

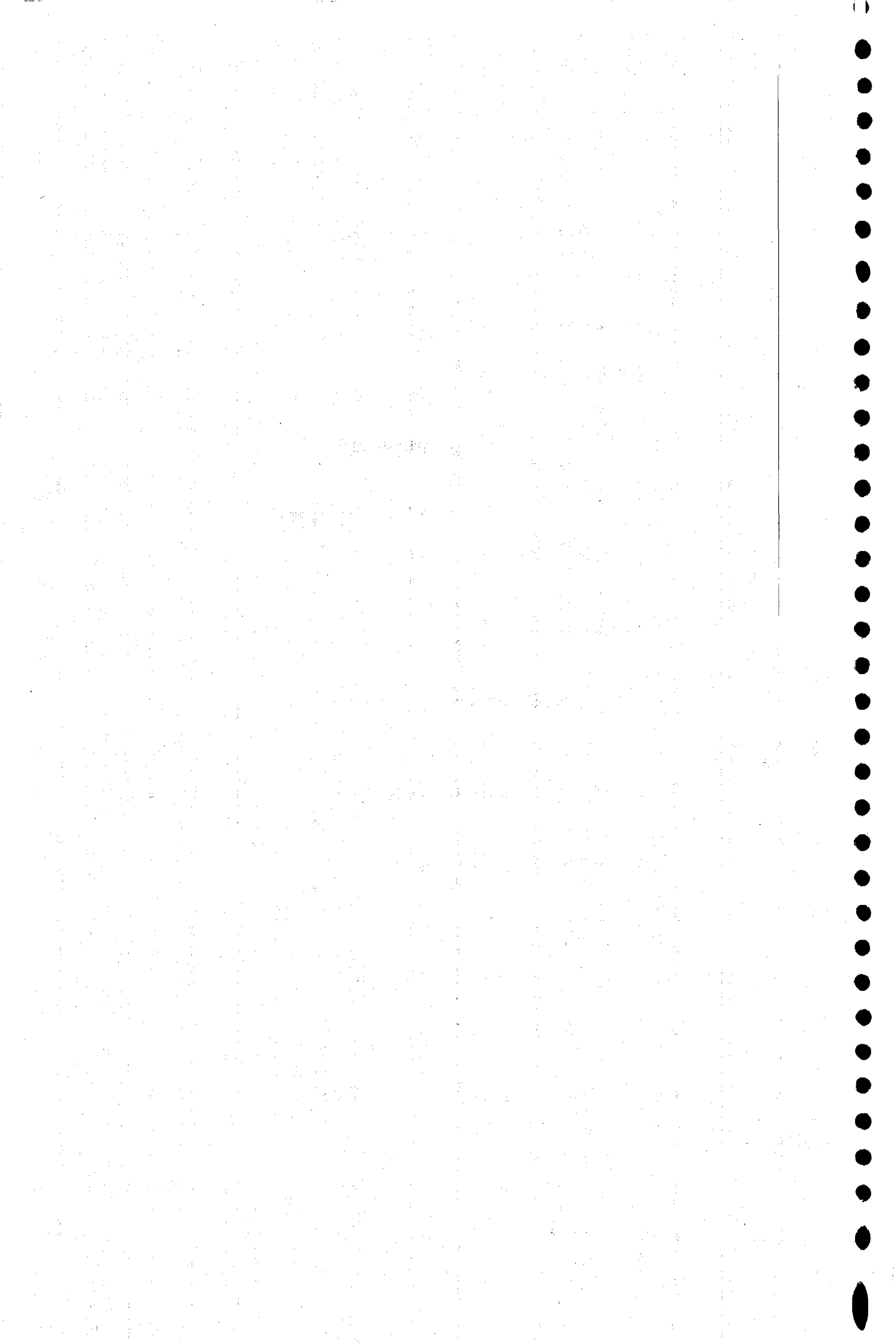
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THE PROGRESS OF INDIAN STATES

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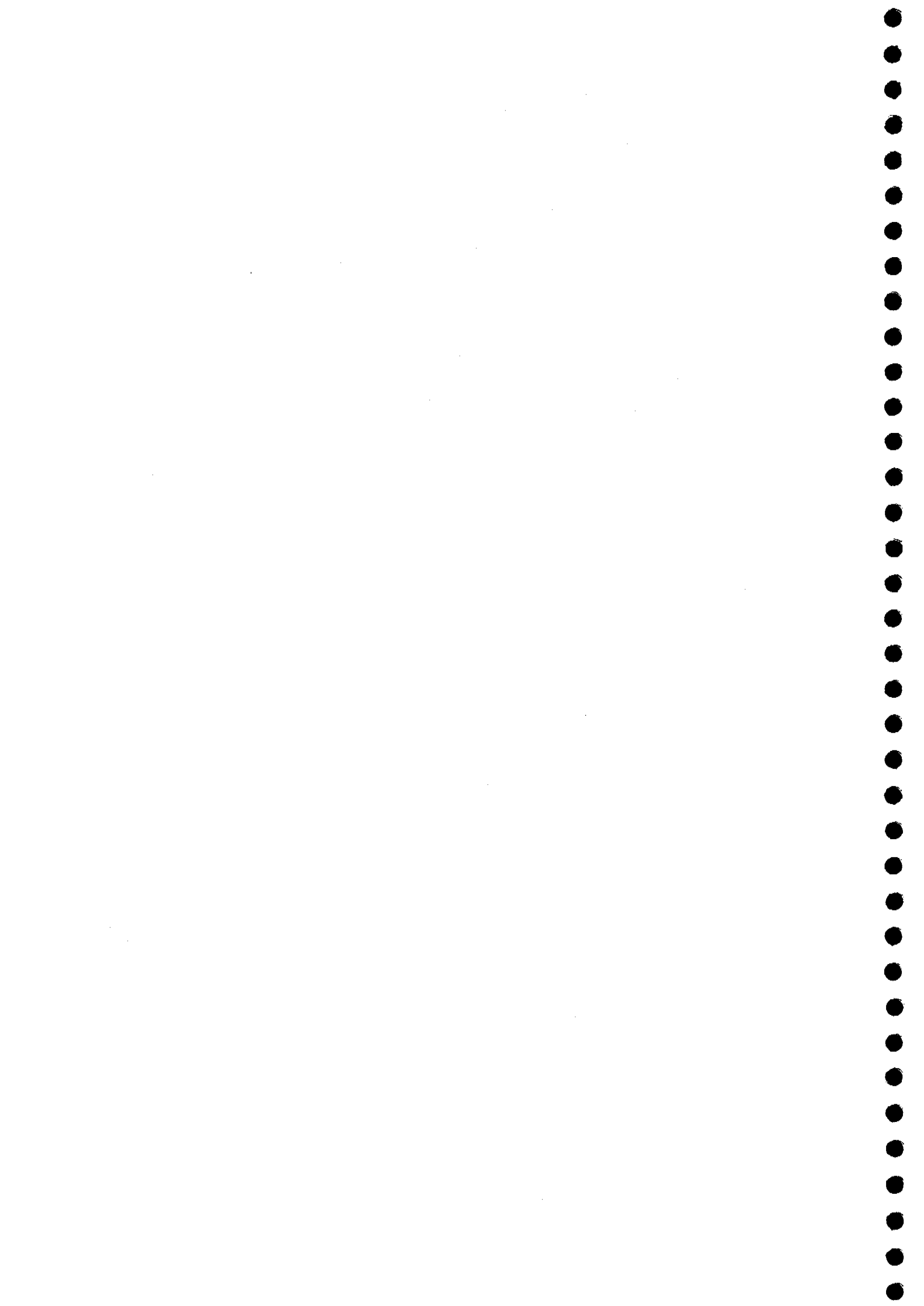
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*A Report on the achievements of
Indian states in child survival, health, nutrition,
family planning, maternal mortality, primary education,
gender equity, child labour — marking the progress
towards India's goals for children*

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UNICEF/MILAS KHOPKAR

*Dedicated to
India's 350 million children and to
James P. Grant,
who cared for each one of them*

James P. Grant was Executive Director of UNICEF for 15 years until his death in January 1995. He led the worldwide effort to place "Children First" on the national agenda of every country.



UNICEF/DUDLEY HARRIS

This Report has been prepared by A. K. Shiva Kumar and Jon E. Rohde, with assistance from Uma Shanker. It incorporates constructive ideas and comments from colleagues within UNICEF, in government and other concerned agencies. While ascribing everything good in the Report to our several colleagues, any errors and omissions are entirely attributable to the authors. The views expressed do not necessarily reflect the official policies of UNICEF.

THE PROGRESS OF INDIAN STATES

1995

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INTRODUCTION

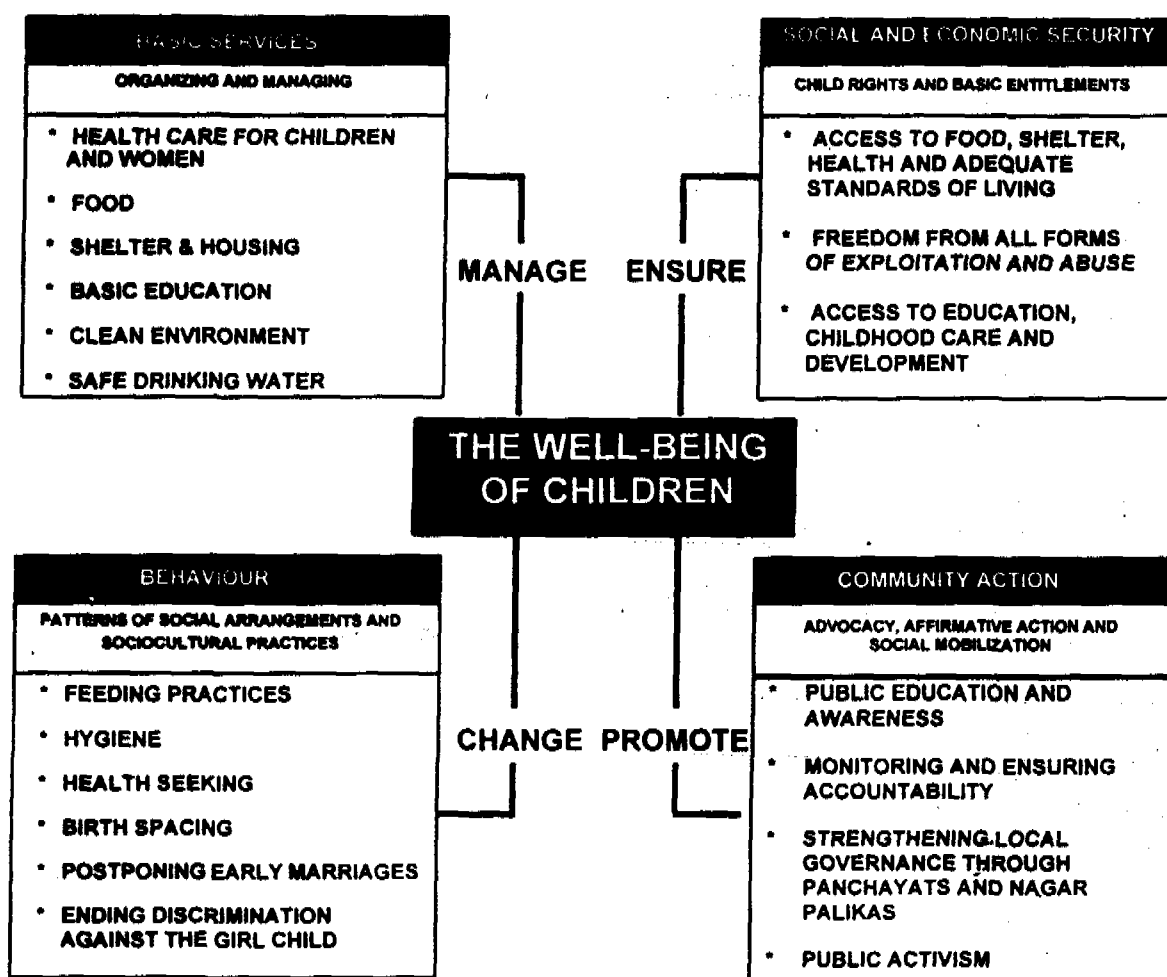
This publication, "The Progress of Indian States," is about directly measuring social progress in India. It focuses on things that are changing for the better, and on things that can and should be changed for the better immediately. It provides tangible data on how children are faring in different states within the country, and offers a basis for comparison.

The intention behind such a comparison, however, is not to be provocative, or to find fault, but to show what is possible.

The well-being of children is the outcome of public action along several fronts. Some of the efforts are quantifiable, but many of them are not easily measurable.

PUBLIC ACTION FOR CHILDREN

An Illustrative framework for policy intervention



Clearly then, measuring the well-being of children using quantitative data, however necessary, provides only one dimension of the picture. Similarly, whereas some of the input, process, output and outcome indicators can be quantified to facilitate monitoring of performance and progress, putting a numerical value on several other important factors, such as greater community participation, enhanced freedom for women or social integration, is difficult.

India has long displayed a remarkable potential to achieve what it sets out to do. At the end of 45 years of planned development, several positive achievements characterize the Indian economy, particularly in terms of commodity production. Between 1950 and 1994, per capita Net National Product (at 1980-1981 prices) increased from Rs 1,127 to Rs 2,282, recording an average growth rate of 1.65 percent per annum. Foodgrains production more than tripled from 51 million tonnes in 1951 to 171 million tonnes in 1990, and to 182 million tonnes in 1994. The index of industrial production shows a twelve-fold increase between 1950 and 1994.

However, from a child's perspective, the balance sheet of development looks somewhat mixed. Life expectancy at birth increased from 33 years at the time of Independence to 61 years in 1992; and infant mortality declined from 146 per 1,000 live births in 1961 to 74 in 1993. Remarkable progress has been achieved in immunizing children and in the control and eradication of guineaworm. Yet, around 2 million infants still die each year today, almost the same number as in 1960; and most of these deaths are avoidable. Despite the fact that the country has built up a buffer stock of 30 million tonnes of foodgrains, and adequate administrative and managerial capabilities to cope with famines and droughts, some 63

percent of India's children below the age of five years are undernourished. Literacy rates more than doubled from 24 percent in 1961 to 52 percent in 1991; yet there are nearly 60 million more illiterate persons today than there were in 1961. Only 64 percent of children in India reach grade 5 of primary schooling, and the proportion of girl children enrolling and completing primary schooling remains lower than that of boys. And of those completing grade 5, many cannot even read or write a simple sentence.

One country—many peoples

India is one country, but inhabited by many peoples. National level analyses mask genuine advancements in different regions, and also conceal wide disparities. It is, therefore, not at all surprising to find that conditions of children vary enormously across the country. Only 29 countries in the world—and all of them by far richer—reported infant mortality lower than Kerala's rate of 13 per 1,000 births in 1993. On the other hand, there were only 20 countries or so in the world—and most of them poorer—that reported infant mortality higher than Orissa's rate of 110 per 1,000 births. The life expectancy of a girl born in Kerala today, around 74 years, is 20 years more than that of a girl born in Uttar Pradesh. There is as much to learn from the experiences of other countries that have recorded rapid improvements in the well-being of children as there is from the differential performance of states within India. For instance, while some states have been able to reduce the striking caste, class and gender differentials in the well-being of children, others have not been as successful. Children of parents belonging to socially and economically backward communities continue to face far greater deprivations than other children.

Limitations of data

Whereas effective policy design requires good data, the Indian data-base on children has several limitations. Basic statistics on several quantifiable indicators relating to morbidity, education, nutritional well-being and so on, are not systematically collected and presented even at the state level. Data are often not available for the less populous states and Union Territories, a deficiency that is reflected in this Report. As we move to the district or sub-district levels, and focus on different socio-economic groups in society, reliability of available data is still less. Additionally, critical issues relating to quality, coverage, timing and relevance of data remain unresolved. But the problem of unreliable, incomplete and inadequate data is not unique to India. Most countries face a similar situation. However, we believe that in the Indian context, with each year that goes by, this weakness reflects less and less a lack of capacity and more and more a lack of priority.

Reaching the twenty-first century

India has accepted the challenge of meeting the goals for the year 2000 adopted during the 1990 World Summit for Children. As in the past, the task may look difficult, but with political commitment and popular support, India can succeed once again in accomplishing what it has set out to achieve. India should enter the 21st century, the next millennium, having eliminated the worst forms of deprivation, and giving its children the start they need to shape their own future.

This first Report on the **The Progress of Indian States** is an attempt to bring out the significant accomplishments of Indian states in promoting the well-being of children. It addresses issues of critical significance to

India's 350 million children and to future generations. The intention is to draw public attention to the various forms of vulnerability that children face across the country, and to prompt action that will enhance their well-being.

Each section of the Report draws attention to current levels of achievements, highlights disparities and the differential pace of progress within the country, and points to several key interventions that are needed to improve the situation of children. We have also presented a **League Table** in each section that ranks Indian states using a single indicator, with the intention of giving the reader some idea on where India and its states stand vis-a-vis the country's commitments to children. While we are aware of the limitations of using quantitative data of this kind, we feel that they serve a useful purpose in at least highlighting the potential for progress. It is only when states advance that India will advance.

This Report does not attempt to cover every issue, but highlights some of the major areas of concern for children. It is designed to raise more questions than it answers, and to stimulate dialogue. With the country embarking on a major programme of political decentralization and local self-governance, data such as these should become the fundamental instruments of accountability in our democracy. To that extent, this Report emphasizes the need to focus on children and the importance of social statistics. It is a contribution that should not merely be accepted at face-value, but should be used to demand more facts, encourage public discussion, and to see, measure and promote progress for children. Advancing the well-being of its children is the best investment that India can make.

India's commitment to children

The **Constitution of India** reiterates several times over the importance of improving the well-being of children. Article 39 of the Directive Principles of State Policy, for instance, requires that the State shall, in particular, direct its policy towards securing:

that the health and strength of workers, men and women, and the tender age of children are not abused, and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength;

that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity, and that childhood and youth are protected against exploitation and against moral and material abandonment.

Similarly, Article 24 stipulates that no child below the age of 14 years shall be employed to work in any factory or mine or engaged in any other hazardous employment. And according to Article 45, the State shall endeavour to provide free and compulsory education for all children until they complete the age of 14 years.

Nearly 25 years later, in 1974, India reaffirmed its Constitutional obligations to children in the **National Policy for Children** by declaring that:

"It shall be the policy of the State to provide adequate services to children, both before and after birth and through the period of

growth, to ensure their full physical, mental and social development. The State shall progressively increase the scope of such services so that, within a reasonable time, all children in the country enjoy optimum conditions for their balanced growth."

In November 1990, the Government of India endorsed all the 27 survival and development goals for the year 2000, agreed on at the **World Summit for Children**, and firmly committed to the children of this country that the worst elements of poverty, ill-health, malnutrition, illiteracy, exploitation and an unhealthy environment would soon become conditions of the past.

Two years later, in December 1992, the country committed itself once again, this time by ratifying the **Convention on the Rights of the Child**. The Convention is guided by the principle of a "first call for children"—a principle that the essential needs of children should be given highest priority in the allocation of resources at all times. It obligates the State to respect and ensure that children get a fair and equitable deal in society and advocates concrete public action by all individuals and agencies—government as well as non-governmental, local, national, regional and international—to create an environment in which all children are able to live securely and realize their full potential in life. Such an affirmation is contained in a detailed "**National Plan of Action: A Commitment to the Child**" adopted in 1992 by the Government of India.

Children's Rights according to the Convention

The **Convention on the Rights of the Child (CRC)** was adopted by the General Assembly of the United Nations on 20 November 1989. It seeks to protect children everywhere against exploitation, neglect and abuse. Many of its provisions are reflected in the year 2000 goals for improving the well-being of children, agreed on at the 1990 World Summit for Children.

