

CORRESPONDENCE:

What's family planning got to do with it?

To the Editor — The News Feature 'We are seven billion' in the October 2011 issue of *Nature Climate Change*¹ touches on the important role of family planning programmes in influencing population growth, but neglects to consider the vast unmet need for family planning that exists in developing countries. Addressing this unmet need by increased investment in voluntary family planning programmes that respect and protect rights offers a cost-effective strategy for supporting climate change adaptation^{2,3}.

According to the United Nations medium variant projection, the world population will have increased from today's seven billion to over nine billion by 2050, surpassing ten billion by the end of the century⁴. The majority of this growth is projected to take place in developing countries: the countries that have contributed the least to climate change, but are the most vulnerable to its impacts. While struggling to adapt to climate change they face the additional burden of feeding and providing for their growing populations. In Africa, one of the continents most vulnerable to climate change⁵, the

population is expected to more than triple between now and 2100 (ref. 4).

An analysis of the national adaptation programmes of action — in which the 40 least-developed countries set out their most pressing climate adaptation issues and priorities — found that 93% of the countries identify rapid population growth as a factor that either exacerbates the impacts of climate change or impedes their ability to adapt⁶. Climatic impacts identified as being exacerbated by population growth include soil degradation, freshwater scarcity, migration, deforestation and loss of biodiversity⁶.

In developing countries, an estimated 215 million women have an unmet need for contraception — that is, they say they do not want to have a child in the next two years, but are not using a modern method of contraception, often because they do not have access to the necessary services⁷. This offers considerable scope to reduce population growth and increase climate resilience, simply by preventing unplanned pregnancies through ensuring that women have access to the family planning services that they want

and need. To advance this 'win-win' strategy, rights-based sexual and reproductive health programmes, including family planning services, should be recognized as legitimate components of national climate change adaptation programmes and climate change funding mechanisms. □

References

1. Smith, K. *Nature Clim. Change* **1**, 331–335 (2011).
2. Stephenson, J., Newman, K. & Mayhew, S. *J. Public Health* **32**, 150–156 (2010).
3. Costello, A. *et al. Lancet* **373**, 1693–1733 (2009).
4. United Nations Population Division *World Population Prospects: The 2010 Revision* (United Nations, 2011).
5. IPCC *Climate Change 2007: Impacts, Adaptation and Vulnerability* (eds Parry, M. L., Canziani, O. F., Palutikof, K. P., van der Linden, P. J. & Hanson, C. E.) (Cambridge Univ. Press, 2007).
6. Bryant, L., Carver, C. & Anage, A. B. *World Health Organ.* **87**, 852–857 (2009).
7. Singh, S., Darroch, J. E., Ashford, L. S. & Vlassof, M. *Adding It Up: The Costs and Benefits of Investing in Family Planning and Maternal and Newborn Health* (United Nations Population Fund, Guttmacher Institute, 2010).

Sarah Fisher* and Karen Newman
Population and Sustainability Network/
Margaret Pyke Trust, 73 Charlotte Street,
London W1T 4PL, UK.
*e-mail: sf@populationandsustainability.org

COMMENTARY:

The Alberta oil sands and climate

Neil C. Swart and Andrew J. Weaver

The claimed economic benefits of exploiting the vast Alberta oil-sand deposits need to be weighed against the need to limit global warming caused by carbon dioxide emissions.

The US federal government recently rejected approval for TransCanada's proposed Keystone XL pipeline. But TransCanada plans to submit a revised proposal shortly. The proposed pipeline is part of a US\$13 billion system aimed at connecting the bituminous oil sands in Alberta, Canada with refining capabilities in the United States, including those as far south as Texas¹. There has been widespread public interest in, and opposition to the pipeline, primarily owing to

environmental concerns (for example, ref. 2). Similar public opposition has arisen towards the proposed Northern Gateway pipeline in British Columbia, which aims to make the oil sands accessible to Asian markets.

The size of the Alberta oil-sand deposits is massive. Estimates for oil-in-place are 1.8 trillion barrels³, although the economically viable 'proven reserve' is estimated at only around 170 billion barrels with 26 billion barrels under active

development³. For orientation, Alberta's 1.8 trillion barrels of oil-in-place is roughly seven times the size of Saudi Arabia's proven reserves⁴. It has been suggested that construction of the TransCanada pipeline will encourage an expansion of the area under active development². Indeed, greenhouse-gas emissions resulting from expanding oil-sand production are Canada's fastest-growing emissions source⁵, and have the potential to contribute significantly to anthropogenic