

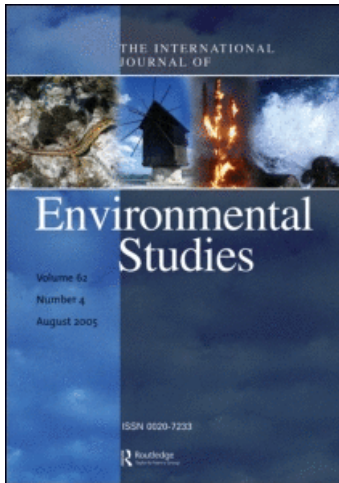
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Are the population policies of India and China responsible for the fertility decline?

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In the 1970s, policy-makers in both India and China, convinced that reducing population growth was critical for ending poverty, instituted coercive population policies. Yet fertility had already been declining in both countries before the population policies were instituted. In China, the total fertility rate (TFR) had already fallen to 2.9 before the institution of the One-Child Policy. In India, fertility continued to decline at roughly the same rate before, during and after 'The Emergency'. Regardless of government mandates, couples in both countries before the policies and since have shown a desire to reduce their family size and when given access to family planning, have voluntarily limited the number of children they chose to have.

Keywords: Population policy; India; China; Family planning; Fertility decline

Introduction

The difference in greenhouse gas emissions between a person in one of the richest countries in the world (which overall have lower rates of population growth) a person in one of the poorest countries (which for the most part have much higher rates of population growth) is indeed stark. This can sometimes lead to the thinking that the main issue is consumption patterns, not population growth. While IPAT [1,2] describes the interrelationship between population, affluence (consumption) and technology there is a tendency at times to focus on the 'A' and 'T' and shy away from the 'P' variable in the equation. Some of the reluctance to talk about population concerns the coercive population policies associated with India, China and Peru, and the fear that any efforts to reduce population growth could or will involve coercive strategies.

This paper aims to give a brief history of the population policies of India and China in the 1970s, and what has been happening in each country since then. Specifically, we argue that while the Indian 'Emergency' (with forced sterilisations) and the Chinese One-Child Policy were cruel abridgements of human freedom, they had relatively little influence on the fertility declines in both countries. Both countries saw family size fall as access to modern

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contraception became available, because families were able to implement decisions to have smaller families *voluntarily*. India's fertility has continued to decline in the absence of coercive policies although many barriers continue to restrict voluntary choices in the poor northern states. We argue that China's fertility would remain at or near replacement level without the one-child policy.

India

Situation before 'The Emergency'

Around the time of Indian Independence (1947), mortality, especially infant and child mortality, began to decline in India, and the high fertility levels led to increasing population. The Indian government instituted the first of several five years plans in 1952, establishing the first national population policy in the world with the goal of bringing down birth rates by providing family planning. This plan was largely unsuccessful, due to a lack of modern contraceptives, a strong tradition of large families and the difficulties in providing health services to a huge country whose population overwhelmingly lived in rural areas. Nevertheless, fertility rates did begin to decline slowly during this period, as seen in figure 1. The second five-year plan (1956–61) continued to focus on increasing access and use of family planning [3]. What is critical to note here is that even with limited resources (the first five-year plan had a budget of US\$1.35 million for family planning) and the formidable goal of providing family planning services to a country of 401,000,000 (1956 population) [4] fertility

