

Role of Health Care Professionals in Raising Clinician and Public Awareness Around Global Climate Change: Importance of Individual Behaviors

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November 5, 2007



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Premises to Start

- To prevent “catastrophic” climate change we must achieve dramatic reductions in greenhouse gas emissions in the next decade
- Catastrophic climate change will be catastrophic
- Converging challenges will greatly impede some efforts and encourage others that will make matters worse
- Changes have to be made on multiple fronts
- *Behavior change is relatively low-hanging fruit, is morally motivated, and should be tackled first*
- If we do this well, politicians, business leaders, and policy makers may follow

“Lifestyle” is the Problem

Environmental Health Perspectives • VOLUME 114 | NUMBER 12 | December 2006

“However, despite a broad scientific consensus that environmental degradation is caused by humans and will impact human health globally, very few exurb-dwelling, McMansion-living, large-lawn-watering, SUV-driving, 100-mile-a-day-commuting, endangered species consuming, therapeutic-shopping Americans acknowledge that their behaviors, and the policies allowing or even encouraging these behaviors, may be implicated and in need of change.”

Global Environmental Change: What Can Health Care Providers and the Environmental Health Community Do About It Now?

Brian S. Schwartz,^{1,2,3} Cindy Parker,¹ Thomas A. Glass,² and Howard Hu⁴

Why Lifestyle?

- An early focus to highlight the idea that our BEHAVIOR is the problem
 - Solving these problems will not be easy
 - Missing link – behavior & responsibility
 - We need to reconnect the disconnect
 - “Sacrifice” or just “change” may be required
- While we claim we care about the environment & future generations, we are not behaving that way
- Global environmental threats are not just about greenhouse gases
- We must decrease our carbon footprints and our ecological footprints

Per capita CO₂ emissions in 2002

<u>Country or Grouping</u>	<u>Tons per person</u>
US	20
High income average	12
Russia	10
UK	10
Japan	10
France	6
Sweden	5
World average	4
China	3
Brazil	2
India	1
Low income average	1

And numbers are WORSE for cumulative

Catastrophic Climate Change

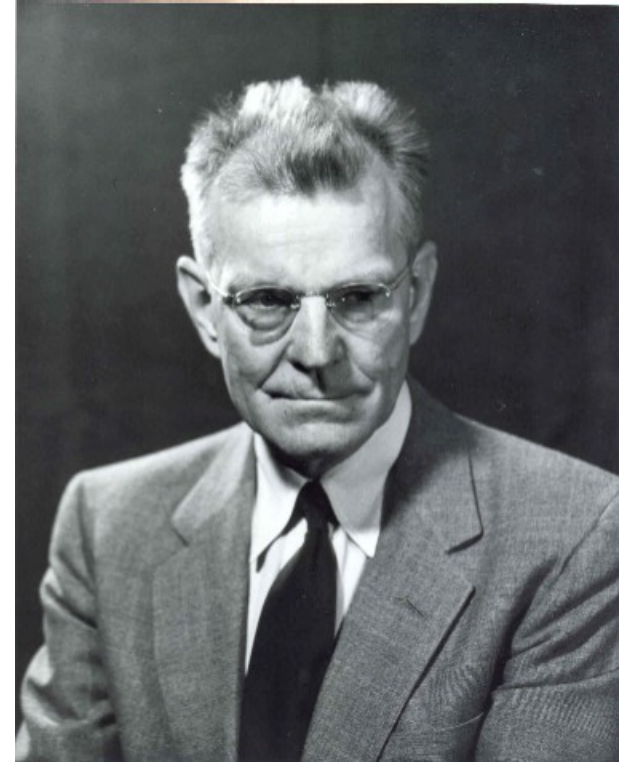
- Sea level rise leading to displacement of human populations (10's – 100's millions)
- Extinction of 50% of plant and animal species
- Regional climate change with large impacts on food production and hydrologic cycle

Converging Catastrophes

- Climate change
- After peak oil
- The “wrong” built environment
- Huge federal budget deficits
- Political obstacles, paralysis, incivility of public debate, influence of special interests in our system

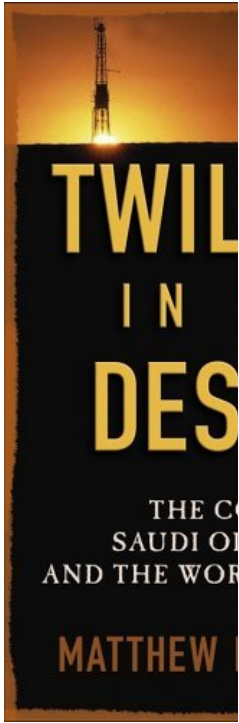
After Peak Oil

M. King Hubbert
1903-1989
Geophysicist



He made a startling prediction in 1949 that the fossil fuel era would be of *very short duration*.

