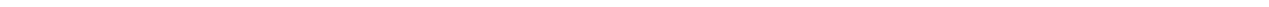


Appendix A

Typical RAPID Presentation



Moving
Forward:
Egypt and Its
Population



The Impact of Population Growth in Egypt

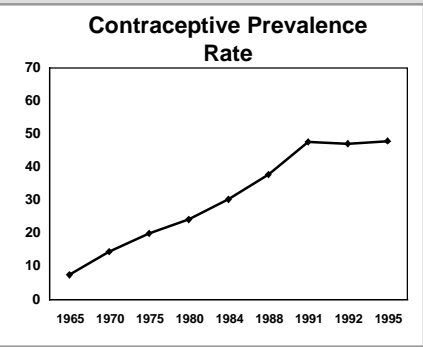
Edward Abel

The POLICY Project

June 1997

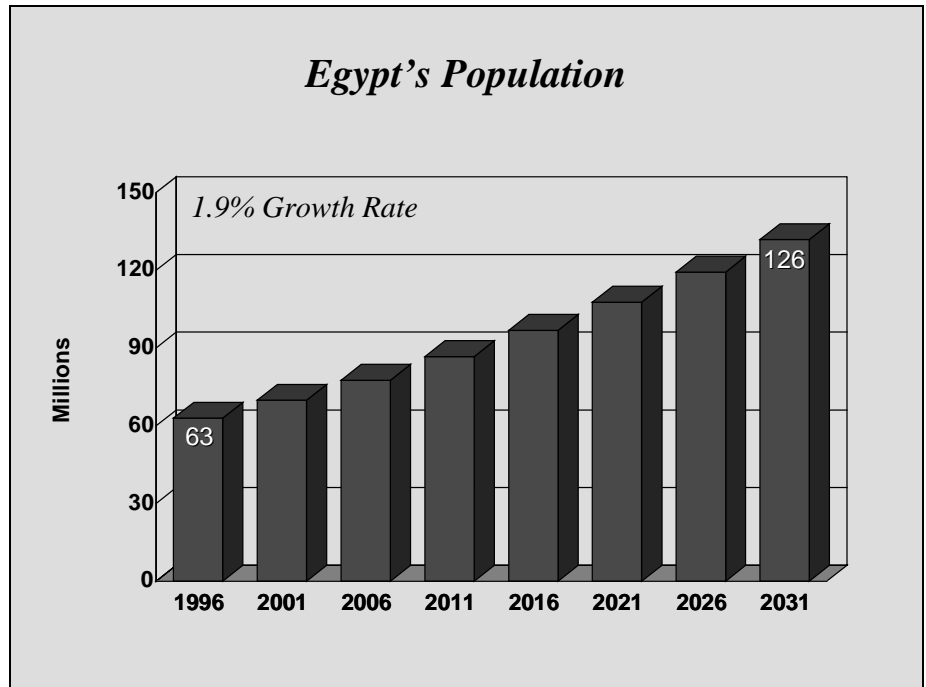
“I've repeated more than once that despite the reduction of population growth rates, still the greatest share of the development harvest is devoured... Therefore, our sole effective means to overcome this challenge is our faith that family planning will provide a better future to the family and to the whole community.” —President Mubarak

