ASSAM

Population and Development

A Discourse on Family Planning in Assam

Purpose of this brief

This policy brief takes a look at the progress made by Assam with respect to the family planning, and the reproductive and child health indicators in the state, and the impact of increasing population on the maternal and child health indicators. The brief has two sections. In Section I data from the National Family Health Survey (NFHS), Sample Registration System (SRS), Census 2011, Annual Health Survey (AHS), and the Registrar General of India (RGI) Population Projections 2006 has been analysed to inform the national- and state-level policymakers and experts on the current status of Assam's family planning programme. Section II of this brief presents population projections to inform the future course of population dynamics, estimate the resources required for family planning, and highlight the state's contribution to the achievement of the country's replacement level of fertility. The elaborate exercise of developing these projections was undertaken in 2012–13, and thus considers AHS, 2010–11 data.

Health Goals for India: 12th Five-Year Plan

- Reduction in Infant Mortality Rate to 25.
- Reduction of Maternal Mortality Ratio to 100.
- Reduction of Total Fertility Rate to 2.1.
- Prevention and reduction of anaemia among women ages 15–49 years to 28 per cent.
- Raising child sex ratio in the 0–6 age group from 914 to 950.

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SECTION I

A. Increasing population in Assam

Assam is a state in the north-eastern region of India, bordering two countries – Bhutan and Bangladesh. About one-third of the population in the state lives below poverty line and the state has high infant and maternal deaths. Assam has the highest Maternal Mortality Ratio (MMR) in India and a significant percentage of infants do not live to see their first birthday. Almost one-third of children under three suffer from malnutrition, and a large number of young people, particularly girls and women are anaemic.

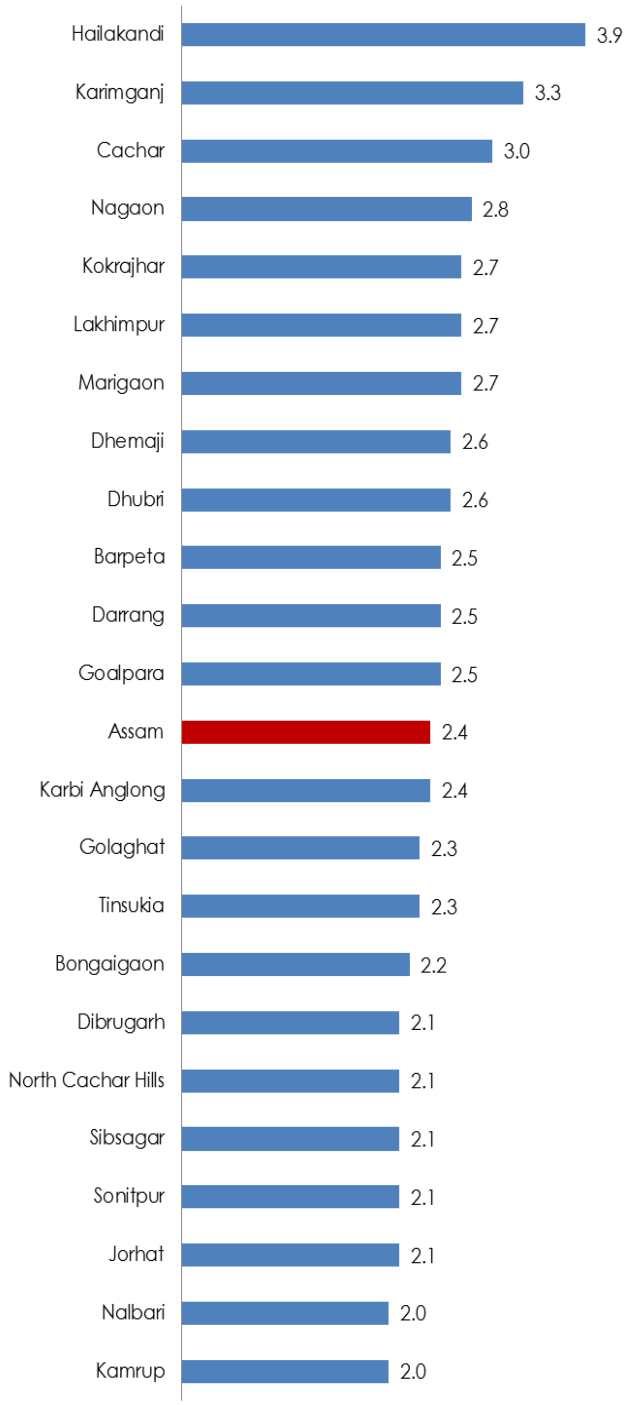
Assam has 27 districts and a geographical area of 0.78 lakh sq. km. As per Census 2011, the population of Assam is 3.12 crore. The population density per square kilometre is 398. Between 2001 and 2011, the population of Assam has increased from 2.66 to 3.12 crore, an increase of 0.46 crore or a decadal growth rate of 16.93. The Total Fertility Rate (TFR)—the average number of lifetime births per woman by the time she reaches 50—of Assam is 2.4. The district-wise TFR varies between 3.9 in district Hailakandi and 2.0 in districts Kamrup and Nalbari. Figure 1 shows the district-wise TFR of 23 districts, which were part of the AHS 2011–12 survey, of Assam. Twenty out of these 23 districts have a TFR lower than 3.

