Outline

1. National Development Vision
2. Population Situation and Context
3. Population and Development Factors
4. Family Planning: Challenges
5. The Role of Policy: Opportunities
India’s Vision

Eleventh Five-Year Plan (2007 – 2012)

• Commitment to planned social and economic development
• Governmental role and responsibility

“Our ultimate objective is to achieve broad based improvement in the living standards of all our people.”

Millennium Development Goals (MDGs)

• Eight goals that respond to main development challenges
• Provide framework to measure and target development
• 2015 deadline
Outline

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5 The Role of Policy: Opportunities
Population
Economy and Society

How does population affect India’s economic growth and social development in the coming decades?
India’s population has quadrupled in the last 100 years. And the number of people added each decade continues to grow.

Decadal Population Growth

Source: Census 2001: India at a Glance
In 20 years, India will be the most populous nation in the world.

10 Most Populous Countries in the World Population (Millions)

<table>
<thead>
<tr>
<th>Country</th>
<th>Year 2008</th>
<th>Year 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>1324.7</td>
<td>1484.6</td>
</tr>
<tr>
<td>India</td>
<td>1149.3</td>
<td>1484.6</td>
</tr>
<tr>
<td>USA</td>
<td>304.5</td>
<td>370.0</td>
</tr>
<tr>
<td>Indonesia</td>
<td>239.9</td>
<td>271.5</td>
</tr>
<tr>
<td>Brazil</td>
<td>195.1</td>
<td>217.2</td>
</tr>
<tr>
<td>Pakistan</td>
<td>172.8</td>
<td>265.7</td>
</tr>
<tr>
<td>Nigeria</td>
<td>148.1</td>
<td>226.7</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>147.3</td>
<td>203.2</td>
</tr>
<tr>
<td>Russia</td>
<td>141.9</td>
<td>128.9</td>
</tr>
<tr>
<td>Japan</td>
<td>127.7</td>
<td>124.4</td>
</tr>
</tbody>
</table>

Population of Indian states matches that of large countries...

<table>
<thead>
<tr>
<th>State</th>
<th>Population (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uttar Pradesh</td>
<td>183</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>104</td>
</tr>
<tr>
<td>Bihar</td>
<td>90</td>
</tr>
<tr>
<td>West Bengal</td>
<td>85</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>80</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>66</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>65</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>62</td>
</tr>
<tr>
<td>Gujarat</td>
<td>55</td>
</tr>
<tr>
<td>Orissa</td>
<td>39</td>
</tr>
<tr>
<td>Kerala</td>
<td>33</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>29</td>
</tr>
<tr>
<td>Assam</td>
<td>29</td>
</tr>
<tr>
<td>Punjab</td>
<td>26</td>
</tr>
<tr>
<td>Haryana</td>
<td>23</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>22</td>
</tr>
<tr>
<td>Delhi</td>
<td>16</td>
</tr>
<tr>
<td>Jammu and Kashmir</td>
<td>11</td>
</tr>
<tr>
<td>Uttarakhand</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: Population in millions

Half the population growth will be in 7 northern states. Southern states will contribute only 13% of growth.

Projected population of India: 2001-2026
Share of additional 371 million

- Uttar Pradesh: 22%
- Uttarakhand: 1%
- Bihar: 8%
- Jharkhand: 3%
- Madhya Pradesh: 7%
- Chhattisgarh: 2%
- Rajasthan: 7%
- Orissa: 2%
- Four Southern States: 13%
- Rest of the Country: 35%

India’s Youth Bulge
3 out of 10 people are under age 15

Source: Census 2001
By the time India achieves population stabilization, there will be 1.6 billion people.
## Population Explosion:
### Rapid Growth in Four States