***Commitment to the family planning program
on the part of everyone
is required if this challenge is to be overcome.***

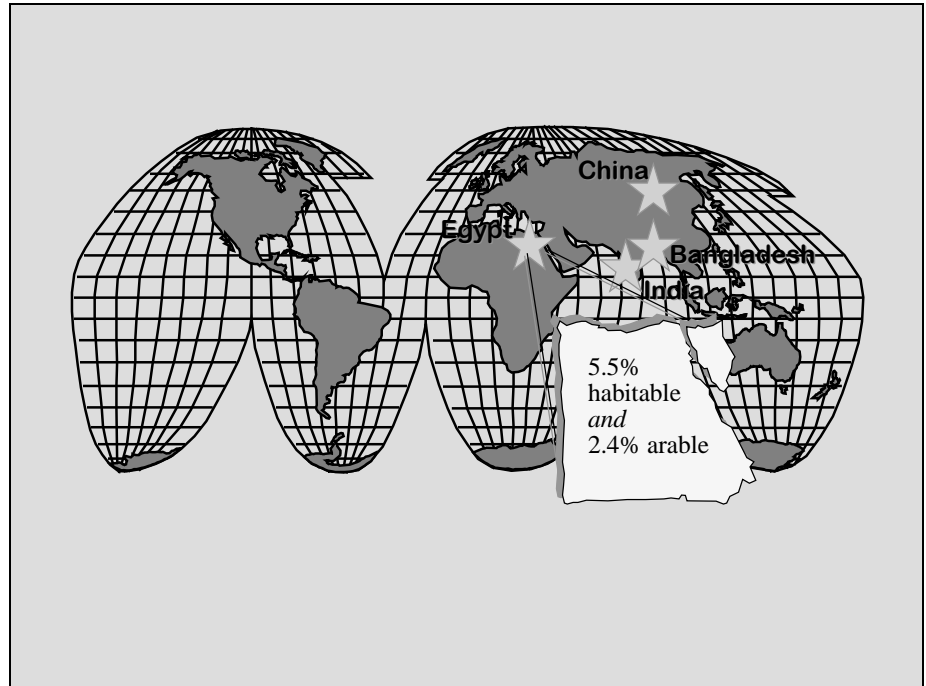


Renewed commitment to the family planning program on the part of everyone is required if this challenge is to be met. While contraceptive prevalence — a measure of family planning usage — increased steadily between 1965 and 1991, it has plateaued over the past few years, and questions are now being raised as to whether the program can continue its past success story.

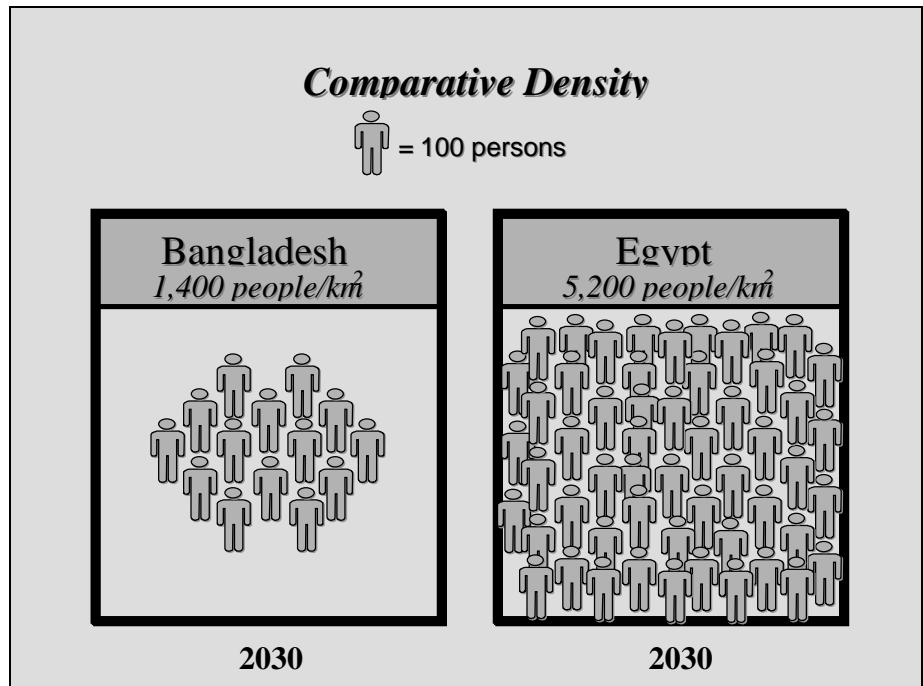
Unless contraceptive prevalence breaks out of the current plateau, the population will grow dramatically in the future. In 1996, the census results showed a population of about 63 million that was growing at about 2.1% per year. If this level of growth were to continue, the population would double in size by 2031 — reaching nearly 126 million.



Population density is one of the most critical problems associated with the country's swelling population. While the population size causes significant problems in other countries such as China, India, and Bangladesh, the problems occurring here are far worse because of the small habitable land area. Currently, only 5.5% of the land is lived upon, and only 2.4% of the land area is arable.

