



“That’s Not What I Meant”

Bridging Science and Policy in a Political and Media-savvy World

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Anatomy of a Scientific Controversy

Scientific articles in *Science* and *Nature* in late 2005/early 2006 raising questions about the role of forest carbon sinks as a climate mitigation strategy

“Can planting trees make global warming worse” –*London Daily Mail*

“Plants bad for the environment” – *Fox News*

“Carbon ‘sinks’ drain water” – *The Australian*

“Plants gone bad” – *Philippine Daily Inquirer*





Nicholas Institute Process



Do Recent Scientific Findings Undermine
the Climate Benefits of Carbon Sequestration
in Forests?

An Expert Review of Recent Studies on
Methane Emissions and Water Tradeoffs

April 2006



NICHOLAS INSTITUTE
FOR ENVIRONMENTAL POLICY SOLUTIONS
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Water stresses from plantations

R.B. Jackson, E.G. Jobbagy, R. Avissar, S.B. Ray,
D.J. Barrett, C.W. Cook, K.A. Farley, D.C. le Maitre,
B.A. McCarl, and B.C. Murray. Dec 2005. Trading
water for carbon with biological carbon
sequestration. *Science*. 310: 1944-1947.

Methane emissions from plants/trees

Keppler, J.T.G. Hamilton, M. Bras, and T. Rockmann. Jan
2006. Methane emissions from terrestrial plants under
aerobic conditions. *Nature*. 439: 187-191.

<http://www.nicholas.duke.edu/institute/methanewater.pdf>





Questions

- Why do these controversies arise?
- How can we resolve them in ways that are helpful to the policy and scientific communities?
- What other “hot issues” in agriculture/forestry/climate warrant attention now?





Why do these controversies arise?





The Ideal Scientist

“The ideal scientist thinks like a poet, works like a bookkeeper, and, all too rarely, writes like a journalist,”

Attributed to Edward O. Wilson

(Carter, L.S. Dartmouth Medicine, Winter 2002)





What we have here...