<table>
<thead>
<tr>
<th>State</th>
<th>Population Increase</th>
<th>2009 Estimated Population</th>
<th>Additional Population in a Decade</th>
<th>Total Population Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP (19.4%)</td>
<td></td>
<td>69,897,000</td>
<td>5,941,245</td>
<td>MP + HP</td>
</tr>
<tr>
<td>Bihar (21.6%)</td>
<td></td>
<td>95,026,000</td>
<td>12,027,000</td>
<td>Bihar + J&amp;K</td>
</tr>
<tr>
<td>UP (20.7%)</td>
<td></td>
<td>193,763,000</td>
<td>27,565,000</td>
<td>UP + Punjab</td>
</tr>
<tr>
<td>Rajasthan (20.7%)</td>
<td></td>
<td>65,650,000</td>
<td>9,143,000</td>
<td>Rajasthan + Uttarakhand</td>
</tr>
<tr>
<td>INDIA (10.9%)</td>
<td></td>
<td></td>
<td>54,676,245</td>
<td>INDIA + GUJARAT</td>
</tr>
</tbody>
</table>

Source: Registrar General of India
On average, women in northern states have more children.

Total Fertility Rate, 2008

Source: SRS 2007

Photo by Leandra Falls
While some states have achieved replacement-level fertility, others will take many more years.

**National Population Policy Goal**

**Total Fertility Rate 2.1 by year 2010**

Fertility Trends: Madhya Pradesh, Bihar & Andhra Pradesh

Children per woman

- Madhya Pradesh:
  - 1991: 4.6
  - 1996: 4.4
  - 2001: 4.1
  - 2006: 3.9
  - 2008: 3.3

- Bihar:
  - 1991: 4.5
  - 1996: 4.4
  - 2001: 4.2
  - 2006: 3.5
  - 2008: 3.0

- Andhra Pradesh:
  - 1991: 3.0
  - 1996: 2.5
  - 2001: 2.3
  - 2006: 2.0
  - 2008: 1.8

Source: Sample Registration System (SRS), Registrar General of India
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Population and development affect each other

Link between population growth, development, and poverty alleviation goals
If we continue to grow at the current pace, our population will double in 50 years, making sustainable development unattainable.

Urgent need to reduce population growth

Sources: Census 2001 and 2008 Revision Population Database UN Population Division
Development Sectors

A  Education
B  Environment and Food Security
C  Water and Electricity
D  Economy and the Labour Force
E  Health
Education

Universal enrolment of children ages 6–14 including the hard-to-reach segment

All gender, social, and regional gaps in enrolments to be eliminated by 2011–12

Dropout at primary level to be eliminated

Significant improvement in learning conditions
Primary Students

Fewer Students, More Resources Available per Child

Number of Students, Ages 6 – 11 (Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>High Fertility</th>
<th>Low Fertility</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>148.7</td>
<td>145.7</td>
</tr>
<tr>
<td>2031</td>
<td>237.7</td>
<td>114.5</td>
</tr>
</tbody>
</table>

Projections arrived using SPECTRUM with inputs from Census, 2001, NFHS -2 & NFHS -3 and Eleventh five-year plan
Primary Teachers

Fewer Teachers Needed, Better Student-to-Teacher Ratio

Number of Teachers (Millions)

- **High Fertility**
  - 2010: 2.72
  - 2031: 4.08
  - 2041: 5.68
  - 2051: 5.68
  - 2061: 5.68

- **Low Fertility**
  - 2010: 2.66
  - 2031: 3.38
  - 2041: 3.62
  - 2051: 3.62
  - 2061: 3.62

Projections arrived using SPECTRUM with inputs from Census, 2001, NFHS -2 & NFHS -3 and Eleventh five-year plan.
Education Expenditures

Significant Savings with Slower Population Growth

Projections arrived using SPECTRUM with inputs from Census, 2001, NFHS -2 & NFHS -3 and Eleventh five-year plan.
Better Education
With Less Population Pressure

• More resources for training and incentives to keep teachers in rural areas
• More resources for classrooms and educational material
• Smaller classrooms and better learning environments
• Progress on MDG 2:
  • Achieve universal primary education
Environment and Food Security

Goals:

• Accelerate the agricultural growth rate of 4% per annum during 2007-12

• Increase the foodgrains production by at least 20 million tonnes by 2012
Environmental Degradation

Larger Population Leads to Overuse of Land

- Overexploitation
- Deforestation
- Erosion
- Poorer soil fertility

Lower Productivity
Land Fragmentation
Higher Population, Less Land per Holder

Land holdings divided among more family members
Lower productivity from small farms – less food security
Undernourishment
Larger Population, Greater Demand for Food