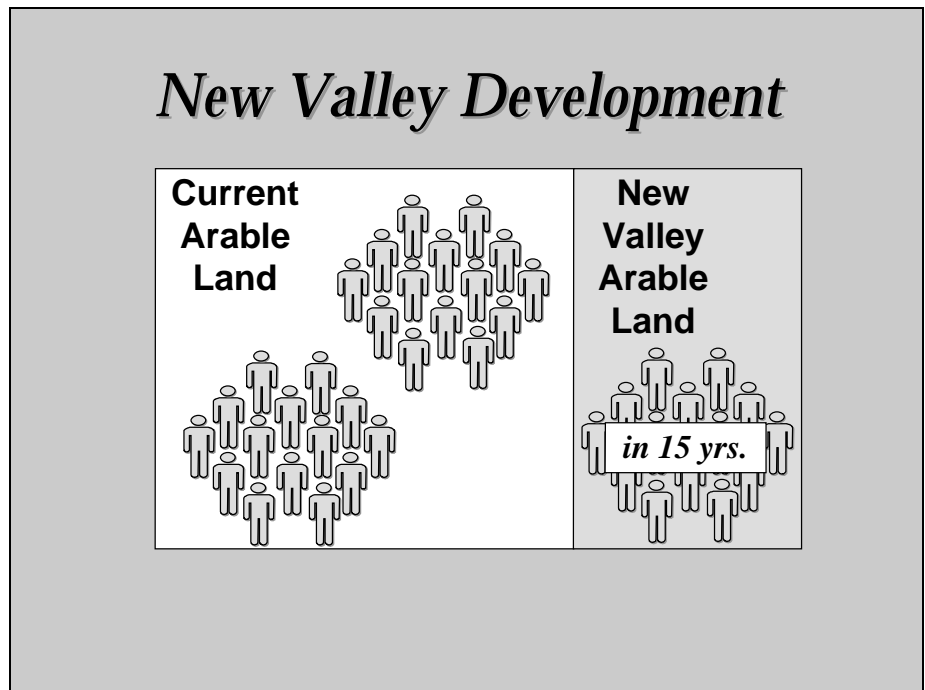


Bangladesh is often considered to be one of the most densely populated countries on earth. In Bangladesh, it is projected that each square kilometer of arable land must support about 1,400 persons in the year 2030. In Egypt, by comparison, each square kilometer of arable land supports nearly 2,600 persons. If the population were to continue growing at its current rate, this same square kilometer of land would need to support over 5,200 persons by 2030.



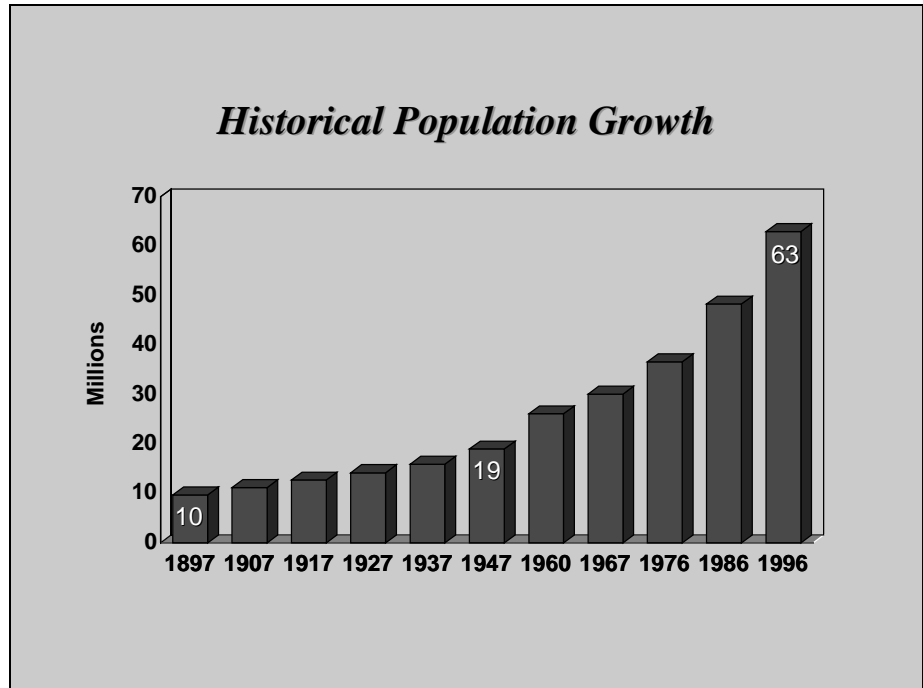
Advances in technology and population redistribution policies can help support a larger population in the future. It will, however, take time to develop and implement these advances, and population growth will reduce gains made by them.

The New Valley Development Project is an example of a forward-thinking policy designed to relieve some of the current population pressure. Through this project, about 2.2 million new arable feddans could potentially be added to the existing land supply — capable of supporting an additional 23.5 million people at today's land density levels. This project will help alleviate some of the current pressure, but it may not be sufficient by itself, as population growth will eat into this new land within a relatively short time. If, for example, the population were to continue growing at its current rate, land density — even with the New Valley Development Project — would revert to today's levels within 15 years.