Table 1 categorises the districts of Assam according to their TFR.

TFR (AHS 2011-12)	# of	%age
3.6 – 4.0	1	4.3
3.1 – 3.5	1	4.3
2.6 – 3.0	7	30.5
2.1 – 2.5	12	52.2
1.6– 2.0	2	8.7
Total	23	100

Table 1: Districts categorised as per TFR. Source: AHS 2011–12

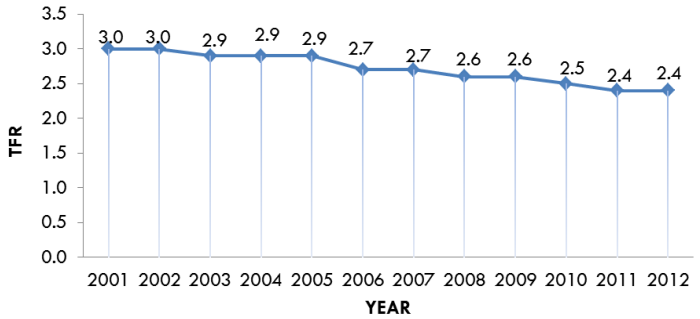
Figure 1: Districtwise TFR in Assam
Source: AHS 2011–12



B. Slow and steady fertility decline in Assam

Assam's TFR has dropped consistently between 2001 and 2012, i.e. from 3.0 to 2.4 (SRS 2001–2012) (Figure 2). The TFR of Assam is currently 2.4 children per woman (SRS, 2012). According to RGI Population Projections (2006), Assam is likely to achieve replacement-level of fertility (i.e. 2.1) by 2019.

Figure 2: Trend in TFR in Assam since 2001.
Source: SRS (Multiple Issues)



C. Drivers of increase in population that need to be addressed

Increase in population is a cumulative effect of fertility and mortality indicators, along with socioeconomic determinants. Key actions requiring urgent attention to ensure a check on the increasing population include:

C1. Reducing early marriage: Early marriage increases the length of time for which a girl is exposed to pregnancy, which in the absence of use of a family planning method can lead to higher levels of fertility affecting the overall population momentum. In Assam around 20.8 per cent girls get married before the age of 18 years (DLHS-3, 2007–08), a figure much better than that of other empowered action group (EAG) states. Recent AHS (2011–12) data shows that a high percentage of currently married women (ages 20–24 years) i.e. 36.7 per cent are married before the legal age of 18 years in Assam. Girls completing schooling and higher education, and being gainfully employed results in their marrying at a later age, planning their families, and becoming socially and economically empowered. Thus, focus needs to increase on enrolling girls in school, reducing drop out rates, and providing opportunities for higher education and employment. State departments need to emphasise on increased health and life-skills education in schools, increased counselling of young women by Accredited Social Health Activists (ASHA), Auxiliary Nurse Midwives (ANM), and other door-to-door and mass media campaigns.

C2. Reducing early childbirth: Early marriage is potentially linked to early childbirth, as it keeps the fertility levels high. As per AHS, 2011–12, a high percentage i.e. 51.4 per cent of women ages 15–19 years in Assam were already mothers or pregnant at the time of the survey. Improved health education and community engagement by ASHAs and ANMs can help change social norms around expectations of first child immediately after marriage.

