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POPULATION POLICY FOR KARNATAKA : A SUGGESTED FRAMEWORK

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Population Policy for Karnataka: A Suggested Framework

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Abstract

In a vast country like India, with a population of one billion, having high demographic diversity and heterogeneity, and varying levels of socio-economic development among states, a common national population policy might not serve the purpose. An effective population stabilisation programme must be state-specific and address regional disparities, socio-cultural differentials and infrastructural problems. This paper discusses the need for a state policy for Karnataka, within the broad framework of the National Population Policy of 2000, by evaluating the past performances and emphasizing the existing regional disparities within the state. It also highlights the perspectives, framework and recommendations for a Population Policy for Karnataka.

Introduction

The modern history of the developing countries is, in reality, a history of development. It is punctuated with enormous concerns about the socio-economic development of people. The unbridled population growth in these countries has been rightly hypothesised by some as a contributing factor to the deceleration of economic growth. In their efforts to moderate the impact of such a population growth, several countries have instituted population programmes. Policies have been enunciated as academic backup and theoretical frameworks to support the conceptualisation of strategies to control population growth. Legislated or otherwise, the population policies reflect the political

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commitment of the governments in power. In this regard, these policies are a summation of a broad consensus and genuine perception of the nations and their people. The United Nations defines a population policy as having two important components - firstly, the efforts to affect size, structure and characteristics of population and secondly, efforts to improve social and economic conditions which are likely to have demographic consequences. Population policies in the developing world have often been equated with family planning programmes. India is the first among the developing countries to set up a state - sponsored family planning programme, as early as 1952. The emphasis had been to reduce birth rates 'to stabilize the population at a level consistent with the requirement of national economy'. However, the policies and programmes initiated in the last five decades in India have only been partially successful, making it a formidable challenge. In some states, the fertility decline has been significant, but in many larger states it has been otherwise. The National Population Policy 2000, unveiled recently provides a policy framework to advance goals and prioritize strategies to achieve the net replacement level by 2010.

The immediate objective of the new policy is to address the unmet need for contraception, health infrastructure and personnel and to provide comprehensive reproductive and child health care facilities. This policy also set a long-term objective of achieving a stable population by 2045, at a level consistent with the requirements of sustainable economic growth, social development and environment protection. The socio-demographic goals to be achieved by 2010 include reduction of infant mortality rate to below 30 per 1000 live births, reduce maternal mortality ratio to below 100 per 100,000 live births, universal immunization of children, 80 per cent institutional deliveries and school education free and compulsory up to age fourteen.

However, in a vast country like India with a population of a billion, having high demographic diversity and heterogeneity, and varying levels of socio-economic development among states, a common national policy might not serve the purpose. A national population policy at best would only provide a broad framework and direction. This has necessitated the formulation of state level population policies to address regional, socio-economic and cultural diversities, as well as infrastructural problems. An effective population stabilization programme must be state-specific and should identify policy initiatives, interventions and demographic goals to be achieved in a given time frame.

Considering the importance of regional planning and population interventions to stabilise population, some state governments have thought of their own state-specific population policies. Andhra Pradesh formulated its

Population Policy in 1997 followed by Rajasthan in 1999 and Madhya Pradesh in May 2000. This paper is an attempt to address the need for a state population policy for Karnataka and formulation of appropriate strategies in that direction.

This paper is presented in six sections. Section I briefly describes the population scenario of Karnataka. Section II deals with demographic trends. Population policy environment since independence is discussed in Section III. Section IV evaluates the past performance of fertility control measures. Section V defines future prospects and challenges. Final Section VI highlights the perspective, framework and recommendations for a state level population policy.

I Population Scenario in Karnataka

The population of Karnataka which stood at 13 million in 1901, increased to 19 million by 1951 and to 45 million by 1991 - a three and a half fold increase in the last ninety-year period. The projected population of Karnataka is 56 million by 2001 AD (RGI, 1996). The state accounts for about five per cent of the population and six per cent of the land area of the country. According to the 1991 Census, sex ratio indicates that there are 960 females per 1000 males in the state, compared to 927 in the country as a whole. The percentage of urban population in Karnataka was always higher than that in the country. By 1991, almost every third person in the state was living in an urban area.

The religion-wise composition of the population in the state: Hindus 82, Muslims 11.6 and Christians 2.4 per cent, as per the 1991 census. Further, Scheduled Castes and Scheduled Tribes comprise one-fifth of the total population. According to the 1991 census, over half of the population (56 per cent) aged 7 years and above is literate in the state. The differentials in literacy between rural and urban areas, and between males and females have persisted over time. Seventy-four per cent in the urban and 48 per cent (less than half) in the rural areas, with two-thirds of males (67 per cent) and 44 per cent of females were literate in 1991. The life expectancy at birth is 62.1 years - 60.6 for men and 63.6 for women in 1991.

As per the 1991 census, there were 29,193 villages with an average population of 1,149 and an average area of 6.64 sq. km. per village. There are 254 towns and cities in the state. Nearly 72 per cent of households in Karnataka have access to safe drinking water whereas only 24 per cent of households have toilet facility (6.9 in rural and 62.5 in urban areas). About 52 per cent of households were electrified. Only less than 4 per cent of rural households reported having all the three amenities (electricity + safe drinking water + toilet), whereas 20 per cent of households in rural Karnataka have none of these basic amenities. The household size in rural areas is 5.8 persons

and in urban areas it is 5.4. According to the National Family Health Survey (NFHS) of 1992-93, Karnataka had 12.5 per cent of households headed by females.

From 1960-61 to 1996-97, the state income (Net State Domestic Product) at 1980-81 prices increased from Rs 2,977 crores to Rs 13,047 crores, - a four-fold of increase. However, according to the Human Development Report of the Government of Karnataka (1999), the real per capita income has just doubled during the period from Rs 1, 273 to Rs 2,668. Considerable disparities exist in socio-economic development levels between different regions of the state; as is the case with population growth (Table 1).