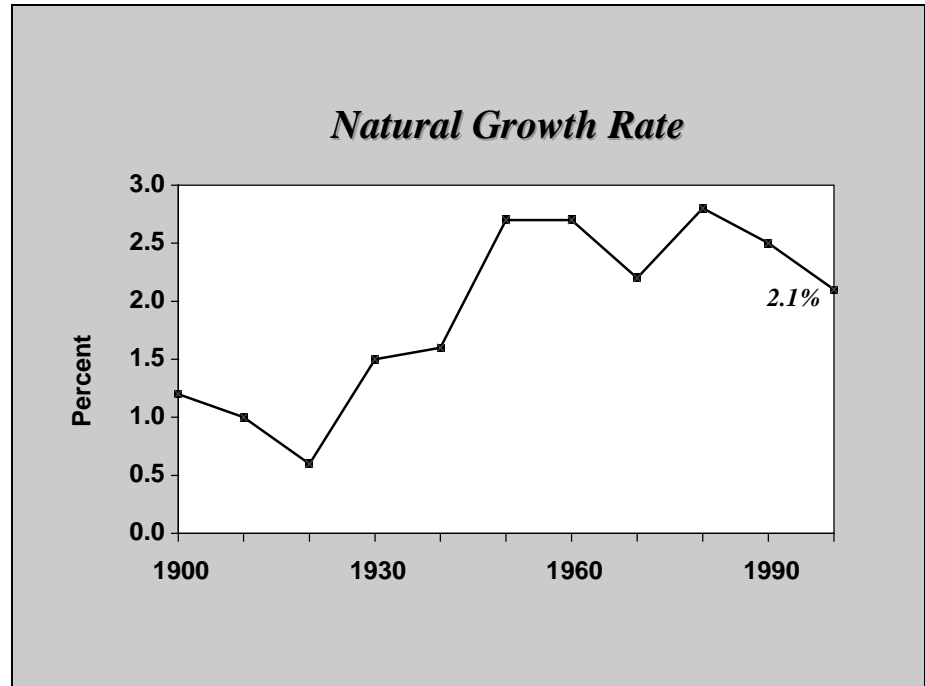
In today's presentation, we will examine some of the current critical population issues, and how they relate to national population goals: to reduce population growth; to enhance the quality of the population; and to improve the distribution of the population. To accomplish this, we'll first examine population growth trends. Next, we'll examine the consequences of future population growth. Finally, we'll examine actions that are effective in reducing the high rate of population growth.

Let's turn to our first point — trends in population growth over time. In 1897, 100 years ago, the population was about 10 million. Between 1897 and 1947, the population grew slowly — increasing to 19 million. Since 1947, however, the population has grown rapidly, rising to about 63 million in 1996.



What has caused the population to grow so rapidly, especially in the recent past? In essence, recent population growth has been caused by the increasing difference between the annual number of births and deaths, or the natural growth rate.

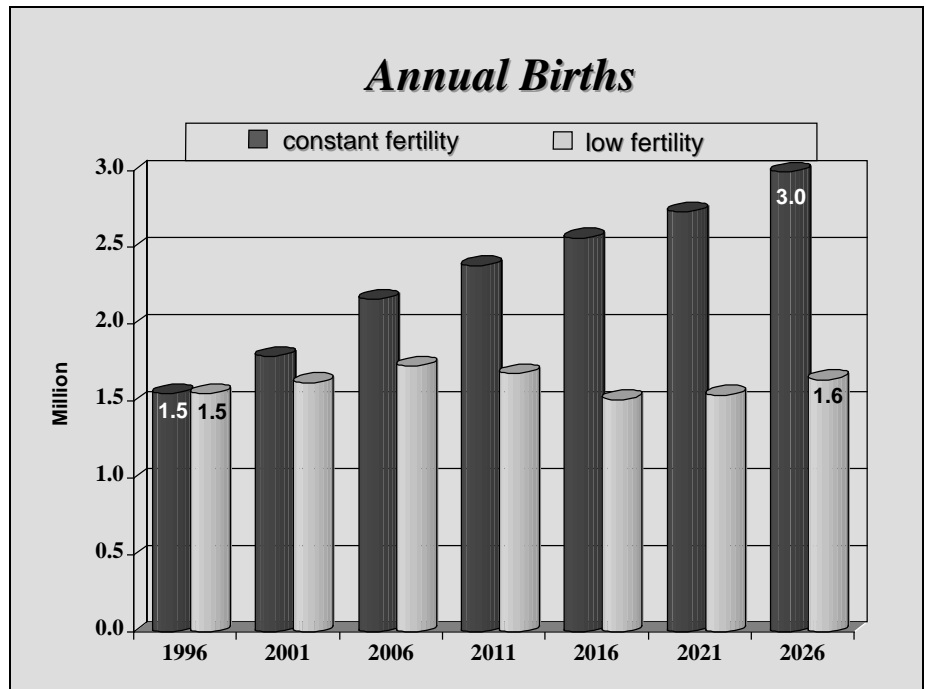
Up until about 1950, the rate of population growth was consistently low, never exceeding 2% per year. Since 1950, however, population growth — as a result of constant fertility and declining mortality — began to consistently exceed 2% per year. Currently, the annual growth rate is about 2.1%.



