

Brief Introduction to Matlab HDSS

Matlab HDSS was established in 1966, following a population census conducted by Cholera Research Laboratory. Since then, the Matlab HDSS has maintained the registration of births, deaths, and migrations, in addition to carrying out periodical censuses. Registration of marital unions and dissolution began in 1975, internal movement in 1982, changes in household headship and household dissolution in 1993.

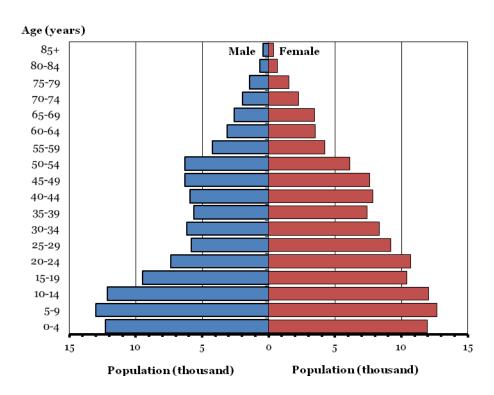
Matlab HDSS field site is situated in Matlab *Upazila* (sub-district) under Chandpur District in Bangladesh. It is located about 55 km southeast of the capital, Dhaka. Matlab HDSS now covers an area of about 184 square kilometres covering 142 villages.

Population Characteristics (2011)

Total Population	225,202
-Male	104,825
-Female	120,377
Infant	4,779
-Male	2,421

-Female	2,358
Children (1-4 Years)	19,447
-Male	9,844
-Female	9,603
Population Density	1,224 people per square kilometre

Population Pyramid (2011)



Demographic Characteristics

Crude Birth Rate (CBR)	21.5 per 1000 population
Total Fertility Rate (TFR)	2.6 per woman
Crude Death Rate (CDR)	6.2 per 1000 population
Neonatal Mortality	21.7 per 1000 live births
Post-neonatal Mortality	6.6 per 1000 live births
Infant Mortality	28.3 per 1000 live births
Child Mortality (1-4 years)	2.3 per 1000 children aged 1-4 years
Under Five Mortality	37.4 per 1000 live births
Rate of Natural Increase	15.2 per 1000 population
In-Migration	41.5 per 1000 population
Out-Migration	57.6 per 1000 population
Growth	-0.1 per 100 population

Objectives

- to identify and treat cholera and other diarrhoeal diseases
- to conduct large-scale vaccine trials
- to provide a comprehensive health and population database with a valuable longstanding data collection infrastructure for conducting health and population research

Priority Research Areas

Fertility, reproductive health, maternal and child health, cause of death and child morbidity, health equity, and climate change

Funders/Donors

- International Centre for Diarrhoeal Disease Research, Bangladesh
- Australian Agency for International Development
- Government of the People's Republic of Bangladesh
- Canadian International Development Agency
- Embassy of the Kingdom of the Netherlands
- Swedish International Development Cooperation Agency
- Swiss Agency for Development and Cooperation
- Department for International Development, UK

Collaborators

- National Institute of Population Research and Training
- INDEPTH Network
- Johns Hopkins University
- University of Colorado