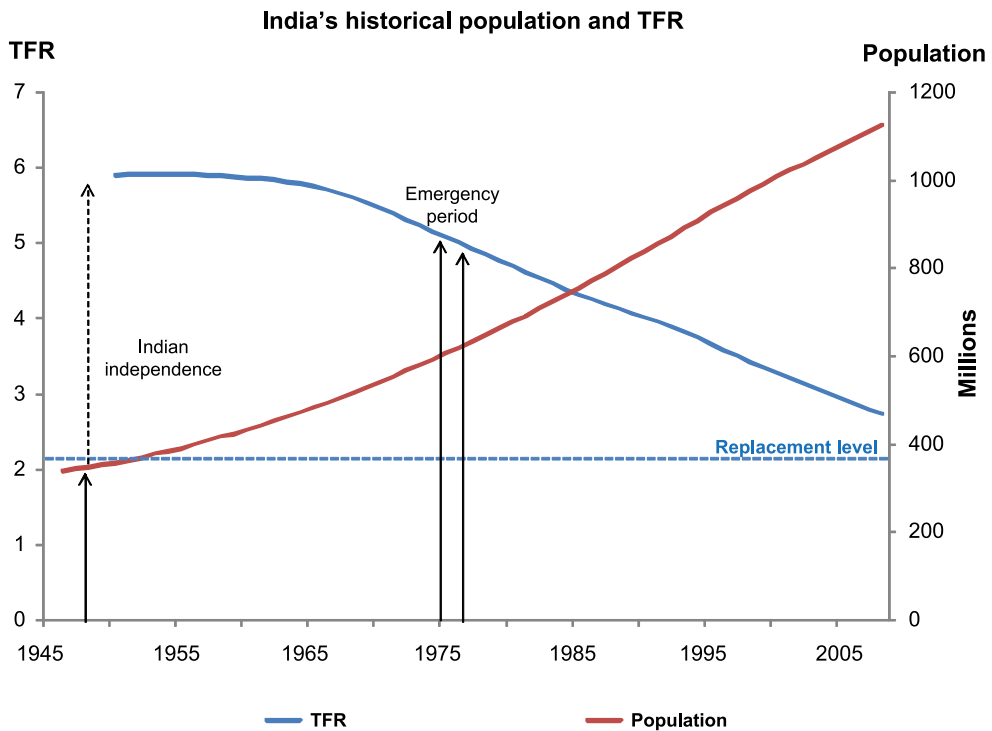


Figure 1. India's historical fertility and population size [4].

began to fall slowly. The widespread use of voluntary sterilisation surprises some Western observers, but voluntary sterilisation has been the single most common method outside the US.

A patriarchal family structure, strong son preference, and young age at marriage, and caste differences between health/contraceptive providers and clients, and a conservative bureaucracy all slowed the voluntary limitation of family size. In 1971, India became the first large developing country to repeal the restrictive abortion laws it had inherited from British rule [5].

Reasons given for 'The Emergency'

In 1975, Indira Gandhi, the prime minister of India, citing national security concerns due to the recent war with Pakistan, instituted an 'Emergency' period. Gandhi, like many educated leaders in the 1970s had been influenced by the demographic transition theory, which suggested that only as couples became richer and better educated would they choose to have fewer children. At the 1974 international conference on population in Bucharest the Indian Health Minister Karen Singh had coined the phrase 'Development is the best contraceptive'. If true, then either rural India would remain mired in poverty or individuals needed to be offered incentives to be sterilised.

The Gandhi government proposed an anti-poverty 20-point program, including reining in money lenders who charge usurious rate to villagers, redistributing land and limiting dowries, a cause of gender inequity. It was a bold and humane programme, but high fertility was seen as a threat to it. Thus, the Gandhi government, spearheaded by her son, Sanjay, also began the National Population Policy (NPP), which aimed to cut population growth fast. Although the NPP was clear that the central government would not legislate compulsory sterilisation, it stated that if an individual state wanted to make sterilisation compulsory, it was welcome to do so [6]. In fact Maharashtra passed such a law although it was never implemented. The general character of the campaign in Maharashtra was coercive if not compulsory.

India's population had almost doubled since Independence and the poor quality family planning services that did exist were being taken up slowly. Local bureaucrats were put under a great amount of pressure to reduce birth rates, including being required to achieve targets for sterilisations. Within months men were being rounded up for vasectomies. Incentives for both the doctors and the recipient of sterilisations were unevenly distributed, and corruption of officials was rampant [6]. The voting Indian public – and the outside world – were with good reason outraged.