During 1981 to 1991, the work force in the state increased from 15 million to 19 million, a growth rate of 2.6 percent per annum. Labour force participation rate (persons aged 15 to 59 years) for the state works out to be 67 per cent (85 per cent for males and 47 per cent for females). Between 1973-74 and 1993-94, the proportion of population below the poverty line has declined from 54 per cent to 33 per cent in Karnataka (30 per cent in rural and 40 per cent in urban areas). Despite the overall reduction in poverty levels, 15.6 million persons were below the poverty line in 1993-94, a large number of them (9.6 million) in rural areas (GOK, 1999).

II Demographic Trends

Trends in basic demographic indicators from 1971 to 1991 are presented in Table 2.

Age distribution:

The age distribution of population is a crucial component. According to the projections (Registrar General of India, 1996), the increase in the population in Karnataka in the age group 15-59 between 1996 to 2016 would be about 13 million; in the age group 60 plus years it would be about 2.7 million. Even if we are able to bring down the fertility to the replacement level in the near future, the population will continue to grow due to the population momentum or young age structure.

Age at marriage:

Fertility performance of a woman is determined by three factors, viz. age at marriage, length of marital union and use of contraception. It is generally hypothesised that there is an inverse relationship between age at marriage and the number of children born to a woman.

Table-1: Decadal Variation in Population Growth by Regions in Karnataka, 1901-1991

State/Regions	1901-11	1911-21	1921-31	1931-41	1941-51	1951-61	1961-71	1971-81	1981-91
Karnataka	+3.60 (+3.55)	-1.09 (-1.10)	+9.38 (+9.01)	+11.09 (+10.57)	+19.36 (+17.85)	+21.57 (+19.72)	+24.22 (+21.92)	+26.43 (+23.73)	+21.12 (+19.16)
Coastal and Malnad-5	-0.51	-1.11	+5.71	+7.81	+17.24	+32.67	+24.19	+24.33	+13.13
Northern-Maidan-7	+3.15	- 4.98	+9.96	+11.05	+15.60	+19.27	+22.53	+23.60	+23.00
Southern-Maidan-8	+6.4	+3.35	+10.42	+12.81	+24.25	+19.55	+25.90	+30.15	+22.62
All India	+5.75 (+5.60)	-0.31 (-0.31)	+11.00 (+10.49)	+14.22 (+13.39)	+13.31 (+12.58)	+21.51 (+19.78)	+24.80 (+22.40)	+24.66 (+22.36)	+23.51 (+21.12)

Note : Coastal and Malnad region consists of five districts, namely Dakshina Kannada and Uttara Kannada (Coastal); Chikmagalur, Shimoga and Kodagu (Malnad).
Southern Maidan contains Bangalore Rural, Bangalore Urban, Chitradurga, Hassan, Kolar, Mandya, Mysore and Tumkur districts. Northern Maidan includes the districts of Bidar, Bijapur, Belgaum, Bellary, Dharwad, Gulbarga and Raichur.
Figures in the parentheses are decadal exponential growth rates.

Source: Census of India, (several years), as cited by P H Rayappa and M Lingaraju (1996).

Table- 2: Trends in Basic Demographic Indicators, Karnataka, 1971-91

Index	1971	1981	1991
Population	29299014	37135714	44977201
Per cent population increase (previous decade)	24.2	26.8	21.1
Density (Population/Km2)	153	194	235
Per cent urban	24.3	28.9	30.9
Sex Ratio	957	963	960
Per cent 0-14 years old	42.4	39.5	35.5
Per cent 65+ years old	3.5	3.9	4.1
Per cent Scheduled Caste	13.1	15.1	16.4
Per cent Scheduled Tribe	0.8	4.9	4.3
Per cent literate*			
Male	41.6	48.8	67.3
Female	21.0	27.7	44.3
Total	31.5	38.5	56.0
Crude Birth Rate	31.7	28.3	26.9
Crude Death Rate	12.1	9.1	9.0
Exponential Growth Rate	2.17	2.37	1.92
Total Fertility Rate	4.4	3.6	3.1
Infant Mortality Rate	95	69	74
Life Expectancy			
Male	U	60.2+	62.1++
Female	U	61.1+	63.3++
Couple Protection Rate	9.3	23.4	48.2

U : Not Available

* : Based on the population age 5 and above for 1971 and 1981 and the population age 7 and above for 1991

\+ : 1981-86

++ : 1986-91

Sources : Office of the Registrar General (several years) *Sample Registration System*, Office of the Registrar General and Census Commissioner (several years) *Census of India, Ministry of Health and Family Welfare (several years), Family Welfare Programme in India - Year Book, as cited in National Family Health Survey 1992-93 - Karnataka.*

Marriage is almost universal in the state, as elsewhere in the country. The average age at marriage for females in the state was 20 years, whereas for males it is 26 years (1991). The differences in age at marriage between rural and urban areas are on expected lines - 25 years in rural and 27 years in urban areas for males and 18 years and 20 years for females, respectively. According to NFHS (1992-93), in Karnataka, urban women marry about two years later than rural women do and males marry 6.5 years later than females.

Fertility:

The Crude Birth Rate (CBR) has been declining in Karnataka since early 1970s. CBR, which remained relatively stable at a higher level of about 40 or more in 1950s and 1960s, reached a level of about 28 by 1990. According to the latest Sample Registration System (SRS) bulletin, the CBR in Karnataka is 22.0 (23.1 in rural and 19.4 in urban areas) in 1998. As per the NFHS (1992-93) estimate, for the three years period of 1990-1992, the total fertility rate is 2.9 and CBR is 26. The changes in the fertility behaviour and family planning practices in the state were well documented by some of the major demographic surveys (United Nations, 1961, Srinivasan et al., 1978, Rao et al., 1986).

NFHS (1992-93) provides fertility differentials by various categories. The urban total fertility rate (TFR) of 2.4 is lower than the rural TFR of 3.1. The TFR among illiterate women is 3.39, declining significantly with the increase in the level of education. Among women, for those educated high school and above, it is only 2.0. According to NFHS, the TFR among Hindu, Muslim and Christian communities is 2.73, 3.91 and 2.25, respectively. The TFR among Schedules Castes is 3.15 and Scheduled Tribes is 2.15.

