

ABSTRACT

As a climate scientist, I realized 12 years ago that one of my responsibilities was to help Vermont understand and adapt to climate change. My road-map has four components:

- 1) **Newspaper articles**, radio and TV interviews to explain climate issues and how to deal with them in plain English (about 100 so far)
- 2) **Public talks** across the state to schools, professional, business and citizens groups, the legislature and state government - in fact to anyone that asked - with a willingness to honestly and clearly address all issues raised (230 so far).
- 3) **Specific research** on how the climate and seasonal cycle of Vermont have changed in the past, and are likely to change in the future, exploring the unknowns.
- 4) **A personal web-site** to make all my writings, talks and research open access (<http://alanbetts.com>).

Vermont is a small state with a rural, environmental ethos and a strong desire to understand climate change. An EPSCoR project, through the University of Vermont is addressing the resilience of the Lake Champlain basin to extreme events in the future climate. In parallel, Vermont has put in place an ambitious renewable energy policy.

My multifaceted strategy is open, clear and transparently honest, aimed at helping society understand and deal with critical issues. (In sharp contrast with the deceptive strategy to discredit climate science by well-funded groups.)

1) Newspaper Articles

My newspaper columns started in January 2008, when we helped set up an environment page in two Vermont newspapers (Betts and Gibson 2012).

These columns, a blend of science and opinion, go through the seasons, dealing with weather, climate, climate change, energy and policy issues from a systems perspective. They encourage the reader to explore alternative and hopeful paths for themselves, their families and society. They are written so that a scientist will perceive them as accurate (although simplified); while the public can relate their tangible experience of weather and climate to broader issues of climate change and energy policy.

We all share responsibility for the future of the Earth.