Results of 'The Emergency'

'The Emergency' lasted for less than two years. In 1977 Indira Gandhi lost the election. During 'The Emergency' there was an increase in sterilisations, an estimated 8.25 million people were sterilised between 1976 and 1977 [7] or roughly four times as many annual sterilisations as were performed in 1975. Before 'The Emergency' the government services had been slow and inefficient and many of the sterilisations that were done during this period were welcome and voluntary, making the obscenity of coercive sterilisation even more tragic. Yet, as figure 1 shows, 'The Emergency' does not even make a blip in the slope of the fertility decline, fertility continued to fall at about the same rate in India as a whole.

The Janata party, which took power from Mrs Gandhi's Congress party, partly campaigned on an anti-family planning platform as they spoke out against 'The Emergency'. After taking power they returned to the previous poor quality family planning program. In 1971, the Medical Termination of Pregnancy Act (Act 34) made abortions legal, but most abortions remained unsafe especially in the northern states.

Alternative choices to 'The Emergency'

While Indian fertility as a whole has declined sharply since the 1950s (figure 1), the population still grows by one million more births than deaths every three weeks. There is a great division in fertility rates. These follow north to south lines. The southern states have had a dramatic decline, while the northern states for the most part have not. Kerala, in the south, has a total fertility rate (TFR) of 1.9, while Bihar, farther north, has a TFR of 4.0 [8]. In 1974, Tamil Nadu, Kerala's southern neighbour, had a TFR of 4.7, while in 2005–06 it had fallen to 1.8 [8]. The decline in fertility in the south is due largely to access to family planning including voluntary sterilisation in a culture with other indicators that people would have fewer children, such as lower levels of son preference and higher women's status, work force participation, and education levels [9].

Even though fertility has not yet fallen so markedly in the north, fertility levels are beginning to creep down. Haryana, also in the north, has had its fertility decline from 4.0 in 1992–3 to 2.7 in 2005–06 [8]. This fertility decline was achieved by means of voluntary family planning programmes alone. Couples are choosing to have smaller families when they are given access to family planning methods and face no barriers to family planning [10]. In addition, some of the states with the greatest fertility declines, such as Tamil Nadu, have very strong family planning media programs, which focus on norm changing as well as education about family planning [10].

India's future

Fertility has continued to decline in India without coercive population policies, but there is an urgent need for policy changes. Further population growth will depend on two things: a) demographic momentum, that is, the large number of young women entering the fertile years; and b) the speed at which replacement level is reached in the states that still have high fertility. Bihar, as mentioned above, has a TFR today of 4.0 [8], and a rapidly growing population. Figure 2 shows population growth in Bihar based on three estimates of when replacement level fertility will be reached.

As can be seen, the population of this one state of north India will double, if not triple (depending on when replacement level is reached), before the population levels off. Population pressure exacerbates the serious water shortages, lack of employment and chronic malnutrition that exist now; and some forecasts indicate these may become much worse over the century [12,13]. Episodes of internal violence are possible and the tension between Pakistan (where the population is growing even more rapidly than in India) could worsen [14]. Thus, while the steady decline of TFR shown in figure 1 indicates progress, more effort is needed to bring contraception and other services to women who wish to limit their families. Studies have shown that increasing access to contraception and safe abortion, reducing barriers to family planning and countering misinformation are essential to hasten the achievement of replacement level fertility [15].