- In 1956 he predicted U.S. oil production would peak in 1970; he was scoffed at; he was correct.
 - In 1968, he predicted world oil production would peak 200-2005.

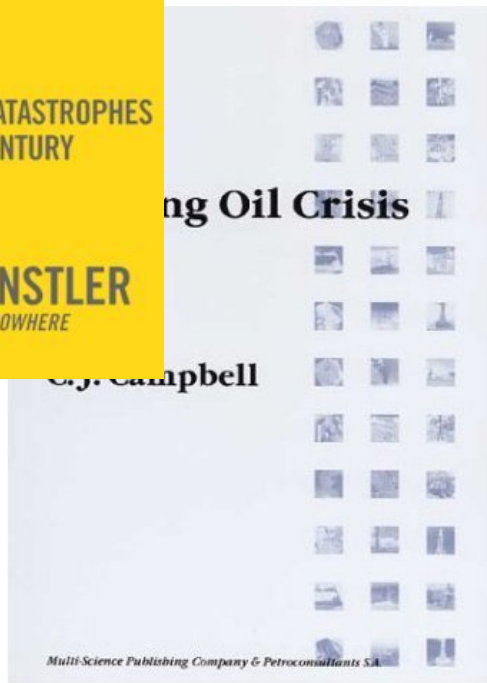
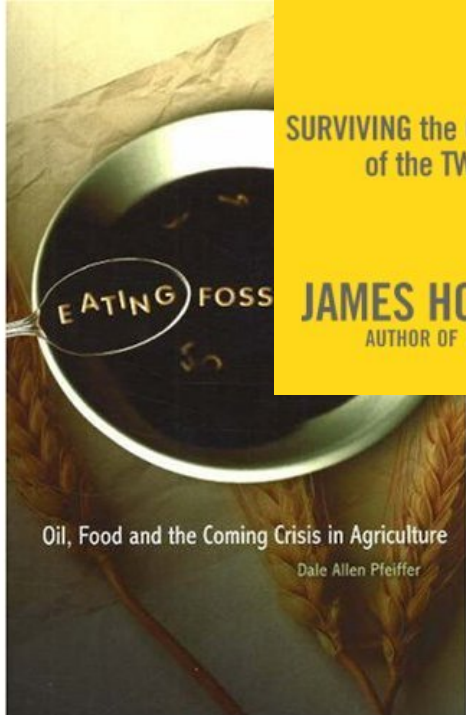
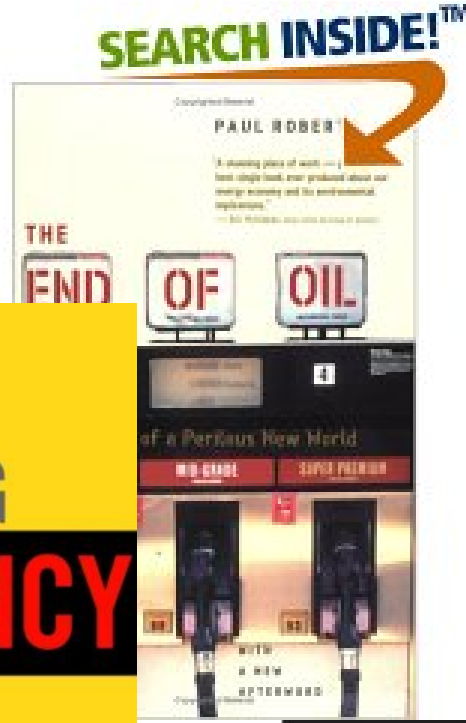


The Coming Economic Collapse

How You Can Take Control of Your Future
Oil Costs \$200 a Barrel
STEPHEN LEVITSKY
Author of *THE OIL*
with **GLEN STUBBS**

The LONG EMERGENCY

SURVIVING the CONVERGING CATASTROPHES of the TWENTY-FIRST CENTURY
JAMES HOWARD KUNSTLER
AUTHOR OF *THE GEOGRAPHY OF NOWHERE*

