

UTTARAKHAND

Health Goals for India: 12th Five-Year Plan

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

India has witnessed a steady decline in its population growth rate over the last four decades (1971–2011). The fertility rates have fallen by 2.7% per annum (2.8 to 2.5) over the 2006–10 period. Despite this steady decline, India has missed and postponed its fertility goals time and again. The goal of achieving the replacement level of fertility has now been deferred to 2017. As per the latest Sample Registration System (SRS), 2012 estimates 21 states and union territories (UTs) have achieved the replacement level of fertility, though fertility remains high in several states, highlighting different stages of demographic transition among the states, leading to difference in their timelines to achieve population stabilisation.

Seven states with high fertility rates are **Bihar (3.6), Chattisgarh (UP) (3.4), Madhya Pradesh (MP) (3.1), Rajasthan (3.0), Jharkhand (2.9), Chhattisgarh (2.7), and Assam (2.4)**, of which six belong to the empowered action group (EAG) states. All EAG states and Assam also collectively account for the highest number of births, as well as infant, under-five, and maternal deaths in the country, bringing a focus on poor maternal and child health (MCH) indicators and their correlations with high fertility rates.

Reducing maternal and child mortality are integral to the National Rural Health Mission (NRHM), and the government has made strategic investments to improve the MCH indicators in the country, with a specific focus on high-fertility states.

The population projections in this brief will chart the future course of population dynamics, estimate the resources required for family planning, and highlight the different states' contributions to the achievement of the country's replacement level of fertility.



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Population Projections and Expected Levels of Achievement for Family Planning Programme in Uttarakhand

This brief has been developed from a Technical Report that was commissioned by the Ministry of Health and Family Welfare to the Health Policy Unit, under the guidance of Dr. R.K. Srivastava, Sr. Policy Analyst, (ex DGHS, 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 (NIMS), with experts from various technical organisations to provide technical directions to estimate the population projections and Expected Levels of Achievement.

Data analysed and presented here have been collated from various sources, including Census publications, Sample Registration System (SRS) Bulletins, three rounds of National Family Health Surveys (NFHS), District Level Household and Facility Survey (DLHS), Annual Health Survey (AHS), and Family Welfare Statistics in India (of MoHFW), and other published materials. The widely-used Spectrum Suite of computer models, in particular, DemProj and FamPlan, have been used to project the population, FP requirements needed to reach the national goals to address unmet need.

Population and Fertility	National Level	in Uttarakhand
Crude Birth Rate, CBR (births per 1,000 population)	Steady Decline (41% decrease) from 36.9 in 1971 to 21.8 in 2011	CBR remains high at 25
Total Fertility Rate	2.4 for India in 2011, declined more than 53%, from 5.2 in 1971.	NA
Age-specific Fertility Rates	Fertility of the younger age group, 15–19, has declined >69%	8.0 at 15-19 age group
Birth Order- Ranking of a newborn baby in relation to all of the mother's previous live births.	Dropped from 43% in 1991 to 39% in 2001 and further, to 27.6%, in 2011	NA
Age at marriage- determines the risk of pregnancy, has bearing on birth rates, her fertility and health profile.	Mean age at marriage in India is 21.2, which has risen moderately from 20.2 in 2005 (SRS, 2012)	NA
%age of women married before the age of 18 years	22% (Source)	5.7% (DLHS-3, 2007–08)
Couple protection rate- Couples currently and effectively protected by family planning methods	Increased from 22% in 1980 to 40%, in 2011 (Family Welfare Statistics, MoHFW, 2011)	NA
Contraceptive Prevalence Rate	Overall contraceptive use in India, for any modern method, increased from 36.5% in 1992–93 (NFHS-1) to 42.8% in 1997–98 (NFHS-2) to 48.5% in 2005–06 (NFHS-3)	CPR in Uttarakhand increased from 44% (DLHS-2, 2002-04 to 55% in AHS, 2010-11)
Contraceptive Method mix	3/4th of the users of modern contraceptives in India have adopted female sterilisation, with a little >2% using male sterilisation (DLHS-3, 2007–08). The proportion of limiting methods users has hardly changed over the years.	Female sterilisation accounted for about 59% of modern method use, while spacing methods accounted for 38% (AHS, 2010–11).
Unmet Need for Contraception	13% of currently married women in India have an unmet need for family planning (NFHS-3, 2005–06), a marginal decline from 15.8% in 1997–98. The decline in the unmet need for spacing was (8.3% to 6.2%); for limiting methods 7.5% to 6.6%. (NFHS-2, 1997–98; NFHS-3, 2005–06.	23.2% unmet need, that hasn't changed much (AHS, 2010-11)