The NFHS-2 (2000) estimate of the TFR for the state as a whole is 2.13 children per woman. This is lower than the SRS estimate of 2.5 children. Over the six-year period between the two NFHS, fertility has declined in Karnataka from 2.85 children in 1990-92 to 2.13 in 1996-98.

Mortality:

Between 1951-1991, the crude death rate in the state has come down sharply, mainly due to the eradication of epidemics and access to health care facilities. According to SRS, the Crude Death Rate (CDR) in Karnataka is 7.6 (8.5 in rural and 5.4 in urban areas) in 1997. SRS also estimates that the infant mortality rate (IMR), widely recognised as a sensitive indicator of both the socio-economic development and access to health services, is 53 in the state, compared to 71 at the national level. But considerable variations can be observed between rural and urban areas (63 and 24, respectively).

Family Planning:

Karnataka had an early start in family planning. Two government-sponsored family planning clinics were opened: one in Bangalore and one in Mysore, as early as 1930. These were the first official family planning clinics in the world*. According to NFHS (1992-93), the knowledge of family planning is nearly universal in the state, with 99 per cent of ever-married women reporting knowledge of at least one modern method of contraception. Even though knowledge of family planning is almost universal, the practice of contraception is relatively moderate in the state. Half of the currently married women, aged 15-49 years, were not using any contraceptive method (NFHS, 1992-93). The remaining 48 per cent were using a modern method (43 per cent sterilisation, mostly female sterilisation and 5 per cent spacing methods). The ideal family size reported by women is 2.5. NFHS also indicates that 18 per cent of currently married women have an unmet need for family planning (11 per cent for spacing and 7 per cent for limiting). If all the women with an unmet need for family planning were to accept contraception, the current contraceptive prevalence rate would increase from 49 per cent to 67 per cent.

Couple Protection Rate (CPR) has gone up considerably during the last three decades - 9.3 in 1971 to 23.4 in 1981 to 48.2 in 1991. The latest official statistics show the CPR is 55.6 per cent in the state in 1997, whereas it is 45.4 for all India. Female sterilization is the most popular and preferred method, with 43.6 per cent of currently married women accepting it. There are significant variations in the level of family planning performance by districts. Mandya has the highest CPR in 1993-94 (71 per cent), Raichur (38) and Gulbarga (39) with the lowest.

The preliminary report of NFHS-2 (2000) shows that 58.3 per cent of women currently use contraception (56.5 modern methods and 1.7 traditional methods). The usage of modern methods in 1992-93 (NFHS-1) was 48 per cent which has increased to 56 per cent by 1998-99 (NFHS-2).,

The changes in the family planning programme are accompanied by the changes in the attitudes and perceptions of individuals. The ideal family size as per the Mysore Population Study (United Nations, 1961) carried out during 1951-52 was 4.7. As per NFHS-1 (1992-93), it has declined to 2.5 in the state. According to the Karnataka Fertility Survey (Rao et al, 1986), the son preference (per cent of women who want the next child to be a boy) was 52 and it has declined to 44 as per NFHS-1. The state is expected to attain a

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* For a succinct review of the evolution of health and family welfare administration in Karnataka, see Rayappa and Sekher (1998).

replacement level fertility by 2009 (Registrar General, 1996). Among the four South Indian states, Kerala and Tamil Nadu have already attained replacement levels and Andhra Pradesh is likely to follow by 2002. In Karnataka, the widening regional disparities, not only in demographic variables but also in various developmental indicators, are a matter of concern. The achievement of demographic transition in Karnataka, to a great extent, depends upon the overall development of the backward districts like Gulbarga, Bidar, Bellary, Raichur and Bijapur in Northern Karnataka. If the state can make substantial efforts for the improvements in the quality of life in these districts, the fertility transition may be sooner than expected.

III Population Policy Environment since Independence

The evolution of a population policy in India is very interesting. The country's decadal censuses since 1921 were showing an increase in population growth rate, leading to an active debate on population control within the academic and intellectual circles in the country. The situation was growing grim with every census, to the extent of attracting the attention of political leadership involved in the freedom movement as early as 1935. In 1939, the Indian National Congress prioritised the population control in its economic resolutions as a forerunner for development. That could be rightly considered as the beginning of a population policy formulation in the Indian context. At about the time of independence, recommendations of several committees, a large section of enlightened citizens with vast administrative and political influence, all were in favour of population control as a basic prerequisite for a planned development of the people.

With the central planning process in position, a Population Policy Committee was appointed in 1952. However, definite policies and programmes were not benchmarked, resulting in a failure to achieve the desired goals. This had led to disaffection and frustration in the ranks of functionaries at different levels.

The first ever Population Policy stated during the emergency, the successive policies by the Janata Government and the recent policy statements lack a persuasive strategy and a coherent approach to achieve the stated goals. Also, these Population Policies have failed to visualise a certain need for region-specific strategies for an effective implementation, resulting in regional disparities in fertility transition*.

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* For a detailed discussion on India's population policy, see Srinivasan (1995), Visaria and Chari (1998)

Population policy through the Five-Year Plans:

The overwhelming concern about the population growth in India emanating from intellectual and expert debate in the pre-independent era could be considered as the cradle of the population concerns after Independence. The political leadership of post- independent India was in unison about the need for population control. The population policy in India takes its origin from the immense concerns for a social and economic development and perceived threat of a growing population, which can impede the pace of such a development. It was this twin concern which secured a prime place for the population control in the development agenda of the nation.

The thrust of the Indian family planning programme almost began with great hopes and barely any expertise and resources. Yet the programme moved forward, gradually gaining momentum and gathering resources in its course.

Although the First Five-Year Plan acknowledged the urgency of the problem of family planning and population control, the service base was limited and a clinic-based approach was adopted. A committee was created to address the issue of policy and approach with the intent of setting up of a population commission in the future.