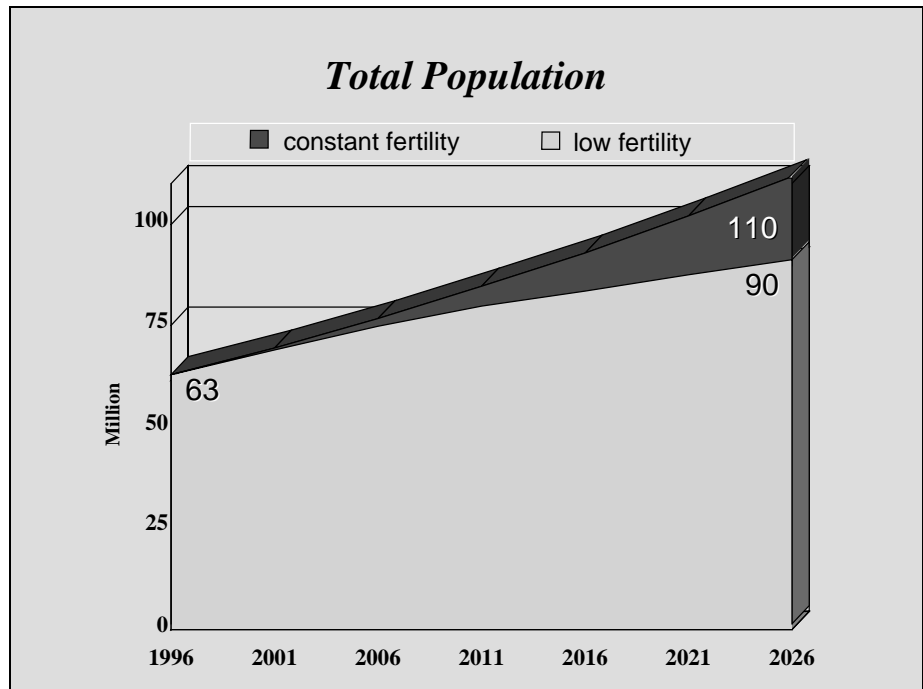
If zero population growth is to be reached eventually, the birth rate must drop to the level of the death rate. The birth rate is closely related to the total fertility rate, which is the number of children that a woman will have in her lifetime.

What are the implications for future population growth if the total fertility rate remains at its current level? To help answer this question, we've constructed two alternative population projections for the next 30 years. The first projection assumes that the present fertility situation is continued. This projection always appears in red. For comparison purposes, we've created a second projection that assumes that replacement-level fertility, about 2.1 children per woman, is achieved by 2015. This projection always appears in yellow. Both projections assume that life expectancy gradually increases over the period, and the rate of net international migration remains low.

In 1996, there were about 1.5 million births in the country. If the total fertility rate of 3.6 children per woman were to remain constant over the next 30 years, the annual number of births would increase from 1.5 million to 3.0 million by the year 2026. Under the low-fertility projection, the annual number of births would be slightly higher from today's levels, rising only to about 1.6 million.



Given the projected number of births under the constant-fertility projection, the total population would grow from 63 million in 1996 to 110 million by the year 2026. While low fertility would lead to fewer births, the population would still increase significantly over the next 30 years, rising to 90 million by 2026.



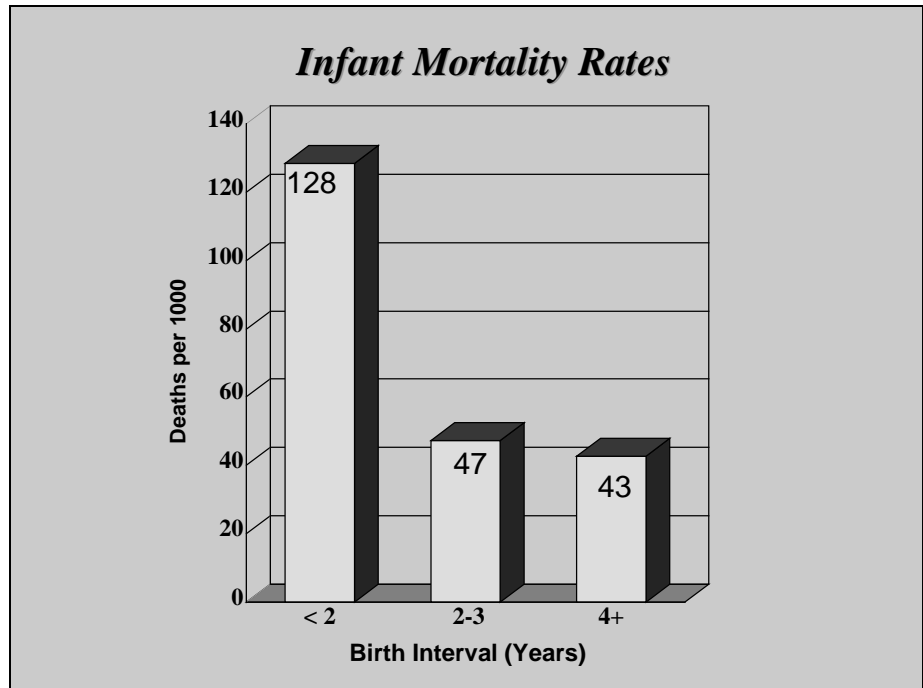
Let's now briefly examine a few of the consequences resulting from the alternative population growth projections in the sectors of: health, the economy, education, urbanisation, water, and the environment.