C3. Improving Maternal Mortality Ratio: Women who begin childbearing when they are younger than 18, are also at increased risk of complications during their pregnancy and during delivery. Assam's MMR stood at a high 490 in 2003. It has come down to 328 (SRS, 2013). Although it is a steady improvement, Assam's MMR is the highest in the country, and it continues to be much higher as compared to India's MMR of 178 (SRS, 2013). The pace of progress will need to be substantially accelerated in order to come close to the 12th Five-Year Plan goal of bringing down MMR to100 by 2017. There is a need to improve health service delivery, ensure availability of supplies and equipment, utilise funds effectively, ensure rigorous follow ups and provide continuum of care.

C4. Bringing down Infant and Under-Five Mortality Rates: The death rates of infants and children under the age of five in Assam are high at 55 and 75 respectively (SRS, 2012). Infant mortality rate (IMR) and under-five mortality rate for India is 42 and 52 respectively. The state needs to make very focused attempts to improve the IMR and under-five mortality rate by ensuring universal immunisation coverage; early detection and treatment of diarrhoea, pneumonia and malnutrition; community activation for wellbeing of children through the Village Health and Nutrition Days; improved access to quality nutrition supplementation at the Anganwadi centres; and reduction in harmful traditional practices for treatment of childhood illnesses.

Figure 3: Maternal Mortality Ratio in select Indian states. (Source: SRS 2013).

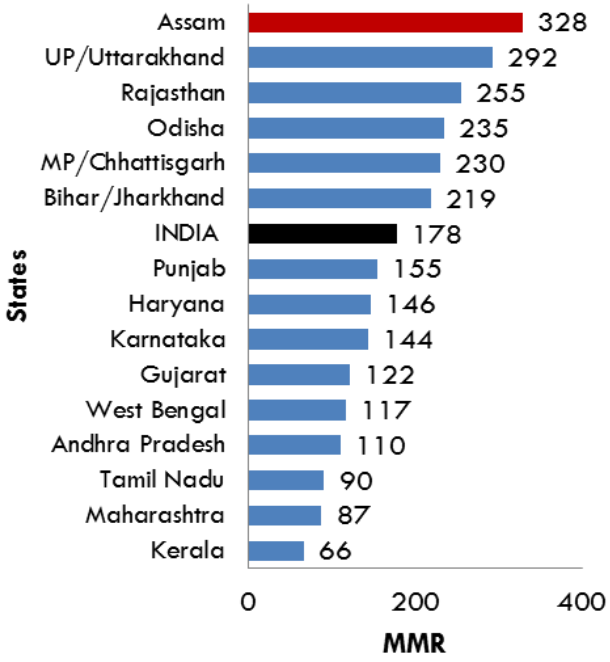
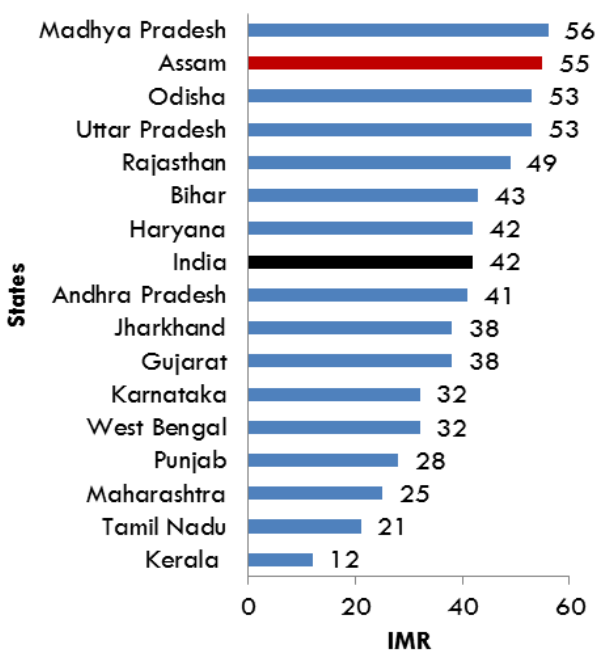


Figure 4: Infant Mortality Rate in select Indian states. (Source: SRS 2012).