The policy perspective during the Second Five-Year Plan was also limited but the service base was broadened by integrating clinic-based family planning services with health programmes and health education, thus lending a comprehensive outlook. The scheme of incentives for acceptors and motivators which was introduced initially by the Madras State, was eventually expanded.

In consideration of the steep population growth rate as revealed by the 1961 census, the Third Five-Year Plan recognised the need for stabilization of population growth over a reasonable period and also acknowledged the great complexity of the problem. The plan considered women's education, employment and raising the age at marriage as important for a greater participation of people in the family planning programme. The limited reach of clinic-based approach was expanded with the extension approach with the female health workers reaching out to the doors of the eligible couples. The 'cafeteria approach' with several methods for choice was introduced during this period. The programme was reinforced with a target of achieving a reduction in the birth rate to 25 per thousand in the next ten years, i.e. 1973.

A strong purposeful Government Policy, supported by an effective programme and adequate resources was considered as essential for the success of the family planning programme during the Fourth Five-Year Plan. Time-

bound, method-specific targets along with Maternal and Child Health (MCH) services were introduced. The family planning organisational structure was revamped with the creation of the Department of Family Planning, the appointment of the Commissioner of Family Planning with the Regional Directors and establishment of the Central Family Planning Institute. Information, Education and Communication (IEC) activities were given due importance as also the logistics of contraceptives.

The Fifth Five-Year Plan emphasised on integration of the family planning programme with health, MCH and nutrition for children, pregnant and lactating mothers under the minimum needs programme. The first ever population policy expressed the intention that besides vigorously pursuing the programme initiatives, it considered essential to raise the age at marriage, female literacy and employment. A change in the government and in the background of the emergency excesses, the family planning programme was rechristened as the Family Welfare Programme with greater emphasis on voluntary acceptance of contraception.

The Sixth Five-Year Plan considered the family planning as very difficult and delicate, according it a high priority and the goals to be achieved through motivation, persuasion and education. Immunization and MCH services were vastly expanded, paving the way for Universal Immunisation Programme (UIP), and Child Survival and Safe Motherhood (CSSM) programmes, which were the forerunners of the current RCH approach. A National Health Policy incorporating the long-term population and health goals for the country was approved by the Parliament.

The Seventh Five-Year Plan envisaged better programme management, greater emphasis on MCH including immunisation, nutrition and school health, with a view to reduce infant and child mortality and participation of non-governmental and community organisations.

The Eighth Five-Year Plan corresponded with the economic liberalisation and International Conference on Population and Development (ICPD) at Cairo, generating lively debate and shifts in the programmatic approaches. On the recommendation of the Cabinet subcommittee on population, an expert group was constituted under the chairmanship of Dr M S Swaminathan to draft a National Population Policy, in 1993. The group submitted the draft policy document in May 1994. The second most significant policy initiative during this period was the abolition of method-specific targets from the financial year 1996-97 in favour of the RCH approach, with decentralised micro-planning and the active involvement of the community leadership and grass-root level people's representatives in the planning process.

During the Ninth Five-year Plan, the RCH approach was redesignated as the Community Needs Assessment Approach (CNAA). The plan has changed the usage of the NRR of Unity in favour of replacement levels of fertility.

Supplementary and complementary programmes:

In an effort to augment the family planning programme, several supplementary and complementary programmes were introduced with varying degrees of success. The central theme of these interventions was to promote maternal health and ensure the survival of the child, so that the family planning programme could be accepted by a larger number of couples. Provision of safe drinking water, sanitation, school health, supplementary nutrition programmes, informal literacy campaigns, employment generation and several rural development programmes are some among a number of interventions sought.

Educational programmes for children and adolescents:

Children and adolescents comprise of a large percentage of population with a potential to modulate the population momentum. Educational programmes in the form of population education and family life education will be helpful for a clear understanding and early realisation about the effects of early pregnancy and impact of adolescent fertility on the individual and the state.

IEC and mass media:

There is a certain feeling that the IEC support for the family planning programme has never been very successful, as the knowledge about different methods of family planning have not been uniform. This, even though, most of the large scale surveys in the recent years have reported universal knowledge about family planning methods and the reach of the mass media being quite wide. Hence, this leaves vast scope for innovations in the IEC interventions.

Family planning technology:

There had never been a dependable and innovative technology base for the programme in the past. Indigenous technical contributions have been very few in view of the massive size and half a century long experience in the Indian family planning. The nationalistic outlook to initiate biomedical research into human reproduction and contraceptive testing and development in the first Five-Year Plan soon lost its importance. Indigenously developed safer contraceptives have never found favour. There is a genuine concern among certain quarters about the possibility of introducing culturally insensitive and experimental contraceptive methods into the programme.

The Family Planning Management Technology in India is in its infancy. The traditional hierarchical administrative pattern is the principal mode of programme management even today, and it is not uniform throughout the country. In spite of several decades of programme implementation, a reliable data base and family planning management information system (FP-MIS) is almost missing.

Targets and achievements:

To introduce the cafeteria approach and achieve the desired decline in birth rate necessitated the introduction of method-specific annual targets. There were two sets of targets in the Indian family planning programme - one for the demographic outcome and the other for the programme implementation. The demographic outcome as a target was never achieved and it was shifted, as if it was a sliding scale, while the family planning programme implementation targets were partially achieved. Manipulation of targets was alleged to have led to the misappropriation of incentives involved.

Basically, the targets were a management tool to measure the outcome of an intervention, and were easily understood across the programme. Failure of monitoring and evaluation that would have kept the performance under check and conversion factors applied gave rise to over-reporting. Thus, a good management tool, which finds a very wide application elsewhere, came to disrepute.

Incentives and disincentives:

The Government of Madras and Bombay introduced monetary incentives for the acceptors of sterilizations to cover the loss of wages. Government of India acceded to it following the recommendations of the Mukherjee Committee. Motivators and service providers were paid nominal incentive money, on per case basis.