Human rights conventions usually take several decades to achieve widespread international acceptance. **In only five years, the Convention on the Rights of the Child has been ratified by 175 nations.** The governments of six more countries have signed the document, indicating their intention to ratify. Only 11 nations have neither signed nor ratified. Several of those are expected to do so before the end of 1995.

The **Convention** draws attention to four sets of civil, political, social, economic and cultural rights of every child. These include:

THE RIGHT TO SURVIVAL

which includes the right to life, the highest attainable standard of health, nutrition and adequate standards of living. It also includes the right to a name and a nationality.

THE RIGHT TO PROTECTION

which includes freedom from all forms of exploitation, abuse, inhuman or degrading treatment and neglect, including the right to special protection in situations of emergency and armed conflicts.

THE RIGHT TO DEVELOPMENT

which includes the right to education, support for early childhood development and care, social security and the right to leisure, recreation and cultural activities.

THE RIGHT TO PARTICIPATION

which includes respect for the views of the child, freedom of expression, access to appropriate information, and freedom of thought, conscience and religion.

LEAGUE TABLE

This table ranks Indian states according to one of the most revealing of all indicators of the well-being of children—the number of children who die before the age of five (for every 1000 live births).

Many aspects of life are reflected in this one statistic—including the income and education of parents, the prevalence of malnutrition and disease, the availability of clean water, the efficacy of health services, and the health and status of women.

Each League Table in this Report presents data for the more populous states comprising over 96 percent of India's population. League Table data for the smaller states and Union Territories, wherever available, are presented in the Annexure at the end of the Report.

STATE	Under-5 mortality rate 1992-1993
1. Kerala	32
2. Punjab	68
3. Himachal Pradesh	69
4. Maharashtra	70
5. Tamil Nadu	87
6. Karnataka	87
7. Andhra Pradesh	91
8. Haryana	99
9. West Bengal	99
10. Rajasthan	103
11. Gujarat	104
INDIA	109
12. Bihar	128
13. Madhya Pradesh	130
14. Orissa	131
15. Uttar Pradesh	141
16. Assam	142

**Source: National Family Health Survey
1992-1993**



**UNDER-FIVE MORTALITY RATE
OF 70 BY THE YEAR 2000**

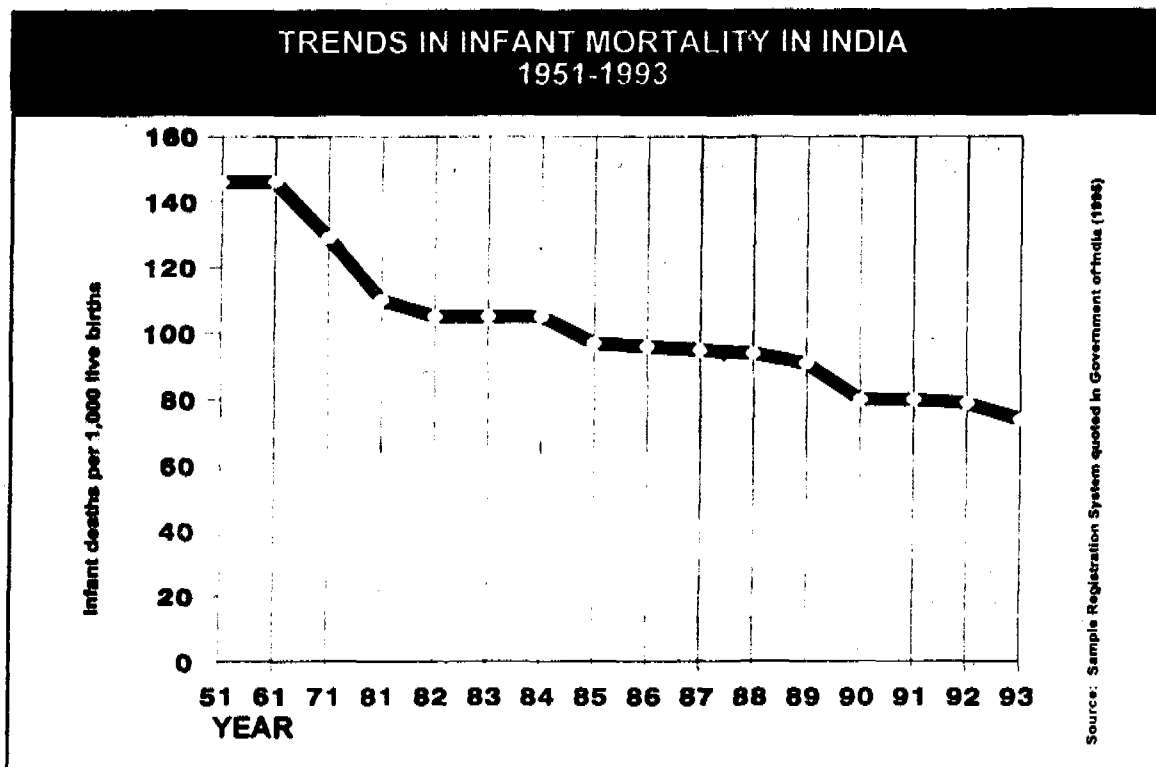
SURVIVAL

The bottom line

The reduction of under-five mortality rates (U5MR) has, over time, emerged both as an aim and a measure of progress for children. It has also gained widespread acceptance as one of the most important indices of development. Almost all governments have accepted, as a goal for the year 2000, a reduction of U5MR to 70 or less per 1,000 live births. The U5MR is, however, more than just a measure of child deaths. It is a comprehensive indicator that reflects the quality of life in any society. While it is a prime indicator of the progress of children, it is directly affected by, for example, the income and education of parents, the prevalence of malnutrition and disease, the availability of clean water and safe sanitation, the efficacy of health services, and the health and status of women

in society. To that extent, the U5MR figures present much more than a measure of survival; the quality of life for the much greater numbers of children who survive is summed up in the figure for the much smaller number of children who die.

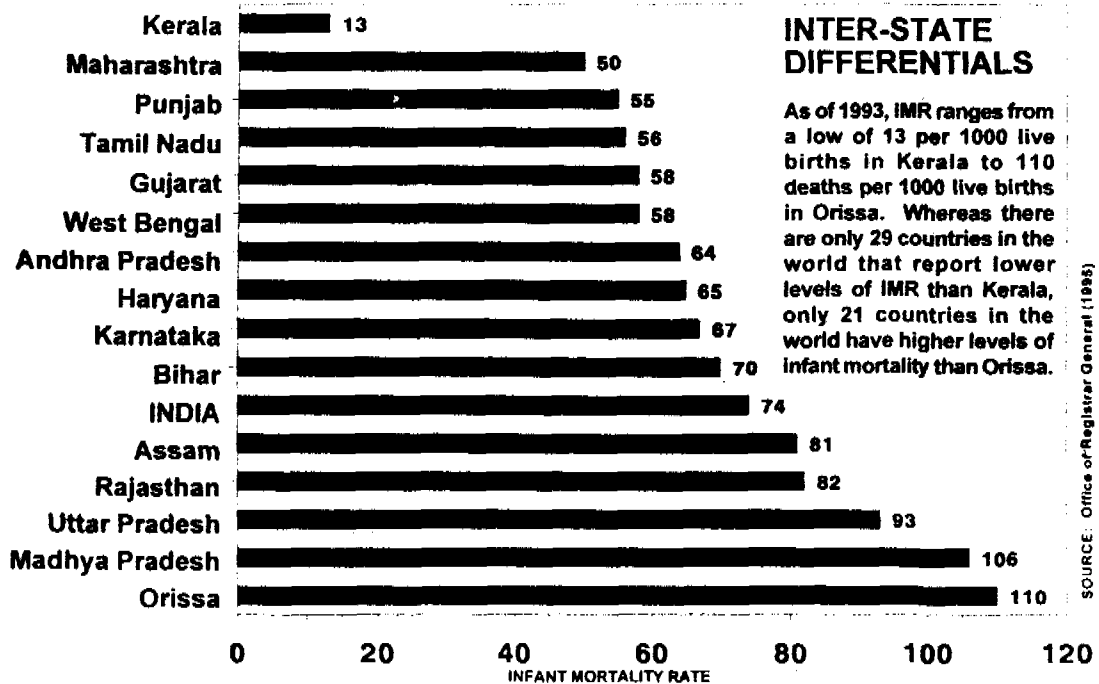
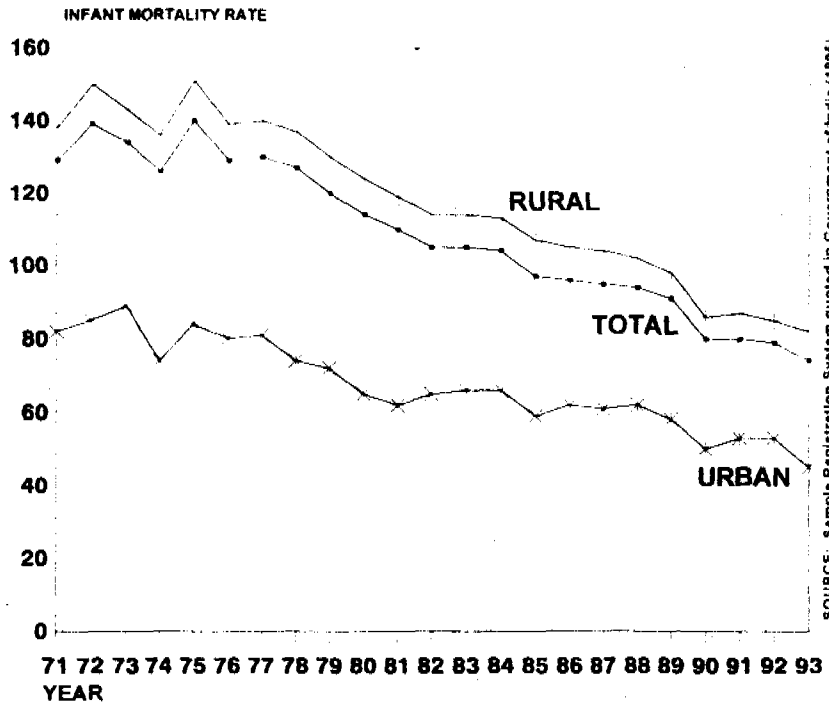
The technical definition of U5MR poses no problem: it is the number of deaths before the age of five for every thousand live births. Although the U5MR captures both child survival and health conditions of children through the first five years of age, many countries, including India, measure more frequently and accurately the infant mortality rate (IMR), which gives the number of deaths of infants before completing the age of one, for every thousand live births. However, trends in U5MR tend to parallel those in infant mortality.



DISPARITIES IN INFANT SURVIVAL

RURAL-URBAN DIFFERENTIALS

Whereas the IMR in both rural and urban India has declined over the years, India's achievement in reducing IMR has been greater in urban areas than in rural areas, where 74 percent of the country's population still resides. As a result, even today, the IMR in rural areas (82 per 1000 live births) is nearly double the IMR in urban areas (45 per 1000 live births).



India has done well to reduce its U5MR from 236 per 1,000 live births in 1960, to 177 in 1980 and to 109 in 1993.

Of the 25 million children born in India every year, close to 2.7 million die before completing five years of age. Of these, a significant proportion, nearly two-thirds, or close to 2 million children, die before reaching the age of one, almost the same number that died in 1961. That the same number of infants die in India today as they did 30 years ago is, to a large extent, the result of a growing population despite the consistent decline in birth rates and infant deaths. Four states, Uttar Pradesh, Madhya Pradesh, Bihar and Rajasthan, account for 47 percent of children born and for more than 50 percent of infant deaths in India.

A persistent feature of child survival in India is the disparities that exist between and within states, rural and urban areas and communities. These differences in survival mask even larger differences in the circumstances in which children live, for

those who die represent a small minority even in the most deprived communities. Many more are disabled by polio, by blindness due to vitamin A deficiency, or by pervasive malnutrition that is the main underlying cause of high under-five mortality. Equally devastating but less common diseases, such as encephalitis, hepatitis, typhoid, kala-azar, or nutritional disorders like rickets, scurvy and pellagra, are all found in higher proportions in the same populations with high mortality.

Achieving reductions in child mortality has several significant implications for India's development. Notably, all the evidence suggests that improvements in child survival lead to a slowing of population growth, perhaps more dramatically than any other single intervention. In fact, a remarkable improvement in survival, such as halving of U5MR, results only in an increase of six or seven percent in the number of children who survive. Yet, such an improved survival is associated with a drop of as much as 50 percent in fertility and birth rates.

Improving child survival

The single most important population intervention

Population growth rates and fertility correlate directly with the under-five mortality rate (U5MR). Many are inclined to believe that saving children's lives exacerbates population growth, but evidence from all over the world suggests exactly the opposite. In India itself, Kerala with an U5MR of 32 and Goa with an U5MR of 39 are among the states with the lowest child mortality rates. Not surprisingly, these are also the two states with the lowest fertility rates in the country. Whereas Kerala reports a Total Fertility Rate (TFR) of

1.7, Goa reports a TFR of 1.9. Were all of India to have Kerala's birth and child death-rates, there would be 10 million fewer births and 1.5 million fewer infant deaths in India every year—a dramatic decline in population growth.

Higher child deaths are associated with higher births, and invariably the births far over-compensate for high death-rates among children. Paradoxically, this leads to population growth, being maximal in communities with the highest mortality of children.

LEAGUE TABLE

Diarrhoeal disease continues to be a major killer of children in India despite the availability of the low-cost remedy known as Oral Rehydration Therapy (ORT) which was developed in India some 25 years ago.

This table ranks states according to the percentage of cases of childhood diarrhoea that are treated with Oral Rehydration Salts (ORS) or with recommended home solutions. These figures reflect the capacity of the primary health care system to convey to every family the essential knowledge that the solution to diarrhoeal deaths among children is very much within the home.

PERCENTAGE OF CHILDREN WITH DIARRHOEA WHO RECEIVED EITHER ORS OR RECOMMENDED HOME SOLUTION

STATE	1992-1993
1. West Bengal	75
2. Himachal Pradesh	45
3. Maharashtra	42
4. Orissa	41
5. Kerala	38
6. Assam	35
7. Karnataka	34
8. Punjab	33
9. Madhya Pradesh	33
10. Andhra Pradesh	32
INDIA	31
11. Tamil Nadu	27
12. Bihar	23
13. Uttar Pradesh	23
14. Rajasthan	23
15. Gujarat	21
16. Haryana	19

SOURCE: National Family Health Survey, 1992-1993



**ACHIEVING USE OF
ORAL REHYDRATION THERAPY
IN 80 PERCENT OF CASES**

HEALTH

The basic service

No one can claim that immunization plus oral rehydration therapy (ORT) equals health for the child. But it is fair to say that progress towards universalizing of these two particular techniques is both a measure and a means of progress towards health for all. Fifteen years ago, the benefits of immunization were restricted to no more than 15 percent of the developing world's population. Today, they are reaching almost 80 percent, and preventing approximately 3 million child deaths and half a million cases of polio every

year. A little over a decade ago, ORT, the low-cost life-saving method of preventing and treating dehydration caused by diarrhoeal disease, was hardly known to the outside world. Today, it is being used by almost 40 percent of all families in the developing world and saving about a million lives each year. Despite such phenomenal progress over the last two decades, some 2 million children worldwide still die every year from vaccine-preventable diseases, and another 3 million succumb to diarrhoeal disease.

Is your child fully protected?

Immunization, provided at the right age, offers nearly complete protection from six of the most common and deadly infectious diseases of childhood. In the first year of life, starting from birth, and ideally completed within nine months, but no later than one year, a child needs to receive four different vaccines on four or five occasions. The universal immunization programme, through the primary health care system, seeks to reach every child born even in the most remote areas of the country.

Successful immunization of every child, however, requires not only that vaccines are available and are administered by the health system, but more importantly, that parents actively seek out these services. The **National Immunization Card** for every child clearly shows the doses that are required at different ages. And so, parents do not even need to know the names of the vaccines or the schedule, provided they return regularly to their health provider and ask that the boxes in the card be filled in a timely way. This will ensure that all the vaccines have been administered at the appropriate age.

As a matter of fact, anyone can check whether a child is fully protected.

Check the card

CHILD IMMUNIZATION CARD			
7/3/94 DATE B.C.G.			
22/4/94 DATE DPT-1	24/5/94 DATE DPT-2	21/6/94 DATE DPT-3	
22/4/94 DATE OPV-1	24/5/94 DATE OPV-2	21/6/94 DATE OPV-2	
2/12/94 DATE MEASLES			

When all the boxes are full, it shows that the child is fully protected from six killer diseases of childhood.

Sustained immunization of infants is a key indicator of the outreach potential of a country's health care system and its ability to carry life-saving, preventive, promotive and curative care into every village and every household. When the goal of universal childhood immunization by 1990 was proposed more than 10 years ago for India, many public health experts described it as unrealistic. Even while acknowledging India's success in eradicating smallpox by 1975, they pointed out that universal immunization was a different matter: smallpox had been eradicated not by universally immunizing everyone, but rather

by containing smallpox outbreaks through intensive vaccination of all contacts with identified cases. With reported immunization coverage rates exceeding 80 percent today, India's achievements in immunization have proved the sceptics wrong.

Building on the existing health infrastructure, health workers were trained and equipped to reach out into each and every one of the villages they served. They made a regular monthly visit to provide immunization for all children in their first year of life, administering basic vaccines to protect them against common infections.

Fixed day, fixed site

The backbone of the immunization programme and a major factor in its success is the "fixed day, fixed site" strategy, which has helped establish a regular contact between the community and the service provider. The venue, date and time of the immunization session in each village are fixed and widely publicized through wall paintings, display boards, pamphlets and word of mouth, making this essential life-saving service almost a festive occasion. "Catch-up rounds" are organized in districts where the coverage is low. The declining trend in the incidence of vaccine-preventable diseases testifies to the effectiveness of the immunization programme.

The health worker has the task of providing, on a fixed day of every month, immunization services to each of five to seven villages assigned to her.

The success of this system has shown that communities will use such services when they become confident they would be provided on a regular and reliable schedule. This is in marked contrast to the previous system, which depended on the health worker drumming up interest in sporadic immunization sessions by making personal visits to each and every household in the village.

In districts where the Child Survival and Safe Motherhood programme is operating, the fixed-day immunization sessions are being converted into comprehensive "mother and child protection" sessions, where an integrated package of services for mothers and children is provided. Women, who might otherwise have difficulty in seeking health care for themselves, are now able to take care of their own health, and at the same time, look after that of their children.

Immunizing every child born in India:

What makes it work?

The Universal Immunization Programme (UIP) aims at immunizing every one of the 25 million children born in India each year. The success of the programme shows what can be achieved when public advocacy and programme management are combined creatively.

In the early 1980s, close to a million Indian children were dying each year from vaccine-preventable diseases. Immunization coverage was very low—below 30 percent, and less than five percent for polio and nil for measles. By the early 1990s, reported coverage exceeded 80 percent for each antigen. Even in the country's most backward districts, immunization contact is reported to exceed 70 percent. The success of the immunization programme within a relatively short period of time has demonstrated the capacity of the health system to reach out to nearly all pregnant women and children with early and repeated services even in remote areas. It has laid the foundation for a primary health care system which has now been broadened to offer immunization plus a range of other health services, such as vitamin A supplements, oral rehydration salts, treatment of anaemia and pneumonia.

What were the reasons for this success? Firstly, the immunization

programme enjoyed political commitment at the highest level. Prime Minister Rajiv Gandhi made immunization his personal priority, when in 1985, he committed the nation to universal immunization as a "living memorial" to Mrs Indira Gandhi.

Secondly, the programme was carefully planned and rigorously managed so as to deliver the service. Building on the existing health system in operation in the districts, immunization coverage was intensified by working district by district in a step-by-step approach. Overall, the achievements on the supply side—vaccine production, refrigerated distribution, and the training of health workers, administrators and engineers were remarkable.