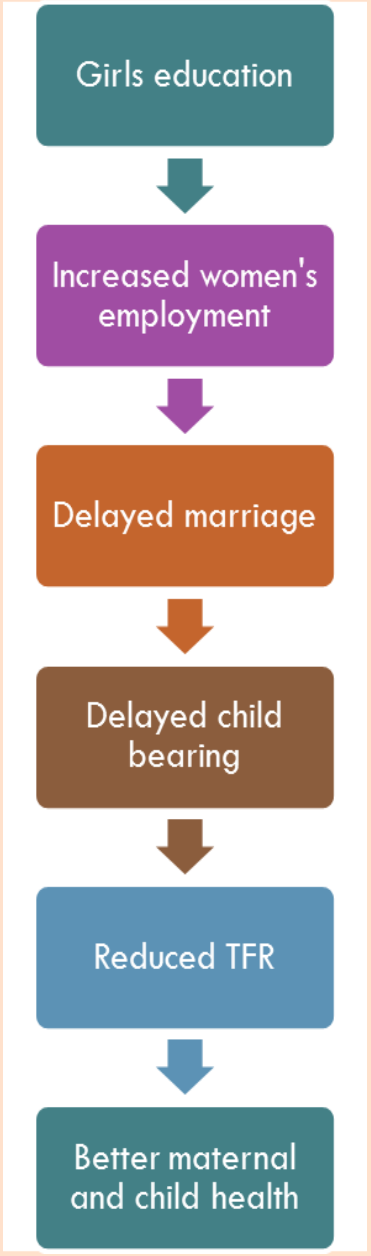
C5. Improving contraceptive use among currently married women: Contraceptive Prevalence Rate (CPR) is the proportion of women of reproductive age using (or whose partner is using) a contraceptive method at a given point of time. The CPR in Assam is 37.9 per cent for any modern method (AHS, 2011–12), lower than the CPR in India (as per DLHS-3, 2007–8 estimates the CPR for India is 47.1 per cent). The state health department needs to increase: access to quality contraceptive products and services through door-to-door delivery; postpartum IUCD for women who are delivering under Janani Suraksha Yojana (JSY); male involvement and adoption of sterilisation; Family Planning week celebrations; efforts towards demand generation; and health education at the community level.

C6. Addressing high unmet need for family planning: Unmet need is defined as the proportion of women who want to delay or limit childbearing but are not using any family planning method (traditional or modern). Based on the AHS, 2011–12 data, 15.9 per cent currently married women in Assam have an unmet need for family planning. These figures are lower as compared to the national figures, which stand at 21.3 per cent (DLHS-3).

D. Family planning saves lives

Investing in family planning will help improve health and development in Assam. In this direction following actions would be required:

- **Help couples in Assam achieve desired family size.** In Assam, two-thirds of the men and women consider the ideal family size to be two children or less (NFHS-3, 2005–06). NHFS-3 also elaborates that 69 per cent of currently married women and 65 per cent currently married men in Assam either want no more children, are already sterilised or have a spouse who is sterilised. Among those who do want another child, 50 per cent of women and 47 per cent men would like to wait at least two years. NFHS-3 findings point to a preference for sons among men and women in Assam. Twenty-four per cent of women and 18 per cent of men want more sons than daughters. Most men and women would like to have at least one son and most also want at least one daughter.
- **Reduce childbearing risks.** High-risk births are a major cause of illnesses, disability and premature death among mothers and children (Feranil and Borda, 2008). High-risk births are defined as those that are spaced less than two years apart or born to mothers who are younger than 18 or older than 34, or who have more than three children. Infant mortality is 95 deaths per 1,000 live births in teenage mothers, compared with 60 deaths per 1,000 live births born to mothers ages 20–29 (NHFS-3).



As per NFHS-3:

* Bearing children too close together in time is especially risky.
* The risk of death in the first year of life is more than five times as high for children born less than two years after a previous birth than for children whose mothers waited four or more years between births.
* Children whose mothers have no education are twice as likely to die before their first birthday as children whose mothers have completed at least 10 years of school.