KEY PUBLICATIONS

- 1. Abdur Razzaque, Akhtar Hossain, Julie DaVanzo, Mohammad Enamul Hoque, Nurul Alam, Abbas Bhuiya, Peter Kim Streatfield. Effect of Maternal Mortality on Survival of Under-five Children: Evidence from Matlab, Bangladesh, Asian Population Studies (forthcoming).
- 2. Juile DaVanzo, Mizanur Rahman, Shahabuddin Ahmed & Abdur Razzaque. Influences on Pregnancy-Termination Decisions in Matlab, Bangladesh; Demography; Volume 50, Issue 5 (2013), Page 1739-1764.
- 3. Alam N, Townend .The Neighbourhood Method for measuring differences in maternal mortality, infant mortlity and other rare demographic events. PLoS ONE (in press).
- 4. Alam N, Khuda Barkat-e. Demographic events and economic conditions of rural households in Bangladesh. Asian Population Studies 2014 (in press).
- 5. Alam N, Lindeboom W, Begum D, Streatfield P K. The effects of weather on mortality in Abhoynagar, Bangladesh 1983-2009. Global Health Action 2012; http://dx.doi.org/10.3402/gha.v5i0.19121.
- 6. Sohel N, Vahter M, Ali M, Rahman M, Rahman A, Streatfield PK, Kanaroglou PS, Persson LA. Spatial patterns of fetal loss and infant death in an arsenic-affected area in Bangladesh, Int J Health Geogr 2010; 9:53
- 7. Shenk Mary K, Towner Mary C, Kress Howard C, Alam Nurul. Why does fertility decline? A model comparison approach shows stronger support for economic models. The Proceedings of the National Academy of Sciences of the USA
- 8. Lindeboom W, Alam N, Begum D and Peter Kim Streatfield. The effects of meteorological factors on mortality in Matlab, Bangladesh, 1983-2009. Global Health Action 2012; http://dx.doi.org/10.3402/gha.v5i0.19120.
- 9. Shenk Mary K, Starkweather Kathrine, Kress Howard C, Alam N. Does absence matter? A comparison of three types of father absence in rural Bangladesh. Human Nature, Volume 24(1), spring 2013.
- 10. Abdur Razzaque, AHMG Mustafa, Peter Kim Streatfield. Do self-reported health indicators predict mortality? Evidence from Matlab, Bangladesh, Journal of Biosocial Science (forthcoming).
- 11. Alam N, Khuda Barkat-e. Demography of Muslims and non-Muslims in Bangladesh. Demography India 2011; 40(1): 163-174.
- 12. Alam N and Khud Barkat-e. Out-migration from Matlab a Rural Area of Bangladesh: Directions, Levels, and Differentials. Asian Population Studies 2011; 7(1):35-50.

- 13. Hashizume M, Faruque ASG, Terao T, Yunus M, Streatfield K, Yamamoto T, Moji K. The Indian ocean dipole and cholera incidence in Bangladesh: a time series analysis, Environ Health Perspect 2010 Oct 27
- 14. Vahter M, Sohel N, Streatfield K, Persson LÅ: Arsenic exposure from drinking water and mortality in Bangladesh, Lancet 2010 Nov 13;376(9753):1641
- 15. Rahman M, DaVanzo J, Razzaque A: The role of pregnancy outcomes in the maternal mortality rates of two areas in Matlab, Bangladesh, Int Perspect Sex Reprod Health 2010 Dec;36(4):170-7
- 16. Abdur Razzaque. Population growth of Bangladesh: past, present and future, South Asian Journal of Population and Health, 2010, 3(1): 75-87.
- 17. Alam N, Streatfield PK, Shahidullah M, Mitra D, Vermund SH, Kristensen S. Effect of single session counselling on partner referral for sexually transmitted infections management in Bangladesh. Sex Transm Infect 2011Feb;87(1):46-51 [Jul 23 Epub ahead of print]
- 18. Alam N, Barkat-e-Khuda. Out-migration from Matlab—a rural area of Bangladesh: directions, levels and differentials. Asian Popul Stud 2011 Mar;7(1):35-50
- 19. Borse NN, Hyder AA, Streatfield PK, Arifeen SE, Bishai D. Childhood drowning and traditional rescue measures: case study from Matlab, Bangladesh. Arch Dis Child 2011 Mar 11. [Epub ahead of print]
- 20. Canning D, Razzaque A, Driessen J, Walker DG, Streatfield PK, Yunus M. The effect of maternal tetanus immunization on children's schooling attainment in Matlab, Bangladesh: follow-up of a randomized trial. Soc Sci Med 2011 Mar 24. [Epub ahead of print]
- 21. Razzaque A, Nahar L, Mustafa AHMG, Ahsan KZ, Islam MS, Yunus M. Sociodemographic differentials of selected noncommunicable diseases risk factors among adults in Matlab, Bangladesh: findings from a WHO STEPS survey. Asia Pac J Public Health 2011 Apr; 23:183-91.
- 22. Milojevic A, Hashizume M, Armstrong B, Wilkinson P, McAllister K, Faruque ASG, Yunus M, Streatfield PK. The Long-term Effects of Flooding on Mortality in Rural Bangladesh (abstract). Epidemiology 2011 Jan;22(1 Suppl):S179
- 23. Feenstra SG, Nahar Q, Pahan D, Oskam L, Richardus JH. Recent food shortage is associated with leprosy disease in Bangladesh: a case-control study, PLoS Negl Trop Dis 2011 May 10;5(5):e1029