Finally, all possible community resources were mobilized to raise public knowledge of the programme and to create a demand for the service. Members of Parliament, religious leaders, associations of health professionals and businessmen, Rotarians; *panchayat* members, schoolteachers, *anganwadi* workers, sports personalities, the folk media, *mahila mandals* and youth organizations all supported the immunization drive.

Immunization efforts have since continued, but not as a single effort. Recognizing that many such low-cost and effective technologies can be made available to virtually all, the **child survival and safe motherhood** strategy of the Government now ensures that along with monthly immunization, critical interventions to treat diarrhoea with ORS packets and continued feeding of sick children are also available. At the same time, mothers are provided with prenatal care and given iron tablets to treat their anaemia. Children are protected from vitamin A deficiency with a twice yearly dose of vitamin A syrup. In family planning, supplies are made conveniently available. Thus, through universal immunization contact, women, infants and young children

are linked effectively to the entire primary health care system.

At the same time, recognizing that some life-threatening conditions simply cannot be treated in the village, every pregnant woman is also informed of the danger signs that could occur late in pregnancy or during delivery which might necessitate her being moved immediately to the nearest hospital, usually at the headquarters of a *taluka* or district. There, emergency obstetric care and doctors can provide needed surgical intervention, blood transfusion and more sophisticated care to save the life of the mother and the child. This extends available hospital facilities even to those living in remote and deprived rural areas as well as urban slums.

Improving immunization data

Government reports of immunization coverage are based on the number of doses of vaccine given against the expected number of infants born in the population. On this basis, during 1993-1994, 23 states and Union Territories of India reported child immunization coverage rates that exceeded 80 percent. Over the same period, in 285 (or 73 percent) out of 393 districts that reported data, child immunization coverage rates were more than 80 percent.

Recent survey data from interviews with mothers show that in some states, the proportion of children who report having received vaccine is very close to the calculations made by the health authorities on the basis

of vaccines administered. In other states, however, the gap between government reports and field surveys is as wide as 40 percent. For instance, according to the coverage evaluation surveys conducted in 113 districts during 1993-1994, only in 51 percent of the districts did immunization coverage exceed 60 percent. The National Family Health Survey reports a full immunization coverage rate of only 35 percent for 1992-1993.

Undoubtedly, this points to the need for more accurate, reliable and timely data. More importantly, honest reporting and special measures to bring actual levels of vaccination up to the target of 90 percent are necessary if the community is to be adequately protected.

HEALTH

The case-containment experience of smallpox, and the intensified local immunization efforts have provided useful clues toward eradication of polio (which has been successfully accomplished in the

western hemisphere), and in the current campaign to eliminate guineaworm, where identifying cases and providing effective treatment have already curtailed further spread of the disease.

On the road to eradicating polio

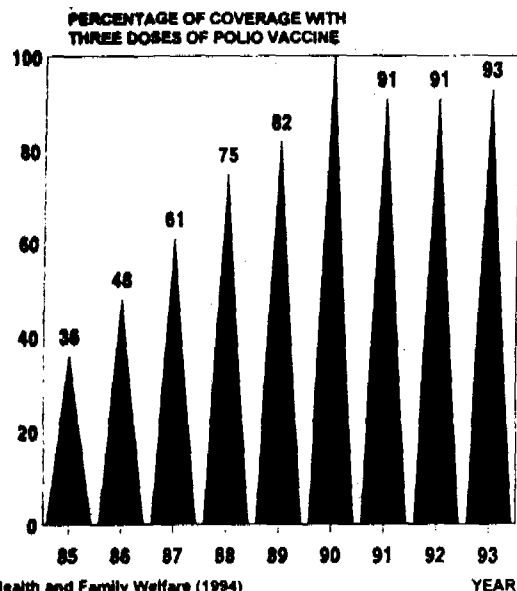
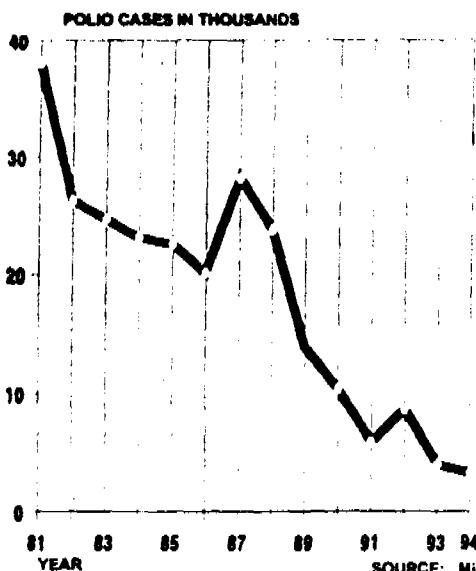
Delhi and Kerala show the way

The last child to be paralysed by polio in all of India may well be born within the next five years

More than 200,000 Indian children every year have traditionally and regularly entered the ranks of the crippled. The more fortunate, with extensive modern hospital care, have received braces or helpful operations to strengthen their crooked limbs, but most are doomed to a life substantially disabled.

Today, vast areas of India no longer face this threat. Effective protection against polio is provided by a simple vaccine that

is administered orally three times to children between the ages of one and four months. This inexpensive vaccine, when given to every child below age three, can not only prevent the disease in each child, but can also drive the virus virtually out of existence. Successful campaigns in Delhi and Kerala have shown the way through special Pulse Immunization Days. When every child under age three is given an extra dose of vaccine orally, all on the same day, this ancient scourge can be eliminated.



SOURCE: Ministry of Health and Family Welfare (1994)

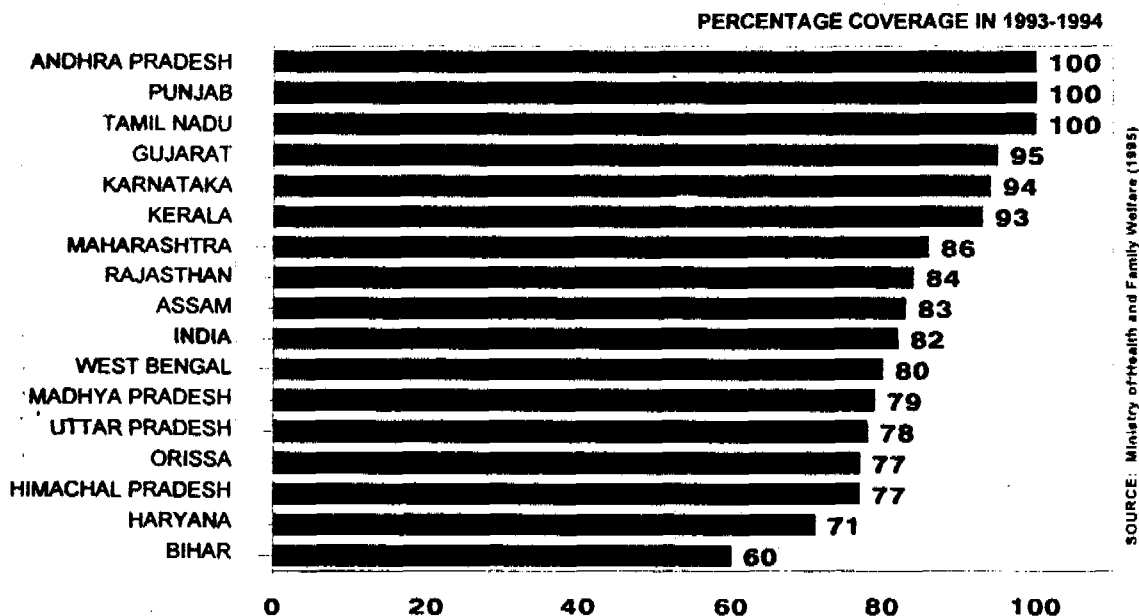
Tetanus spores, found throughout the environment, can enter any wound or cut and cause the dreaded lockjaw and spasms that claim the lives of nearly 125,000 Indian children every year. Paradoxically, the freshly cut umbilical cord of the newborn baby is the most easily infected, and traditional practices of unclean delivery can sow the seeds of death in the first moments of life. But not if the mother is immunized; antibodies stimulated by tetanus toxoid

injections during pregnancy can protect both the mother and her newborn baby from this common germ.

While efforts are being made to achieve universal immunization coverage, it is important to recognize that diseases like measles, neonatal tetanus, and diarrhoea continue to be most common among the least privileged, the least well-nourished and those least served by health services.

Tetanus

Tetanus can be virtually eliminated if every woman is provided at least two doses of tetanus vaccine during pregnancy (or a booster if she has had the vaccine before).



Whereas on an average 82 percent of pregnant mothers received tetanus toxoid during 1993-1994, the percentage varied from 60 percent in Bihar to 100 percent in Andhra Pradesh, Punjab and Tamil Nadu.

Oral Rehydration Therapy

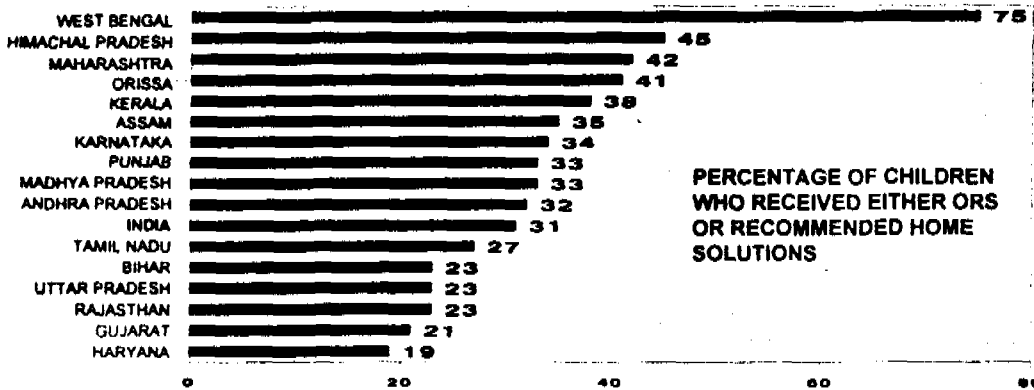
In 1968, when researchers in Calcutta and Dhaka first developed the Oral Rehydration Therapy (ORT), the only hope to save a life from dehydration due to diarrhoea was with the administration of intravenous fluids. ORT changed all of that, making treatment of the most common killer of children possible even in a poor village home. Following the demonstration that cholera mortality could be reduced by 90 percent, even in the squalid conditions of the refugee camps during the liberation war of Bangladesh, ORT technology spread throughout the world, promoted widely by World Health Organization and UNICEF. It is estimated that two-thirds of all deaths due to diarrhoea could be prevented with timely use of oral rehydration. One million deaths

are already being prevented with this technology, and in places where ORT use rate is high, deaths from dehydration have become a distinct rarity. Described by the *Lancet* as "potentially the most important medical advance of the 20th century," ORT has yet to attain widespread use in the very country of its origin. Sadly, habits die hard, and, paradoxically, ORT use remains low even where people are highly educated and wealthy. Long-standing practices of prescribing useless or harmful anti-diarrhoeal drugs continue to prevail, fostered by the belief that an expensive medicine prescribed by a doctor must somehow be better than a cheap therapy that could be taken at home and administered by the mother herself.

ORT use in India: Still low

In West Bengal, the traditional home of cholera and also the home of ORT, the life-saving effect of sugar and salt solutions has long been known. Perhaps, this is why the state has the highest use of oral rehydration solutions, the simple sugar-salt formulation available in packets that can save the lives of cholera victims and those with any kind of diarrhoea. In West Bengal, diarrhoea wards in the hospitals have been closed,

and mortality from uncomplicated diarrhoea is extremely rare. Whereas India as a whole shows only around one-third of diarrhoea cases using ORS or recommended home solutions, in West Bengal almost 75 percent did so for the last episode of diarrhoea. It is not surprising that in this state, the fall in deaths from cholera, gastroenteritis and diarrhoea of other forms has been dramatic.



SOURCE: National Family Health Survey 1992-1993

Today in India, diarrhoea continues to claim more deaths among the poor than any other disease. And yet only during dramatic cholera outbreaks is there a wide public cry for ORS packets and a general acceptance of ORT. While the country continues to invest large sums of money in modern high technology medical science, the home-grown, India-discovered miracle of oral rehydration is still unknown and unused by a majority of Indian families. This results in the death of 760,000 to 800,000 children from diarrhoea each year.

In celebration of 25 years of the discovery of ORT, India has taken up the challenge to provide a source of ORS packets in each and every community. While government health services and *anganwadi* centres are obvious supply points, the commercial sector can also readily promote this product, now classified as an over-the-counter item for sale in retail outlets.

The Simple Solution

Until 25 years ago, cholera and other forms of severe diarrhoea, causing acute dehydration and life-threatening conditions, could be treated only with the expensive technology of intravenous solutions, administered in hospitals and clinics by a doctor or a skilled health worker. The situation today is very different, thanks to the discovery of the Oral Rehydration Therapy (ORT).

In 1968, researchers in Calcutta and Dhaka found that drinking a mixture of glucose and salt in the correct proportion could treat dehydration, even in the most severely affected cholera and diarrhoea patients. The initial studies were, however, conducted in hospitals where patients were given a carefully prepared solution of pure, refined glucose and three different kinds of salts: sodium chloride, potassium chloride and sodium bicarbonate. Nevertheless, very soon it was established that preparing the solution at home, using household sugar or *gur* (jaggery) and common salt, was equally effective, provided salt and sugar were mixed in the correct proportions. Too much sugar or

salt tends to reduce the effectiveness of the solution, and could sometimes even be dangerous. The ideal oral rehydration solution (ORS) was 30 to 40 grams of common sugar (eight teaspoons) and five grams of salt (one teaspoon) in a litre of water.

This is easy to make in a glass of water by adding a small pinch of salt and a teaspoon of sugar. Today, it has been found that many home solutions provide effective replacement of diarrhoea fluid losses. These home-available fluids, if started early in the course of illness, are a simple solution to the largest killer of children in the world today. Almost any fluid containing a source of energy—sugar or starch—and a small amount of salt can replace fluid losses that occur with any kind of diarrhoea. Each time fluid is lost, a glass or so should be drunk to replace the losses. Along with this, continued feeding helps absorption of fluids and offsets the nutritional depletion of diarrhoea. Extra fluids to drink and continued feeding: these are the modern scientific answers to the most common illness in children.

Water and child survival

The availability of clean, safe water supply is arguably one of the most important contributing factors to the improvement in child survival and health over the past decade. Over the International Water Decade, India has increased the availability of safe, potable water supplies to such an extent that 96 percent of its rural population has full or partial access to safe water. This dramatic expansion was made possible by the application of locally developed technologies: both the widely known Mark II handpump and the drilling rigs, which are capable of boring a hole 50 metres or more deep in hard rock in just two or three days.

And yet the challenge continues, for as many tubewells go out of operation each year as new ones being bored. Over 2 million handpumps require constant maintenance, a job which is becoming increasingly difficult for public health departments at the state or district level to handle. How common it is in rural villages to see a handpump in the midst of a pool of mud, with a broken platform and stagnant water breeding mosquitoes and flies. Only when the community accepts full ownership of this life-supporting resource, and takes the initiative to maintain and repair, will the promise of the pump—good health through safe drinking water—be realized throughout the country.

Women of Rajasthan as custodians of water

Everyone knows that sinking borewells and handpumps is not sufficient to solving the problem of drinking water. Their maintenance and upkeep are equally important. For several years, handpump maintenance remained neglected to such an extent that in many areas, there were as many handpumps going out of order as new ones installed. Several efforts at improving the maintenance of these handpumps proved unsuccessful until the women of Banswara came together in 1988, acquired the necessary skills and took on the responsibility of handpump maintenance. Once women learned to maintain and fix pumps, and were provided with tools and spare parts to ensure immediate repair, things changed dramatically. Not only did this assure water to those who suffer most by pump breakdowns, but it transformed the image

of women in their own eyes and in the eyes of the community. No longer helpless bystanders, women such as these soon established control over a major element of their lives in many regions of Rajasthan.

As the water-table declines, and water becomes an increasingly valued and rare commodity, it will become critical to effectively manage local watersheds in order to ensure availability of water for drinking and for agricultural requirements. If this is to be achieved, responsibility for environmental protection must shift into the hands of the community. The Rajasthan experience shows that water conservation and management work best when responsibility is vested in women, who are by far the most reliable custodians of their immediate environment.

Water is healthy life

In poor communities, a majority of ill-health is spread by water. Diarrhoea, dysentery, guineaworm, hepatitis, polio, typhoid: the list is long, and the diseases extensive and severe. Improving access to safe drinking water is the single intervention that can do most to improve health and reduce the daily burden of work, especially of girls and women in poor families.

Significant achievements have been made by the states in ensuring access of populations to water. A survey carried out by the Ministry of Rural Development between May and July 1994 reveals the following:

THE BEST AMONG MAJOR STATES	PERCENTAGE OF FULLY COVERED RURAL HABITATIONS WITH ACCESS TO DRINKING WATER
BIHAR	78
MAHARASHTRA	66
GUJARAT	66
ANDHRA PRADESH	65
MADHYA PRADESH	60
INDIA	57

FULLY COVERED HABITATIONS ARE THOSE WITH MORE THAN 40 LITRES OF WATER PER CAPITA DAILY

SOURCE: Ministry of Rural Development (1995)

Almost 80 percent of India's water systems are based on handpumps and only 20 percent are based on piped supply systems tapped either from surface or ground-water sources. Exceptions, however, are Haryana, Kerala and Punjab, where piped water supply systems are widely prevalent.

The India Mark II handpump and the drilling rigs required for their installation are all made in India and now exported to more than 40 countries in the world. With the active role played by Government of India's Technology Mission for Water, safe and reliable water supply is being brought into every village of the country.



UNICEF/DUDLEY HARRIS

LEAGUE TABLE

India has one of the highest proportions of malnourished children in the world.

This table ranks states according to the proportion of children 6-9 months old who receive breastmilk and solid or soft foods.

It is widely believed, and rightly so, that breastmilk provides vital nutrients throughout the first year and into the second year of a child's life. But breastmilk alone is not sufficient. Beyond six months of age, the energy needed by a child for healthy growth can come only from additional food. Not caring enough for the child by feeding it solid/soft foods beyond six months is a major factor contributing to malnutrition.