Many have found fault with incentives on the grounds that the incentive money has led to fraudulent practices in manipulation of service statistics and it was a major issue made out against target setting. The cost benefit ratio of incentives in averting 2.3 births per sterilization is extremely good. Also, the incentive paid to the motivators like ANMs were quite meagre, which is of utilitarian in nature.

The RCH programme has a whole range of incentives for services rendered and the quantum of incentive money is higher than family planning incentives. Some states have introduced much larger packages of incentives.

The scheme of disincentives introduced during the emergency was quickly withdrawn.

IV Evaluation of Past Performance

A performance appraisal is necessary for the future formulation of policies and programmes, as it would provide an idea about the strengths and weaknesses in the programme.

The performance of the state has been a mixed one and achievements are not certainly meagre. Population growth rate in the state has declined in the last decade but we are not very close to reaching the goal of Net Reproduction Rate of unity (NRR= 1). At present the annual population growth rate in Karnataka is about 1.5 per cent. A complete fertility transition in the South will have a significant impact on the national population growth rate as it constitutes about one fourth of the total population in the country.

Much progress has been achieved in the provision of maternal and child health services. Antenatal care has been provided to nearly three-fourth of pregnant women in recent years. Over two-third of pregnant women have received at least 2 TT injections, IFA tablets and three antenatal check ups. The percentage of institutional deliveries has increased to 50 per cent with two-thirds of deliveries attended by trained personnel. The role of Dais or Traditional Birth Attendants (TBAs) is very important in this context. There is a need to train more Dais to conduct safe deliveries and to provide expectant mothers with disposable delivery kits (DDKs) of good quality. Immunisation coverage under the Universal Immunisation Programme (UIP) is about 60 per cent with the objective of reaching at least 85 per cent. Diarrhoea, Acute Respiratory Infections (ARI) and malnutrition are the other factors influencing child mortality and morbidity. Knowledge about Oral Rehydration Therapy (ORT) has increased but treatment for ARI remains low. Malnutrition in pregnant mothers and children continues to be higher as nearly 42 per cent of mothers and 66 per cent of children are undernourished. Similarly, school going children suffer from several diseases, which remain unattended since school health programmes remain only on paper.

Much headway has been achieved in the direction of improving infrastructure facilities in the state. In 1998 there were 8143 subcentres (SC), 1601 Primary Health Centres (PHC) and 242 community Health Centres (CHC) functioning in the state. On an average, a subcentre covers 3,815 population; a PHC 19,406 population and CHC 1.28 lakh population who conform to the required norms set by the centre. Close to half of the subcentres (4560 out of 8143), more than one-third PHCs (644 out of 1601) and nearly one-third (87

out of 242) of CHCs are without government buildings. There are 242 CHCs against the required number of 268.

In terms of humanpower, shortfall in female health workers is significant as there are 8097 in position against the required number of 9744 (as on 30.6.1998). Shortfall in the case of male workers is 4063, which is nearly half of the total required number of 8143. There are 727 subcentres without either a male or a female worker in position. Similarly, there is a shortage of 607 female Health Assistants (LHVs) and 778 Male Health Assistants (MHA). There are 213 PHCs without a Medical Officer, 832 without a Lab Technician, 542 without a Pharmacist and 224 without a Lady Doctor in 1998. Similar shortage exists with regard to specialists- surgeons, obstetrician and gynaecologists and paediatricians. Recruitment of health personnel at the district level may be an appropriate strategy to overcome these problems. Moreover, due importance should be given to these positions as prized postings to retain the personnel in position.

There are not many studies to throw light on the extent of utilisation and quality of services provided by institutions run by the government. The government institutions do provide most of MCH and family welfare services, particularly in rural parts of Karnataka. However, there are problems with regard to the utilisation of these services, as also with the follow up services. Health Workers fail to provide the needed information with regard to immunisation, contraception, need for institutional deliveries to their clients. With regard to Family Planning, the workers themselves emphasise sterilisation, mostly female sterilisation, and neglect other methods such as spacing and practice of traditional methods. Follow up services for those who have come forward to accept family planning methods have been poor and inadequate. According to the National Family Health Survey (1998-99) in Karnataka, only 7 per cent of current users of contraception were told about other methods of contraception.

The Report on Human Development in Karnataka (1999) has pointed out that the indices developed for the state are slightly above those applicable to the country as a whole. However, Human Development Index (HDI) is higher than Gender Development Index (GDI) in all districts in the state, implying that status of women is generally poor. Apart from this, in 1991, there were about 10 lakh children aged 5-14 working as main or marginal workers.

V Prospects and Challenges

It is visualised that Karnataka would be able to achieve replacement levels of fertility by 2009 AD, but it may be possible to advance this date by a few years, with proper planning and genuine commitment. The HDR Report

(GOK, 1999) has stated that the task of population stabilisation is not one of raising resources, but more an urgent need to find committed people in Karnataka to work in these areas.

Karnataka's strength lies in the promotion and consolidation of maternal and child health services, but much more remains to be done. The community has responded positively and enthusiastically to the successful implementation of MCH, CSSM and Pulse Polio Immunisation campaign in the state. In the area of the family welfare programme, there lies much scope for the promotion of modern spacing methods and practice of traditional methods in Karnataka.

There is an uneven deployment of humanpower in the state with a large concentration of specialists in urban areas and particularly in big cities. Their services have to be adequately utilised in the provision of family welfare services in the rural areas. Uneven development of health infrastructure, compounded by the inadequate delivery system, are to some extent responsible for the poor health indicators in some districts.

Health workers at the grass-roots level are not equipped with the required knowledge, skills and materials and, as a result, the programme has suffered. They are yet to grasp the full implications of the recently introduced RCH programme. Therefore, they should get the required orientation. Hence, training should become an important component for a successful health and family welfare programme.