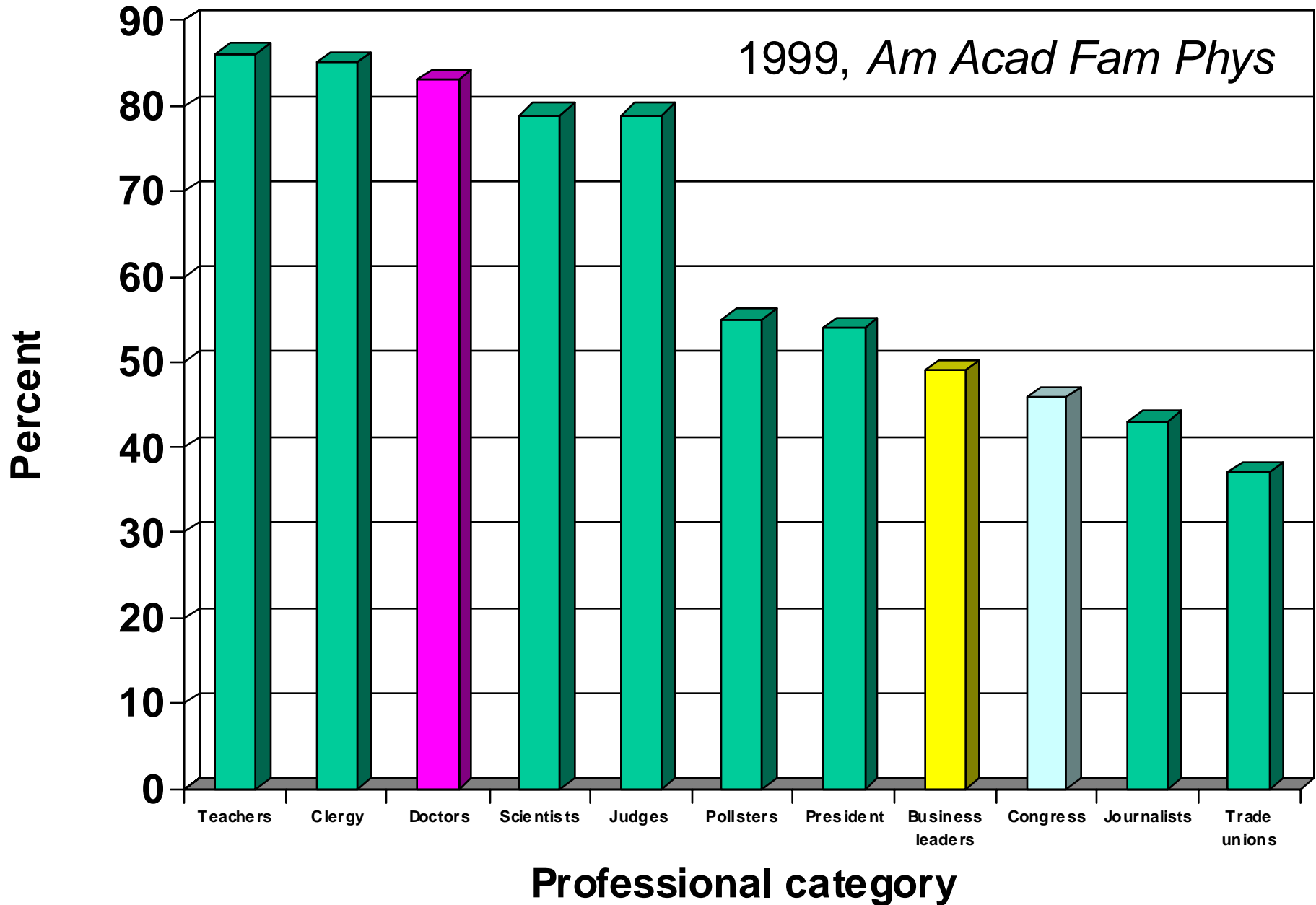


What Can Health Care Professionals (HCPs) Do?

PREMISES

- *Broad and deep social change will be necessary*
- *HCPs can influence behaviors*
- *HCPs should lead by example*
- *HCPs will also be involved in several adaptation/preparedness initiatives (public health practice)*
- *HCPs could also be involved with mitigation behaviors*

Americans trust their doctors ...



Mitigation – IPCC

- Anthropogenic intervention to limit or reduce greenhouse gas emissions or enhance sinks

What Can Health Care Professionals Do?