- **Save lives:** As per UNFPA estimates widespread use of family planning could lower MMR by 20 per cent and IMR by as much as 25–30 per cent in developing countries. Spacing pregnancies farther apart can help women affected by anaemia and malnutrition become healthier and better prepared for pregnancy in the future and thus, have healthier babies. For women for whom pregnancy poses substantial health risks and for those who do not want any more children, voluntary sterilisation can be an option to prevent pregnancy permanently.

Population projections and expected levels of achievement for Assam

This section presents the expected levels of achievement (ELA) for Assam to address its unmet need for family planning along with the population projections for the state till 2022. The projections include the increase in population, projected number of acceptors of family planning methods, the increased demand for contraception, and projections of IMR and under-five mortality rate. In keeping with the urgent need to address the family planning requirements in the state, these projections are intended to inform the family planning programme and help the state gear up for future requirements to strengthen the family planning programme. These projections were developed in 2012–13, and thus consider AHS 2010–11 data.

A. Inputs and projection period

The population projections and the estimation of ELAs in Assam and India took into consideration a set of inputs and assumptions. Two scenarios were considered—one with changed method mix and the other with an unchanged method mix.

- To compute the population projections, the universally accepted "Component Method" has been used. As per the method the population growth of a given geographic location is determined by three components: fertility, mortality, and migration.
- SPECTRUM Suite, a software package developed by Futures Group, was used to compute population projections and ELAs. In particular two models—DemProj and FamPlan—have been used to project the population, and family planning requirements, needed to reach the national goals to address the unmet need.

In view of the two subsequent plan periods (12th and 13th five-year plans), the projection period has been determined as 2011–22.

B. Assumptions and goal setting

The goal of reaching the unmet need for contraception has been fixed while keeping in mind the estimates of reaching the TFR of 2.1 provided by the Expert Committee on Projections, 2005–2006 (Office of the Registrar General of India, 2006). It is assumed that the unmet need for contraception will not fall beyond 4.7 per cent (Andhra Pradesh's level, NFHS-3, 2005–06), which has been the lowest in the country.

The overall goal is to "meet 60 per cent of the current unmet need for family planning (24.0%, AHS, 2010–11)." This will result in increasing the modern CPR from 35.4 per cent in 2010–11 to 49.8 per cent in 2022.

C. Scenarios for projections

Two scenarios have been created for population projections and ELAs:

Scenario A: Change in method mix proposed (based on the state's current level) for the projection period (2011–22).

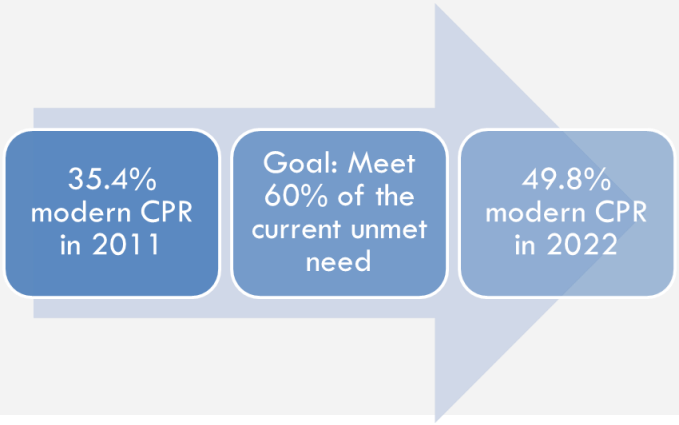
Scenario B: The method mix will remain unchanged during the projection period (2011–22).

Currently, the method mix in Assam is 36.2 per cent (at the AHS, 2010–11 level) for limiting methods against 63.8 per cent for spacing methods.

If Assam has to reduce 60 per cent of its current unmet need, the modern CPR will need to increase from the current 35.4 per cent (AHS, 2010–11) to 49.8 per cent in 2022 (projected figures).