• 1 out of 5 people do not have enough to eat

• Less food per person

Source: Food and Agriculture Organization, Statistics Division
More Families Will Require Food Subsidies

Population Requiring Subsidies (Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>High Fertility</th>
<th>Low Fertility</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>134</td>
<td>131</td>
</tr>
<tr>
<td>2021</td>
<td>131</td>
<td>131</td>
</tr>
<tr>
<td>2031</td>
<td>171</td>
<td>131</td>
</tr>
<tr>
<td>2041</td>
<td>216</td>
<td>171</td>
</tr>
<tr>
<td>2051</td>
<td>267</td>
<td>216</td>
</tr>
<tr>
<td>2061</td>
<td>183</td>
<td>267</td>
</tr>
</tbody>
</table>

Sources: India Economic Survey; Department of Food and Public Distribution; Authors’ calculations
Future Expenditure on Food Subsidies

Greater Pressure to Provide Subsidies

Cumulative Savings
Rs 6,21,881 Crores

- High Fertility
- Low Fertility

Sources: India Economic Survey; Department of Food and Public Distribution; Authors’ calculations
Water and Electricity
Sustainability

“Adequate safe drinking water facilities should be provided to the entire population both in urban and in rural areas.”

- *National Water Policy, 2002*

Source: Ministry of Water Resources
Access to Safe Drinking Water

Less Demand for Water with Lower Fertility

People Without Access (Millions)

- High Fertility
- Low Fertility

Projections arrived using SPECTRUM with inputs from Census, 2001, NFHS -2 & NFHS -3 and Ministry of Water Resources
Electricity

Less Demand with Lower Fertility

Electricity Consumption (Billions Kilowatt Hours)

- **High Fertility**
- **Low Fertility**

Sources: U.S. Energy Information Administration, India Energy Profile
Economy

Goals:

• Increase average GDP growth rate to 9% per year

• Reduce unemployment among the educated to less than 5%

• Increase local wage rate of unskilled workers by 20%

• Reduce head-count ratio of consumption poverty by 10%
Labour Force
Unemployment, Underemployment

• Eight percent of population is unemployed
• Population with formal education are unable to find jobs
• Migration to cities in search of employment
Employment

Number of People Seeking Employment Will Continue to Rise

![Graph showing projections of total labor force in millions from 2010 to 2060, with two lines representing high and low fertility scenarios. The projection uses SPECTRUM with inputs from Census, 2001, NFHS -2 & NFHS -3.]
Better Economy
With Less Population Pressure

• More funding for social sector
• Greater disposable family income for education and health
• Lower youth unemployment
• Greater stability
• Progress on MDGs

1: Eradicate extreme poverty and hunger

Photo by Ford APA
Health

Goals:

• Reducing Maternal Mortality Ratio (MMR) to 100 per 100,000 live births

• Reducing Infant Mortality Rate (IMR) to 28 per 1000 live births

• Reducing Total Fertility Rate (TFR) to 2.1
Decline in the national maternal mortality ratio is small compared to the goal.

Rate of decline needs to be faster to meet the MDG.

**State Maternal Mortality Ratio**

States need to invest in quality health care services and empower women to demand their reproductive and health rights.

Maternal deaths per 100,000 live births

- Assam: 480
- Uttar Pradesh: 440
- Rajasthan: 388
- Madhya Pradesh: 335
- Chhattisgarh: 335
- Jharkhand: 312
- Bihar: 312
- Orissa: 303
- Karnataka: 213
- Gujarat: 160
- Andhra Pradesh: 154
- Maharashtra: 130
- Tamil Nadu: 111
- Kerala: 95

State Infant Mortality Rate

Infant deaths per 1,000 live births

- Madhya Pradesh: 70
- Orissa: 69
- Uttar Pradesh: 67
- Assam: 64
- Rajasthan: 63
- Chhattisgarh: 57
- Bihar: 56
- Andhra Pradesh: 52
- Gujarat: 50
- Jharkhand: 46
- Karnataka: 45
- Maharashtra: 33
- Tamil Nadu: 31
- Kerala: 12

