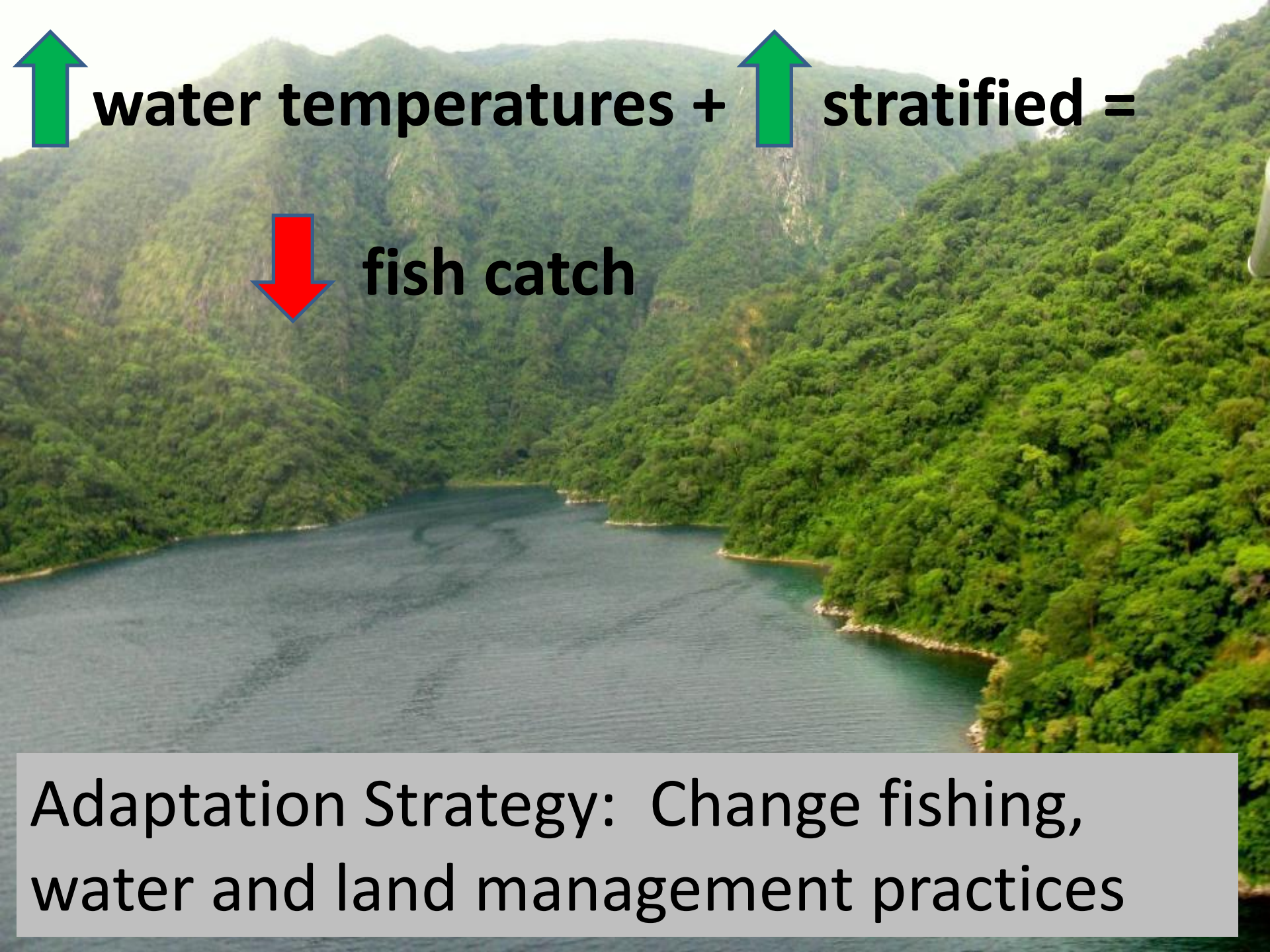



End-of-Century: Annual Temperature Change
Mean Temperature Change (C)
0
1
2
3
4
B1
A1B
A2