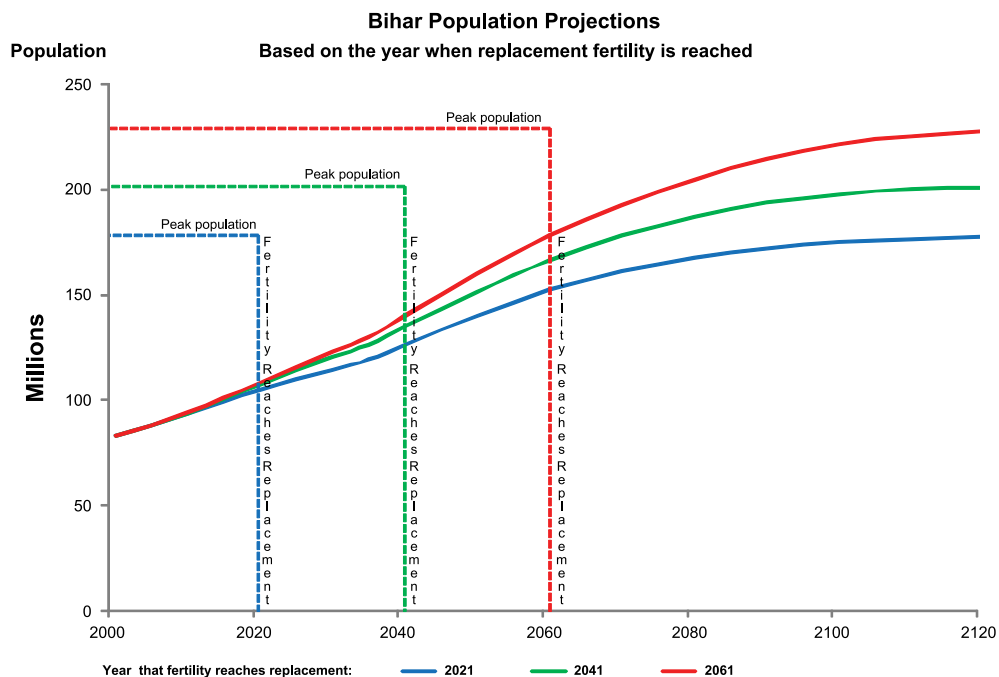


Figure 2. Projections of Bihar’s population growth with three scenarios of timing of fertility decline [11].

China

Before the one-child policy

When the communists, lead by Mao Tse Dong, gained power in 1949, China was already the most populous country in the world. While Mao was not concerned about population growth per se, he believed in planned births. Fertility decline was encouraged under the slogan ‘later, longer, fewer’ [16]. All methods of family planning and safe abortion were made available. The ‘barefoot doctors’ provided access to family planning in rural areas. There were strong social pressures reinforcing smaller families from within many communes and the TFR fell rapidly. After Mao’s death the government took a more active stance on reducing population growth, and revised the Constitution (Article 53) to read, ‘The state advocates and encourages birth-planning’ [17].

Fertility, as figure 3 shows, began to decline under communism, rose slightly after the Great Leap Forward (1958–61), and declined again during the Cultural Revolution (1966) and afterwards. Overall it had fallen by half, from 5.5 in 1953 to 2.9 in 1978 even before the one-child policy [18], as access to family planning and abortion allowed people the opportunity to voluntarily limit the number of children they chose to have [15,19]. As figure 3 shows, the one-child policy was introduced just as the TFR approached replacement level. The policy is associated with a slowing of the decline.

Reasons given for the one-child policy

Although Mao’s China had been cut off from Western thought, like India, the decision-makers were influenced by the demographic transition theory. The Demographic Transition

model explains the transition from high births rates to low births rates that accompany a country's development from pre-industrial to developed economic life. In the early stages of the demographic transition, countries have high fertility and high mortality. With development, mortality begins to fall, but fertility remains high, leading to fast population growth. Slowly, fertility falls as well, until again equilibrium is reached in a low mortality, low fertility state. This theory has dominated much of the demographic thinking in the past 50 years, but recent studies have suggested that the fall in fertility is not guaranteed, as evidenced by fertility stalls in some African countries [20]. Furthermore, it appears that many highly developed countries, after reaching a low, below replacement fertility, see their fertility rates increase, creating a J-shaped curve of TFR and GPD [21]. Even Mao declared in 1958, 'When [people's] level of education increases, [they] will practice birth control' [22]. Yet during Mao's rule, science, especially Western-influenced science, was restricted and repressed. Therefore, once free from Mao's constraints, scientists in China who were influenced by the concerns about overpopulation that were gaining popularity in the West, strongly advocated the necessity of strict population policy. Susan Greenhalgh (2003) documents how population projections made by scientists in China showed a worrying increase in population as 'baby boom' during the Cultural Revolution entered the fertile years [23]. Greenhalgh finds that Chinese scientists were influenced by the 1966 Club of Rome report [23]. This stated unequivocally, 'In general, as GNP rises, the birth rate falls. This appears to be true despite difference in religious, cultural or political factors' [24].