**Is a failure to
communicate**

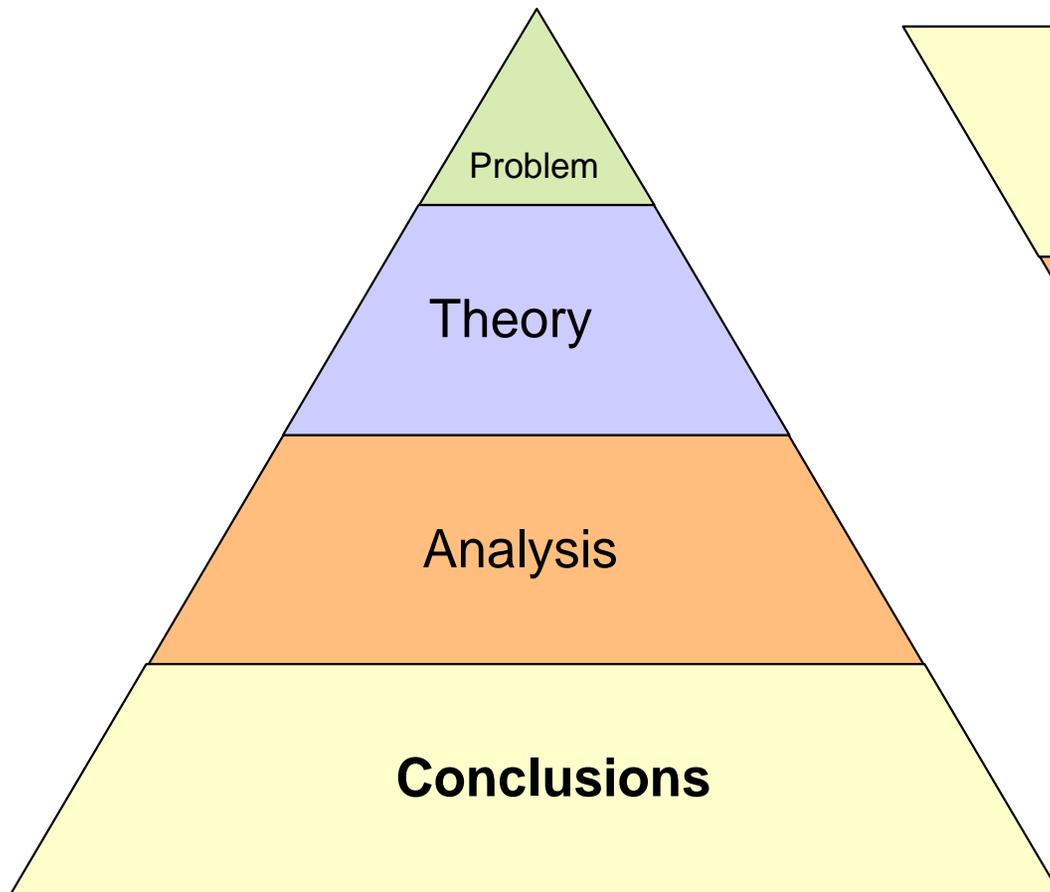


***Strother Martin in
“Cool Hand Luke” (1967)***

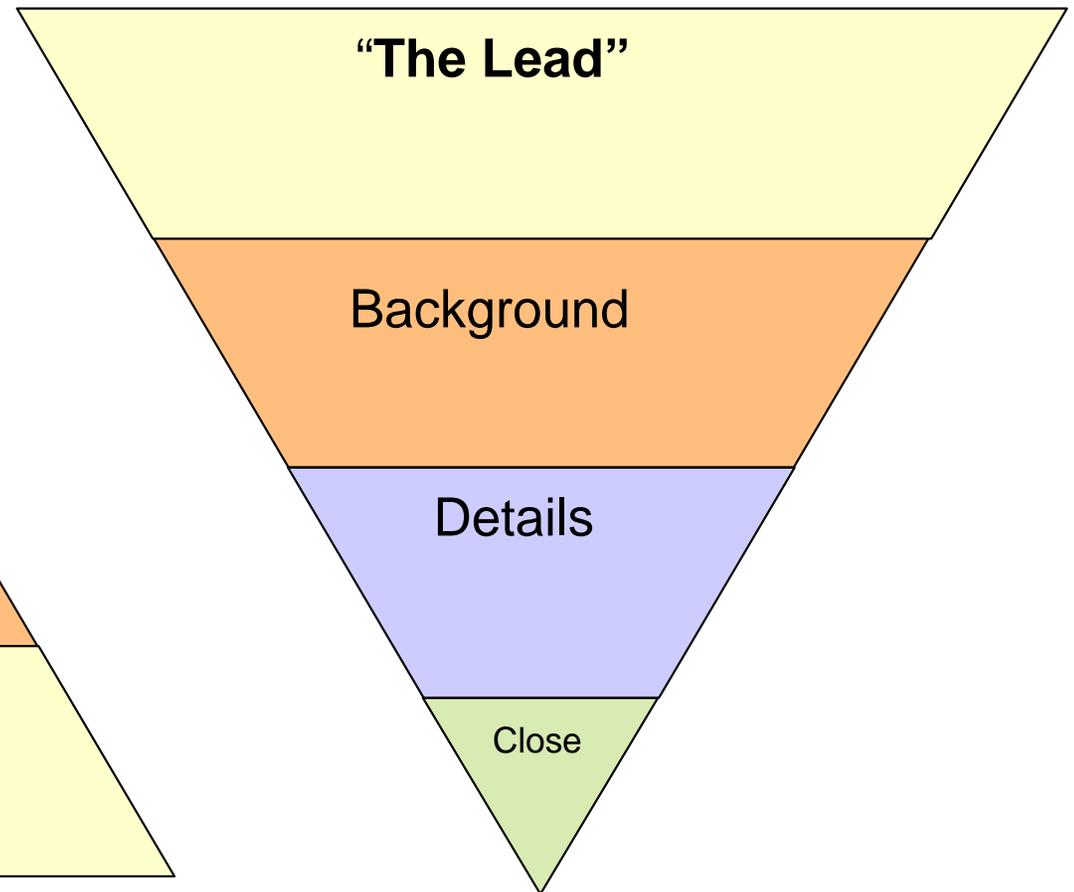




What's up is down and what's down is up



Good Science



A Good Story



A confidence game

What you are interested in, I am not confident about



What you are confident about, We are not interested in





Defending the Turf?



- Scientists are specialists
- Questions from outside and within can challenge
- Much is at stake





Spin Happens

- Complexity/uncertainty
- Vested stakeholders





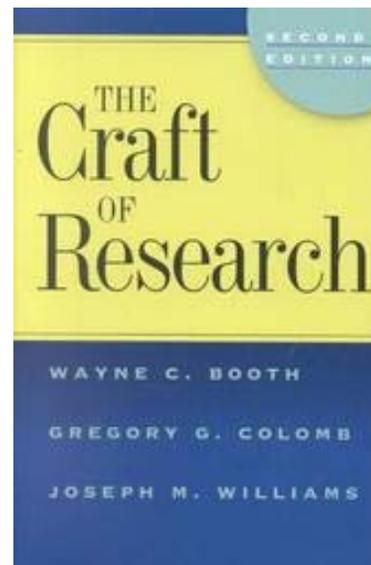
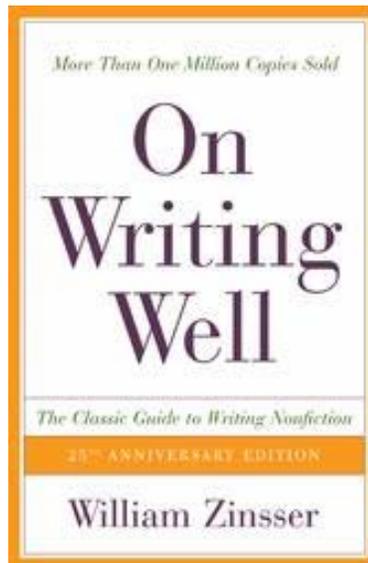
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What to Do?





Scientists - Tell better stories





Audience

Accept that science is
uncertain





Institutional commitment to synthesis/communicating

- IPCC
- Evidenced based practice in medicine





Other Controversial Issues in Agriculture, Land Use and Climate Change

- Net GHG benefits of biofuels
- Albedo effect from establishing forests/net cooling





HARNESSING FARMS AND FORESTS IN THE LOW-CARBON ECONOMY:

**A collaborative project of independent scientists,
published as a contribution from the Nicholas Institute at Duke University**

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Recap

- Climate change's moment in the sun
- Need science to guide decisions: clarity
- Complex science, economics + politics
- Stakes are high
- Good foundation/Lessons to be learned
- Policy moves faster than science





A Closing Quote

**“The issue of politicizing science has
itself become politicized.”**

Rep Tom Davis (R-VA), Jan 30, 2007