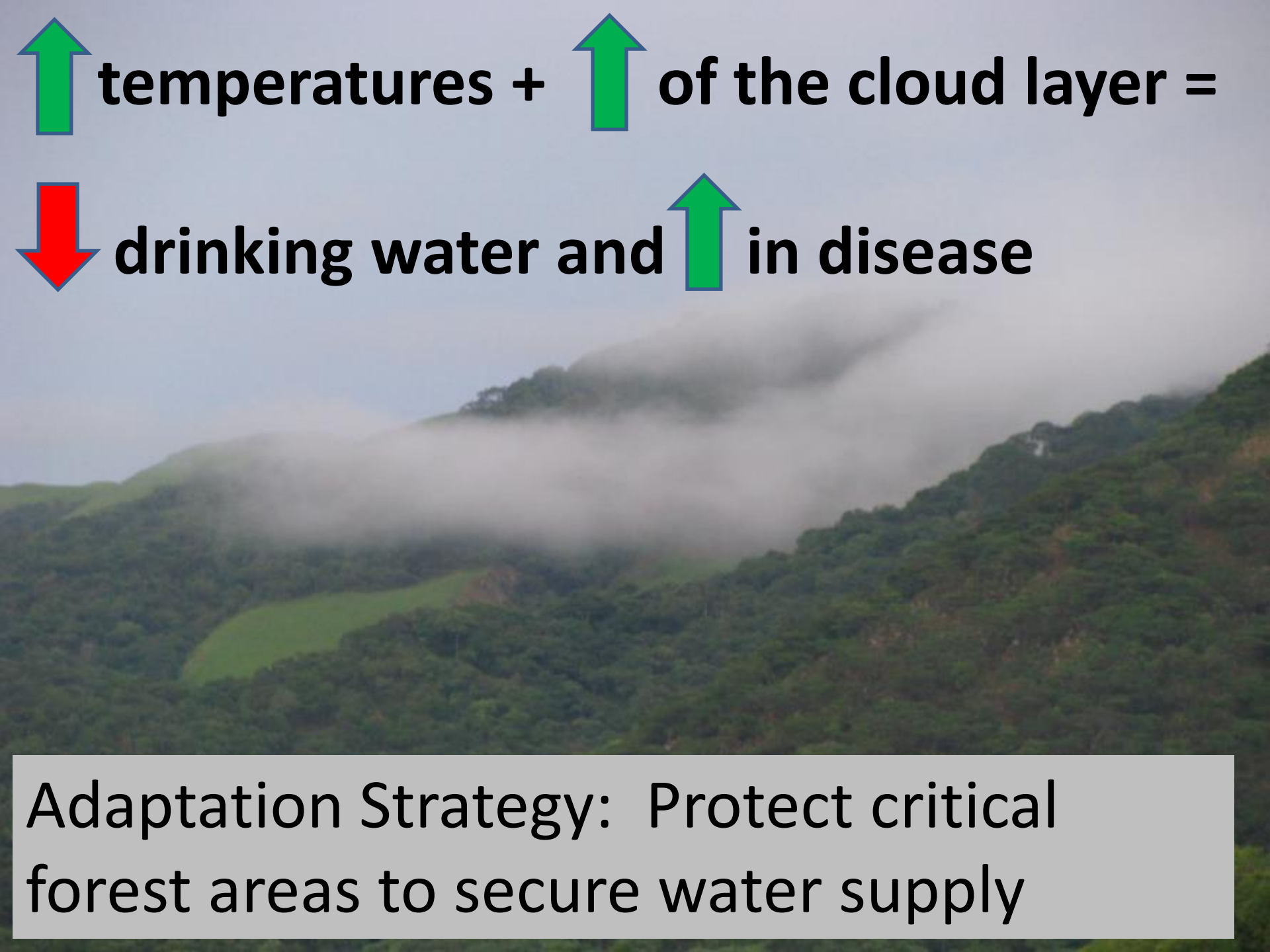

End-of-Century: Annual Precipitation Change
Mean Percent Precipitation Change (%)
80
60
40
20
0
-20
-40
B1
A1B
A2

