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An Afghan Population Estimation

The 2001 Bonn Agreement,¹ which established a future framework for Afghanistan, requested the United Nations to facilitate a population census before the end of 2008. In preparation for the census, a household listing was conducted during the period 2003–05 and a pilot census in 2007. A full census scheduled for the following year (2008) did not take place because of poor security. In preparation for the re-scheduled census in 2011, another household listing exercise was conducted from August 2009 to March 2010 with support from the United Nations Population Fund (UNFPA).

Population data in Afghanistan is extremely sensitive, among other reasons because it has been the basis for determining the composition of the Lower House of the National Assembly (the Wolesi Jirga). While this paper suggests that the current official estimates are not made on a re-basing of the population estimates that made full use of the latest available data, widely publicising this could have negative consequences, especially for the government body responsible, the Central Statistics Office (CSO). The CSO is currently undergoing reform. The population estimate compromise of 2004 described below was done under previous management and was largely imposed from the president's office.

1. THE 2004 POPULATION ESTIMATE

The first and only Afghan census was held in 1979, but insecurity resulted in enumeration of only 67 per cent of the population. For those areas where security prevented the census count, the household estimates from the pre-census household listing were used. A set of sub-national growth rates were derived from comparison between the pre-census household listing and the census data and then subsequently used to project population estimates annually up until 2004.²

The CSO conducted a household listing between 2003 and 2005, supported by UNFPA, in preparation for a full census. Again insecurity resulted in several provinces not being fully enumerated. For those districts where security prevented enumeration by the end of 2005, population estimates were obtained from the local *shura* (council) leaders. The results of the 2003–05 house listing were published,³ but prior to that, an official population rebasing took place to produce the 2004 population estimates that have been

¹ 'Agreement on Provisional Arrangements in Afghanistan Pending the Re-Establishment of Permanent Government Institutions', Bonn, United Nations, 5 December 2001, available at www.unama.unmissions.org/Portals/UNAMA/Documents/Bonn-agreement.pdf.

² Central Statistics Office, 'Estimated Population of Afghanistan: Settled Population by Civil Division', Urban and Rural and Sex Annual Reports 1974/5–2009/10.

³ Central Statistics Office/UN Population Fund, 'Afghanistan: A Socio-economic and Demographic Profile', 2007.

used as the basis for all subsequent annual population estimates. The official rebasing in 2004 was in response to the need for provincial population estimates in order to determine the composition of the Lower House of the National Assembly (the Wolesi Jirga). The rebasing was calculated by taking the average of the provincial estimates of the 1979 census projections for 2004 and the 2003–05 CSO household listing for those 29 provinces where both these population estimates were available. For those provinces without data from the 2003–05 household listing at the time of the rebasing, the 1979 census projections for 2004 alone were used. These re-based population estimates of 2004 were made official through a presidential decree.

The official population estimate for 2008–09 (a continued projection of the 2004 rebased estimates) was 23.51 million for the settled population only, to which an estimated 1.54 million nomadic Kuchi should be added in order to estimate the total Afghan official population of just over 25 million. Several alternate current population estimates are in the public domain: the US Census bureau estimate for midyear 2010 was 29.12 million;⁴ the UN Department of Economic and Social Affairs also estimated a population of 28.15 million for the year 2009.⁵

The official population estimates for the provinces of Helmand, Zabul, Daikundi and Paktika were based solely upon the 1979 census projections, as the 2003–05 household listing data was not available at the time of the rebasing. The official population estimates for these provinces thus represent a significant underestimation, as they have not incorporated any element of the estimate from the 2003–05 household listing.

Despite several shortcomings in data collection (eg, missing districts, no specific Kuchi enumeration and variation in methodology for defining households), the 2003–05 household listing produced an almost complete population count and is the best basis for current estimates and population sample frame, until superseded by either a new household listing or complete census.

The 2009–10 household listing exercise, if conditions allowed a full count of all settled population, could provide a credible household estimate if published (except for nomadic Kuchi),

which may in turn be the basis for providing an updated population estimate.