CHILDREN 6-9 MONTHS OLD RECEIVING BREASTMILK AND SOLID/SOFT FOOD		
STATE	1992-1993 %	
1.	Kerala	69
2.	Tamil Nadu	57
3.	West Bengal	54
4.	Andhra Pradesh	48
5.	Himachal Pradesh	40
6.	Assam	39
7.	Haryana	39
8.	Karnataka	38
9.	Punjab	37
	INDIA	31
10.	Orissa	30
11.	Madhya Pradesh	28
12.	Maharashtra	25
13.	Gujarat	23
14.	Uttar Pradesh	19
15.	Bihar	18
16.	Rajasthan	9

SOURCE: National Family Health Survey, 1992-1993



**CONTINUED BREASTFEEDING EXCLUSIVELY
FOR FOUR TO SIX MONTHS AND THEREAFTER
INTRODUCTION OF COMPLEMENTARY FOODS**

NUTRITION

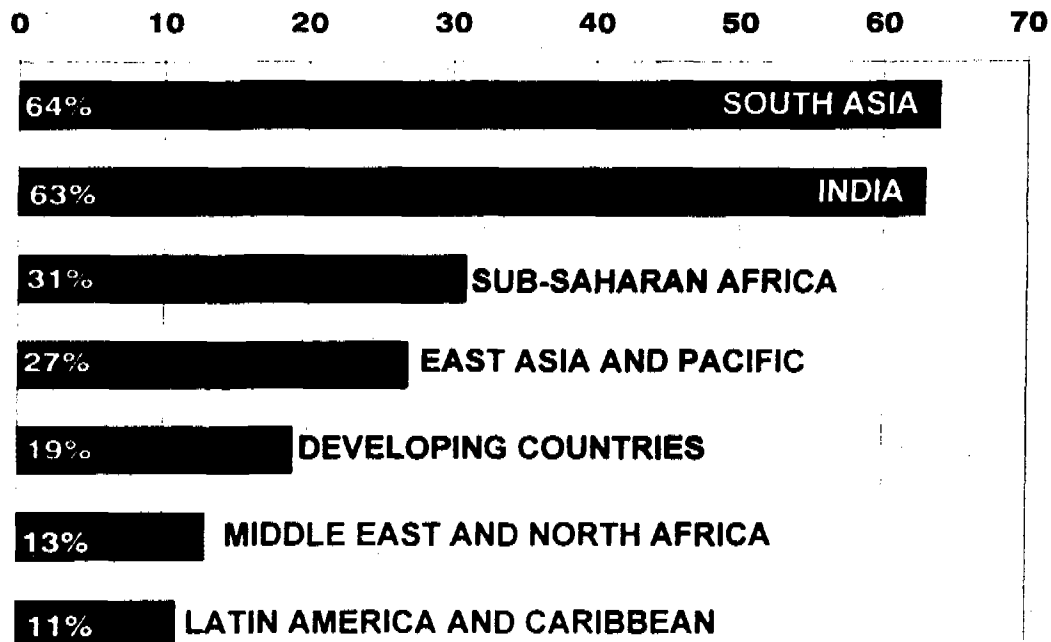
Not by food alone

India has the unfortunate distinction of having nearly 75 million malnourished children below the age of five years, the largest number of malnourished children in the world. Even at birth, one in every three children born in India is of low birth-weight: the result of undernourishment in the womb. The rate of malnutrition among children below five years of age, 63 percent in India, is more than double the average for Sub-Saharan Africa. In the world today, only children in Bangladesh and Nepal are more malnourished than Indian children. Even mild malnutrition can cause a critical increase in the likelihood that a child will die of a disease. Compared with the risks facing a well-nourished child, the risk of death from

common childhood diseases is **doubled** for a mildly malnourished child, **tripled** for a moderately malnourished child, and may be **as high as eight times** for a severely malnourished child. A lack of only 200-300 calories in a young child's daily diet is often the difference between normal growth and the faltering that starts the descent towards illness and death.

It used to be thought that biologically and genetically, Indian children do not normally grow as fast or as large as children in other countries. This is not true. Extensive studies by the Nutrition Foundation of India have now shown that global standards of height and weight apply to Indian children as well.

PERCENTAGE OF CHILDREN UNDER FIVE WHO ARE UNDERWEIGHT—MODERATE AND SEVERE

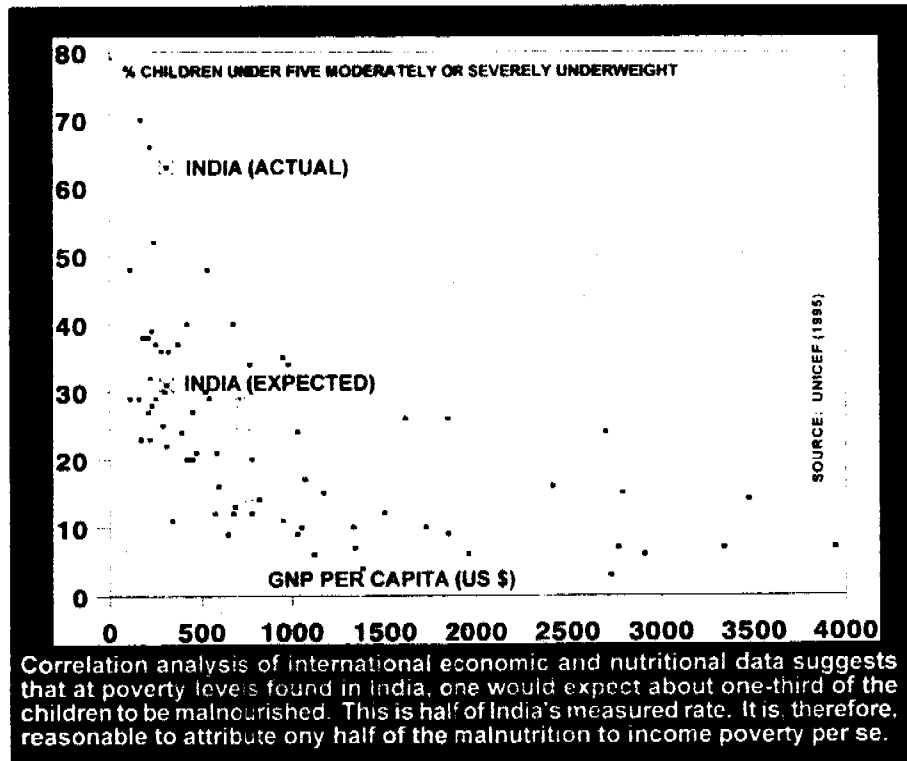


SOURCE: UNICEF (1985)

It has also been customary to regard poverty or a lack of purchasing power as an important factor contributing to malnutrition. But world-wide, the correlation of malnutrition and per capita incomes is extremely weak, and this is not surprising. Even within India, although Maharashtra's per capita income is more than one-and-a-half times that of Madhya Pradesh's, both states report the same levels of child malnutrition: 55 percent.

Again, whereas Gujarat and Kerala have the same proportion of population living below the poverty line, 17-18 percent, the level of child malnutrition is 59 percent in Gujarat and 35 percent in Kerala. Certainly, there is extensive malnutrition among the poor, but even in middle-income families, malnutrition is common.

Again, common sense often attributes high levels of malnutrition to the non-availability of food. It is true that if children do not get food to eat, they will get malnourished. It is also true that there are several remote villages where the seasonality of harvests assures very little to eat during the monsoons. Heavy rains also frequently bring diseases, and make access by road extremely difficult. As a result, foodgrains are not available through government's Public Distribution System or in local markets; families have to wait until after the next harvest to purchase new stocks of foodgrains. But then this is true even for those with the purchasing power. Clearly, there is more to understanding malnutrition than the simplistic linkage between food availability and incomes.



Explaining malnutrition:

Is the problem of malnutrition simply one of there not being enough food to eat? Surely, nationwide this is not the case, as foodgrain availability on a per capita basis averaged across the country exceeds what is required for ensuring nutritional standards. In fact, over 30 million tonnes of food are in government storage even today. What then explains the high levels of malnutrition?

In understanding malnutrition, the focus has to shift from incomes and food availability to an appreciation of how families establish command over food and health care, acquire and apply knowledge on child caring and rearing practices, allocate time to look after children and protect the cleanliness and safety of the environment. Considerable research points out that nutrition and healthy growth are the outcome of three essential factors: accessibility to food in the home, health care, both preventive and curative, and child caring

NUTRITION

practices. Few would argue over food: interventions need to address issues of household food and economic security in order to ensure access to adequate food for every household member, starting with the child. And similarly about health. It is **care** which is often the most critical and missing factor that explains the prevalence of malnutrition despite the availability of food. Infants have small stomachs and must be fed frequently. Breastmilk provides vital nutrients throughout the first year and into the second year of life; but breastmilk alone is not sufficient. The energy and calories needed for healthy growth can only come from additional food. Beyond six months, infants are often cared for by siblings, themselves only a few years older, knowing little of hygiene and of the requirements of infants and small children for food and attention. If fed at all, they often receive a tiny bit of finger food once or twice a day; and the child may often be left sleeping in a hammock by herself for much of the day. A child must be fed a full meal three or four times daily from six months onward. Along with improved child care, a clean environment is equally critical for promoting a child's nutritional status.



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Measures of child malnutrition

There are three commonly used measures of malnutrition among children under five years of age: **stunting**, which measures a child's height against that expected for the average child of the same age; **wasting**, which measures a child's weight against that expected for the average child of the same height; and **under weight**, which measures a child's weight against that expected of the average child of that age. In all three cases, moderate malnutrition refers to below minus two standard deviations from the median value, and severe malnutrition refers to minus three

standard deviations from the median value of the reference population. Of these three measures, under weight is the most comprehensive measure of malnutrition as it captures elements of both stunting and wasting. In examining data on malnutrition, however, it is important to realize that by focusing on children who are alive, the figures do not capture the worst forms of malnutrition which result in child deaths. The National Nutrition Monitoring Bureau in Hyderabad provides data on the proportion of underweight children at the state level, but only for eight states.

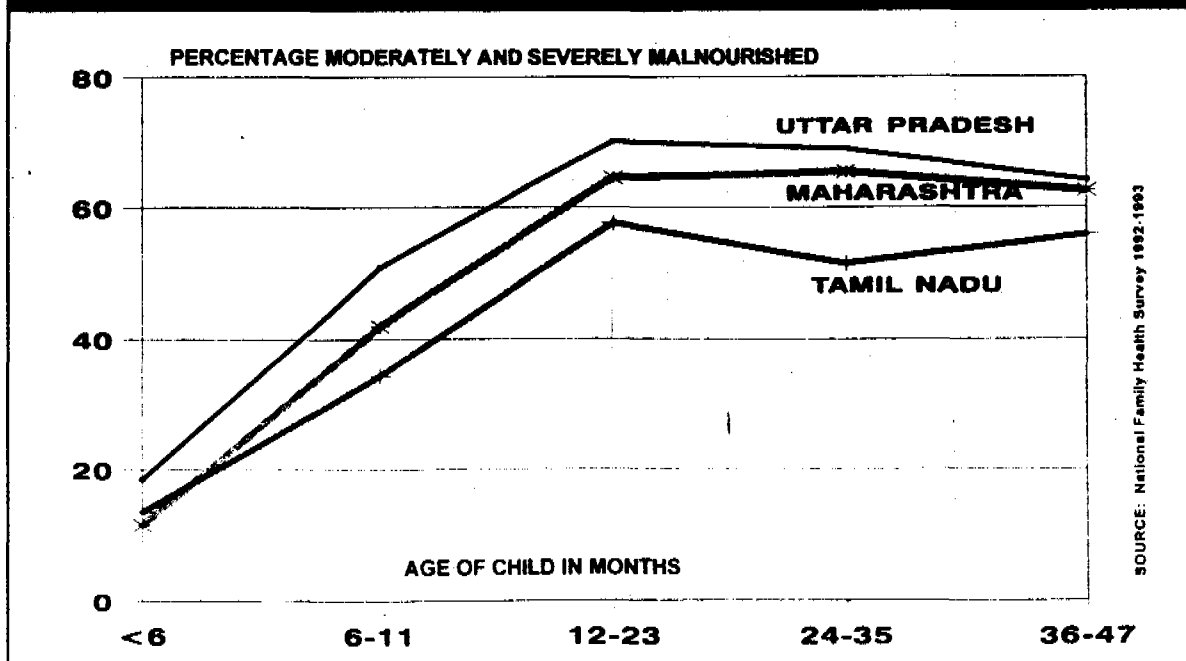
**Nutritional interventions:
timing is crucial**

A child becomes malnourished mostly between six months and 18 months of age, and remains so thereafter. In most cases, nutritional rehabilitation is difficult. Breastfeeding in the first months of life assures rapid and healthy growth, but by four to six months of age, additional food is required. Surveys show that in as many as 70 percent of children, no additional foods, particularly solids, are provided until after one year of age. Until then, and especially after the first six months of life, infants remain relatively starved because breastmilk no longer meets their growing nutritional requirements. By 12 months of age, when most families begin feeding regular foods, malnutrition has already set in.

Evidence shows breastfeeding, crucial to good health in the earliest months, simply

does not provide adequate calories for normal growth beyond four or five months of age, even though the child may appear to be physically healthy and satisfied on breastmilk alone. All too often, between six and 12 months of age, thin gruel and soup are the vital foods fed, when in fact, a six-month old child can and must eat rice or soft *chapattis*, vegetables and other foods from the family pot. Once again, proper understanding and caring practices offer the clue to improved child nutrition. An infant must be fed and requires help from an older person, whereas an older child eats, feeding herself. Clearly, parents do not deliberately deprive infants of solid foods and adequate nutrition; they just do not think about it. Much of it has to do with socioculturally determined feeding habits, not just economic factors like low income.

When malnutrition among children sets in



More care than money

Limited data on malnutrition available for eight Indian states reveals the lack of a strong association between income, poverty and child malnutrition. For instance, Kerala, Tamil Nadu and Andhra Pradesh which report the lowest levels of child malnutrition, do so despite having relatively low levels of per capita incomes. Similarly, Madhya Pradesh and Maharashtra report the same levels of child malnutrition, 55 percent, even though Maharashtra has a per capita income that is more than one-and-a-half times that of Madhya Pradesh's. Again, Gujarat, which is also one of the high-income states of the country, reports the highest levels of child malnutrition.

	% OF CHILDREN 1-5 YEARS MODERATELY & SEVERELY MALNOURISHED 1988-1990	RANK	PER CAPITA NET STATE DOMESTIC PRODUCT (AT CURRENT PRICES) 1990-1991 Rs.	RANK	% OF CHILDREN 6-9 MONTHS RECEIVING BREAST-MILK AND SOLID/ SOFT FOODS (1992-1993)	RANK
Kerala	35	1	4,207	6	69	1
Tamil Nadu	50	2	5,047	3	57	2
Andhra Pradesh	52	3	4,728	4	48	3
Madhya Pradesh	55	4	4,149	7	28	6
Maharashtra	55	5	7,316	1	25	7
Karnataka	57	6	4,696	5	38	4
Orissa	57	7	3,077	8	30	5
Gujarat	59	8	5,687	2	23	8

SOURCE: National Institute of Nutrition (1991), National Family Health Survey (1992-1993) and Ministry of Finance (1995)

At the same time, there is a very close association between child malnutrition and the age when complementary foods are introduced to the child. The last column in the above table shows the proportion of children in the age group of 6-9 months who receive solid/soft food to complement breastmilk. Kerala, Tamil Nadu and Andhra Pradesh, three states with the lowest levels of child malnutrition, are also the states where the largest proportion of children in the age group of 6-9 months receive solid/soft foods along with breastmilk. On the other hand, Gujarat, where child malnutrition is reported to be the highest, is also the state where the lowest proportion of children receive complementary foods.

Catching them younger: Strengthening India's ICDS Programme

India makes substantial investments to improve child nutrition through the Integrated Child Development Services (ICDS) programme, noted as the largest programme for children anywhere in the world. The services are comprehensive and consist of supplementary feeding, immunization, health check-ups, referral services, non-formal preschool education and nutrition. Efforts have been made to expand the coverage of ICDS to the most vulnerable groups: children, pregnant women and nursing mothers. The programme today provides child care and daily food supplements to 17.5 million children, mostly in the age group of three to six years, in 3,657 of the poorest blocks and 240 urban slums throughout the country. Evidence also suggests that where ICDS centres are efficiently managed and better supervised, the

outcomes for children have been significant.

The Government of India has intensified its efforts to strengthen ICDS. Current initiatives include efforts to improve coordination between different sectors, promote community participation for greater efficiency and accountability, deepen the involvement of non-governmental organizations and *mahila mandals* (women's groups) and above all, promote appropriate feeding practices, particularly among young children over four to six months of age. Considering that most children become malnourished before they even reach the *anganwadi*, the move to intensify efforts by reaching out to children from the age of four to six months is bound to yield substantial benefits.

Indian policy makers must recognize the complexity of the nutritional situation, and design multisectoral and integrated interventions that address the malnutrition problem by focusing on access to food, health services, a healthy environment and care to all children in the country. In addition to addressing the problem of food and economic security for the household, the most vital intervention has to do with

altering feeding and caring practices of children. To this end, strengthening Government's Integrated Child Development Services (ICDS) becomes an immediate priority. Clearly, while interventions by the State and the community are necessary, it is also obvious that individuals and households have a direct responsibility to address the grave situation of child malnutrition in the country.

Changing infant feeding practices

Behavioural changes often occur when the effectiveness of interventions are clearly demonstrated. Large community programmes in Tamil Nadu provide extra food when ill-health or even seasonal poverty manifests in poor child growth. Studies have shown that focusing on the younger child and providing extra feeding of the child only when she is not gaining weight properly convinces mothers of the decisive importance of household feeding behaviour, and of their own ability to assure good growth and nutrition with existing foods. There is no way out but

to make a concerted effort to improve the knowledge levels of parents and siblings on the nutritional requirements of children. It is necessary to redirect current investments and resources towards the younger child, and interact more intensely with mothers and other child care providers to convince them of the need for an early introduction of complementary food. Sustained advocacy of this kind, supported by health care and food supplements where needed, can bring about dramatic changes in this sensitive measure of child well-being.

Grain banks in Orissa—making a difference

Adequate entitlement to food at the household level is necessary to ensure proper nutrition for children. Grain banks in Orissa are beginning to make a difference.

In the drought-prone districts of Koraput, Kalahandi, Bolangir and Rayagada in Orissa, populated largely by tribal villagers and characterized by persistent deprivation, exploitation by moneylenders and dependency on landlords, there is invariably very little food available during the monsoon months. The starvation deaths in 1992 brought into sharp focus the harsh conditions facing these people.

The emergency was turned into an opportunity by the Household Food Security Project. Village committees headed by women were formed to manage community grain banks which were established following a one-time grant of 600 tons of *ragi*, or millet, provided by

UNICEF. Households borrow from the grain banks according to norms set by the community. Decisions on who should receive grain loans, and how much, are made by the village committees. At the time of harvesting the new crops, borrowers return the quantity of grain originally borrowed, along with additional grain as interest. Thus, the bank not only becomes self-sustaining, it regenerates itself and grows, while at the same time, significantly reduces the dependency of the villagers on moneylenders. Additionally, the project also assists in the control of diarrhoeal diseases, rehabilitation of defunct water sources and stocking of supplies of Oral Rehydration Salts as a preventive measure prior to the monsoons.

LEAGUE TABLE

Lack of iodine in the diet is a major nutritional problem. It affects the normal development of some 250 million people in India, and accounts for an estimated 90,000 stillbirths and neonatal deaths every year. It has led to 2.2 million Indian children being afflicted with cretinism and another 6.5 million becoming mildly retarded.

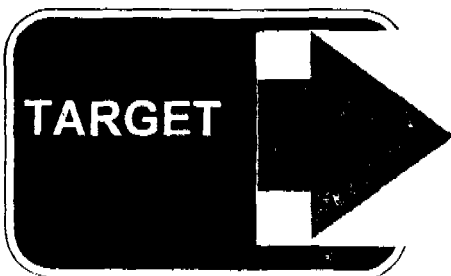
Yet, the simple, inexpensive solution—iodizing all salt supplies—has been available for decades.

This table lists states according to the availability of iodized salt in relation to their requirements.

AVAILABILITY OF IODIZED SALT AS PERCENTAGE OF REQUIREMENT		
STATE	1993	
1.	Assam	126
2.	West Bengal	119
3.	Bihar	119
4.	Uttar Pradesh	83
	INDIA	65
5.	Madhya Pradesh	37
6.	Punjab	26
7.	Maharashtra	20
8.	Karnataka	19
9.	Himachal Pradesh	15
10.	Gujarat	12
11.	Kerala	8
12.	Rajasthan	7
13.	Tamil Nadu	7
14.	Haryana	7
15.	Orissa	5
16.	Andhra Pradesh	4

NOTE: Percentages exceeding 100 indicate that excess iodized salt available in these states flows to other states and neighbouring regions.

SOURCE: Estimates derived from Salt Commissioner's Report, 1994



IODIZE ALL EDIBLE SALT BY 1995

THE MIGHTY MICROS

The cheapest buy

Most people recognize a large, unsightly swelling in the neck as goitre, caused by a severe deficiency of iodine in the diet. Fewer realize that iodine deficiency disorders are the largest preventable cause of mental retardation and congenital neurological disorders. For years, it was thought that only these severe forms of deficiency resulted from iodine-deficient diets, but now it is clear that people living in iodine-deficient areas, some 250 million in India, may appear normal but are probably also suffering from invisible signs of deficiency, manifested in a slight decrease in energy levels, slowness in fine motor skills and a marginal yet measurable fall in IQ of 10 to 12 points. While the congenital lack of iodine causes lifelong mental retardation, the dietary lack

experienced by most populations in India is reversible. A lifetime supply of iodine can be contained in less than a single teaspoon; yet this essential nutrient must be consumed in minute quantities each day for good health, and particularly for the mental development and regulation of body energy. Normal thyroid function can be recovered with a daily consumption of iodized salt. Iodine is added to normal salt, whether taken from the sea or brine, as raw salt contains no iodine. The cost of iodine and its addition to salt is as little as 30 paise per person per year. Because salt is consumed by everyone everywhere, it is the ideal vehicle to carry iodine, the cheapest and most dramatic of the mighty micronutrients.