Addressing Vermont's concerns on climate change



Alan K. Betts
 Atmospheric Research, Pittsford VT 05763
<http://alanbetts.com>

PA31C-2213

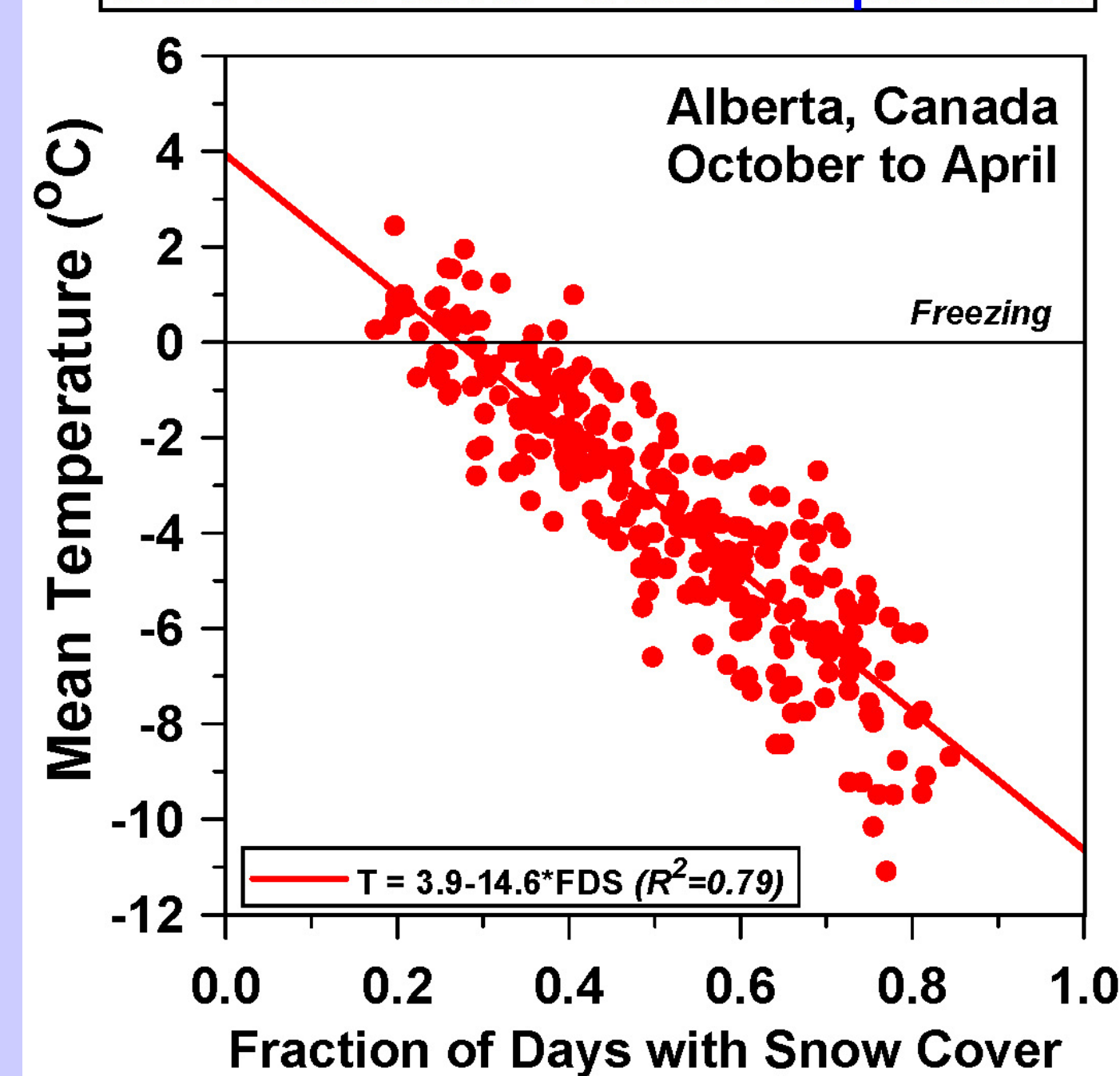
2) Public Talks across Vermont

Schools and colleges
 Professional groups
 - Business, health, planning
 - Forest, land-use, watersheds
 Citizens groups
 Church groups
 State agencies & government

230+ talks: 2006-2016

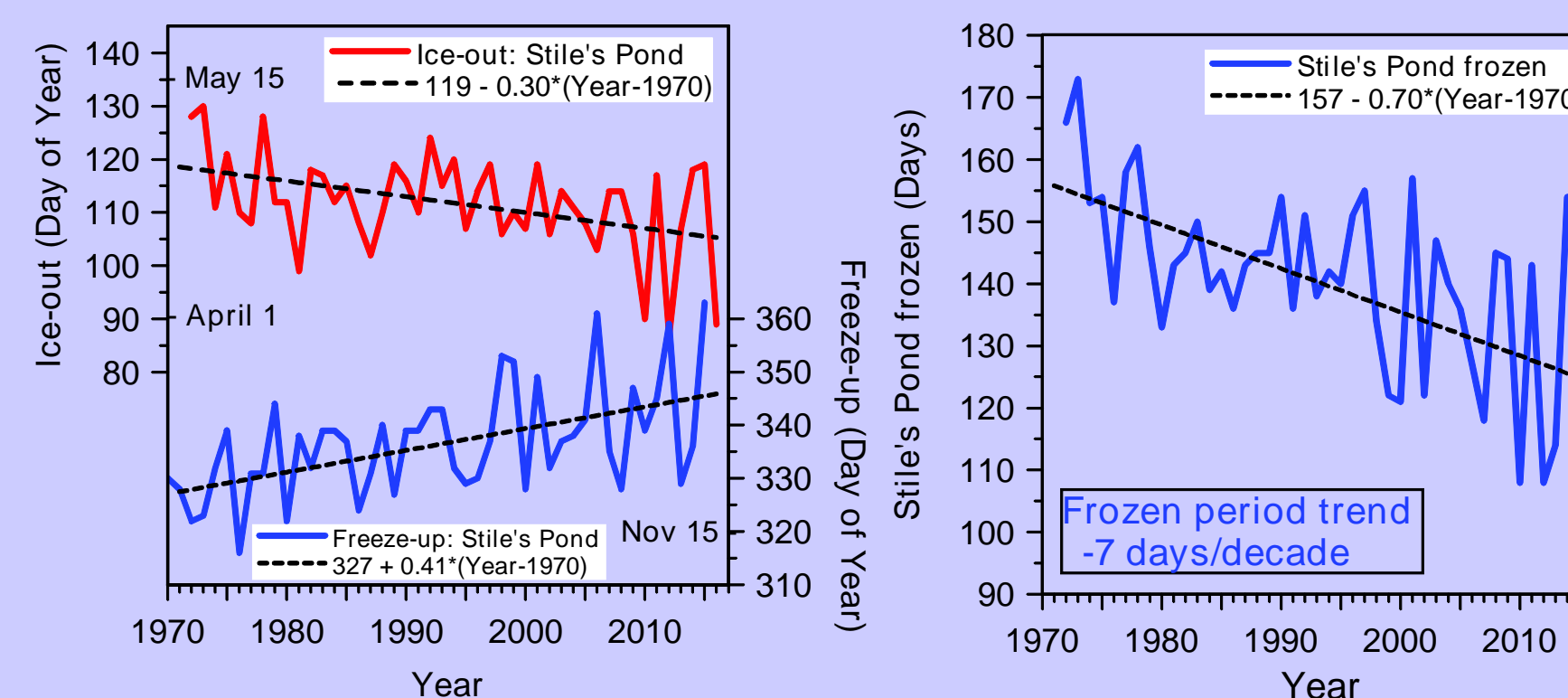
Blend of climate science (local and global) and strategies for a sustainable future