POPULATION PROJECTIONS AND EXPECTED LEVELS OF ACHIEVEMENT FOR INDIA AND UTTARAKHAND

Reduction in fertility and population growth rates remain a challenge for policymakers and planners in the EAG States, including Uttarakhand.

Inputs and Assumptions

- To compute the population projections, the universally accepted “Component Method” has been used that says, 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 view of the two subsequent plan periods (12th and 13th five-year plans), the projection period has been determined to be 2011–22.

Goal

The goal of reaching 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, 2006b).

Assumption

It is assumed that unmet need for contraception will not fall beyond 4.7% (Andhra Pradesh's level, NFHS-3, 2005–06), which has been the lowest in the country.

Two scenarios have been created for projection 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 (2011–2022).

Uttarakhand: Increase focus on limiting methods

The NHFS-2 did not include the newly formed state of Uttarakhand. The proportion of limiting methods has remained unchanged for the state from 61% in 2005–06 to 2010–11. The overall goal is to meet 60% of the current unmet need for family planning (29.7%, AHS, 2010–11). This will result in increasing the modern CPR from 31.4% in 2010–11 to 48.6% in 2022. If Uttarakhand adopts Scenario A—where a change in limiting method is high compared to Scenario B, though the difference between the scenarios do not vary much. Proportion of limiting methods changed from 36.2% in 2011 to 51.0% in 2022. The changed method mix (Scenario ‘A’) has been constructed by looking at the various datasets at different time periods.

Chhattisgarh shows a declining trend in IMR from 55 to 37. Improving the use of contraception will definitely help Uttarakhand to improve the IMR status further. It seems that along with India, **Uttarakhand will fall short of achieving Millennium Development Goal for IMR 28** per 1,000 live births by 2015. The declining rate of Under5mortality is also approaching but in a very slow pace.

State	IMR			UNDER-5 MORTALITY		
	2012	2017	2022	2012	2017	2022
Uttarakhand	55.5	45.8	36.8	73.9	59.6	46.1
Andhra Pradesh	44.5	38	32.4	57	47.1	39.8
Tamil Nadu	33.1	26.2	20.1	40.7	31.6	23.7
India	41.3	34.1	27.3	52.1	42	33.1

SCENARIOS A and B MWRA

State	Numbers (Millions)											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Uttarakhand	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Andhra Pradesh	18.3	18.5	18.7	18.8	18.9	19	19.1	19.1	19.2	19.2	19.3	19.3
Tamil Nadu	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.6	14.6
India	237.7	242.2	246.6	250.8	254.8	258.6	262.1	265.5	268.6	271.5	274.3	277

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

The Projected number of acceptors of spacing methods in Uttarakhand is large (IUDs, condoms, and pills) in both the scenarios. Compared to Scenario A, the number of acceptors of spacing methods would increase faster under Scenario B, thus Uttarakhand will have to plan to provide for this large population through improved contraceptive procurement and supply and increasing access points for spacing methods.

Projected number of Acceptors for Spacing methods: Scenario A, if states change the method mix

State	Numbers (Millions)											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Uttarakhand	0.39	0.4	0.4	0.4	0.41	0.41	0.42	0.42	0.42	0.42	0.43	0.43
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 states continue as today

Uttarakhand	0.39	0.4	0.41	0.42	0.43	0.45	0.46	0.47	0.49	0.5	0.52	0.53
India	31.6	32.7	33.7	34.7	35.7	36.6	37.6	38.6	39.6	40.6	41.6	42.5

In India and in Uttarakhand, limiting methods, especially female sterilisation, has played a crucial role in the FP programme in the past. The growth of sterilisation use continues to rise, as more and more couples who have completed their family size are more likely to adopt any of the limiting methods. Though there is not much difference in both the scenarios, Uttarakhand needs to work towards normalising small family size and its socio-economic benefits.