Iodizing Salt

Salt in India comes from the ocean, and from subterranean brine. Pumped or poured on to large flat surfaces, water evaporates, leaving salt crystals behind. In most salt pans, these crystals are raked by hand, gathered into large piles, and transported and stored outdoors in huge mounds. Iodation is accomplished by dripping a solution of potassium iodate slowly on to the conveyor belt carrying raw salt through a hopper. Salt thus iodized is bagged in large polythene-lined 70 kg. sacks and loaded on to trucks, or more often rail cars, for distribution throughout the country.

While marine salt is a small fine crystal, underground brine deposits result in a large crystal, resistant to both humidity and pouring rain, making its shelf life far longer and more convenient for storage and transportation. Unfortunately, the large crystal *bargara* salt

appears dirty, and is traditionally washed by users before it is crushed at home and consumed. Iodation then becomes ineffective as the added potassium iodate, having been sprayed on the outside of the crystals, readily washes off.

Salt producers in the Rann of Kutch in Gujarat have now found a way out of this problem. When the salt collection season begins, a thin layer of white crystalline salt is used to line the bottom of the salt pan. As a result, the new large crystals forming in the pan are a brilliant white, almost like diamonds. This large crystal *poda* salt is equally resistant to humidity and rain, and does not require washing. If people find this salt attractive, and do not feel the need to wash it, the sprayed iodine will remain, and be consumed.

Turning blue: *Testing salt on the spot for iodine*

For years, samples of salt had to be sent to a laboratory to be tested for iodine. Results returned days later when the salt had already been sold or consumed. Today, salt can be tested on the spot with a simple drop of testing fluid costing less than two paise per test. The fluid, a simple mixture of sulphuric acid, potassium iodide and starch with an appropriate stabilizer turns salt into a deep blue colour, when dripped upon salt containing potassium iodate. Salt without iodine remains white.

Such a test does not require a laboratory, nor even a trained technician. It can be performed by teachers, schoolchildren, shopkeepers and housewives. Most importantly, it enables public enforcement of laws on the spot. Such an appropriate technology in the hands of people can transform the prospects of enforcing regulations, enabling the public to know what they are buying and consuming daily at home.



UNICEF



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Eliminating iodine deficiency: The Kangra story

While endemic goitre and cretinism were well known and widespread in the Himalayas in the 1950s, the actual cause of this devastating illness was not known. Indeed, many nutrition scientists attributed the goitre to toxic products in the food, to pollution, or to congenital enzyme deficiency in the population. In the late 1950s, a young investigator from the Pathology Department of the newly established All India Institute of Medical Sciences (AIIMS), Dr. V. Ramalingaswami, resolved to take the most modern tests to Kangra Valley in order to define the cause and to find solutions to the problem. Using radioactive iodine measures of urinary iodine, his team rapidly proved that iodine deficiency was the sole cause of this extensive and debilitating nutritional illness. The team from AIIMS published their remarkable result in the *Lancet* in 1960, and immediately contacted the Salt Commissioner of India, who, together with UNICEF, provided the first salt crusher and iodization plant at the Sambar Lake Salt Works in Rajasthan.

Iodized salt was provided to a population of 60,000 in Kangra, while 30,000 received only crushed salt without additional iodine. Within five years, the results were dramatic. Goitre had disappeared in schoolchildren, and was reduced to negligible levels in adults, where previously 40 to 50 percent had had visible goitre. Schoolteachers in the control area, noticing the difference in their children, demanded that they too receive salt with iodine, having suspected that salt in their area was indeed left uniodized.

By 1970, iodine deficiency disorders were a thing of the past. Clear laboratory investigative techniques, combined with effective interventions by the Salt Commissioner, railways and salt sellers removed the stealthy scourge of iodine deficiency from the Kangra Valley. This lesson, proved to the world more than 30 years ago, waits to be fully applied even today throughout all of India.

Widespread malnutrition in the world is caused by lack of iron and resulting anaemia. Surveys over the past ten years have shown that up to 85 percent of Indian women are anaemic, with inadequate iron in their diets manifested as low red blood cell levels, lack of energy, susceptibility to infections and even a greater risk of dying in childbirth from blood

loss. While iron is found in **animal** meat and many green vegetables, it is **severely** lacking in most diets. The provision of iron tablets on a regular basis to women in the reproductive age group during pregnancy is an important approach to addressing this widespread cause of morbidity, especially among pregnant women.

Supplementing diet with vitamin A *Carrots and leafy vegetables alone may not be enough*

Everyone always knew that carrots were good for your vision—indeed, the association between vitamin A and good eyesight has been recognized worldwide, at least among the educated, for decades. Little known, however, was the fact that deficiency of vitamin A increases the body's susceptibility to infections of all kinds. Particularly in poor societies, a lack of vitamin A contributes to increased mortality among infants and young children. This data first came to light in a study in Indonesia nearly 20 years ago, and has been subsequently confirmed in field investigations across the world: most significantly in villages around Madurai where a 55 percent decline in child mortality was seen following the administration of weekly doses of vitamin A. Such a dramatic effect, however, does not seem to hold true everywhere, for in villages around Hyderabad only a five percent mortality decline was noted. Nonetheless, in thousands of villages where vitamin A deficiency is a chronic reality, its provision, either through improved diet (green leafy vegetables, yellow fruits), or in the periodic administration of syrup or capsules containing high doses of vitamin A, offers a major strategy not only for preventing blindness but for reducing child

mortality. While some experts have been concerned that high doses of vitamin A given periodically may cause a transient increase in fluid inside the brain, recent studies show that the pressure remains normal even with slightly increased fluid. Even in these few cases, it resolves within a day or so. Thus, while some side-effects are feared, the evidence strongly indicates a dramatic fall in mortality, especially among the poor whose diets have little vitamin A. The benefits seem to far outweigh the risks.

Dietary improvement has long been a message of India's Integrated Child Development Services (ICDS) and health care systems, but convincing parents to add a bit of saag (spinach) to the child's food each day has proved to be a daunting task. Meanwhile, government has started providing vitamin A syrup along with measles vaccine at nine months of age for the child. Perhaps, it is time to consider offering this life-saving vitamin regularly to women during pregnancy, and continue it even after they give birth, so that their breastmilk is enriched. One could also give vitamin A to children as soon as they come in contact with the health care system for their first vaccination.

MIGHTY MICROS

Deficiency of vitamin A has long been known to be the largest preventable cause of blindness among children. But only recently has the important role of vitamin A in ensuring protection against infections and maintaining normal body functions in many systems, especially body immunity, become evident. Mortality in childhood infancy, and possibly even intrauterine foetal loss, can be dramatically reduced by a diet adequate in vitamin A.

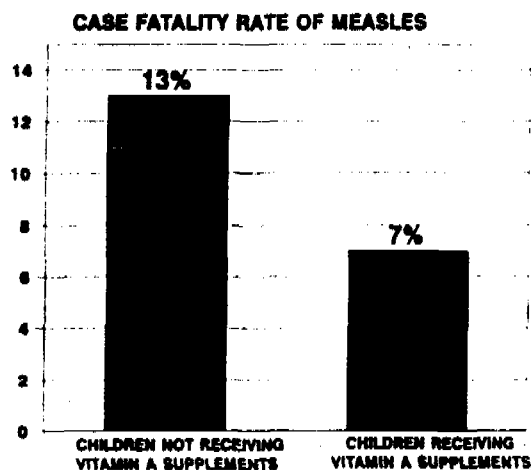
Ideally, a properly balanced diet would include three micronutrients—iodine, iron and vitamin A—each in adequate quantities. However, it is also possible to provide nutrients as supplements through the health care system or through the fortification of processed foods (such as sold in the fair-price shops in India) at an extra cost of a few paise in a year. Micronutrients may be micro, but they are the best buy in the health and nutrition field.

Vitamin A, measles and child mortality

The association of blindness with measles has long been documented. While irritation of the eyes is recognized as a common symptom in measles, blindness was thought to be due to a combination of the infection by the virus and vitamin A deficiency. Children's eyes were found to be well protected if vitamin A was provided early in the disease; but far more dramatic was the finding, first published from Tanzania and later confirmed in South Africa, that the

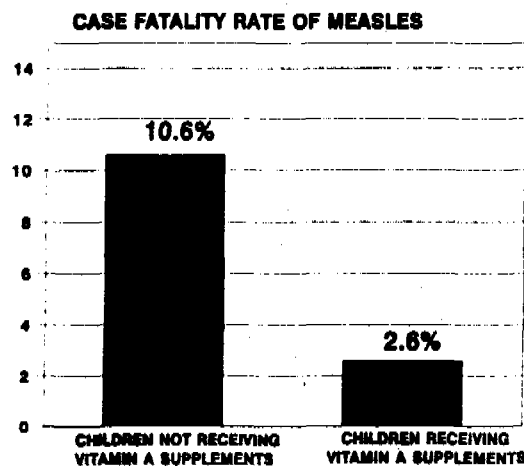
child mortality rate from measles was reduced by one-half or more simply by the administration of high doses of vitamin A to a child with measles. This documented finding was the first good evidence of the mortality-reducing effect of vitamin A, which has now been found to extend to other infections, particularly among vitamin A-deficient populations. Since then, this has become a major strategy for reducing death from measles.

MORTALITY RATE AMONG CHILDREN BELOW TWO YEARS OF AGE WITH MEASLES



DATA RELATE TO A RURAL HOSPITAL IN TANZANIA (1982-1983)

SOURCE: Barclay et al (1987)



DATA RELATE TO REGIONAL CENTRE HOSPITAL IN SOUTH AFRICA (1987)

SOURCE: Hussey and Klein (1990)

LEAGUE TABLE

This table ranks states by the average number of births per woman, the Total Fertility Rate (TFR). Too many births too close together, or at too young or too old an age, are a major cause of illness, disability, poor nutrition and premature death among both women and children. Fewer births can bring dramatic improvements to the lives of women. They can also improve child survival, nutrition, health and education—and allow parents to invest their energy, time and money in a smaller number of children.

Assuming no child deaths, a TFR of 2.0 means that each couple is reproducing itself. Once this replacement level has been reached, the population will eventually stabilize.

		TOTAL FERTILITY RATE	
	STATE		1992
1.	Kerala		1.7
2.	Tamil Nadu		2.2
3.	Andhra Pradesh		2.8
4.	Maharashtra		2.9
5.	Karnataka		2.9
6.	West Bengal		2.9
7.	Himachal Pradesh		3.1
8.	Punjab		3.1
9.	Orissa		3.1
10.	Gujarat		3.2
11.	Assam		3.4
	INDIA		3.6
12.	Haryana		3.8
13.	Madhya Pradesh		4.4
14.	Rajasthan		4.5
15.	Bihar		4.6
16.	Uttar Pradesh		5.2

SOURCE: Office of the Registrar General (1994)



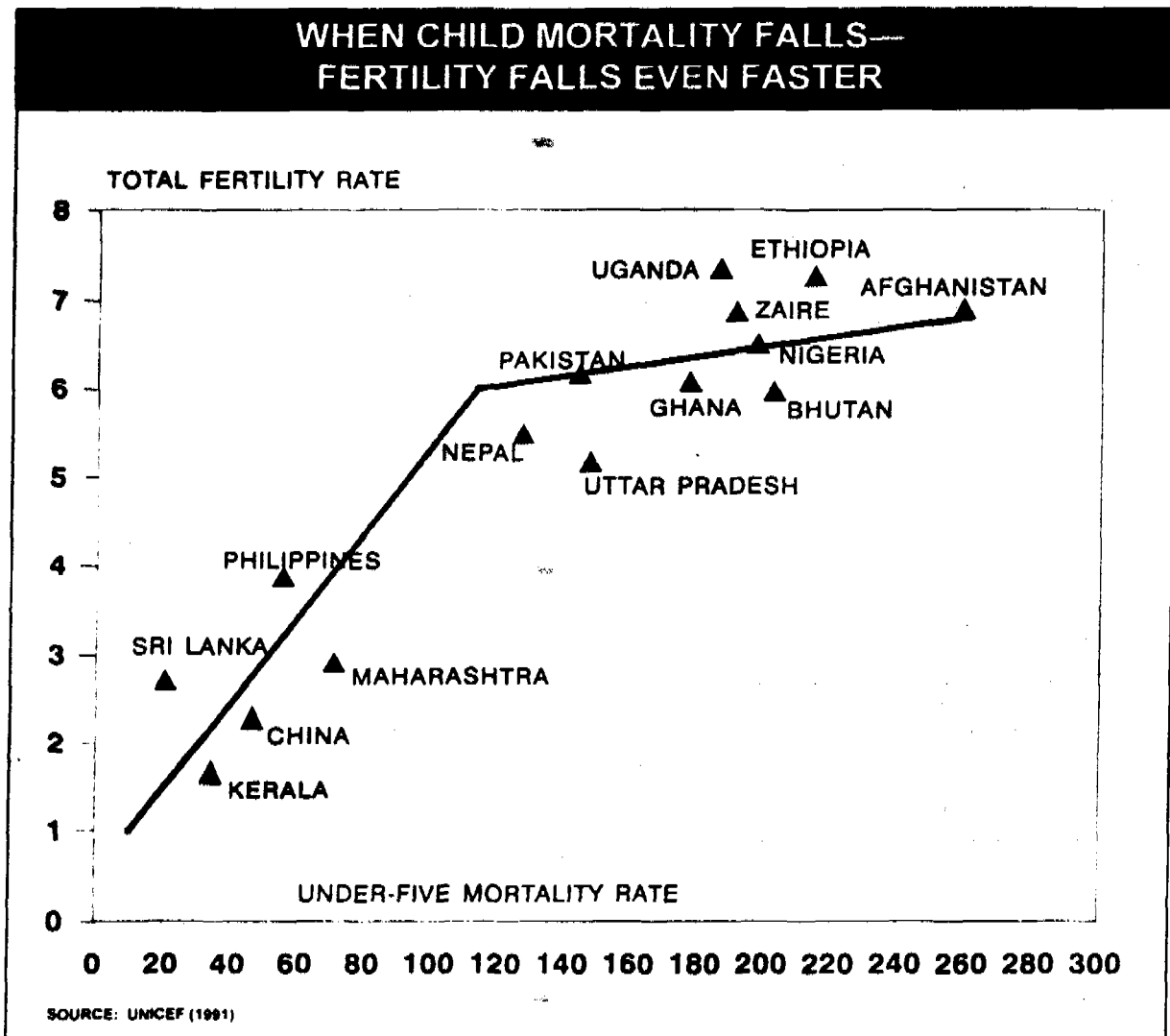
REACHING A NORM OF TWO
CHILDREN PER FAMILY

FAMILY PLANNING

Towards a sustainable population

Reducing child deaths is essential in order to restrain population growth. At the same time, however, family planning for India would still be one of the highest priorities, even if population control were not a concern. Public support for improving child survival conditions has sometimes been inhibited by

the argument that, inasmuch as such efforts are successful, they are ultimately self-defeating because they serve only to aggravate the problem of rapid population growth. Such an argument is not only morally repugnant, but is also demographically unsound.



Several mechanisms connect lower child death rates to lower birth rates, a linkage that is one of the least understood but most vital of contemporary issues. First, the **physiological factor**: an infant death means the end of breastfeeding, an important "natural contraceptive." In the absence of any other method of birth planning, a new pregnancy becomes more likely. Second, the **replacement factor**: the death of a child prompts many couples to "replace" the loss by a new pregnancy sooner than would otherwise have been the case. Such families which experience the death of a child are also much less likely to use any method of family planning. Third, the **insurance factor**: when child death rates are high, many parents compensate for the anticipated loss of one or more of their children by giving birth to more children than they actually want. Compounded by such factors as gender preference and the time lag between changes in death rates and changes in *perceived* risks, this "insurance effect" is a major reason for the persistence of high birth rates. Fourth, the **confidence factor**: empowering

parents with today's child survival knowledge helps build the confidence which is a crucial factor in the acceptance of family planning.

Reducing child deaths can, therefore, help societies move towards family building by design rather than by chance. This factor seems to be significant when child deaths become very unlikely from the parents' point of view. The process of family building then becomes more predictable, confidence begins to grow and the "insurance factor" begins to weaken. And it is this turning point in the process which many nations of the developing world are now approaching.

The strength of the relationship between falling deaths and falling births depends primarily upon the particular stage which a country has reached. In the earlier stages, when under-five mortality rates begin to fall from a very high level, parental confidence remains low and birth rates tend to change very little. Most countries in the developing world, including India, have completed



UNICEF

FAMILY PLANNING

this phase. In the next stage, when under-five mortality begins to fall below 200 per 1,000 live births, the correlation between falling deaths and falling births is still weak. But it is when countries begin to bring child mortality rates down below 150, as is happening in countries such as India, and to move towards and through the 100 barrier, that strong and consistent patterns of fertility change begin to emerge. At this stage, most countries begin to see a much more rapid fall in the number of births for every further advance that is made in reducing child deaths.

India's population has nearly trebled from 361 million in 1951 to 900 million in 1994: an addition of 539 million people over a 45-year period. Population projections indicate that by the year 2001, India will have more than a billion inhabitants. The rate of population growth which went up from 1.25 percent annually between 1951 and 1961 to 2.22 percent between 1971 and 1981 fell marginally to 2.12 percent between 1981 and 1991. Kerala and Tamil Nadu which recorded the lowest annual growth rates in population (1.3 and 1.4 percent respectively) between 1981 and 1991, also recorded the maximum declines in crude birth rates during this period. On the other hand, the annual population growth rates in Rajasthan (2.5 percent), Madhya Pradesh (2.4 percent), and Haryana (2.36 percent) far exceeded the national average of 2.12 percent.

Four factors are most strongly associated with falling birth rates: rising incomes, female education, reduced child deaths and the availability of family planning services. Together, these factors exert many times more control on birth rates than any one of them acting alone. Economic progress can assist women's advancement; in turn, this advance-

ment helps to reduce child deaths; reduced child deaths help to lower birth rates; and lower birth rates also spur women's overall advancement. In the context of development, all of these basic factors in fertility decline—improvements in the lives and educational levels of women, reduced child deaths and the availability of family planning services—are important priorities in themselves. Three of the most important strategies now available for reducing child deaths—the education of women, the well-informed timing and spacing of births, and breastfeeding—also happen to be among the most direct of all methods for reducing child births. Above all, family planning is significant for its value to women's own health and liberation from the cycle of child-bearing. At the same time, in programmatic terms, there are several complementarities between interventions aimed at promoting child survival and family planning. For example, providing access to family planning has been facilitated by the linkage with the monthly immunization, making it easy for these high-risk mothers to obtain the services they require.

Researchers have also highlighted the importance of birth-based family planning, demonstrating the demographic fact that women with a young child are the most likely to be pregnant next. Therefore, assuring that they understand the importance of family planning for their own health and that of their children is an important strategy. The total fertility rate (TFR), which gives the average number of births per woman, is therefore a measure of a woman's well-being as well as an indicator of the control she has over reproductive decisions.

India's TFR, estimated at 3.6 children per woman in 1992, was well above the

FAMILY PLANNING

replacement level of 2.0. With the exception of Kerala, the TFR in rural areas has tended to exceed the TFR in urban areas for India as a whole, and for the states. Coinciding with the decline in fertility and birth rates has been an expansion in the Couple Protection Rate in India from 22 percent in 1980 to 43 percent in 1993.