Source: SRS

Photo by Matthieu A.
Population with Specific Needs

Women of Childbearing Age and Children Under Five

<table>
<thead>
<tr>
<th>Year</th>
<th>High Fertility</th>
<th>Low Fertility</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>452</td>
<td>452</td>
</tr>
<tr>
<td>2021</td>
<td>433</td>
<td>433</td>
</tr>
<tr>
<td>2031</td>
<td>500</td>
<td>453</td>
</tr>
<tr>
<td>2041</td>
<td>576</td>
<td>453</td>
</tr>
<tr>
<td>2051</td>
<td>653</td>
<td>453</td>
</tr>
<tr>
<td>2061</td>
<td>768</td>
<td>453</td>
</tr>
</tbody>
</table>

Projections arrived using SPECTRUM with inputs from Census, 2001, NFHS -2 & NFHS -3 and Eleventh five-year plan.
Nurses
Less Pressure on Health Providers

Projections arrived using SPECTRUM with inputs from Census, 2001, NFHS -2 & NFHS -3 and Medical Council of India
Health Expenditures
Less Pressure on Health Services

Cumulative Savings
Rs 5,38,200 Crores

Projections arrived using SPECTRUM with inputs from Census, 2001, NFHS -2 & NFHS -3 and MoHFW
Improved Health
With Less Population Pressure

• More resources to train staff, retain staff, and improve facilities
• Fewer maternal and child deaths
• Progress on MDGs
  4: Reduce child mortality
  5: Reduce maternal mortality
  6: Combat HIV/AIDS and malaria

Photos by Stephane Tougard (top), Suneeta Sharma (bottom)
Outline

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High percentage of non-contraceptive users indicates a gap in service delivery

**Use of Family Planning Methods**

- Female Sterilization: 34%
- Male Sterilization: 1%
- Pill: 4%
- IUD: 2%
- Condom: 6%
- Any Traditional method: 7%
- Non user: 46%

Source: DLHS-3 (2007-08), IIPS Mumbai
Number of Children at Sterilisation or Use of IUCD
Bihar

<table>
<thead>
<tr>
<th>Number of Children</th>
<th>Sterilisation</th>
<th>IUCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>One child</td>
<td>2.6%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Two children</td>
<td>15.5%</td>
<td>40.8%</td>
</tr>
<tr>
<td>Three children</td>
<td>30.0%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Four and more</td>
<td>53.5%</td>
<td>49.9%</td>
</tr>
</tbody>
</table>

Source: NFHS-3 (2005-06), IIPS Mumbai
By simply meeting unmet need for contraceptives, India can achieve replacement level fertility.
Meeting unmet need will avert nearly 12 lakhs infant deaths

Number of infant deaths averted due to increased use of family planning (2010-2015)

- **6,196,168**
- **5,016,554**

**11,79,615 child deaths averted**

Source: Sample Registration System, Registrar General of India, MDG analysis provided by USAID|Health Policy Initiative Project
Meeting the unmet need will avert nearly 35,000 maternal deaths

Number of maternal deaths averted due to increased use of family planning (2010-2015)

Source: Sample Registration System, Registrar General of India, Maternal Mortality in India, MDG analysis provided by USAID|Health Policy Initiative Project
Meeting unmet need to achieve MDGs:
Social sector cost savings outweigh family planning costs

Cumulative Savings:
Rs 27,765 Crores (2010-2015)

Cumulative Costs:
Rs 3,782 Crores (2010-2015)

Source: Sample Registration System, Registrar General of India, MDG analysis provided by USAID|Health Policy Initiative Project
Moving Forward:

Understanding Challenges

Photo by Aayushi Mehta
Married while still a child denies a girl her basic human rights for health and education.

Percentage of women married before age 18

- Bihar: 68%
- Rajasthan: 58%
- Jharkhand: 56%
- Uttar Pradesh: 55%
- Madhya Pradesh: 54%
- Orissa: 38%
- Tamil Nadu: 24%
- Kerala: 15%
- Punjab: 16%
- Himachal Pradesh: 9%

Source: DLHS-3 (2007-08), IIPS Mumbai
Pregnant teenage girls are at high risk of death or disability

Percentage of teenage girls in India who are pregnant or already mothers

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>19</td>
<td>36</td>
</tr>
</tbody>
</table>

Source: NFHS-3 (2005-06), IIPS Mumbai
Fertility declines with increase in education levels of girls.