The Chinese lacked data on true fertility trends in China, and also lacked consistent evidence internationally for the impact of family planning on reducing fertility in other countries. Thus, the Chinese saw the one-child policy as their best option. The Chinese

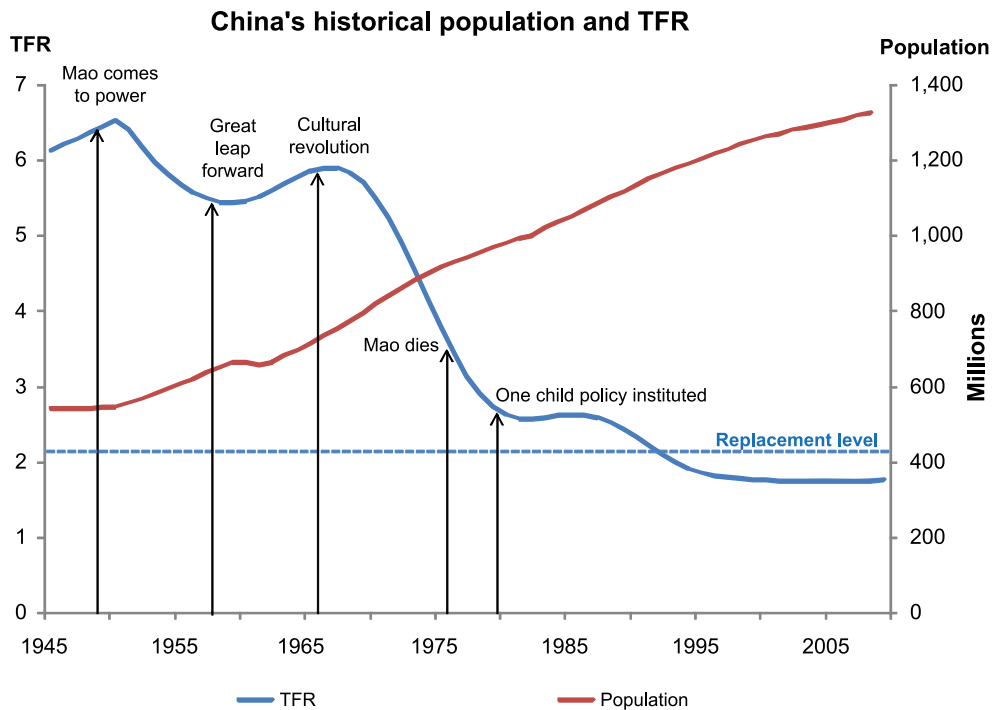


Figure 3. China's historical fertility and population [4].

leadership in the 1970s believed that the best way to bring the masses out of poverty was by reducing population growth. Deng Xiao-ping, who was both the father of the current Chinese economic miracle and a chief architect of the one-child policy commented, 'although it is a difficult task, we must accomplish it' [25].

The goal of the one-child policy was to have the population in 2000 be 1.2 billion, when the policy would end. Although the exact implementation of the one-child policy differed among provinces, generally a family with one child would receive a one-child certificate, which gave them food rations and access to better education. When and if a second child was born, the families had to give back the benefits. Further, the minority populations (non-Han) were not held to the one-child policy. In so vast a country and despite government efforts to prevent abuses, brutal coercive abortions and sterilisations did occur [26].