For Assam, as per Scenario A the change in method mix proposed, based on the state's current level—for

These projections have been taken from a Technical Report that was commissioned by the Ministry of Health and Family Welfare (MoHFW) to the Health Policy Unit, under the guidance of Dr R K Srivastava, Sr. Policy Analyst, (ex-Director General of Health Services, MoHFW), at the National Institute of Health and Family Welfare (NIHFW). NIHFW constituted an expert group under the Chairmanship of Dr Arvind Pandey, Director, National Institute of Medical Statistics, with experts from various technical organisations to provide technical directions to estimate the population projections and ELAs. Data analysed and presented have been collated from various sources, including Census publications, SRS Bulletins, three rounds of NFHS and DLHS, AHS (2010–11), and Family Welfare Statistics in India (of MoHFW), and other published materials.



projection period (2011–22)—is 51 per cent of limiting methods (up from 36.2 per cent in 2011) and 49 per cent of spacing methods by 2022. The proportion of limiting methods has been increased to 51 per cent by 2022 in Scenario A to make up a more balanced method mix pattern. Scenario B proposes an unchanged method mix (36.2 per cent limiting methods and 63.8 per cent spacing methods).

D. Population projections

Table 2 presents the projected population for India and Assam as part of the two different scenarios. India's population is likely to exceed 1.30 billion by 2017 before reaching 1.38 billion in 2022. Assam will add 2.2 million by 2017, and an additional 1.5 million by 2022 (Scenario A) as per these population projections. The projections indicate that under both the scenarios, the population projection for Assam is very close till 2022. As per Scenario A the population of Assam would be 34.8 million in 2022, whereas the projections against Scenario B show the population at 34.9 million.

	Table 2: Projected Population as per Scenario A for Assam and India (Millions)								
State	2011			2017			2022		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Assam	15.9	15.3	31.2	17.0	16.3	33.3	17.7	17.1	34.8
India	623.1	587.4	1210.6	671.5	634.3	1305.9	708.7	669.8	1378.5
	Projected Population as per Scenario B for Assam and India (Millions)								
Assam	15.9	15.3	31.2	17.0	16.4	33.4	17.7	17.2	34.9
India	623.1	587.4	1210.6	671.6	634.4	1306.1	709.1	670.2	1379.3

Photo © Futures Group.

E. Contraceptive method mix

If Assam has to increase its modern CPR from current 35.4 per cent (AHS, 2010–11) to 49.8 per cent in 2022 (projected figures); reduce at least 60 per cent of its total unmet need; and meet the demand for spacing (total unmet need=24%; spacing=13% and limiting=11%, AHS, 2010–11), a change of current method mix is proposed.

Instead of the current method mix (36.2% limiting & 63.8% spacing—Scenario B), Assam could adopt a method mix of 51 per cent limiting and 49 per cent spacing (Scenario A) whilst ensuring improved counselling for clients to make informed and voluntary choices and provision of quality services, and not losing momentum of the uptake of spacing methods. As per the projections of Scenario A, 1.61 million women will require contraceptives for spacing and 0.14 million new acceptors will require limiting methods by 2022.

Table 3 and 4 present the projected number of acceptors of spacing and new acceptors of limiting methods under both the scenarios, to facilitate the planning process at the state level.

Table 3. Projected number of acceptors for spacing methods: Scenario A, if Assam and India change the method mix (Assam: Limiting= 51% and Spacing= 49%) (Numbers in millions)

State	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Assam	1.29	1.38	1.45	1.5	1.53	1.55	1.57	1.59	1.6	1.61	1.61	1.61
India	31.04	32.52	33.12	33.74	34.34	34.89	35.42	35.97	36.49	36.98	37.44	37.92
Projected number of acceptors for spacing methods: Scenario B, if Assam and India continue as today (Assam: Limiting= 36.2% and Spacing= 63.8%)												
Assam	1.29	1.39	1.48	1.57	1.65	1.72	1.78	1.85	1.91	1.98	2.05	2.11
India	31.04	32.08	33.01	33.99	34.96	35.91	36.85	37.84	38.82	39.79	40.75	41.7

Table 4. Projected number of new acceptors for limiting methods: Scenario A, if Assam and India change the method mix (Assam Limiting= 51% and Spacing= 49%) (Numbers in millions)

State	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Assam	0.08	0.1	0.1	0.1	0.1	0.1	0.11	0.11	0.12	0.12	0.13	0.14
India	5.17	5.05	5.3	5.34	5.37	5.39	5.66	5.7	5.75	5.81	5.88	6.07
Projected number of new acceptors for limiting methods: Scenario B, if Assam and India continue as today (Assam: Limiting= 36.2% and Spacing= 63.8%)												
Assam	0.08	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
India	5.14	4.85	5.07	5.1	5.12	5.12	5.36	5.38	5.41	5.46	5.5	5.63

F. Increased demand for contraception

The number of married women in the reproductive age group (MWRA) will also increase over time, as the table below suggests (Table 5). These women will require contraceptives. Assam will have to ensure access to a wide range of quality contraceptive products and services.