- Understand issues
- Change own behaviors
- Implement green clinical practices
- Work on ecological footprint of hospitals
- Advocate for public health
- Get involved with professional organizations
- Discuss with patients
 - Consider these behaviors the same as other risky behaviors?

Can Tools Assist Behavior Change?

- Carbon footprint calculators
- Ecological footprint calculators
 - Redefining Progress
 - Environmental Defense
 - SafeClimate.net
 - American Public Media (publicradio.org)
- Put in health care provider settings, self-administered, computer-administered

What Behaviors?

- Decisions regarding where to live
- Transportation behaviors
- Home heating and cooling behaviors
- Home electricity use behaviors
- Eating behaviors
 - Eat lower on the food chain
 - Get food locally
- Water use behaviors
- Recreation behaviors
- Leisure travel & tourism behaviors

Adaptation – IPCC

- Adjustment in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts.
- Changes in processes, practices, or structures to moderate or offset potential damages or take advantage of opportunities.
- ***We need to do these regardless – momentum in the climate system***

Adaptation



- **The Dr. Strangelove strategy:** “Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb” (1964 movie)
- Does this have a “genocidal meaning” – “...a cosseted, wealthy few may survive climate change by retreating to some refuge, but the vast majority will inevitably perish, as will the bulk of the Earth’s species and ecosystems.”

Adaptations in which health care professionals could become engaged

Ann Intern Med 2007

- (Weather surveillance)
- Emergency preparedness
- Air quality management
- Water quality management
- Vector monitoring and control
- Infectious disease surveillance
- Public and professional education
- Protective technologies (vaccines, sunscreen, water purifiers)
- Improving social equity
- Environmental tort litigation
- Research in climate-health relations

“The effective practice of medicine increasingly requires that physicians and their professional associations turn their attention to environmental issues that have a bearing on the health of individuals and populations.”

World Medical Association *Statement on the Role of Physicians in Environmental Issues*
October 14, 2006

- California Medical Association, *Resolution 106-02*
- American College of Preventive Medicine, *Policy Number 2006-002*

What Must the Future Look Like?

- Locally-based
- Decentralized
- Down-scaled
- Low-energy
- Resource-conserving
- Radically reorganized food production and perhaps dietary habits
- Based on international cooperation (peaceful? – war is very energy intensive)
- Without a huge energy subsidy, behaviors will by necessity change, becoming more “sustainable” (but very different)

Summary

- Given climate change, “after peak oil,” other resource depletion, land degradation, water quality and quantity, species losses – do we really think our lifestyles are sustainable?
- If not, why isn’t anyone talking to us about this?
- An early focus on behaviors is an important first step – morally-motivated, link to responsibility – and HCPs can play an important role
- HCPs must promote both mitigation and adaptation for climate change
- HCPs can act within and outside traditional boundaries
- End result of efforts to reorganize the way we live will have many health benefits

Scientific American 2006

Where we are headed?

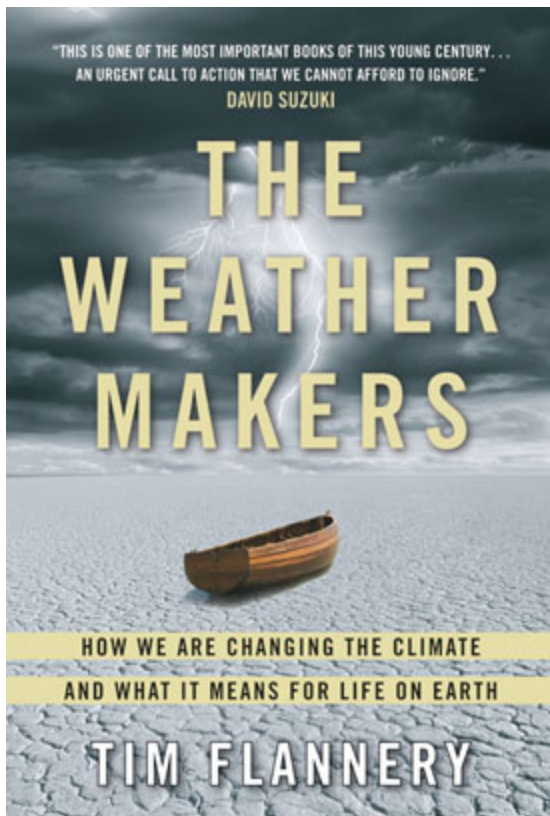


What we must achieve?