Results of the one-child policy

Despite the one-child policy, China did not reach its goal of population of 1.2 billion in 2000, when the population reached 1.27 billion. Even today with below replacement fertility, as a result of population momentum (the natural increase in population due to an age pyramid that is bottom heavy) China adds 8 million more births than deaths each year. The Chinese government claims that the one-child policy prevented 250 to 300 million births, but some question the validity of these numbers given the trend in fertility before the policy. Fertility did fall from 2.9 in 1979 to 1.7 in 2004, however, and family planning use is the highest of any large country in the world. Eighty-seven percent of women use family planning methods, with 90% of these using sterilisation or IUDs [18].

As figure 3 shows, the one-child policy did not start the fertility decline in China. If we extrapolate from the rate of fertility decline before the one-child policy, it appears that replacement level fertility would have been reached without the one-child policy. It might even be argued that the one-child policy led to a levelling off (or even slight increase in TFR), as seen in figure 3, but the levelling corresponds with a relaxing of policies which occurred in the early 1980s (personal communication, Marc Feldman). By 1986 the policy was strengthened again, and targets emphasised, due to concerns about changing age structure and rising fertility [27].

Many of China's neighbours have achieved even lower fertility than China in the absence of coercive population policies, such as Vietnam (2.1), Thailand (1.8), South Korea (TFR=1.2) and Japan (TFR=1.4) [28].

After the 1994 International Conference on Population and Development in Cairo, and subsequent growing international recognition of women's rights in the reproductive health framework, feminists in China began speaking out about the one-child policy and women's rights [29]. Additionally, the one-child policy has exacerbated underlying son preference. The sex ratio (number of boys to girls) has increased since the one-child policy from 1.06 in 1979, to 1.14 in 1990, to 1.17 in 2001 [18].

Alternative choices to the one-child policy

If China had maintained the strategy it had in the early 1970s, encouraging families to have fewer children, to space them longer and to have them at a later age, while providing access to family planning, fertility would probably have continued to fall. The dramatic fall in

fertility from 1959 to 1978 was due only to access to family planning and encouragement by the government of reasons to reduce fertility – voluntarily.

China's future

In 2000, rather than stopping the one-child policy, as had been the original plan, China decided to continue the policy. There have been certain relaxations, perhaps prompted by human rights concerns. Today, a couple who were themselves only children can have a second child. In 2002 China took steps to prevent the use of physical force to make a woman have an abortion or sterilisation and to ban sex-selection abortions, but enforcement has been uneven [30].

Some worry that if the one-child policy was stopped, and people were given freedom over their fertility decision-making, that there would be an increase in fertility. Others have argued that the small family norm is now standard throughout much of China and families want one or two children only. In more educated, urban China families state overwhelmingly that they only want one child, regardless of gender. This trend does not hold true for rural China, which still has strong son preference, and people are less satisfied with the option of having only one child [18]. Figure 4 shows that as long as China's TFR stayed at or below replacement level, China's population will level off or even start to decline by 2050.

China is now vastly different from what it was in 1979. More people have risen from poverty, are educated, and live in urban areas, all of which are associated with people choosing to have smaller families. It seems likely that if China discarded the one-child policy, fertility would remain low.