There is a realisation that to make further progress, it requires the support of non-governmental organisations. Whenever, committed NGO groups were involved in the programme implementation, it did pick up momentum. Active involvement of NGOs, Mahila Swasthya Sanghas (MSS) and self-help groups in the villages will help to popularise family planning. There is a realisation that private and corporate sectors can also be involved in this venture. With the 73rd and 74th Constitutional Amendments, the role of panchayat bodies has been re-emphasised. With the active involvement of these bodies, the programme can pick up further momentum. Therefore, there is an urgent need to motivate and train the elected representatives with a proper orientation to programmes like RCH and ICDS.

VI Population Policy Perspective for Karnataka

Considering the specific requirements of Karnataka, for an accelerated development, several suggestions, which will provide the cutting edge for the programme implementation and greatly improve the outcome, could be included in the population policy.

Regional planning perspective:

The policy formulated for the state should be set in a state-specific context, approach and foresight. Moreover, it should become a structural design drawn by the regional talent, which can induce a good deal of pride and give rise to enormous amount of prestige as a matter of possession. Such a passionate ownership is the right ingredient for complete involvement of all concerned. Regional imbalances in the northern districts, which have been impeding development, must be given due consideration in the planning process and in proportionate resources allocation.

Political will and administrative leadership:

The Karnataka state population policy must reflect the political will to manage their own population agenda and a firm commitment towards that end. By declaring a state population policy the state must shift its role from the hitherto passive programme manager and be an active planner of its own population prospects and implementer of such plans. This is the genuine decentralisation of planning. The State Planning Board should be involved in the planning and implementation, so that coordination and linkages will become more effective.

The Administrative leadership should come spontaneously from within the groups involved in the formulation of the policy. A committed leadership would facilitate resources mobilisation for planning and implementation of policies.

Enabling environment:

An enabling environment is the most desired precondition for an effective implementation programme in the state. The political and administrative leadership should strive to create and foster such an environment in the state.

A conducive working environment at the service provision sites would lead to a pride in service provision and a sense of ownership. A possessive workforce would help sustain a project in the long run. Ownership of the facility should jointly belong to the service providers and the community that benefits from it.

Strategic planning and action plans:

For an effective implementation of population policies, specific strategic planning is imperative. The region-specific plans would reflect the 'whole' plan for the state, which must be amenable for desegregation without any distortions. The strategic planning should be such that it could provide

two sets of approaches with almost similar outcomes set in two different time frames. This allows a choice in the time frame, both for planning and implementation, depending on the urgency and regional requirement.

It is highly desirable to incorporate proven strategies, which would have multidirectional and multi-modal impact. Practical strategies without scope for excessive dependence on external support and resources are desirable.

Action plans resulting from the strategic planning should consider the entire perspective of population stabilization and be drawn up diligently to cover the entire state. Regional differences and the remedial course of actions must be well defined to prevent confusion in the implementation. The action plans should be desegregatable to the smallest unit involved so that implementation will be smooth and uniform. Action plans could also be convertible into PHC or subcentre plans for the utility of service providers and maintenance of a good management information system.

Action plans must be clear, simple to understand and implement. They should reflect the total impact at the aggregate level, and upon desegregation, must be representative of micro-plans up to the tiniest unit. Additional resources deployment should be judicious and absolutely need based.

Programme management:

In recent years the population control programmes having assumed greater importance, the urgency in the implementation of these programmes cannot be wished away. Since a great amount of interdisciplinary talent and resource outlays and controls are required, they need a better management approach. It is better to consider the population control programmes as an important enterprise and administer as such. Population control programmes easily fit into the enterprise management perspectives and such an approach will greatly enhance the projected outcomes. Resource planning, mobilization and programme management will be user friendly.

A Suggested Population Policy Framework for Karnataka:

The policy framework for Karnataka should project the specific and pragmatic approaches which would help to achieve the intended goal of reducing the prevailing fertility to the replacement levels, earlier than projected. It should be a comprehensive policy. It should be lucid enough to be a technical manual in design and a user's guide in application.

Functional status of facilities and servicing:

Infrastructure and facilities must match the projected growth for service provision. Continuous maintenance of facilities in a functional status is

critical. Facilities like running water supply, electricity with back up, timely replenishment of consumables and upkeep of the service area are as important.

Competency building:

Proficiency in service provision requires maintaining the service providers at an optimum level of competence. To develop and maintain competency, training and re-training of service providers is an essential requirement. All training should be competency based with ample scope for development of skills. Periodic refresher courses would reinforce the capabilities of service providers.

Contraceptive technologies:

The state must choose technologies most suitable for its people. Culturally acceptable, least hazardous technologies would meet the needs of people and the programme, perfectly. Interests and safety of the acceptors of contraception should be accorded utmost primacy.

Investment of resources:

There should be a shift in the resources application policy. Resources should be deemed as invested, which will serve the interest of the community and the development of human capital. There should be no place for the term 'expenditure' in the sphere of human development, because, the benefits of such investments are accrual in nature. Resources allocations, deployments and 'ploughing-in' in the past have amounted to squandering, sans accountability. For every unit of resources so invested, a periodic cost-benefit and return-on-investment ratios should be made available. It will establish credibility of investment and a better fiscal discipline and monitoring.

Convergence:

Linkages must be established among all those involved in the developmental sectors from grass-root level to the highest policy making body. Efforts should be made continuously to endure such linkages for a concerted action. The convergence of services is imperative. Interdepartmental coordination must rest with the highest policy making body. The actual implementation should be handed over to the functionaries at the community level. The responsibility to oversee the establishment and coordination of linkages at the grass-root level should rest with all the departments and agencies involved in the socio-economic development of people.

People's involvement:

People's involvement has been a far cry in the family welfare programme both in the state and in India, and has remained a mere rhetoric. Non-governmental organisations (NGOs), resourceful expertise and individuals and community leadership are additional resources. Industry and corporate sectors in recent times have evinced keen interest in population and development. This needs attitudinal change and a determined approach at the political and administrative levels.

Implementation and review:

Implementation of the policy should be 'proactive'. The political and administrative leadership must provide a durable support to sustain implementation. Reviews of programme implementation should take place from grass roots to the highest policy making body. Such reviews should be uniform, periodic, uninterrupted and compulsory. Reviews should include the appraisal of supplementary and complementary progammes on equal footing.