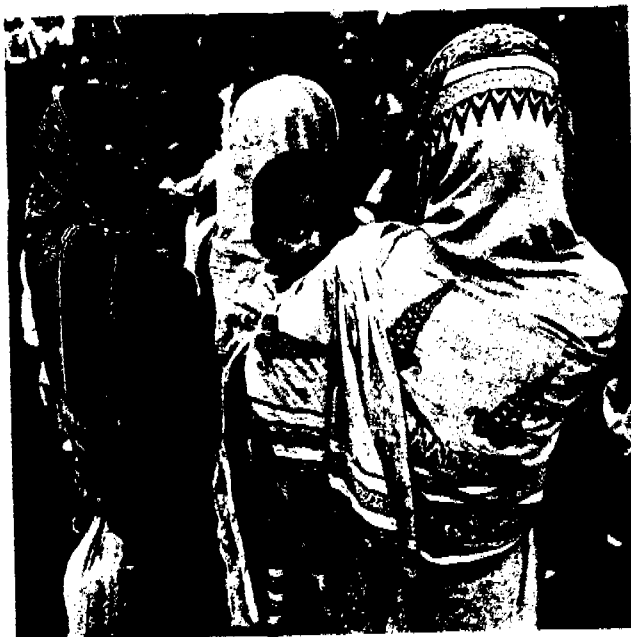
The decision to move from a focus on fertility reduction through encouraging family planning to a truly broader view of attention to family well-being, greater control for women over reproductive decisions and the planning of a small and healthy family through better health care, better education and a better status for women is increasingly reflected in Government's current initiatives in population planning. This approach has also been endorsed by the 1994 International Conference on Population and Development held in Cairo.

UNICEF believes that child survival and the many goals endorsed by the **World Summit for Children** are critical inputs to the success of efforts to reduce fertility. This is explicitly

acknowledged by the Plan of Action adopted by the **World Summit for Children**, which observes:

"There is an added benefit of promoting maternal and child health programmes and family planning together in that, acting synergistically, these activities help accelerate the reduction of both mortality and fertility rates, and contribute more to lowering rates of population growth than either type of activity alone."

Such a position is based on the realization that virtually every major goal in the **World Summit for Children** is substantially impeded by existing high levels of fertility, close spacing of births, and the burden on mothers attendant on frequent bearing and rearing of children. Conversely, means to fertility control are among the most direct interventions to reduce infant and child mortality, are unquestionably a major strategy for the reduction of maternal mortality, and will contribute substantially to the reduction of childhood malnutrition.



BY DUDLEY HARRIS



UNICEF/SONDEEP SHANKAR

LEAGUE TABLE

Close to 125,000 women die in India each year from causes related to pregnancy and childbirth.

This table offers a state-wise estimate of maternal mortality rate (MMR).

The survival of mothers and babies alike is closely correlated with the care and attention received during pregnancy and, most importantly, at the time of delivery. When mothers receive proper obstetric care, not only are their lives saved, but also those of their children, particularly in the first month of life.

MATERNAL MORTALITY RATE		
STATE	MATERNAL DEATHS PER 100,000 BIRTHS	
1.	Kerala	87
2.	Maharashtra	336
3.	Punjab	369
4.	Tamil Nadu	376
5.	Gujarat	389
6.	West Bengal	389
7.	Andhra Pradesh	436
8.	Haryana	436
9.	Karnataka	450
	INDIA	453
10.	Himachal Pradesh	456
11.	Bihar	470
12.	Assam	544
13.	Rajasthan	550
14.	Uttar Pradesh	624
15.	Madhya Pradesh	711
16.	Orissa	738

SOURCE: Indirect estimates based on the MMR-IMR linkage. See Section for details



REDUCTION OF MMR TO 250 MATERNAL DEATHS BY THE YEAR 2000

MATERNAL MORTALITY

Dying to give life

Maternal mortality is so neglected that systematic data do not even exist on the death of women in childbirth. The World Health Organization estimates that worldwide at least half a million women die every year from causes related to pregnancy and childbirth. The National Family Health Survey of India estimates that in the early 1990s, close to 110,000 women died each year from causes related to pregnancy and childbirth. Other estimates for India place the figure at 125,000 women each year.

The survival of mothers and babies alike is closely correlated with the care and attention

received at the time of delivery. No other statistic is perhaps as telling as the figures on the percentage of institutional deliveries in different Indian states. When mothers receive proper obstetric care, not only are their lives saved, but also those of their children, especially in the first month of life when the mortality rate is highest. While there are not enough hospital beds to accommodate every woman at childbirth, there are enough specialists and facilities to assure that every woman in need receives correct, timely and effective emergency obstetrical care.

Attention during childbirth:

A key to lowering maternal deaths and ensuring safe births

Kerala reduced its infant mortality rate from 37 in 1981 to 13 in 1993: an average annual reduction of 8 percent. Similarly, Tamil Nadu lowered its infant mortality rate from 91 in 1981 to 56 in 1993, recording an annual average rate of reduction of 4.6 percent, significantly higher than the national average of three percent during this period. Of the several factors that may have contributed to this decline, a very striking feature is the attention that mothers receive during delivery. In Kerala, 97 percent of the rural deliveries and 99 percent of the urban

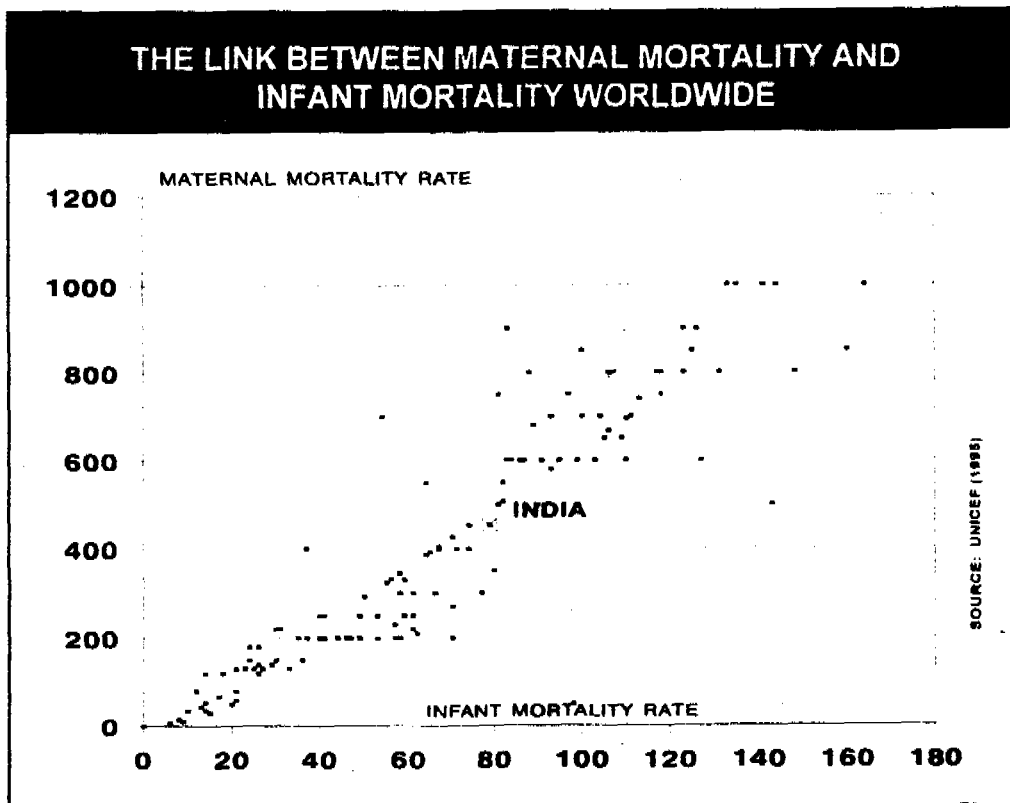
deliveries that took place in 1992 were conducted by trained personnel either in institutions or at home. In Tamil Nadu, the corresponding figures were 70 percent in rural areas and 97 percent in urban areas; and for India as a whole, only 40 percent of rural deliveries and 83 percent of urban deliveries were conducted by trained personnel either in institutions or at home. An increase in institutional deliveries contributes to lowering not only child mortality, but equally significantly, to preventing maternal deaths.

MATERNAL MORTALITY

Estimating Maternal Mortality

Even though demographic methods exist for estimating maternal mortality rates (MMRs), most surveys do not have large enough samples to work out reliable estimates. At the same time, problems associated with data collection and the high costs of conducting surveys have acted as severe constraints to arriving at accurate estimates. As a result, even where estimates of MMR are available, these are often at the national level. Estimates of MMR at the sub-national levels are virtually non-existent.

The National Family Health Survey conducted in India during 1992-1993 was large enough to estimate maternal mortality at the national level. According to the NFHS, the average MMR for the two-year period preceding the survey was 420 deaths per 100,000 live births. The NFHS report, however, states that there is no way to assess the completeness and accuracy of these estimates. Global data, however, reveal a very strong correlation ($r=0.91$) between maternal mortality and infant mortality; and this relationship can be used to estimate MMR when IMR is known.



Using the above relationship yields an MMR estimate of 453 deaths for India, a figure somewhat higher than the NFHS estimate, but consistent with the caveat given in the NFHS report that "direct survey estimates of this type often under-numerate maternal deaths." It is also this equation that has been used to estimate the MMRs for

Indian states presented in the League Table. It is important to note that there are only 15 countries or so in the world that report higher levels of MMR than the estimated levels of over 700 for Madhya Pradesh and Orissa. This is also in sharp contrast to Kerala where the estimated levels of MMR are 87 deaths per 100,000 live births.

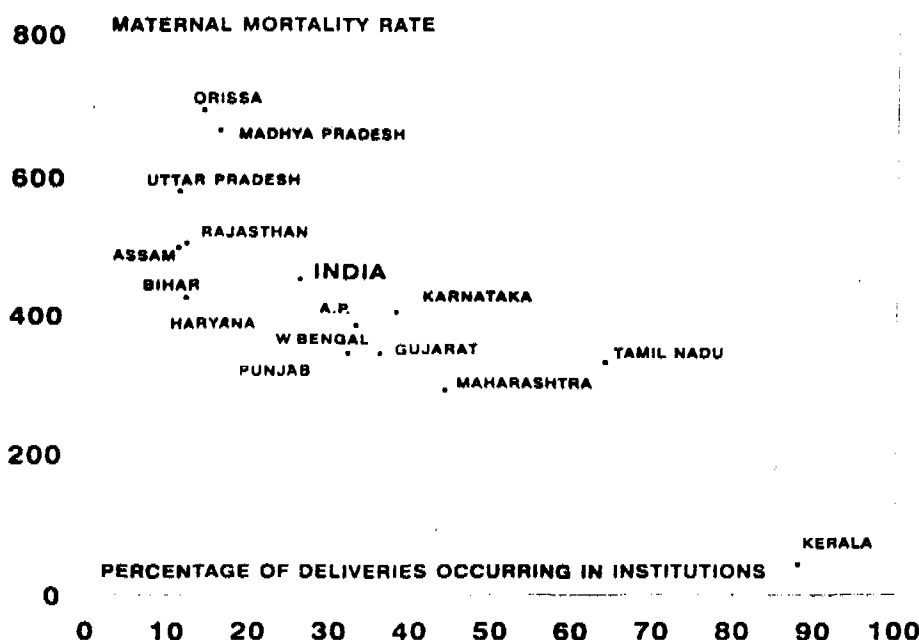
MATERNAL MORTALITY

Government of India's safe motherhood strategy is based on village level contact with each pregnant woman and provision of prenatal care, including treatment of anaemia and early detection of possible complications in pregnancy. But in the end, every woman who is pregnant has to realize that the only real risk factor is pregnancy itself and that any pregnant woman can encounter a life-threatening

complication at any time. **She** must know what the signs are, and be immediately prepared to move to a hospital where proper care can be given. To enable this, the role of husbands and the community becomes critically important in assuring prompt action in transporting her to the proper hospital facility with appropriate emergency obstetric care.

The need for institutional emergency care

There is nothing that a family wishes for more than the safe birth of a child and the safety of the mother during delivery. The importance of access to institutional care becomes apparent when we look at data on Indian states. The lower the percentage of institutional deliveries, the higher is the maternal mortality rate.



SOURCE: NFHS, 1992-1993 and indirect estimates of MMR from League Table

Evidence from several countries suggests that providing institutional emergency care is a critical intervention for reducing maternal mortality. While there are not yet enough hospital beds to accommodate all of India's 25 million annual births, there is adequate distribution of existing obstetric facilities to handle obstetric emergencies (estimated at 10-15 percent of deliveries), provided women and their families recognize the early signs of complications and reach those facilities in time. India's maternal mortality reduction goal could be realized if the existing facilities were properly used by all.

LEAGUE TABLE

There is widespread agreement that it is critical to ensure universal primary education, both for its intrinsic worth as well as for its value in stimulating social progress and economic growth. Education of girls in particular is one of the most crucial investments that India can make in its own future.

This table portrays the educational progress of states as shown by the percentage of girls aged 6-14 years who are not attending school.

GIRLS AGED 6-14 YEARS WHO ARE NOT ATTENDING SCHOOL	
	1992-1993 %
1. Kerala	5
2. Himachal Pradesh	12
3. Punjab	22
4. Tamil Nadu	22
5. Maharashtra	23
6. Haryana	25
7. Gujarat	32
8. Assam	34
9. Karnataka	36
10. West Bengal	37
11. Orissa	38
INDIA	41
12. Andhra Pradesh	45
13. Madhya Pradesh	45
14. Uttar Pradesh	52
15. Rajasthan	59
16. Bihar	62

SOURCE: National Family Health Survey, 1992-1993



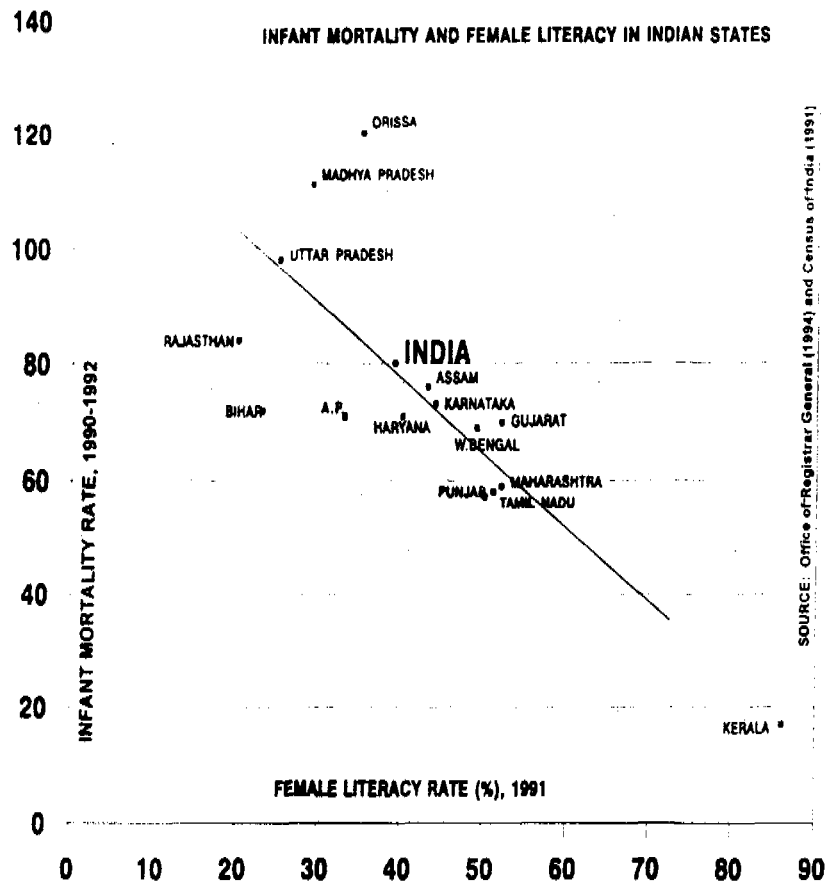
**ACHIEVEMENT BY THE YEAR 2000
OF PRIMARY EDUCATION BY AT
LEAST 80 PERCENT OF PRIMARY
SCHOOL-AGE CHILDREN**

PRIMARY EDUCATION

An informed public

Forty-five years after Independence, in 1991, only 52 Indians out of every 100 were able to read and write. More disturbing is the disparity between men and women: whereas 64 men out of 100 could read and write, only 39 women could do so. These achievements are also not uniform across the country. In Rajasthan, only 17 women out of 100 could read and write, whereas in Kerala, as many as 75 out of 100 women could do so. The economic losses arising from such high levels of illiteracy are enormous, to say nothing of the social discrimination and lack of opportunities suffered by the illiterate. Even the health effects of female illiteracy are obvious in the correlation with infant mortality.

According to the Government of India's most recent estimates for 1993-1994, gross enrolment ratios among boys at the primary school level exceeded 100 percent in 26 out of 31 states and Union Territories of the country; and among the more populous states, varied from 93 percent in Punjab to 149 percent in Tamil Nadu. Similarly, in the case of girls, the gross enrolment ratio in primary schools exceeded 100 percent in 15 out of the 31 states and Union Territories of India; and among the more populous states, varied from 54 percent in Bihar to 141 percent in Tamil Nadu. However, the



gross enrolment ratio for girls in India, 93 percent, was lower than the ratio for boys, 115 percent without exception in all the states and Union Territories of India. Girls account for 40 percent of students enrolled in the educational system. However, their enrolment declines progressively as they move from primary to the secondary level of schooling. In fact, there is a sharp decline in the enrolment ratio among girls from 93 percent in the age group 6-11 years to 55 percent in the age group 11-14 years.

Doubts have often been expressed on the validity and reliability of enrolment figures, especially when primary education is not compulsory for children, and it is well known

that not all children attend school. Lack of more up-to-date data makes it difficult to assess recent advances that could have been made. However, an estimated 35 percent of children who enrol in Class I drop out before completing primary school, the rate being higher for girls than for boys. There are several reasons for such high drop-out rates. But the fact that nearly 30 percent of those people who have "never enrolled" in school often report that they were "not interested," is a sad reflection of the poor classroom environment, the method of instruction, and

the perceived quality and relevance of education.

Article 45 of the Constitution of India (1950) enjoins that "the State shall endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years." While the Constitution indicates India's intention to provide universal free and compulsory primary education for all, this goal has so far remained elusive.

***A Gross Enrolment Ratio of greater than 100 percent:
What does it imply?***

The Gross Enrolment Ratio (GER) at the primary school level is derived by expressing total enrolment in primary schools (usually Class I to V)—regardless of the age of the students—as a percentage of the population between 6 and 11 years of age, which according to national standards is the age group eligible to attend primary school. A GER value of 100 indicates that a state is able to accommodate all of its school-age population.

The GER, however, does not indicate the actual proportion of eligible children attending school for several reasons. First, over-age pupils tend to inflate the numerator. Thus, if there were several children more than 11 years old enrolled in primary school, GER will be greater than 100. Second, high repetition rates which typically occur in the final grade of the primary school, namely in Class V, tend to inflate the numerator, again resulting in GER exceeding 100 percent. For instance, a recent study reports repetition rates by

Class V students in Rewa district of Madhya Pradesh to be 60 percent. This would imply that, even if the GER in Rewa was 100 percent, around 60 percent of the children of primary school age would still not be enrolled in school. Third, and in some instances, principals and teachers have been reported to falsify the enrolment figures by inflating them, especially if their salary levels or employment depend upon the number of children enrolled in primary schools. As a result, the GER often exceeds 100 percent even when only a proportion of the eligible children are actually enrolled and attending school.

GER thus offers an unsatisfactory measure of universal enrolment, and offers virtually no information on universal attendance. Nonetheless, the actual achievement of a GER of 100 is necessary, though not sufficient, for enrolling all children of the appropriate age group in school.