2. CHALLENGES TO POPULATION ENUMERATION IN AFGHANISTAN

2.1 Enumeration of Kuchi Nomadic Pastoralists

While summary data on the Kuchi nomadic pastoralists were collected in the village facility survey accompanying CSO's 2003–05 household listing, the full Kuchi enumeration originally intended to accompany the household listing was never conducted. The CSO resorted to taking the estimate of the total nomadic pastoralist population from the National Multisector Assessment of Kuchi (NAMAK) conducted by the Ministry of Rural Rehabilitation and Development and which consisted of enumerating all Kuchi tribes in their winter locations in early 2004 before the spring migration.⁶ The NAMAK estimated that in 2004 there were 1.42 million truly nomadic pastoralists, with another 1 million sedentary Kuchi, who are assumed to be enumerated with the settled population during the 2003–05 household listing.

In the 2009–10 household listing, enumerators were instructed to ask village leaders or key informants whether there were any months of the year during which nomadic Kuchi pastoralists settled around the village and if so, how many tents. With this household listing taking place over six months encompassing the period of summer-winter location migration, it is not clear how the CSO would have been able to generate a robust estimate of the nomadic Kuchi population, while avoiding double counting some of the Kuchi.

2.2 Production of an Official Geo-referenced, Geo-coded Settlement List with Population Estimate

The recent modified household listing exercise for 2009–10 was a collaboration between CSO, the Afghan Geodesy and Cartography Head Office (AGCHO), and the Independent Directorate of

⁴ See www.census.gov/population/international/data/idb/country.php.

⁵ See www.un.org/esa/population/publications/wpp2008/wpp2008_highlights.pdf<http://esa.un.org/unpp/p2k0data.asp>.

⁶ 'National Multi Sectoral Assessment on Kuchi', Ministry of Rural Reconstruction and Development, Kabul, MRRD 2005.

Local Governance (IDLG). These agencies jointly undertook a village list resolution at the district level, which revealed that the vast majority of the 'new villages' had resulted from areas within large villages being referred to by their Community Development Council (CDC) names rather than the original village names. This is an interesting side-effect of the 'success' of the National Solidarity Program and provides reassurance that the CSO 2003–05 household listing did not omit a significant number of rural settlements. If successfully implemented, the exercise can lead to a publication of an official geo-encoded geo-referenced rural settlement list. This would provide the much-needed geographic standard for indexing urban and rural settlements, which would still be of value, even if the estimated settlement population is not included.

2.3 High Levels of Immigration and Migration

A comparison of the age-sex pyramid between the CSO's 2003–05 1/200 household demographic corrected data⁷ and the National Risk and Vulnerability Assessment (NRVA)⁸ 2007–08 data shows significant differences in sex ratios in different age cohorts.⁹ Afghanistan is still experiencing significant simultaneous refugee return and exodus,¹⁰ and this is likely to result in sex ratios changing over short periods. NRVA 2007–08 indicates that there had been much more male than female out-migration in the year before the NRVA 2007–08 survey. The data indicates that it is 7.6 times more likely that a male migrated out of Afghanistan than a female. The age profile of the male out-migrants coincides with those age groups that have a low sex-ratio in the NRVA 2007–08 demographic data (ie, 20–44 years old) providing some degree of support for the

hypothesis above that out-migration since 2005 is responsible for the change in the population of young and middle-aged males. Further support comes from considering the level of immigration during the year before the enumeration of the NRVA 2007–08. Estimated total immigration in the year preceding the NRVA 2007–08 survey was much lower than emigration, totalling just 196,000 and almost evenly split between males and females. Emigration, on the other hand, was significantly higher and predominantly male, with an estimated 1.73 million males and 113,000 females leaving Afghanistan in the year before the households were enumerated for the 2007–08 NRVA.

This underscores that the Afghan population was, for the reference period of this analysis, still very mobile with significant numbers of Afghans moving in or out of Afghanistan influenced by various factors including drought, insecurity and repatriation efforts by Iran and Pakistan. This ongoing flux of large numbers of Afghans ensures that year-to-year population projections based upon a fixed growth rates will likely become increasingly inaccurate when compared to countries where the bulk of the population is more stable.

3. CONCLUSIONS

Despite its shortcomings, the 2003–05 household listing produced an almost complete population count and is the basis for the best population estimates and population sample frame until superseded by another published household listing or, better still, a full census.