Synthesis of Climate Wizard Analyses

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



Adaptation Strategy: Change fishing, water and land management practices



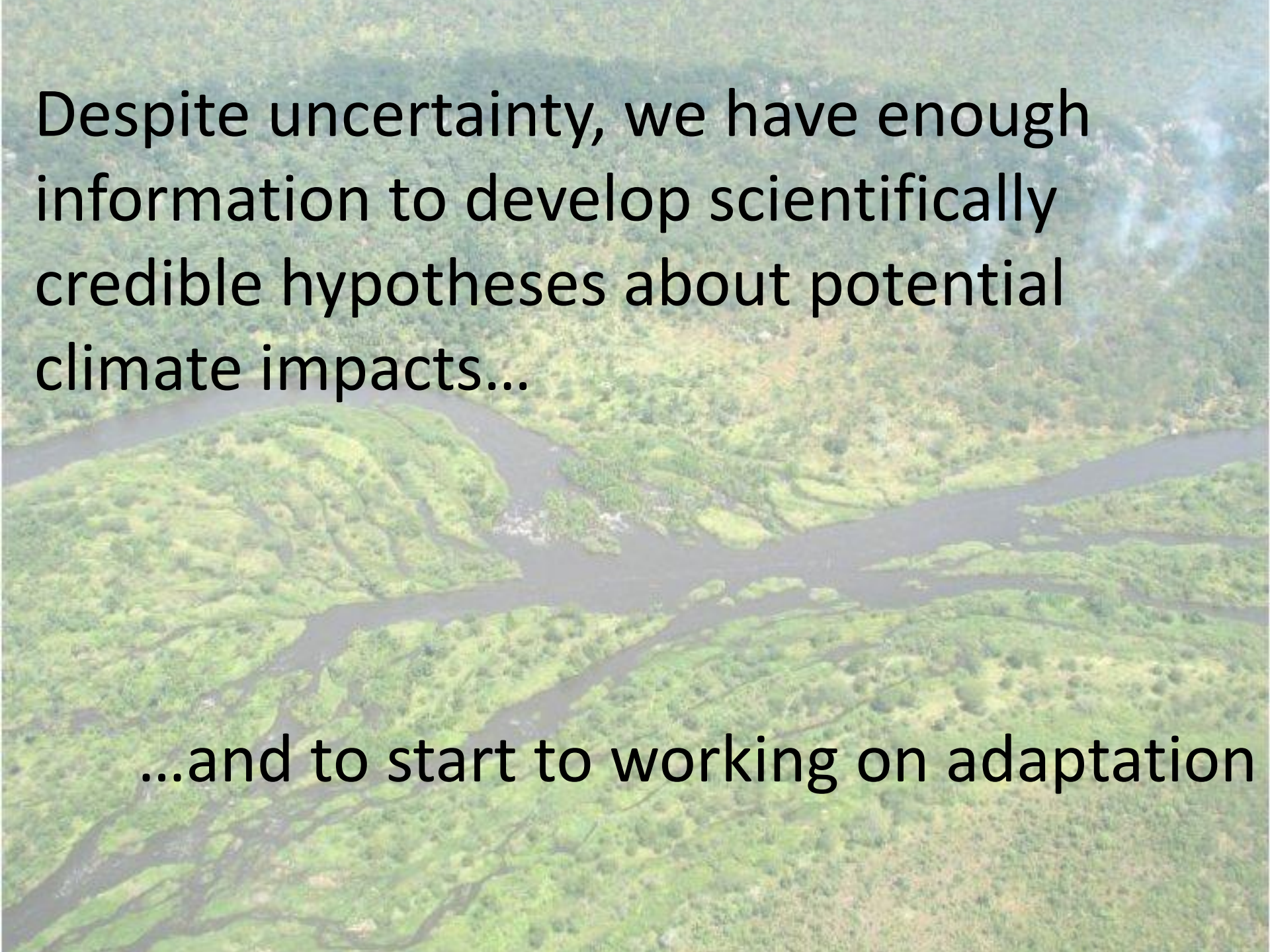
Adaptation Strategy: Protect critical forest areas to secure water supply

↓ flows + ↑ flooding + ↑ water temps =

↓ food supply and ↑ water conflicts

Adaptation Strategy: Promote alternative crops and livelihoods

Lessons Learned



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

…and to start to working on adaptation

People are empowered by demystifying climate change

Before . . .

After!

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
- Be clear about the benefits of ecosystem based adaptation & drive funding efforts towards implementation

Useful Links

www.climatewizard.org

www.NaturePeopleFuture.org

www.conserveonline.org