Health



One of the country's most important development goals is to provide adequate health care for the population. High rates of population growth work against attainment of this goal as scarce health resources are stretched to meet the health needs of ever-increasing numbers of people. In addition, high fertility rates contribute directly to high death rates among both infants and mothers. Infants born closely spaced, to very young women and to very large families — all associated with high rates of fertility — are at a much higher risk of dying.

For example, infants born less than two years apart are more likely to die than those born at least two years apart. The mortality rate for infants born within less than two years of a sibling is about 128 per 1000. When the birth interval is lengthened to two to four years, the infant mortality rate is cut nearly in half, dropping to 47. When the interval extends beyond four years, the infant mortality rate drops to 43. The data clearly show that as the length of the birth interval expands, the infant mortality rate declines.



This relationship is especially important in Egypt, where a large percentage of births occur at intervals less than two years apart. According to the 1995 Demographic and Health Survey, nearly 26% of all births occurred at intervals less than two years, meaning that about 460,000 infants were exposed to higher rates of mortality associated with shortened birth intervals. If all births in 1995 had occurred at intervals of at least two years, over 20,000 infant lives could have been saved.

High Risk Births



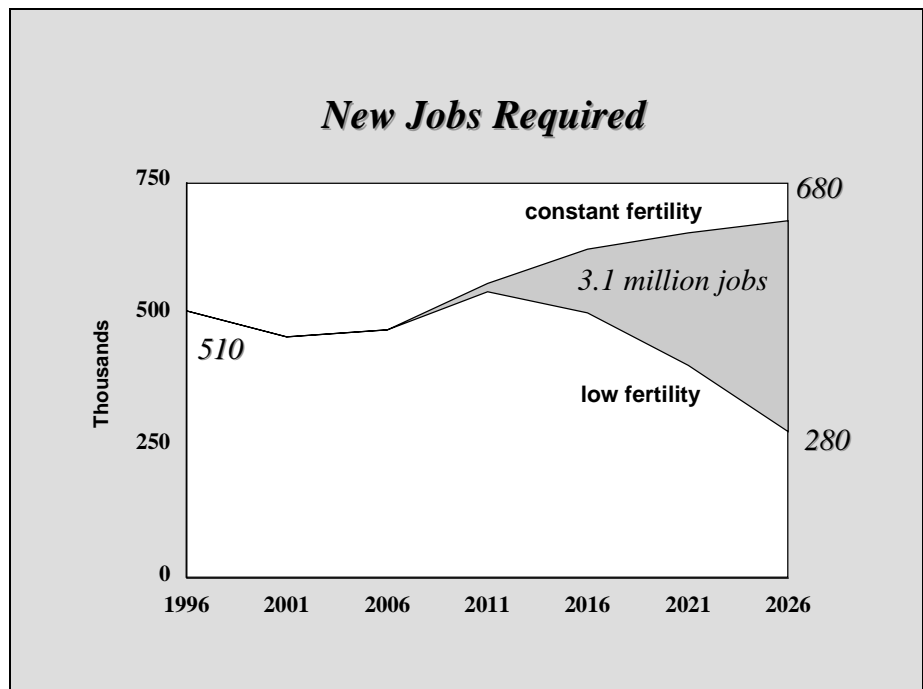
Expanding the length of birth intervals allows a mother to devote more time and attention to her infant, and also allows her body more time to recuperate between births. This extra time translates directly into improved health for both the mother and her child, and contributes to the overall well-being of the entire family.

Population growth affects the economy in a number of ways, including per capita income, the size of the labour force, the number of new jobs that have to be created annually, and the dependency ratio.