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>33</td>
</tr>
<tr>
<td>&lt;5 years complete</td>
<td>21</td>
</tr>
<tr>
<td>5-9 years complete</td>
<td>14</td>
</tr>
<tr>
<td>10-11 years complete</td>
<td>6</td>
</tr>
<tr>
<td>12 or more years complete</td>
<td>4</td>
</tr>
</tbody>
</table>

Girls with less than 10 years of education are not able to exercise their reproductive rights.

Photo by Meena Kadri

Source: DLHS-3 (2007-08), IIPS Mumbai
Seven in 10 women in high-fertility states have less than 10 years of education.

### Education Status of Rural Unmarried Women (age 15-24)

<table>
<thead>
<tr>
<th>State</th>
<th>10 Plus Schooling (%)</th>
<th>Less than 10 Schooling (%)</th>
<th>non literate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madhya Pradesh</td>
<td>15</td>
<td>72</td>
<td>14</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>15</td>
<td>71</td>
<td>14</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>17</td>
<td>63</td>
<td>21</td>
</tr>
<tr>
<td>Bihar</td>
<td>19</td>
<td>56</td>
<td>25</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>21</td>
<td>53</td>
<td>26</td>
</tr>
<tr>
<td>Orissa</td>
<td>25</td>
<td>59</td>
<td>16</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>30</td>
<td>52</td>
<td>18</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>71</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>Kerala</td>
<td>75</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

Source: DLHS-3 (2007-08), IIPS Mumbai

Photo by Michael Foley
Early onset and long periods of fertility affect mother and child health

Age-Specific Fertility Rates for Jharkhand, Tamil Nadu, and Andhra Pradesh

Tamil Nadu
1.7 children average

Andhra Pradesh
2.0 children average

Jharkhand
3.4 children average

Photo by Akshay Mahajan
Source: NFHS-3 (2005-06), IIPS Mumbai
Too young, Too old, Too many, Too soon

High-risk births lead to high infant mortality

Delay child marriages and promote birth spacing

Source: NFHS – 3 (2005-06), IIPS Mumbai

Photos by Uvrish Joshi (top), Trey Ratcliff (bottom)
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The Way Forward: Critical Role of Elected Representatives

Opportunities:

- Policy
- Leadership
- Financial resources
- Demand
National policies recognize role of FP in meeting health and development goals.

- Eleventh Five Year Plan (2007 – 2012)
- Population Policy of India (2000)
- Asean-India Vision - 2020
Elected Representatives Can Make A Difference

**Actions in Parliament:**

- Safeguard FP line item in NRHM
- Include Family Planning in Central Vigilance & Monitoring Committee’s mandate
- Ensure accountability of health system performance
- Promote parliamentary discussions on issues related to population and development
- Support laws that work for the empowerment of women
- Form youth brigade on delaying and spacing children
- Promote FP as part of the maternal and child health programme
Elected Representatives Can Make A Difference

Actions in State:

• Converge population with other development programmes
• Promote information-based decision-making, monitoring, and feedback on all social sectors initiatives
• Strengthen performance reports in health and family planning
• Increase awareness and enforcement of Child Marriage Restraint Act
• Emphasize population stabilisation at all forums
• Scale up of best practises
• Engage civil society to take ownership
Elected Representatives Can Make A Difference

Actions in Constituency:

• Target underserved communities for health and family planning
• Promote private sector partnerships to augment health delivery
• Encourage male involvement in family planning through shared decision-making
• Ensure girls do not drop out of school
• Empower women through secondary education and job opportunities
• Stop discrimination against girl child and gender based violence
Take A Lead Now...

- Implement policy
- Support leadership
- Utilize financial resources
- Meet demand

![Bar graph showing current and wanted TFR](source: NFHS - 3 (2005-06), IIPS Mumbai)

Photo by Dey Alexander
Let us join hands to save our mothers and children.
We make a living by what we get; we make a life by what we give!

Photo by Vikram Singh
India
Progress through Family Planning

Dr Amarjit Singh
Executive Director,
Jansankhya Sthirata Kosh
(National Population Stabilisation Fund)

Thank You

Support for this presentation was provided by the USAID | Health Policy Initiative, Task Order 1