Table 5: Projections of MWRA for India and Assam under Scenario A and Scenario B (Numbers in millions)

State	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Assam	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.5	6.6	6.7	6.8
India	237.7	242.2	246.6	250.8	254.8	258.6	262.1	265.5	268.6	271.5	274.3	277

G. Contraceptive use and its influence on infant and child mortality

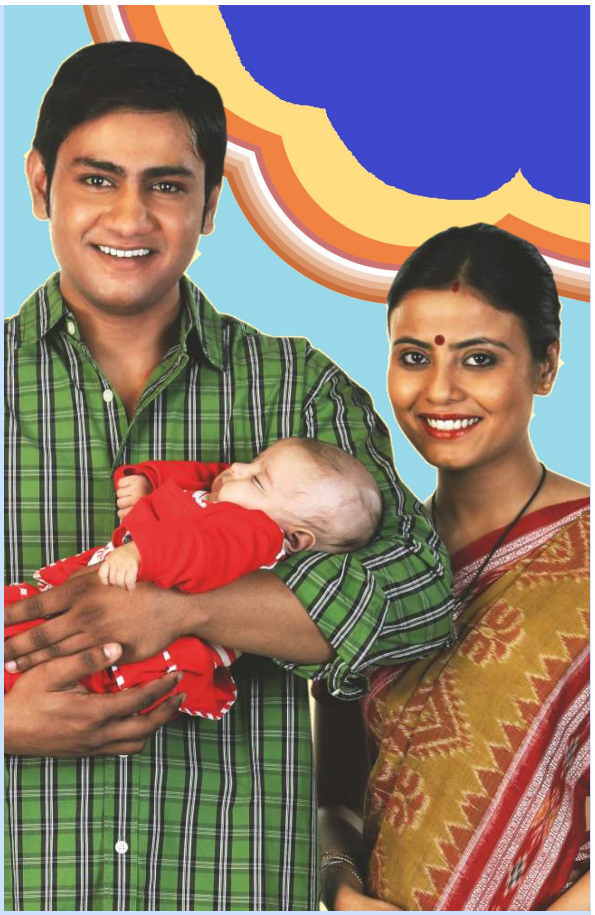
IMR is a serious health concern and directly associated with fertility rate along with other socioeconomic factors. With lower contraceptive use, there are chances of higher IMR. Assam will fall short of achieving its Millennium Development Goal (MDG) for IMR of 28 per 1,000 live births by 2015. The situation regarding under-five mortality is similar. Table 6 projects the possible infant and under-five mortality rates that Assam will have to plan for.

This indicates an urgent need to adopt strategies in a mission mode to address population growth and unmet need, increase age of marriage and first birth, and engage multiple stakeholders in increasing access to quality family planning services.

Table 6: Projections for IMR and Under-5 Mortality for Assam and India

	IMR			<5 MORTALITY		
	2012	2017	2022	2012	2017	2022
Assam	60.0	53.3	46.7	81.0	70.4	60.4
India	41.3	34.1	27.3	52.1	42.0	33.1

H. Greater investment in family planning is the need of the hour in Assam



Family planning saves lives by helping women prevent unintended pregnancies, delay early childbearing, and space births at least two years apart. In summary, meeting the unmet need for family planning reduces fertility rates, leading to improvements in women's and children's health. The population projections present the population scenario of Assam against both the scenarios. Thus, the state functionaries need to systematically expand access to family planning services and address the unmet need for family planning.

The state will need to ensure additional focus on:

- Increasing access to a wide range of quality contraceptive products and services.
- Placing increased importance on spacing methods and encouraging spacing between children among couples.
- Encouraging increased participation of men in family planning.
- Increasing human resources and health facilities to address the unmet need for family planning.
- Accelerating efforts towards addressing the socioeconomic factors that impact fertility. These include: increasing the age of marriage for girls; increasing education levels among girls and women; and creating more employment opportunities for women, to create an enabling environment for women's empowerment and addressing the issue of son preference.

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