Economy



Providing jobs for new entrants into the labour force is critically important to maintain economic growth and social stability. Currently, if employment were provided for all new entrants into the labour force, nearly 510,000 new jobs would have to be created each year. If the current level of fertility were to continue, the number of new jobs to be created each year — just to absorb new entrants into the labour force — would increase to 680,000 by the year 2026. By contrast, only 280,000 new jobs would have to be created in 2026 with a reduction in fertility. Over the entire period, 3.1 million fewer jobs would have to be created as a result of achieving a lower population growth rate.

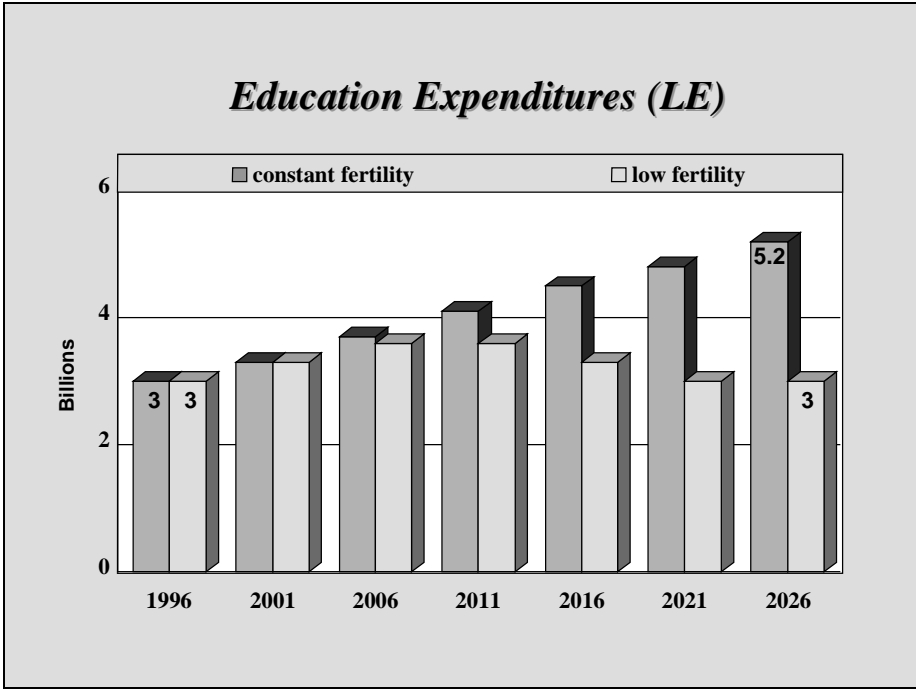


When ample employment is provided, people are productive, the per capita income increases, and the country develops. Conversely, when large numbers of persons are unemployed, social unrest increases and additional burdens are placed on the government to provide assistance for the unemployed. Clearly, providing sufficient employment opportunities in the future would be easier with lower population growth than if high population growth were to continue.

Education



Another government goal is to provide a quality education for all children. Population growth directly affects the government's ability to achieve this goal as it determines the numbers of teachers, classrooms, books, schools, and educational expenditures needed by the students in the future. Future annual primary education expenditures demonstrate how the education system will need to expand.



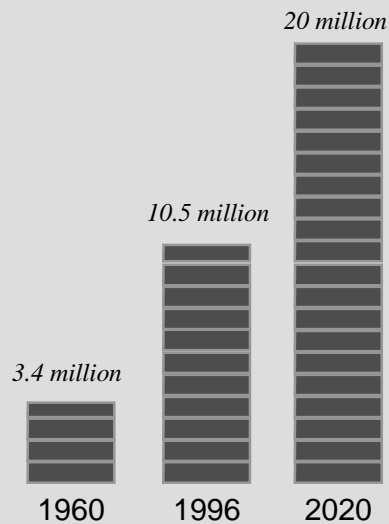
In 1996, about 3 billion pounds were spent on recurrent expenditures for primary education. As the population grows, more money will have to be spent on education just to continue providing the current levels of educational services, let alone improve their quality. Assuming that the primary educational expenditure per student and enrollment rate were to remain constant, annual expenditures on primary education would increase from 3 billion pounds to 5.2 billion pounds by 2026 with high fertility continued. With low fertility, however, annual primary education expenditures in 2026 would be only 3 billion pounds — about the same as today.

Over the entire 30-year period, nearly 25 billion fewer pounds would have to be spent on primary education as a result of lower fertility. These extra funds saved could be used to improve the quality of the education system.

Urbanisation



Growth of Cairo



Between 1960 and 1996, Cairo's population grew by over 3% a year.

One of the most visible signs of rapid population growth is the congestion apparent in all urban areas. The effects of urbanisation are clearly evident in Cairo, Alexandria, and other major urban areas. In 1960, Greater Cairo's population was about 3.4 million. In 1996, it was estimated to be 10.5 million.

