

## Sustainability: A Household Word

I THANK Q. WANG AND G. P. PETERS *ET AL.* (“China’s environmental civilian activism” and “Effects of China’s economic growth,” Letters, 14 May, p. 824) for responding to my Policy Forum, “China’s road to sustainability” (2 April, p. 50). Their Letters reiterated important forces affecting sustainability, which I have previously addressed (1–3).

In contrast to Peters *et al.*, I maintain that the direct and indirect impacts of households on the environment (4) are important and deserve much more attention. For example, the household sector is the major direct and indirect consumer of energy (5). From 1980 to 2006, direct residential electricity usage in China increased 31-fold, whereas electricity usage in other sectors increased only 8-fold (6). In 2005, households’ indirect energy usage (e.g., energy usage by other sectors that produce and transport products

for households) was 4.5 times as high as their direct energy usage; between 1992 and 2005, indirect energy usage increased 6.3 times as fast as direct energy usage (7). CO<sub>2</sub> emissions from households increased over time (5, 8). With increasing domestic demand and household proliferation (rapid increase in the number of households) in China, household impacts on the environment may continue to rise in the future.

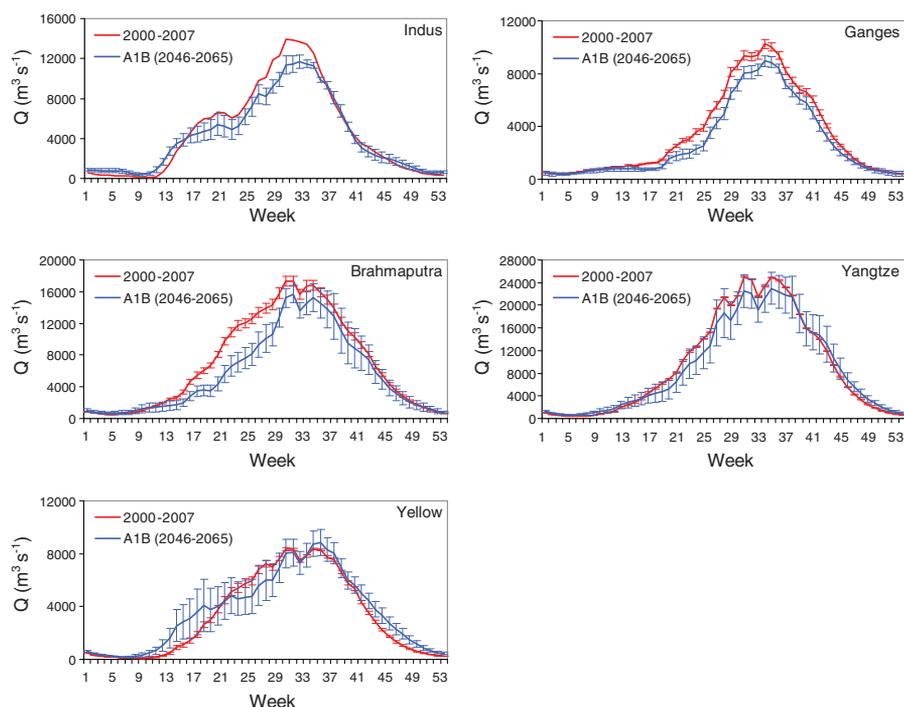
I agree with Wang that more people in China have been involved in environmental civilian activism against environmental damage from industries, but it is essential to consider their own increasing environmental impacts that result from lifestyle changes such as increasing consumption, increasing demand for household products, and increasing divorces (9). To minimize the environmental impacts of industries, it is important to reduce household demand for industrial products.

JIANGUO LIU

Center for Systems Integration and Sustainability, Michigan State University, East Lansing, MI 48823, USA. E-mail: jliu@panda.msu.edu

### CORRECTIONS AND CLARIFICATIONS

**Reports:** “Climate change will affect the Asian water towers” by W. W. Immerzeel *et al.* (11 June, p. 1382). In Fig. 3, the superscript minus signs in the units along the y axis were mistakenly omitted. The units should have read Q (m<sup>3</sup> s<sup>-1</sup>). The corrected figure is shown here.



### TECHNICAL COMMENT ABSTRACTS

#### Comment on “Patterns of Diversity in Marine Phytoplankton”

Jef Huisman

Barton *et al.* (Reports, 19 March 2010, p. 1509) argued that stable conditions enable neutral coexistence of many phytoplankton species in the tropical oceans, whereas seasonal variation causes low biodiversity in subpolar oceans. However, their model prediction is not robust. A minor deviation from the neutrality assumption favors coexistence in fluctuating rather than stable environments.

Full text at [www.sciencemag.org/cgi/content/full/329/5991/512-c](http://www.sciencemag.org/cgi/content/full/329/5991/512-c)

#### Response to Comment on “Patterns of Diversity in Marine Phytoplankton”

Andrew D. Barton, Stephanie Dutkiewicz, Glenn Flierl, Jason Bragg, Michael J. Follows

Huisman argues that environments of intermediate variability promote coexistence of model phytoplankton, apparently contrasting our hypothesis that stability allows for greater diversity of equivalent competitors in the ocean. We argue that our original interpretations of the mechanisms governing model diversity patterns remain valid and that Huisman’s results are complementary to our hypotheses.

Full text at [www.sciencemag.org/cgi/content/full/329/5991/512-d](http://www.sciencemag.org/cgi/content/full/329/5991/512-d)

#### References

1. J. Liu, J. Diamond, *Science* **319**, 37 (2008).
2. J. Liu, J. Diamond, *Nature* **435**, 1179 (2005).
3. J. Liu, P. Raven, *Crit. Rev. Environ. Sci. Technol.* **40**, 823 (2010).
4. J. Liu *et al.*, *Nature* **421**, 530 (2003).
5. Z. Lu, R. Matsuhashi, Y. Yoshida, *Environ. Informatics Archives* **5**, 214 (2007).
6. China Energy Group, China Energy Databook v. 7.0 (2008); <http://china.lbl.gov/research/china-energy-databook>.
7. H. Liu *et al.*, *Energ. Pol.* **37**, 3194 (2009).
8. Y. Wang, M. Shi, *Chin. J. Pop. Res. Environ.* **7**, 11 (2009).
9. E. Yu, J. Liu, *Proc. Natl. Acad. Sci. U.S.A.* **104**, 20629 (2007).

## Studies Support Probable Long-Term Safety of MRI

F. S. PRATO *ET AL.*’S LETTER (“MRI SAFETY NOT scientifically proven,” 30 April, p. 568), and the News story to which it referred (1), questioned the safety of exposure to strong magnetic fields associated with magnetic resonance imaging (MRI) scans. However, neither the Letter nor the related News story provides new evidence of risk from MRI. Prato *et al.*’s reference to a study that used functional MRI (fMRI) does not address the issue of MRI safety (2).

The literature on MRI safety focuses on the demonstrated risks of (i) physical injury from ferromagnetic objects and (ii) magnetic fields in connection to implanted medical devices (3). The limited prospective studies on the bioeffects of MRI have not identified significant biological or neurocognitive risks, even at fields up to 8 T in humans (4)