Capacity building:

Although the existing service provision network is large, it is to be discerned that numerous weak areas do exist. Efforts to reduce the fertility to the replacement levels in the state calls for a robust approach. Such an approach is dependent upon the capability built into the system at its disposal. Capacity building is a multifaceted and multidimensional exercise with the sole objective of strengthening the organisational design and structures.

Infrastructure:

The current position of infrastructure is reportedly inadequate. Proper infrastructure is the first essential input in the implementation of a population policy. A thorough situation analysis would reveal the shortcomings in the infrastructure. Without infrastructure in position it will be difficult to implement population control strategies. A situation analysis will help to determine the actual requirements for service provision without any scope for wastage in any kind of resources. Supplementary infrastructure in the form of telecommunication links to all the primary health centres and community health centres is a bare necessity. Computerisation of the PHCs and CHCs would pave way for building up good management information systems which are vital for appropriate and timely interventions. Complementary infrastructure such as all weather roads, dependable public transport system and availability of emergency transportation are crucial for accessing healthcare.

Human resources:

Development of a responsive human resource base which can actively support the implementation, is an important project management aspect. A full complement of workforce in position is a basic requirement. Without a knowledgeable humanpower committed to the cause of population control, the task of implementation will be extremely difficult. Human resource planning, recruitment, training and maintaining a reliable workforce are important facets of programme management.

The new recruits should be internalised through a thorough process of induction, orientation and assimilation. Workforce motivational options such as continuous education, in-service training, career advancement, financial compensation and other facilities should be provided on a continuous basis. It is possible within the resources limitation to create a working environment and culture that will foster pride in the posting and a feeling of ownership towards the programme.

Financial allocations:

Resources allocation should commensurate with the importance and urgency attached to the population control programmes. A definitive political commitment would most likely ensure financial allocations as a token of commitment. Political and administrative leadership must understand that the financial allocations in core sectors like healthcare and family planning are investments in the human capital and not a routine expenditure. Fiscal discipline is critical not only for the proper application of funds but also for transparency in such application. Compulsory annual auditing with wide circulation of such audit reports will add some degree of transparency in fiscal matters.

Research and development:

Since the population control programmes hinge on the behavioural and attitudinal aspects of the acceptors of contraception which is dependent upon societal and cultural factors governing such behaviour or attitudes, quantitative and qualitative research could point to the reasons for the success or otherwise of the programme under implementation. Indigenous technological innovations could save a great deal of financial resources. Investment in research and development would strengthen the programme in the long run.

Contraceptive technologies and proficiency of service providers:

Appropriate contraceptive technologies should be chosen from the wide array of technologies available. Such technologies, besides being more effective must be culturally acceptable in order to have a wide acceptance.

Service providers must be proficient and thorough in the application of any method. Competency based training programmes are known to produce efficient service providers. This is particularly so in case of clinical methods. Deviations in training will be detrimental to the programme. Training methodologies should be well defined and pretested with lucid and easy to understand manuals.

Emerging areas such as emergency contraception, adolescent counseling, family life education and abortion services need integration and emphasis in training programmes.

A general contraceptive training should be developed to familiarise the entire chain of functionaries from the highest level to the gram panchayat member in contraceptive technologies. Such an orientation will strengthen the understanding of the milieu involved in family welfare programme.

Logistics management:

Availability and continuous supply of essential inputs at the subcentre and PHC levels are critical. A good logistics management system in position from PHCs up to the State head quarters would ensure an uninterrupted supply of essential inputs.

Quality of services:

Quality of services rendered is pivotal for the success of the programme. Generally volume of services accessed depends upon the quality of services provided. Continuous quality improvement (CQI) and total quality management (TQM) approaches would prove beneficial in the long run. With facilitating and /or supportive supervision, quality of services could be improved considerably.

Monitoring evaluation:

Benchmarking all the processes involved in programme implementation will facilitate achieving the desired objectives. Benchmarking will also lend clarity and understanding required for implementation. Besides, it will also aid in evaluating the performance and programme separately. Precise indicators should be developed for monitoring and evaluation of the programme.

Bureaucracy and technocracy:

For an effective population policy framing and implementation, a committed administration with an open mind to attract innovations and constructive criticism is essential. Red-tapism and absolute bureaucracy are

inimical for developing and implementing population programmes. Traditional approaches to the family planning programme and population control seem to have exhausted. Innovations in technology and its application will enhance the performance of the family planning programme. Since the contraceptive technology is a specialty, involving complex reproductive physiology, biomedical engineering and devices, hard-core technocrats with requisite aptitude and expertise would be able provide proper technical support to the family planning programme. Non-specialists and general physicians lack proficiency and competence required for the task. Under such circumstances, contraceptive-related complications and morbidity are likely to increase which will eventually affect the programme.

Intersectoral and interdepartmental coordination:

Family planning and the population programme can never be considered either as vertical, or horizontal or stand-alone. Instead, it is a multisectoral programme with the total and committed involvement of all the social, economic and administrative sectors. The political commitment at the highest level, an imaginative administrative leadership and a definite commitment by all the sectors will ensure good intersectoral and interdepartmental coordination.

Mass media:

Several studies have highlighted the role of mass media in India. All India Radio, Doordarshan and other commercial T.V. channels have a very vast reach, even into the remote regions of the state. However, except for the knowledge of at least one contraceptive method, which is universal, there seems to be a great need to augment the content and emphasis of healthcare information. Information on complementary and supplementary programmes will enhance the importance and receptivity of healthcare information.

Education and skills development:

Education of the service providers is an important requirement for an effective population and family planning programme implementation. The education in this regard needs consideration as a stratified edifice to serve the requirements of personnel at various levels. The essential components of education are: technical - for service provision, managerial - programme management and communication skills development for interpersonal contacts. Education programmes at all levels should be designed to improve the proficiency of the personnel.