Projected number of Acceptors for Limiting methods: Scenario A, if states change the method mix

State	Numbers (million)											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Uttarakhand	0.03	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07
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

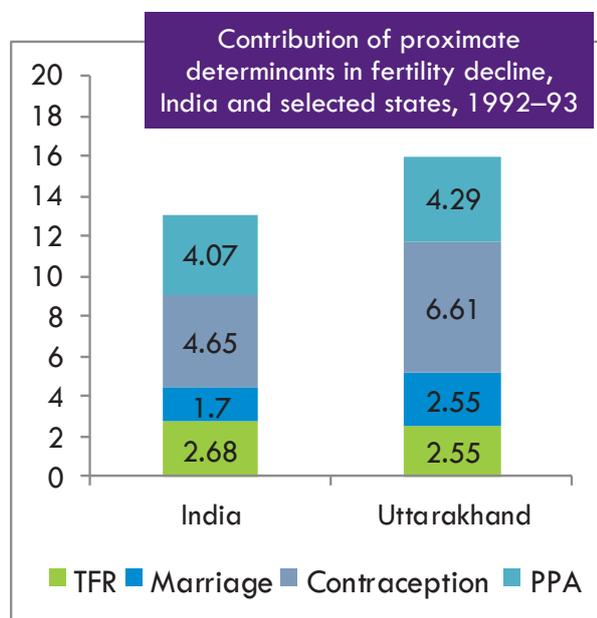
Projected number of Acceptors for Limiting methods: Scenario B, if states continue as today

Uttarakhand	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
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

Proximate Determinants of Fertility

Observed variations in the fertility levels of populations are due to variation in one or more of the proximate determinants. The four important proximate determinants under study are the following:

1. proportion of married women of reproductive age— early age at first marriage in a population is usually associated with a longer period of exposure to the risk of pregnancy, and thus higher fertility levels.
2. proportion of couples using contraception- especially modern methods with less failure rates
3. extent of induced abortion- regulates fertility and abortion ends a pregnancy, but given the stigma attached to reporting it, data is also low
4. the length of lactation infecundability- breastfeeding is the principal determinant of postpartum amenorrhoea that protects women from conception.



RECOMMENDATIONS FOR UTTARAKHAND

The population of Uttarakhand is likely to increase in a slow pace and similar to both scenario. In Uttarakhand change in use of contraception seems to have the highest impact in fertility decline. This prompts the state functionaries to focus on expanding access to family planning services more and address the unmet need for family planning. Some recommendations to address population growth in Uttarakhand are:

1. There is a marginal fall in projected population of India under the “Scenario A” of method mix compared as per the state circumstances. Thus, being a populated state, Uttarakhand needs to focus more on improved delivery of and access to limiting methods.
2. Uttarakhand has not been able to achieve the expected numbers for sterilisation and spacing in the recent years, the state has a long way to go with a more focused approach to achieve the state’s net replacement of fertility levels.
3. Findings from the multivariate analysis have highlighted the impact of socioeconomic factors on fertility reduction- women’s age at marriage, contraceptive use, experience of infant and child mortality, and women’s education are strong

predictors of women moving on to higher parities. Government should focus not only on family planning programmes but also on other activities to increase women’s age at marriage, address activities related to improving infant and child health programmes and increase girls’ education to achieve sustainable and long-term fertility goals.

4. Findings from the decomposition analysis on impact of proximate determinants on fertility suggest that fertility reduction in India is largely determined by change in contraceptive practices and changes due to delayed marriages with little impact of induced abortion and postpartum infecundability.
5. Uttarakhand needs to focus on improving access to contraception and maternal health care to reduce infant and child mortality. More than five per cent of Tamil Nadu’s fertility decline has been attributed to changes due to induced abortion, which points to state Government’s prioritisation and improvement of abortion-related services.

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