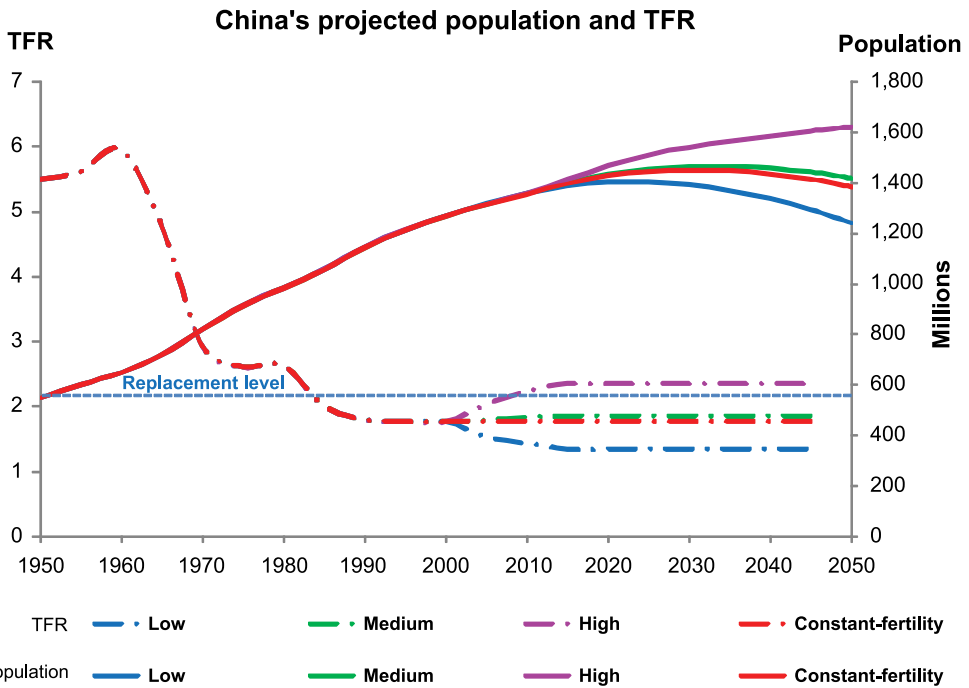


Figure 4. China's projected population and TFR: constant, low, medium and high variant [31].

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India and China: what the future holds

Regardless of declines in fertility and subsequent slowing of population growth rate, the population of India is already over 1 billion, and will continue to increase before levelling off. By 2050 India will have as many people as lived in the whole world in 1800. If the state of Uttar Pradesh reaches replacement level fertility by 2020 – which is extremely unlikely – the population of this one state will exceed that of the whole of India in 1950. Despite rises in education level, improvements in health care, and declines in extreme poverty, it is still estimated that 42% of the Indian population live below the international poverty line – over 456 million people, half the world population in 1800 [32]. As development occurs in India, and people slowly rise out of poverty, each individual will require more natural resources and leave more of an ecological footprint. This is not the place to debate how much people should consume, but what is important to note is that people will consume more as their nations develop. Without development, millions of Indians will continue to suffer from poverty and ill health. With development, the environment will be increasingly stressed even with advanced technologies. Lower fertility rates, leading to slower population growth and the levelling off of the Indian population at a lower number, will not only allow India to develop more quickly (because it will have to bring fewer people out of poverty), but it will ultimately allow the total environmental and resource footprint of the Indian population to be smaller.

China has brought a larger share of its population out of poverty than India. China's GDP is higher than India's, and its economic growth rate has been consistently higher than India's has been. Income inequity is still a problem, however. Although China continues to bring its poor out of poverty, they have not benefited as much as middle and upper income groups. China is developing more infrastructure and more industry than India, contributing to climate change and putting pressures on the environment, even as it improves energy efficiency.

Conclusion

Coercive programs aimed to reduce fertility rates and rein in population growth are not only unnecessary, but detrimental to national goals. Both Chinese and Indian fertilities were falling before the coercive policies of the 1970s. In China before the one-child policy, a combination of access to family planning, education and mass media about family planning and the benefit of a smaller family spurred the fertility decline. In India both before and since the 1976–7 period, the same combination of factors accelerated fertility decline, albeit to a lesser degree. Both China and India, as well as all other countries that have experienced fertility declines in the absence of coercive policies, show that when given the option to have smaller families, people choose to limit their fertility voluntarily. Whatever the reasons, people around the world want small families, and family planning allows people to act on their desires. Of course, even with falling TFRs, both India and China will still see substantial population growth, due to population momentum. Eventually, if replacement level TFRs hold, the population will begin to decline to perhaps more sustainable levels.

When talking about environmental impact (I), there is no need to shy away from the population factor (P). In fact, in many ways it is the easiest variable to focus on. The ways to promote rapid development of cleaner technologies are complex, expensive, and not well understood. The discussion over how much people should consume and who has the right to do so is complex. But, when there is unimpeded access to family planning, people choose to

reduce the number of children they have on their own terms, thereby reducing the overall impact of people on the environment.

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