Take a look! Do solutions exist?

Why do children go to school?

Commonly cited reasons for acquiring basic education:

- empowers individuals and society
- leads to skill formation and opens up new opportunities for employment
- contributes to increased productivity
- enables improved participation in public affairs
- enhances socio-economic status of families
- makes for a more equitable distribution of resources within the community and within the family
- improves child survival, lowers fertility rates and favourably impacts population
- leads to more efficient use of health services, thereby contributing to improvements in health.

Whereas the reasons for going to school are all profoundly important, the reasons for not going to school, while understandable, are relatively minor and could be remedied. Now that non-availability of school facilities is no longer an important factor, accounting for only 10 percent of the "never enrolled" in urban areas and eight percent in rural areas, addressing the commonly cited reasons for not going to school should become an urgent priority.

Why do children not go to school?

Commonly cited reasons for not going to school.

- overcrowded classrooms
- inflexible school timings
- lack of teaching aids
- inadequate training of teachers
- unqualified teachers
- irregular teacher attendance and high absenteeism
- unfair treatment of children and punishment by teachers
- irrelevant education
- very heavy syllabus
- indifferent attitude of parents.

Children go to school, but how much do they learn?

Not only are drop-out rates high, the levels of educational achievements of the children attending primary school are extremely low. During 1992-1993, the National Council of Educational Research and Training (NCERT) carried out a baseline assessment study in 46 low literacy

districts across eight states: Haryana, Madhya Pradesh, Orissa, Assam, Kerala, Karnataka, Maharashtra and Tamil Nadu. The objective of this survey was to assess learning achievements of students approaching the end of the primary school cycle.



Among Class V students, the maximum student achievement in any of the states was 20 out of 40 in word meaning (implying a maximum of 50 percent), and 17 out of 44 in reading comprehension (implying a maximum score of 39 percent).



Among Class IV students, even in Kerala, the state with the highest literacy rates, the maximum score on word comprehension was 58 percent, and in reading comprehension, it was 56 percent.



In reading comprehension, no district in Madhya Pradesh and Tamil Nadu achieved an average score of even 40 percent.



Learning achievements in mathematics were even lower than in reading. The maximum student achievement score in Class IV or V in any of the eight states was 48 percent. More than four-fifths of the students studying in Class IV or V in Assam, Haryana, Kerala, Maharashtra, Madhya Pradesh and Orissa could not achieve a minimum score of 40 percent.

These findings are very sobering, indeed. Establishing teaching-learning processes that ensure minimum levels of learning and

offer relevant, good quality education in a joyful atmosphere can only serve to improve existing educational standards.

A lot is taught, but why is so little learned?

A lot is taught but why is so little learned or understood? This question was addressed by the National Advisory Committee appointed by the Ministry of Human Resource Development in 1993, under the Chairmanship of Professor Yash Pal. In

addition to the physical burden—manifest in the burden of the school-bag which, on average, weighs 4 kilograms in most city public schools—the Committee points to joyless learning as a major problem.

“... both the teacher and the child have lost the sense of joy in being involved with the educational process. Teaching and learning have both become a chore for a great number of teachers and children ... the majority of our school-going children are made to view learning at school as a boring, even unpleasant and bitter experience. They are daily socialized to look upon education as mainly a process of preparing for examinations. No other motivation seems to have any legitimacy.”

Numerous efforts have been made through the country's modern history to enact laws, but these are often lacking in mechanisms of enforcement, and are often criticized as placing particular burden on the poor. It has been said that only compulsory education can effectively convince all parents to allow their children to participate fully in the educational opportunities made available by the State. At the same time, the State is obligated to provide educational facilities, such as infrastructure, teaching and learning materials, and most important of all, an adequate number of teachers properly trained to offer quality primary education. Any effort towards compulsion in primary education must be seen as a two-way street, both by those availing of the education and by those providing it.

The importance of education to national development, to India's global image, to basic human rights, and to a vibrant democracy, is now increasingly being recognized. Never before has the idea received such strong political backing, and enormous public support, especially with the renewed commitment to **Education for All** by the year 2000, and the thrust to primary education provided by Government of India's **District Primary Education Programme**.

Government of India's District Primary Education Programme (DPEP) launched recently in 69 low literacy districts across 11 states, seeks to address the problems of ensuring universal access and retention, while at the same time emphasizing the achievement of minimum levels of learning.

Teachers are the key to education, and for that reason, have traditionally been among the most respected members of society. Poor institutional support, lack of motivation and inadequate training in recent years have greatly eroded their position in society. Today, however, individuals and organized associations of teachers have begun to provide some of the strongest support for the efforts to reach nationwide universal primary education. More such initiatives need to be encouraged, strengthened and supported.

Teachers, community participation and the Joy of learning

The *Shikshak Samakhya* or Teachers' Empowerment Project, spread across 23 districts of Madhya Pradesh, is filling teachers with enthusiasm and classrooms with children eager to learn. From the outside, schools participating in *Shikshak Samakhya* look no different from any other school building. But inside the classrooms, you enter a wonderland of the children's and teachers' imagination. The walls are covered with brightly painted pictures, charts, maps and numerals. Even the sound of the children's voices is different, singing "Elephants come dancing" with joy rather than repeating the teacher's words.

Children enrolled in Class I are no longer required to bring their slates and books to school. This has been achieved quite simply: by painting blackboards all along the walls of the classroom, but at a height well within the reach of children. This seemingly simple intervention has also brought the teacher closer to children as she now sits on the floor along with them.



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Introducing joy into learning and teaching has brought with it several benefits. Attendance in schools has improved dramatically. Girls are finding the setting particularly encouraging. Children and teachers have made very clever use of local materials to produce inexpensive toys, masks and teaching aids. Children want the teachers to tell them stories, sing them songs and teach them to play. Teachers use the process to impart knowledge creatively and enthusiastically. The project clearly demonstrates that enthusing and training the teacher can vastly improve the quality of primary education within the existing system and need not be expensive.

PRIMARY EDUCATION



UNICEF/RAVI CHOPRA

In the past, schools were established, maintained and controlled by the local community. However, over the years, this accountability has shifted to officials in government departments. With the *panchayati raj* institutions coming into place in rural areas, and the *nagar palikas* in urban communities, the chance for local community representatives to become actively involved and take responsibility for primary education is perhaps the most important opportunity facing these institutions. *Panchayati raj* institutions must assume their constitutional responsibility to support, nurture, encourage, and oversee the successful education of all children in their respective communities. While all agree that parent and community involvement in schools enhances both the quality of teaching and the general sense of accomplishment in the community, many elected members of *gram panchayats* do not know how, in practical terms, they can extend their help and partnership to local primary schools. The challenge is to formulate clear guidelines and encourage positive constructive action by *panchayati raj* institutions and *nagar palikas* in support of primary education.

In recent decades, while governments have taken over the responsibility for primary education, private concern for the importance of basic education continues to assure a role for non-governmental organizations (NGOs) not only in facilitating access to schools, but more

importantly, in enriching the quality of primary education and enhancing community life. Even more often, NGOs focus on serving underprivileged sections of the community otherwise unreached or under-served by the existing school system. NGOs of all forms offer an important resource that must be expanded and optimally utilized to reach the goal of universal primary education in India.

In the coming years, media will be called upon to play an increasingly vital role as important agents of social change in the national movement towards universal primary education, especially as the communication revolution sweeping India reaches further into every village and hamlet. Also, as millions now become literate, new ways of providing appropriate reading materials, extending the knowledge base, and deepening educational accomplishment offer a great challenge and opportunity. Post-literacy reading and audio-visual materials will become essential to capitalize on the investment both in basic primary education as well as in adult literacy.

Achieving universal primary education by the year 2000 is indeed a challenging task, but not an impossible one. Every effort must be made to sustain and accelerate the public momentum that has been built up during recent years to achieve this most critical goal for children, and the country.

*Achieving universal primary education:
Step-by-step to the goal*

It is clear that a building is not a school; a school is not a building. Teachers and the community must infuse elements of joyful learning through an interactive process that promotes creativity and helps attain desired levels of achievement. At the same time, a beginning has to be made, somewhere, somehow, to break the practice of children not going to school.

If, for example, all six-year-olds were enrolled in school next year, and then

year by year retained in school, and likewise those who follow them, there would be no cohort of children not going to school in the next generation. Such a step-by-step incremental approach of getting children into school, starting with Class I and maintaining them each year upwards, would also enable teachers to be freed from the current constraints of curriculum, and encourage them to achieve measurable levels of learning through their own initiative and creative teaching.

ACCORDING TO THE *Convention on the Rights of the Child*,

STATES PARTIES RECOGNIZE THE RIGHT OF THE CHILD TO EDUCATION,
AND WITH A VIEW TO ACHIEVING THIS RIGHT PROGRESSIVELY AND ON
THE BASIS OF EQUAL OPPORTUNITY, THEY SHALL, IN PARTICULAR:

**... make primary education
compulsory and free to all.**

Article 28



UNICEF/RAVI CHOPRA

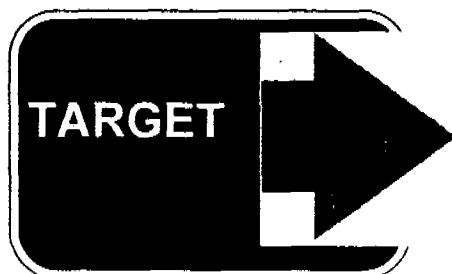
LEAGUE TABLE

India is one of the few countries where there are fewer women than men: only 93 women for every 100 men.

This table lists the nine major states accounting for a majority of the nearly 1.4 million "missing girls" in the age group of 0-6 years based on the assumption that one would typically expect 96 girls for every 100 boys in this age group. This is indeed a sad and shameful comment on the country's development ethos.

STATE		MISSING GIRLS: 0-6 YEARS IN 1991
1.	Uttar Pradesh	493,563
2.	Rajasthan	208,210
3.	Punjab	152,834
4.	Haryana	137,552
5.	Gujarat	120,107
6.	Maharashtra	106,666
7.	Madhya Pradesh	62,711
8.	Tamil Nadu	50,924
	INDIA	1,390,593

SOURCE: Computations based on the population totals given by the Census of India 1991



**ELIMINATION OF ALL FORMS OF
DISCRIMINATION AGAINST THE
GIRL CHILD**

GENDER EQUITY

Towards women's empowerment

There is perhaps no more shameful statistic than the fact that some 40 to 50 million girls and women are "missing" from the Indian population. In all but a few countries of the world, there are typically 105 women for every 100 men. Even though at birth boys outnumber girls by about the same proportion, studies have shown that where men and women have access to equal care, nutrition, health and medical attention, women, due to their biologically determined stronger constitution, live longer than men, and therefore outnumber them. In the

industrialized countries, for example, there are, on an average, 106 women for every 100 men; in Sub-Saharan Africa, there are 102 women for every 100 men and in South-East Asia, 101 women for every 100 men. In India, on the contrary, there are less than 93 women for every 100 men in the population. Only where societies specifically and systematically discriminate against women are fewer of them found to survive. Sex ratios of children 0-6 years capture a portion of this discrimination against females.

"Missing Girls:"

consequent to discrimination against girls

"Missing girls" reflect the unequal treatment that girls receive compared to boys. Rarely is such discrimination against girls not a conscious doing. Anti-female bias is reflected, for instance, in frequently higher numbers of death among girl babies and children, greater malnutrition among girl children, and lower female enrolment and substantially higher drop-out rates among girls in schools. Differential treatment to girl children is also captured by fewer consultations with the health care system in the event of illness. For example, a study carried out in 1988 by the Pediatrics Department of two teaching institutions in Ludhiana revealed that 65 percent of children who came to the outpatient department were boys and only 35 percent were girls. Again, boys accounted for 84

percent of all children admitted as in-patients in the hospital, and girls for 16 percent. And, a higher proportion of female children admitted as in-patients died, compared to male children, suggesting that even the fewer number of girl children who were admitted to the hospital were brought later during the course of their illness.

The extent of discrimination against the girl child varies across states. It is indeed depressing to note, for instance, that the life expectancy at birth of a girl child born in Uttar Pradesh (54.6 years) is today some 20 years below that of a girl child born in Kerala (74.4 years): a sad comment on India's failure to live up to its potential for social development.

Census-based estimates of child mortality for 1981 revealed that female mortality exceeded male mortality in 224 out of 402 districts of India. According to data available from the Sample Registration System for 1992, infant mortality rates among girls were higher than among boys for India as a whole, and in eight out of 17 Indian states. Even though biologically speaking, the probability of girl children surviving is greater than that of boys, in India, the situation is the opposite. With the notable exception of Andhra Pradesh, Assam, Himachal Pradesh and Kerala, in the remaining 11 of the more populous Indian states, and for the country as a whole, the age-specific death rate among girls (below 4 years of age) was higher than among boys in 1991.

A significant number of girls are not alive, often because they have not been allowed to

live, either through selective abortion following sex-determination in pregnancy, or they have survived only hours or for a few days because of inadequate attention following their delivery. Whereas earlier, families gladly accepted a girl or boy born to them, a traditionally strong son preference combined with the mounting pressures of modern society to have a small family has contributed to the phenomenon of female foeticide. Studies have shown, for example, that while prenatal sex determination may enable a couple to recognize the sex of their unborn child, very few parents resort to this on the first child. Only with an increasing number of children, especially girl children, do families attempt it. This practice to learn the sex of the foetus and abort a female is reflected in the strikingly low proportion of girls in the population of children between 0 and 6 years of age in several districts of the country.

TEN DISTRICTS WITH THE LOWEST CHILD SEX RATIO			
DISTRICT	STATE	GIRLS PER 1000 BOYS 0-6 AGE GROUP	
1. Salem	Tamil Nadu	849	
2. Bhind	Madhya Pradesh	850	
3. Jaisalmer	Rajasthan	851	
4. Kaithal	Haryana	854	
5. Jind	Haryana	858	
6. Amritsar	Punjab	861	
7. Faridkot	Punjab	863	
8. Bathinda	Punjab	865	
9. Kurukshetra	Haryana	867	
10. Hissar	Haryana	867	

SOURCE: Census of India (1991)

Whereas poverty is often regarded as a major driving force leading families to despair over the birth of yet another girl child—with the implied costs of raising her, only to get her married off at an exorbitant expense in the future—anti-female bias against girls and women is by no means limited to the poor. For instance, Punjab and Haryana, two of the richest states in terms of per capita incomes, have among the lowest female-to-male ratios: 87.4 women to 100 men in Haryana and 88

women for every 100 men in Punjab. Also, a girl in a Punjabi household has a 10 percent higher likelihood of dying before the age of five years than her brother. Even within these states, studies have shown that survival ratios between girls and boys become increasingly adverse with rising income. On the other hand, tribal societies, almost invariably poor by all material standards, show little anti-female bias, with roughly equal survival rates among boys and girls. Considerable research has also shown



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that very often, it is not the level of income or material well-being that makes families discriminate against the girl child; much of it has to do with cultural beliefs, social norms, superstitions and mind-sets that combine to produce discriminatory behaviour patterns.

Legislation, in a number of areas, has become increasingly gender-sensitive. The Prenatal Sex Determination Technique (Regulation and Prevention of Misuse) Bill, 1991 was passed by the Parliament during the Monsoon Session in 1994. Such an Act, which permits prenatal diagnostic techniques on women only in specified conditions and in approved institutions, is the kind of action that needs to be supported. It is equally important to bring about a change in mind-sets so that society fully recognizes the social and economic contribution of women. The underlying sociocultural biases against girls need to be addressed, and a nationwide celebration of femaleness ought to be promoted: one that recognizes and explicitly appreciates the intrinsic importance of women and girls at all ages and throughout society. Greater understanding, better information and stronger advocacy can help significantly: starting with a common understanding of the rights of women and men alike, knowledge of the biology of gender, and, more specifically, the role of men in determining both the gender of the offspring as well as their survival.

It is equally important to address the problems of female discrimination during adolescence and adulthood when women face several disadvantages and enjoy fewer freedoms. Social norms, for instance, require girls to marry early and assume domestic responsibilities, often depriving them of pursuing educational and occupational opportunities. There is growing evidence to suggest that conditions of child survival improve considerably in situations where women enjoy greater freedoms and participate in decision-making. At the same time, the distribution of work within the household is typically biased against girls. Whereas boys are encouraged to go to school, their sisters are made to stay at home and assist in domestic chores, when in fact both boys and girls should go to school, and both should assist in domestic work.

An anti-female bias can be seen in all fields of society and in human relations. Urgently needed is a revival of the celebration of a girl child that duly recognizes her vital role in ensuring continuity of a family, and highlights the importance to men and women alike of assimilating traditionally "feminine" attributes of nurturing, finding social cohesion and commonality, and in fostering harmonious relationships.

Freedom, women's advancement and child survival

Kerala and Manipur, two low per capita income states in India, are also well known for their low infant mortality rates. However, the levels of female literacy are significantly lower in Manipur (48 percent) than in Kerala (86 percent). Clues to the better child survival conditions in Manipur can be found in the freedoms that women enjoy, particularly in respect of marital and occupational choices. Women in Manipur face far less pressure to marry early and much less discrimination than women in other parts of the country. This is reflected, for instance, in the average age at marriage for women, which is 23 years in Manipur. Similarly, women are valued by society for their economic contribution and are seen as an asset to society. Whereas the female work participation rate is 38 percent in Manipur, it is only 17 percent in Kerala, and 23 percent, on an average, in India. The central market in Imphal, the capital city of Manipur, is even today entirely owned and controlled by women in an otherwise patrilineal society.

The Manipur story points to something fairly obvious: active participation by women in public affairs can and does contribute to better conditions for children and society at large.

More striking than these achievements is the tradition of women's collective action that characterizes Manipur. Their agitation against the British in 1939, known locally as *Nupi Lan* (Women's War), is well known. In the 1970s, women became famous as the "*night patrollers of Manipur*" for the movement they launched to prevent misbehaviour by men under the influence of alcohol. Women actively participate in the electoral processes, and on many occasions, female voter turnout rates in Manipur have exceeded those of even Kerala. The Manipur story points to something fairly obvious: active participation by women in public affairs can and does contribute to better conditions for society at large, and therefore for children. The implications for the future are equally obvious: with the 73rd and 74th Amendments to the Constitution of India ensuring that one-third of locally elected representatives will be women, one can anticipate definite improvements in the conditions of women and children.

The origin of maleness: Why blame women?

How many men, blaming yet another daughter on their wives, are aware of the elementary fact of biology that it is the male sperm which carries the sex chromosome that determines the gender of the child? A broad-based campaign should inform everyone that a woman,

far from being blamed for the sex of her child, brings to life and nurtures the seed sown by her husband. Widespread understanding of this fact alone could undermine the traditional rejection of women who bear daughters by husbands who wish for sons.



UNICEF/DUDLEY HARRIS

LEAGUE TABLE

Child labour is one of the worst forms of abuse and exploitation prevalent in India.

While it is facile to blame poverty, the truth is that child labour perpetuates poverty. Increasingly, however, a national consensus and momentum have built up for the abolition of child labour. The most practical intervention needed to sustain this momentum is to ensure that every child goes to school and receives education until the age of 14 years, as mandated by the Constitution of India.

		ESTIMATED NUMBER OF CHILD WORKERS IN 1991
STATE		
1.	Andhra Pradesh	2,181,462
2.	Maharashtra	1,586,634
3.	Uttar Pradesh	1,585,877
4.	Karnataka	1,169,402
5.	Bihar	1,105,586
6.	Tamil Nadu	1,005,444
7.	Rajasthan	756,886
8.	West Bengal	653,539
9.	Orissa	617,351
10.	Gujarat	561,802
11.	Madhya Pradesh	416,940
12.	Assam	376,555
13.	Punjab	217,007
14.	Haryana	181,098
15.	Kerala	78,565
16.	Himachal Pradesh	72,897
INDIA		14,217,588

NOTE: These estimates of child workers have been arrived at by applying the proportion of child workers in 1981 given by the Census of India to the total populations of each state in 1991.