More snow cover - Colder temperatures

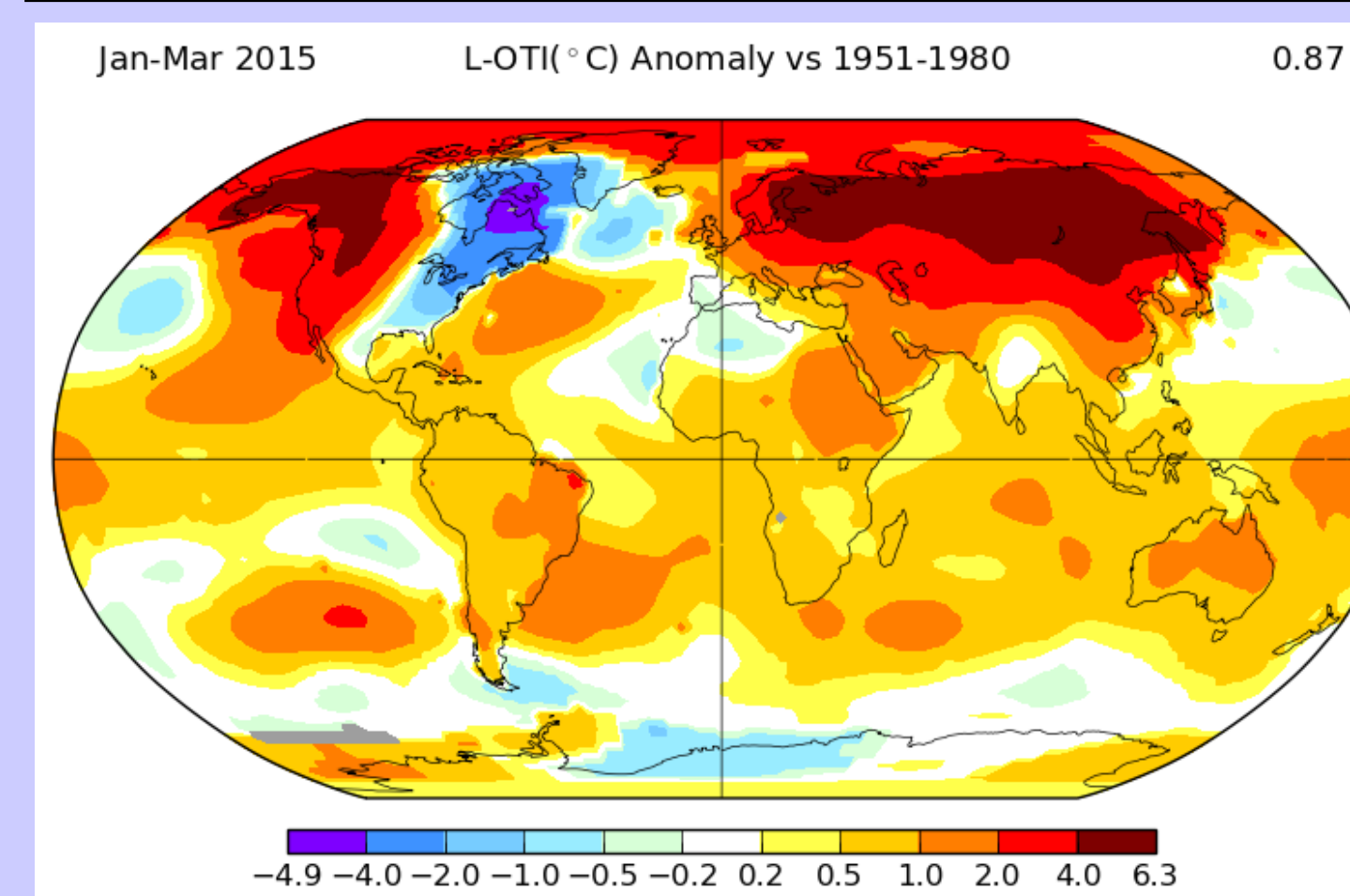


Cold season temperatures linked to days with snow cover

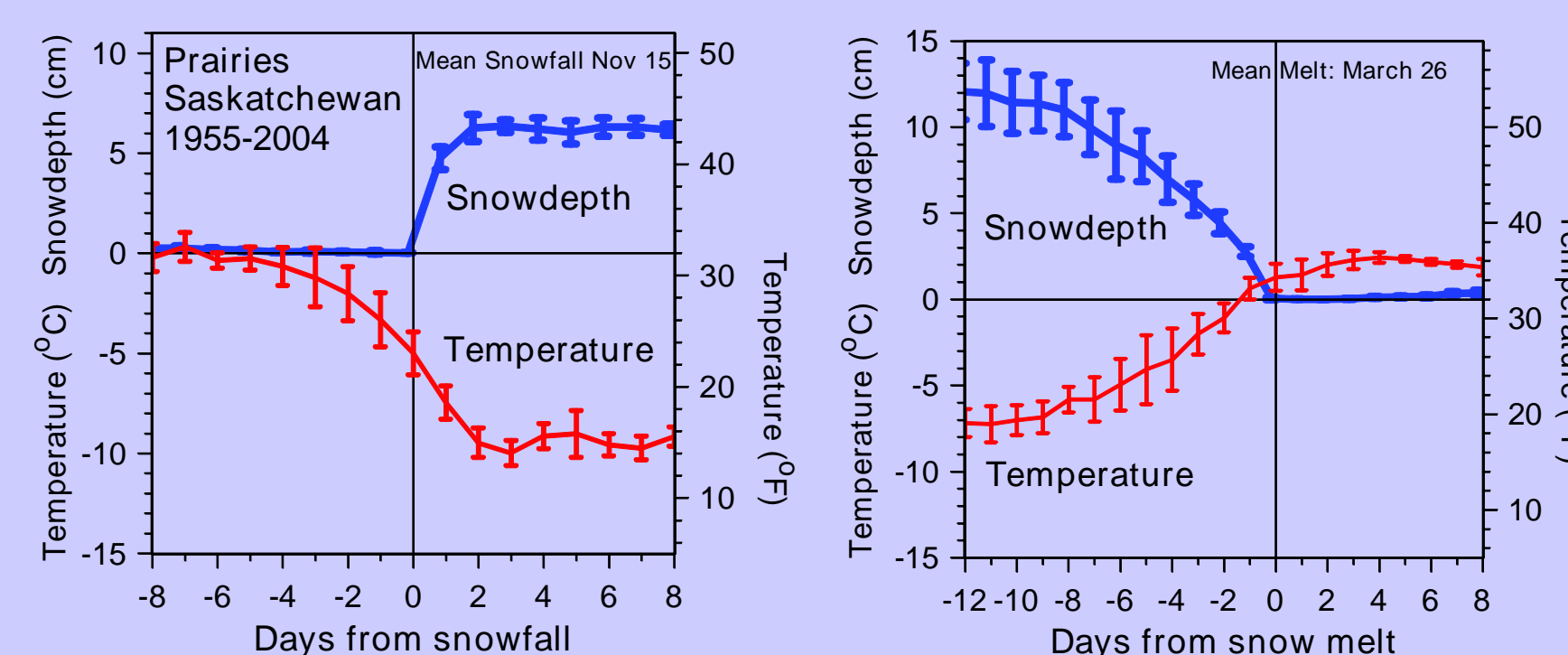
3) Vermont Climate Research



Frozen Period Shrinking: Large winter variability coupled to snow cover



Global Climate view of JFM-2015



Fast Transitions with snow: 10°C on Prairies; 10°F for Vermont

4) Web-site

My personal web-site makes all my writings, talks and research open access. Also addresses key climate questions in plain language. (<http://alanbetts.com>).

CONCLUSIONS

Vermont is a state with a strong environmental ethic supported by Democratic, Progressive and Republican parties. Transformation of the State energy system to renewables is well underway.

The devastating flooding from Tropical Storm Irene and the need to protect Lake Champlain has galvanized the state into planning for future extreme events.

Supported by NSF OIA 1556770

REFERENCES

Betts, A. K. (2011), Vermont Climate Change Indicators. *Weather, Climate and Society*, 3, 106-115.
 Betts, A. K. (2011), Seasonal Climate Transitions in New England. *Weather*, 66, 245-248.
 Betts, A. K. (2011), Communicating Climate Science. *EOS Transactions*, 92, No. 24, 14 June 2011.
 Betts, A.K. and E. Gibson (2012), Environmental journalism revisited. Ch. 41, pp. 382-390, in *Environmental Leadership: a Reference Handbook*. Deborah R. Gallagher, Editor, SAGE