The official 2004 population rebasing, and subsequent population estimates, was a political accommodation between the status quo estimates from the projected 1979 census and the 2003–05 household listing, thereby diluting the value of the latest almost complete count of the Afghan population over the period 2003–05. It is likely that this system of deriving annual population estimates will remain in place until a fully-completed census yields new estimates.

Particular caution should be exercised when using the official population estimates in provinces of Helmand, Zabul, Daikundi and Paktika, as these are based solely upon the 1979 census projections because no household listing data was available at the time of the population rebasing in 2004. These official estimates represent a significant underestimate, and it is recommended that alternate estimates based upon household listing projections be used for programmatic purposes.

⁷ A full listing of all household members, their ages and sex was conducted on every 200th household encountered during the 2003–05 household listing exercise. This 1/200 sample of fully enumerated households provided the basis for construction of an age-gender pyramid. Certain typical demographic corrections were made to the age-gender data based upon assumptions of underreporting of young and particularly female children.

⁸ A regular national multi-topic household survey conducted by the CSO.

⁹ A Pinney, 'Data Quality Assessment of NRVA', DFID, December 2010. Available upon request.

¹⁰ A Pinney and S Ronchini, 'Food Security in Afghanistan after 2001: From Assessment to Analysis and Interpretation to Response', in *Reconstructing Agriculture in Afghanistan*, eds A Pain and J Sutton, Rugby, UK, Practical Action Publishing and FAO 2007.

The most credible estimates of Afghanistan's population are derived from the US Census Bureau model¹¹ or the United Nations,¹² which both produced comparable estimates of approximately 29 million for the year 2010. The US Census Bureau model utilises the following data: 1979 census, Afghan Health Survey (2006), NRVA (2007–08) and the UN High Commission on Refugees (UNHCR) Statistical Yearbooks (2009 and 2010). No details are available for the UN model, but given its almost complete convergence with the US Census Bureau model, its empirical basis is likely to be very similar.

The 2009–10 household listing, if successfully enumerated and published, could provide a credible update to the settled population estimate. For the fully nomadic Kuchi, currently no robust methodology appears to be in place to ensure a credible enumeration of this group. With the

unlikely prospect of being able to fully conduct a census in 2011, resorting to the 2009–10 household listing for the best empirical based estimates of the population is a likely scenario. The data from the current listing exercise could be converted to a population estimate multiplying the number of households by an average household size from various household surveys. This should provide the best available empirical basis for a new estimate of the settled Afghan population. Unfortunately, such an estimate is unlikely to be sanctioned as the basis for the new official population estimates. In anticipation of an incomplete or delayed enumeration, UNFPA and CSO are considering developing alternate methods for estimating the population where direct enumeration of every household is not possible because of security reasons.

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Andrew Pinney, trained in both applied statistics and natural resource management, has experience in food security, household surveys, agroforestry and rural livelihoods in Africa, Asia and Latin America. For most of the four years he spent in Afghanistan from 2002 to 2006, he supported an Afghan government team to develop a regular national household multi-topic survey to provide regular updates on food security, poverty and Millennium Development Goals. In 2009–10 he produced a series of reviews of key Afghan datasets for the Department for International Development (UK Aid). As a consultant he has worked for the British Red Cross, World Bank, UNDP and DFID and as a researcher for the International Centre Research in Agroforestry and Bradford University Centre for International Development. He has a PhD in applied statistics and an MSc in tropical agricultural development, both from the University of Reading UK.

ABOUT THIS CHAPTER

This chapter is part of a larger volume called *Snapshots of an Intervention: The Unlearned Lessons of Afghanistan's Decade of Assistance (2001–2011)*, edited by Martine van Bijlert and Sari Kouvo. The volume is a collection of 26 short case studies by analysts and practitioners, each with long histories in the country, who were closely involved in the programmes they describe. The contributions present rare and detailed insights into the complexity of the intervention and, in many cases, the widely shared failure to learn necessary lessons and to adapt to realities as they were encountered.

The chapters and full document can be found on the AAN website (www.aan-afghanistan.org) under publications.

¹¹ US Census Bureau, 'World Population Estimates: Afghanistan' at www.census.gov/population/international/data/idb/country.php (accessed 8 September 2011).

¹² 'World Population Prospects: The 2008 Revision: Highlights', United Nations New York, 2009, www.un.org/esa/population/publications/wpp2008/wpp2008_highlights.pdf (accessed 8 August 2011).

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