**ABOLITION OF CHILD LABOUR BY
THE YEAR 2000**

CHILD LABOUR

Perpetuating poverty

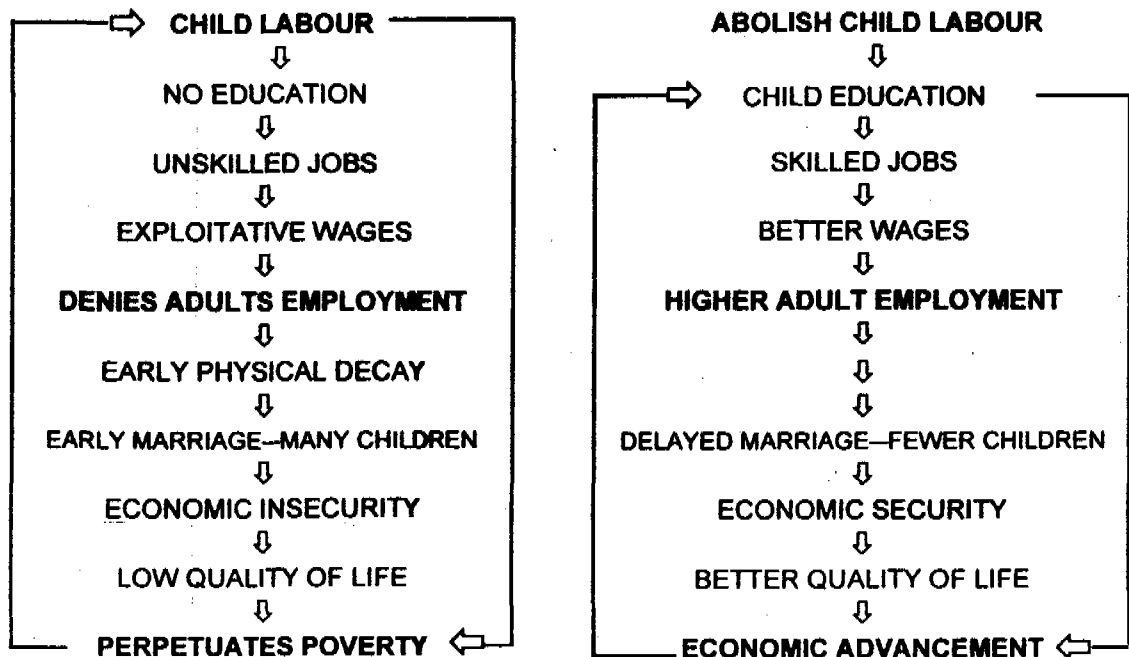
India has several million children living under "especially difficult circumstances." For instance, there are an estimated 500,000 street children in seven cities: Bangalore, Bombay, Calcutta, Delhi, Hyderabad, Kanpur and Madras. The majority of these children are over eight years of age, have never attended school and have parents who have low paid unskilled jobs. Destitute and orphaned children are another group about which very little is known. There is also the reported sale of children and girl trafficking across regional and even national borders. Similarly, there is very little information available about children of prostitutes,

children in institutions, children of construction workers, children of fisherfolk, disabled children, and children affected by riots and disasters: all of whom fall under the category of "children in especially difficult circumstances." In this category also fall millions of child workers.

Among the worst forms of child exploitation is child labour, children being forced to carry out the full-time work of adults. Deprived of education, play and normal childhood, child labour perpetuates poverty as children become part of the destructive inter-generational cycle of impoverishment.

POVERTY AND CHILD LABOUR

Child labour perpetuates poverty as children become part of the destructive intergenerational rhythm of repetitive impoverishment.



CHILD LABOUR

Economic exploitation of children in India is extensive and appears to have increased over recent years. The Census of India in 1981 estimated that there were 13 million child workers (below the age of 14 years) engaged mostly in rural agricultural activities. The National Sample Survey in 1983 estimated that there were 17 million child workers in the age group of 5 to 15 years. The Operations Research Group placed the figure at 44 million in 1983. Most of these children work under stressful conditions in agriculture, and in industries, often hazardous. Estimates by non-governmental organizations place the current figure of children in servitude at 55 million. According to others, who define child workers as those children who are not in school, the numbers are even larger. The reality for the overwhelming majority of these working children is that they will spend their entire lives employed in unskilled occupations, working long hours, often in dangerous conditions, abused and sometimes in bondage for minimal or no pay.

While there is conflicting data regarding the actual number of children employed in the work-place, there are undoubtedly millions in child labour, virtually all employed either in the household or in the private sector, many still in hazardous industries working under extremely adverse conditions. Efforts to legislate and introduce laws against child labour are cumbersome and often prove difficult to enforce. Therefore, a broad consensus needs to be urgently forged from the national to the local level, and implemented to ensure recognition at all levels of private sector employment that the proper place for children is in schools, and that no young children under the legal age of 14 years will be brought into the labour force. Should the corporate and private sector adopt and enforce such a self-regulatory framework, this would be the most effective means of eliminating this problem, showing to the world that Indian labour conditions do not transgress internationally recognized rights of children.



UNICEF/VILAS KHOPKAR

CHILD LABOUR



UNICEF/SONDEEP SHANKAR

Public action: Carpets without child labour

India's carpet industry, one of its major export earners, has been the target of much advocacy and action against child labour. Concentrated around Varanasi in Uttar Pradesh, the carpet business employs an estimated 300,000 children. Many of the children get "bonded" early in life to repay a family debt, and work under appalling conditions.

Over the years, several NGOs have been active in the release and rehabilitation of children from various forms of bondage in the carpet industry. The industry's reliance on export markets has also made it vulnerable to external pressures. The threat of boycott of Indian carpets, initiated in Germany and in the US Senate by the Child Labor Deterrence Bill (more commonly known as the Harkin Bill), has drawn attention in recent months to the problem of child workers. Should the Bill become law, imports into the USA of

articles produced by children under 15 years of age would be banned.

For the first time, employers of children are making serious efforts to reduce their reliance on child labour. Indian NGOs, coordinated by the South Asian Coalition on Child Servitude together with the Indo-German Export Promotion Council (IGEP), representatives of the carpet trade, UNICEF and the ILO have developed an independent, voluntary certification and inspection system, the "Rugmark," to ensure and certify that Indian carpets are child labour free.

But NGOs cannot do it alone. Recently, the government has initiated efforts to certify exports with the establishment of "Kaleen," an inspection system to certify rugs and textiles made without child labour.

A strong momentum is building up in India for the abolition of child labour. The Prime Minister launched an ambitious programme on Independence Day in August 1994 by announcing an allocation of Rs 850 crores (US \$ 300 million) to eliminate child labour from hazardous industries. In August 1994, the National Commission for the Elimination of Child Labour (NCECL) was established under the chairmanship of the Minister for Labour. The Prime Minister has repeated his call to abolish child labour in several fora, including the meeting of the Labour Ministers of Non-Aligned and other

developing countries, held in Delhi in January 1995.

It is, however, important to note that no country has eliminated child labour without making basic education compulsory for children. As discussed in an earlier section of this Report, investing in primary education is not only critical for India's future development, offering a joyful learning experience to children in classrooms and establishing societal norms that require parents and the community to send all children to school. It is the most effective way of ending child labour in India.

Shankarapally's children

Shankarapally is a *mandal* in Andhra Pradesh covering 36 villages. Until recently, almost a third of the nearly 6,000 children in the age group of 6 to 11 years did not attend school. They worked in the fields of this agriculturally backward area or tended cattle. Many young girls helped in the harvesting of *kanakambaram* flowers, making them into garlands for the markets of Hyderabad and Madras. This changed, however, when older children equipped with knowledge and confidence to enter the school system, attended a four-month-long academic summer camp.

Since 1987, 1200 children have been motivated to return to schools. Of these, 450 are children whose labour was bonded to their employers. Surveys show that over 90 percent of these children continue their schooling.

The absence of children when they go away to such camps helps them make a transition to formal school, and also helps convince parents that their families can survive without the labour of their children.

The economic impact of the removal of child labour in Shankarapally has been remarkable. In the flower growing area, the replacement of children by adult labour, mostly women, has resulted in tripling of wage levels.

The economic impact of the removal of child labour has been remarkable. In the flower growing area, the replacement of children by adult labour, mostly women, has resulted in tripling of wage levels. This has contributed substantially towards enhancing the flow of income into the rural households. It has enabled families to acquire new assets like buffaloes and land, generated additional employment, and created opportunities for more children to go to school.

CHILD LABOUR

ACCORDING TO THE *Convention on the Rights of the Child*

States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development.

Article 32



UNICEF/SONDEEP SHANKAR

GOALS

Realizing children's rights

The effort to achieve social development goals is part of a historic struggle to restructure societies in the interests of the many rather than the few. Only in this century has that ideal begun to make significant practical headway. Combined with the continuing increase in worldwide productive capacity that began with the industrial revolution, this change in the underlying social ethic has made it possible to put the basic benefits of progress at the disposal of all. Completing this revolution is the unfinished agenda of the 20th century.

The successes that have been achieved so far in this struggle have not been brought about by any inexorable force of history or technology, but by a conscious effort, led less by governments than by people, to make morality march in step with advancing capacity. The involvement of even larger numbers of people in this struggle is the best hope for fundamental change, for implementing today's development consensus, and for bringing what must be done within the bounds of what can be done.

The Goals of the **World Summit for Children**, now signed by more than 160 Heads of State throughout the world, represent a true consensus, perhaps the widest ever, on specific promises that can and must be met. Far from being an arbitrary listing, these goals have evolved from a decade of debate and discussion in regional and international fora ranging from the SAARC Summit in 1986 to annual meetings of the Organization of African Unity, of Arab League resolutions, heads of state of Central America, as well as the Executive Boards of UNICEF, the World Health Organization, the governing bodies of UNESCO, of UNFPA, the UN General Assembly and of citizen groups and national parliaments around the world.

The identification and endorsement of the global goals provide the social vision of what can and should become a basic minimum, regarded as an essential commitment across national boundaries throughout the world. The goals represent a consensus on moral minima in the social sectors that must be provided and assured to all children. Most importantly, endorsement of the goals amounts to accepting that unless investment in children is made, all of humanity's long-term problems will remain fundamental long-term problems.

These goals, valid ends in themselves, are nonetheless only a stepping stone to assuring the rights envisioned in the **Convention on the Rights of the Child**. They serve as measuring points, milestones on this important path, to give substance to the most widely signed and endorsed human rights document in history.

The **Convention** provides the legal basis for initiating action to ensure the rights of children in society. It also obligates national governments to:

- review national and state legislation and bring it in line with the provisions of the Convention;
- develop appropriate monitoring procedures to assess progress in implementing the Convention;
- involve all relevant government ministries and departments, international agencies, non-governmental organizations, and the legal profession in the implementation and reporting process;
- publicize the Convention and seek public inputs for reporting on its implementation; and
- ensure that the monitoring process is frank and transparent.

As in all endeavours, the end, however desirable, is but a measuring point of the processes to achieve this goal. Without goals these processes are often unfocused and uncontrollable. Similarly, goals without sustainable processes, clearly owned and articulated by those who are carrying them out, can be counter-productive as well. Thus, the integration of the World Summit Goals into an international programme of action for children, enables each country to establish processes unique to societies which would arrive at the goals in a sustainable and equitable fashion.

In India, the **National Plan of Action (NPA)**, formulated in 1992, spells out the country's own commitment to children. Importantly, in the

two years that followed, each of the states in the country took the NPA and adapted it to their own reality, adding goals, modifying targets, identifying specific strategic approaches, highlighting processes and outlining monitoring mechanisms to assure that these goals would be met in a fashion that strengthened the community-government partnership. The translation of **State Programmes of Action for Children** into district plans has provided further ownership and specificity; and these plans are now being used across states in India as the foundation upon which the newly elected *gram panchayat* members are being oriented to take up their

Sona Murmu of Ghosaldanga

Ghosaldanga, 15 kilometres from Tagore's Shantiniketan in West Bengal, is a small impoverished village. Only six of the 45 families in the village own small fragments of land. Others are sharecroppers; the majority are landless. Less than 10 percent of the land is irrigated, and most of the land yields just one major crop in the year. Electricity has yet to reach Ghosaldanga. However, a remarkable feature of Ghosaldanga is that every child, boy and girl, between the ages of 6 and 11 years goes to school.

Much of the credit for this goes to *Sona Murmu*, the first person, and so far the only one, to have passed the school final examination from Ghosaldanga. Sona started his work in the village after undergoing a month-long paramedical course in Calcutta, when he began

Ghosaldanga is a small, yet outstanding example of what even the poorest communities can achieve, if they decide to take control of their own destiny.

distributing medicine and providing first aid. Finding that the tribal children faced severe difficulties in school—as they were taught in Bengali and not in their native Santhali language—Sona started the first “night school” to help the children after classes. He was soon

joined by many young men and women of the village who came together to form the *Ghosaldanga Adibasi Seva Sangha* in 1987.

Ghosaldanga has not looked back since then.

The night schools expanded and moved to cover the neighbouring tribal villages. A feeding centre for children was started in 1991, and a weaving centre for women in 1992. A regular feature of life in Ghosaldanga is the Sunday evening meetings of the village community. Most of the residents, including young people, gather to share experiences, discuss problems and take joint decisions.

GOALS

responsibilities relating to social programmes in their own communities. The mobilization at the grassroots around goals for children has provided a common sense of purpose, while at the same time, building into the process the flexibility to assure that communities understand, own, control and decide on the ways of meeting their promises to their own children.

In the best of circumstances, these goals have become part of political manifestoes. In Madhya Pradesh, goals for children have been incorporated into the Rajiv Gandhi Missions, promising the assurance of universal salt iodation, of dramatic reduction in deaths from diarrhoea, and a remarkable statewide approach to fulfilling the promise of education for all. In Tamil Nadu, the Chief

Pro-child is good politics

Candidates contesting elections in Uttar Pradesh in November 1993 were approached by volunteers and representatives of the South Asian Coalition on Child Servitude to sign the following "pro-child" declaration:

"Recognizing that child servitude and child labour are a scourge on humanity and in the State of Uttar Pradesh, I will make all efforts to eradicate it through my voice, soul and actions. This will also include efforts to replace children by adults as well as to seek penal measures against employers of children.

In accordance with Article 45 of the Constitution of India and the Supreme Court judgement of February 1993, I will make all efforts to get a bill for free and compulsory primary education for all children up to the age of 14 years passed in the State Assembly, and ensure subsequently its proper implementation."

Out of the 1,986 candidates, 942 who were approached signed the declaration; 997 remained undecided; and 47 candidates refused to sign it. Candidates who signed the declaration were called "pro-childhood" candidates; and those who refused were labelled "anti-childhood" candidates. Local newspapers carried the names of the "anti-childhood" candidates with an appeal not to vote for them.

Today, 82 percent of the 422 Members of the Legislative Assembly in Uttar Pradesh are those who signed the "pro-childhood" declaration. It is also not surprising that 44 out of the 47 "anti-childhood" candidates lost the elections, clearly establishing that being against children is just not good politics.

GOALS

Minister's 15-Point Programme for child welfare includes most of the goals as well as others adapted specifically to the conditions prevailing in that state. In West Bengal, the Chief Minister has accorded the highest priority to the State Plan of Action for Children as a commitment of his government to the future generation, evidenced by the allocation of State funds and regular monitoring of progress towards these goals.

While the **Convention on the Rights of the Child** obligates the States to ensure the well-being of children, responsibility for implementation needs to be taken by all sections of society. Large scale public action needs to be mobilized very soon and very effectively.

As these lines are written, India is half way through the decade, attempting to meet the goals for 1995 as a marking point in the larger efforts towards the goals to be accomplished before the year 2000. India's success is critical to the success of the world, and yet that success will be possible only to the extent that these goals are understood, accepted, owned and, indeed, implemented by individuals and communities where our children live. This is the least that the children can ask of Government and of Society as the nation prepares to enter the next millennium.

Shaping tomorrow's India by investing in children today is the best possible development strategy for the country.



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ANNEXURE

A PROFILE OF THE LESS POPULOUS STATES AND UNION TERRITORIES	UNDER-FIVE MORTALITY RATE 1992-1993	PERCENT OF CHILDREN WITH DIARRHOEA WHO RECEIVED ORS OR RECOMMENDED HOME SOLUTION 1992-1993	CHILDREN 6-9 MONTHS RECEIVING BREASTMILK AND SOLID/SOFT FOOD % 1992-1993	AVAILABILITY OF IODIZED SALT AS PERCENTAGE OF REQUIREMENT 1992-1994	TOTAL FERTILITY RATE 1992	MATERNAL DEATHS PER 100,000 BIRTHS	GIRLS AGED 6-14 YEARS WHO ARE NOT ATTENDING SCHOOL % 1992-1993	ESTIMATED NUMBER OF CHILD WORKERS (1991)
Arunachal Pradesh	72	33	36	53	4.3	523	35	20,477
Delhi	83	39	25	309	3.0	255	14	37,680
Goa	39	41	34	1	1.9	134	7	7,865
Jammu & Kashmir	59	44	45	47	3.1	463	20	140,468
Manipur	62	62	50	94	2.7	148	13	22,963
Meghalaya	87	41	56	50	3.7	349	24	51,978
Mizoram	29	24	64	130	2.3	NA	12	6,339
Nagaland	21	25	44	118	3.2	47	11	22,850
Tripura	105	NA	NA	51	2.7	329	23	26,467
INDIA	109	31	31	65	3.6	453	41	14,217,588

SOURCE: Same as in the respective League Tables

NO DATA AVAILABLE ON:

1. Andaman and Nicobar Islands
2. Chandigarh
3. Dadra and Nagar Haveli
4. Daman and Diu
5. Lakshadweep
6. Pondicherry
7. Sikkim

DATA SOURCES

Barclay, Andrew J. C., Foster, Allen and Sommer, Alfred (1987), "Vitamin A supplements and mortality related to measles: A randomised clinical trial," *British Medical Journal*, Vol. 294, 31 January 1987.

Census of India (1991), "Final Population Totals: Brief Analysis of Primary Census Abstract," Paper-2 of 1992, Office of Registrar General and Census Commissioner, Government of India, New Delhi.

Government of India (1995), "Selected socio-economic statistics for India: 1993," Central Statistical Organization, Department of Statistics, Ministry of Planning and Programme Implementation, New Delhi.

Hussey, Gregory D. and Klein, Max (1987), "A randomised controlled trial of vitamin A in children with severe measles," *The New England Journal of Medicine*, vol. 323, July 19, 1990.

Ministry of Finance (1995), "Economic Survey 1994-1995," Government of India, New Delhi.

Ministry of Health and Family Welfare (1994), "National Child Survival and Safe Motherhood Programme," Maternal and Child Health Division, Department of Family Welfare, Government of India, New Delhi.

Ministry of Health and Family Welfare (1995), "Annual Report 1994-1995," Government of India, New Delhi.

Ministry of Rural Development (1995), "Report of the survey on the status of drinking water supply in rural habitations," Rajiv Gandhi National Drinking Water Mission, Government of India, New Delhi.

National Family Health Survey (1992-1993), "India: Introductory Report," International Institute for Population Sciences, Bombay.

National Institute of Nutrition (1991), "National Nutrition Monitoring Bureau: Report of Repeat Surveys (1988-1990)," Indian Council of Medical Research, Hyderabad.

Office of Registrar General (1994), "Sample Registration System: Fertility and Mortality Indicators 1992," Government of India, New Delhi.

Office of Registrar General (1995), "Sample Registration Bulletin January 1995," Vol. XXIX, No.9, Government of India, New Delhi.

UNICEF (1991), "The State of the World's Children," Oxford University Press, New Delhi.

UNICEF (1995), "The State of the World's Children," Oxford University Press, New Delhi.