Awards:

Appreciation and recognition of individual and group contributions are motivational factors, which will serve the ends of the programme very well. Almost all the human endeavours are being recognised with awards and sometimes even rewarded. It is a matter of great concern that outstanding contributions in the field of health and family planning have ever been recognised by the state or central governments. As motivational tools, the investment on the awards would help not only to boost individual and the group's morale but will also instill certain pride in undertaking a certain task.

Recommendations:

In view of consolidating the gains already made in the field of population control, to create and strengthen a formidable organisational/ institutional structures for the fruitful implementation of the population and reproductive health agenda, and, for a true decentralisation of planning and implementation, the following recommendations are made:

1. Establish a State Level Population Stabilization Council presided over by the Chief Minister. It would include outstanding experts in the field of population, family planning, development, representatives of NGOs as members of the Council, besides officials of the concerned departments.

2. District Population Stabilization Committee with Chairperson of the Zilla Panchayat as the Chairman, with local MLAs and MPs, Officials and representatives of the NGOs as the members.

3. Sub-divisional Population Stabilization Committee be established with the Assistant Commissioner as its Chairman with MLAs and Taluk Panchayath Presidents, officials and representatives of NGOs as members.

4. Taluk Population Stabilization Committee with Taluk Panchayath President as the Chairman, MLAs, Presidents of Village Panchayats, officials and NGOs as members.

5. A Regional Population Stabilization Unit in the Hyderabad - Karnataka Development Board for an effective implementation of the programme in the poor performing districts of the region.

6. A Technical Support Group, consisting of outstanding experts in the fields of health, family planning, population, economics, development, finance, education, law and management, be established to advise the

State and District level councils on matters concerning functions of the Council.

7. Interdepartmental Coordination committee under the chairmanship of Chief Secretary with Health Secretary as Member Secretary will guide and monitor implementation of the program uniformly all over the state.

8. Revamp the programme management from the secretariat level to the subcentre. Fixed tenures for functionaries from Health Secretary to ANM would greatly improve efficiency. Programme management must be on the lines of modern management techniques.

9. Education/Training in health programmes and their management, for all those involved in the implementation of the programme including the administrators, panchayati raj/ nagarpalika functionaries should be provided.

10. A detailed baseline survey of all the districts with district and subdistrict action plans extended up to the village level, will help in the effective implementation and monitoring of the progress.

11. Situation analysis of and strengthening of existing infrastructure for service provision, including residential quarters for the service providers in the state should be provided.

12. Provide type designed buildings and equipment, wherever lacking, for service provision, including staff quarters. Attention should be paid to the location of primary health centres and subcentres with the view of greater integration of the staff with the local population.

13. Fill in all the existing vacancies of medical officers, specialists and field workers at service delivery points, on a priority basis. Future recruitment should be on contract basis for all posts.

14. Periodic in-service and refresher courses must be compulsory for all the service providers to keep them at optimum efficiency.

15. Institute a well-designed logistics management programme complete with Logistics management information system (LMIS) for an uninterrupted supply of essential drugs and supplies.

16. Institute a comprehensive health management information system (HMIS) with computerisation of all the PHCs and telelinking them for an effective communication and disaster management.

17. Convergence of service at the village level being essential, the proposed village maternity hut (NPP 2000) or the existing Anganwadi centre should become the rallying point for such convergence of developmental activities, including MCH activities. ANM and the male health worker should be the joint coordinators of such convergence.

18. People's participation in the health and family welfare programme should become a reality than a rhetoric. NGOs should be encouraged to participate more in the programmes.

19. Institute massive health education programmes and family life education for adolescents and strengthen population education in school and college curriculum.

In conclusion, the situation in Karnataka appears ripe enough for chartering its own course in the population control programme. There is a great deal of opportunities to improve the programme performance by an effective planning and concerted implementation. The blue print being sought to be prepared is set in times of great changes both in the nation's economy and on the threshold of a new Millennium. A good population policy would be a beckon for the future.

Bibliography

Government of Karnataka (1999). *Human Development in Karnataka 1999*. Bangalore; Department of Planning.

MOHFW (1999). *Bulletin of Rural Health Statistics in India, June 1998*. New Delhi: Government of India.

MOHFW (1994). *Draft National Population Policy 2000*. New Delhi: Government of India.

MOHFW (2000). *National Population Policy 2000*. New Delhi: Government of India.

MOHFW (several years). *Family Welfare Programme Year Book*. New Delhi: Government of India.

Office of Registrar General (several years). *Sample Registration Bulletin*. New Delhi: Government of India.

Office of Registrar General (1996). *Population Projections for India and States,* New Delhi: Government of India.

PRC, ISEC and IIPS (1995). *National Family Health Survey, 1992-93, Karnataka,* Bombay: PRC, ISEC and IIPS.

PRC, ISEC and IIPS (2000). *National Family Health Survey-2 1998-99, Karnataka* (preliminary Report), Mumbai: PRC, ISEC and IIPS.

Rao, N B , P M Kulkarni and P H Rayappa (1986). *Determinants of Fertility Decline: A Study of Rural Karnataka.* New Delhi, South Asian Publishers.

Rayappa, P H and M Lingaraju (1996). 'Demographic transition in the South: a regional perspective'. *Demography India,* 25(2).

Rayappa, P H and T V Sekher (1998). 'Administration of Health Services' in S Ramanathan (ed) *Landmarks in Karnataka Administration.* New Delhi, IIPA and Uppal Publishers.

Srinivasan, K , P H Reddy and K N M Raju (1978). 'From One Generation to the Next: Changes in Fertility, Family Size Preferences and Family Planning in an Indian State Between 1951 and 1975'. *Studies in Family Planning,* 9(10-11).

Srinivasan, K (1995). *Regulating Reproduction in India's Population: Efforts, Results and Recommendations.* New Delhi, Sage.

United Nations (1961) *The Mysore Population Study;* Population Studies No. 24, New York, United Nations.

Visaria, P and Chari, V (1998). 'India's Population Policy and Family Planning Program: Yesterday, Today and Tomorrow', in Jain, A. (ed.) *Do Population Policies Matter?* New York; Population Council.

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