Slides after here
not shown

Tim Flannery on climate change:

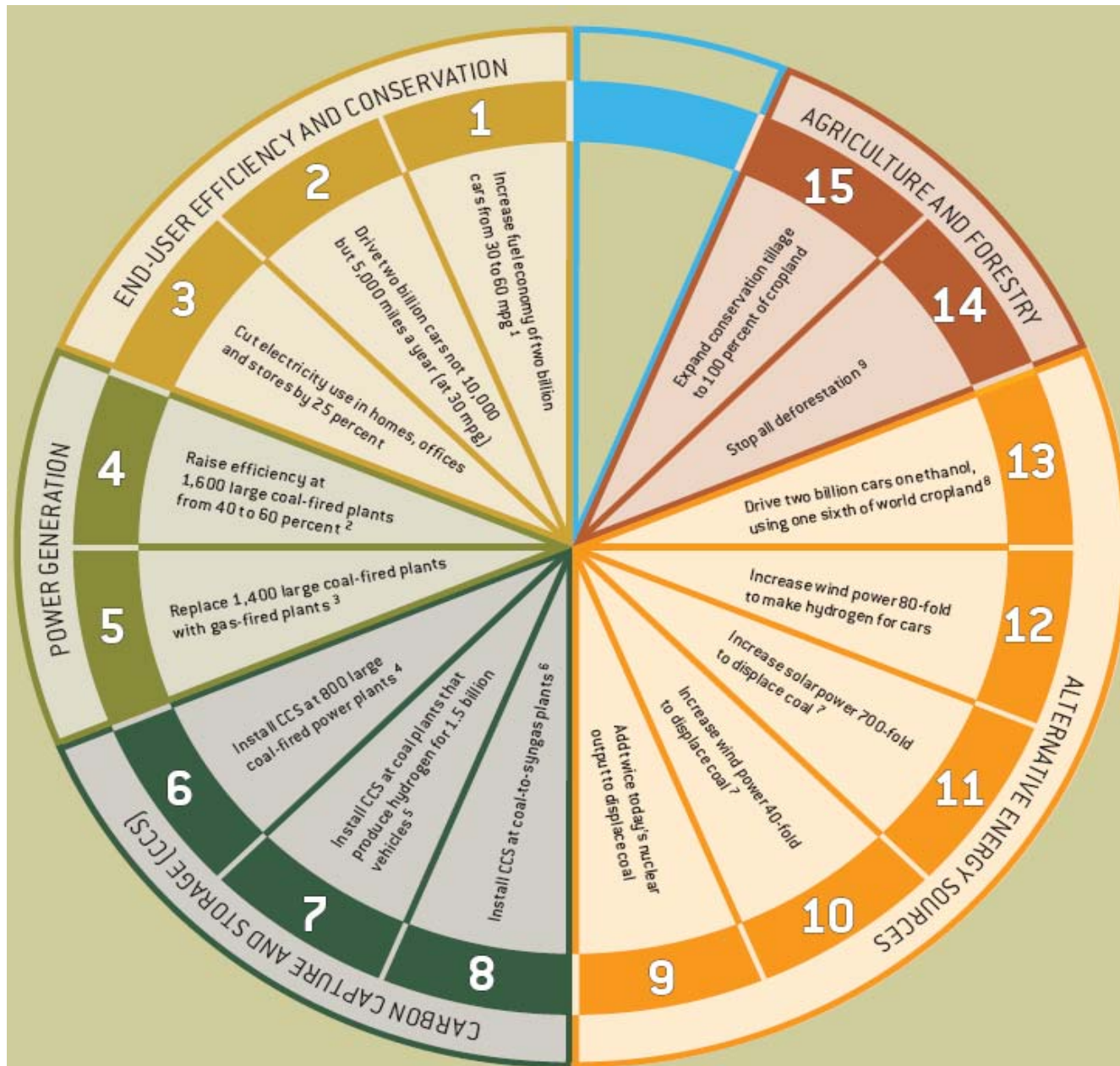
“... the pronouncements of the IPCC do not represent mainstream science, nor even good science, but lowest-common-denominator science ... If the IPCC says something, you had better believe it – and then allow for the likelihood that things are far worse than it says they are.”



Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies

S. Pacala^{1*} and R. Socolow^{2*}

13 AUGUST 2004 VOL 305 SCIENCE



HCPs should know, support, and work on these