Will India’s mega-census leave a mega-footprint?

Pachauri has pointed out that India has been taking steps to curb its carbon emissions. On 1 April 2010, India launched its mega-census, which aims to document biometric details of every person aged above 15 years. This mega-census will be the largest registration exercise in human history and will consume 11.63 million tonnes (mt) of paper over the next eleven months. While we do not question its societal benefits, this endeavour undermines India’s ostensible transition to high rates of decarbonization.

If India operates at its maximum paper manufacturing capacity of around 8 million tonnes annually, considerable amounts of paper must still be imported for this exercise. India recently acquired two of Malaysia’s largest paper and pulp companies and these new ‘paper conduits’ could fuel the clearing of more natural forests for plantations. Some propose the expansion of tree plantations in India to generate carbon credits and satiate the shortfall of pulpable wood, but these ‘green investments’ eventually release carbon when logged. Domestically or abroad, negative environmental impacts from this mega-census could be far-reaching.

We foresee the most amount of paper being utilized during the Census and National Population Register phases. In some districts, we propose the merging of these phases to simultaneously capture demographic and biometric information electronically (via mobile personal digital assistants and laptops with biometric features) in lieu of paper forms. In areas with higher literacy, the authorities could create a portal for census questions to be answered online – a method successful in Spain and Switzerland.

It is alarming that around 15.35 mt of CO₂ (ref. 11), and other detrimental organic compounds, could be released to produce the amount of paper consumed by India’s mega-census. We hope that India will adopt environmentally-friendly measures in this and other projects to reduce her carbon footprint and serve as an exemplar of environmental stewardship. The amount of paper to be consumed in future censuses of populous countries such as China is unfathomable if a precedent is not set now.

2. *BBC News*, India Launches Biometric Census, 1 April 2010; news.bbc.co.uk/2/hi/8598159.stm.
8. Census of India, Office of the Registrar General and Census Commissioner, India; censusindia.gov.in/Data_Products/Library/Indian_perceptive_link/Census_Operation_link/censusoperation.htm
11. epayplus; https://secure.actewsgl.com.au/epayplus/learnaboutpaper.aspx. This website estimates that around 1.36 tonnes of CO₂ is released for every tonne of paper produced.

Is agriculture education in shambles?

The State Agriculture Universities (SAUs) were established on the basis of land grant pattern of USA, modified to suit Indian conditions and to facilitate integration of education, research and extension in agriculture. Today at the time of appointment, scientists accept extension jobs like in Krishi Vigyan Kendras (KVKs), but later they are keen on a transfer to the research/teaching side. Further in almost all the SAUs, the percentage allocation of budget is more for research than teaching; of course, extension gets the lowest budget. Further, most of the budget/expenditure in research and extension side is from the Indian Council of Agricultural Research (ICAR) and other agencies, whereas teaching/education gets the least from ICAR, except funding development grants. The State Governments allow budget mostly for salary in the non-plan side, whereas there is hardly any budget for day-to-day teaching expenditure from the State Governments, ICAR or other agencies. Thus promising career-oriented persons do not want to stay in teaching for long. Further, the teaching posts are not filled up when vacant, on the pretext that there is fund crunch. To worsen the situation, posts under research, when vacant, are filled up in many cases by transferring people from the teaching side. Thus the total strength of the faculty gets depleted each year. These negative factors are detrimental to the academic health of the SAUs.

1. School of Marine and Tropical Biology, James Cook University, Cairns, Queensland 4870, Australia. 2. Department of Ecology and Evolutionary Biology, Princeton University, Princeton, New Jersey 08540, USA. *e-mail: reuben.clements@jcu.edu.au*

IRFAN ALI SHAH

S. SEPAH

1. ICAR Research Complex for North Eastern Hill Region, Umiam 793 103, India. 2. Indian Agriculture Research Institute, New Delhi 110 012, India. *e-mail: irfanishahars@gmail.com*