From 1960 through 1996, the population of Greater Cairo grew at an alarming rate, increasing by over 3% per year. At this rate of growth, the population would double within 23 years, meaning that Greater Cairo's population would reach nearly 20 million persons by the year 2020.

Urban infrastructures are already seriously overtaxed by the burgeoning population, and providing adequate housing, sewerage, electricity, and other services will only become more difficult as the population living in cities continues to grow. Lower population growth rates are critical if Egypt's cities are not to be overwhelmed.

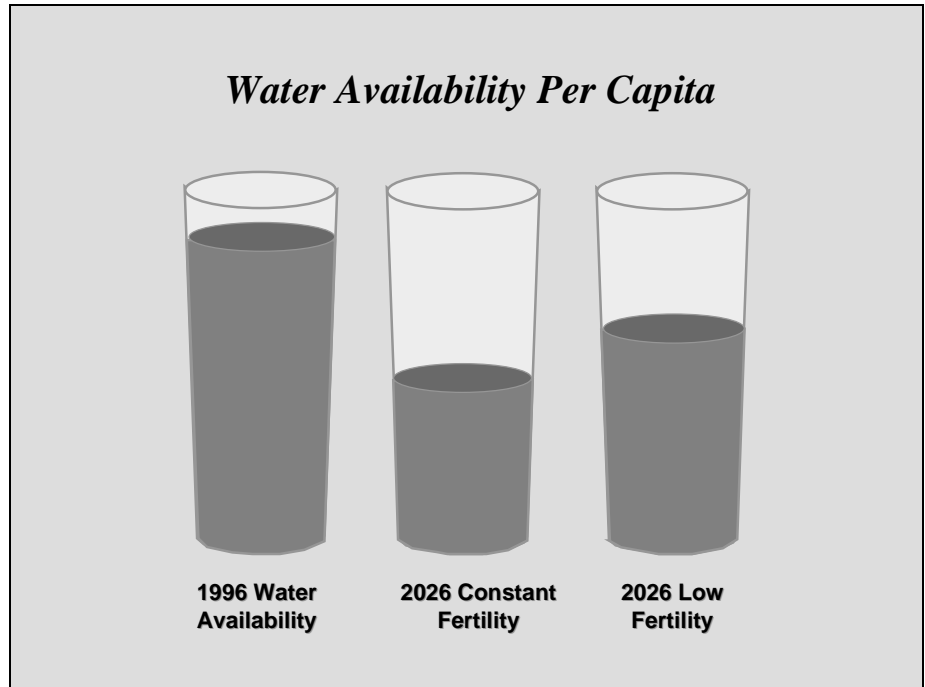
Water



The Nile has always provided the country's lifeblood — water. Water, necessary for drinking, irrigation, and industry is, however, becoming increasingly scarce. A 1996 paper by the Egyptian Center for Economic Studies states that: "...a lack of water may become one of the most serious impediments to the nation's economic development, to say nothing of its negative impact on the quality of life of Egypt's residents."

Population growth will have a significant impact on the amount of water available per person in the future. Assuming that the supply of renewable fresh water were to remain fixed at 60 billion cubic meters per year, with high fertility, the annual

amount of water available per person would be reduced to nearly half of today's levels by 2026 — decreasing by 44%. The amount of water available per person would still decrease with lower fertility, but reducing fertility would allow each person to consume 23% more water per year than if fertility were to remain at current levels.



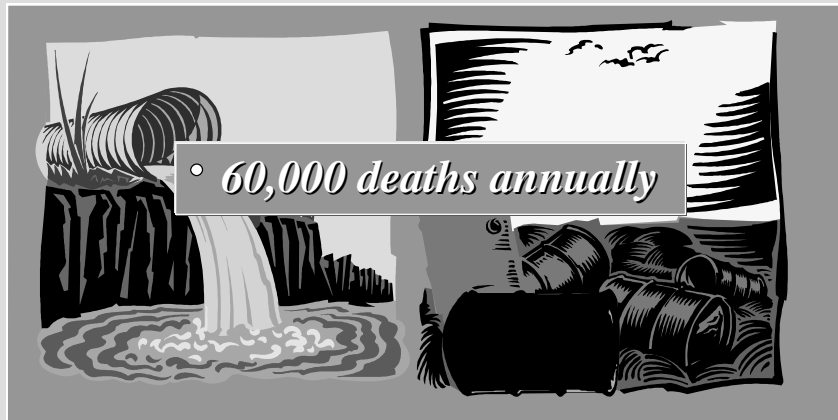
Lower population growth rates will help ensure that there will be enough water to help the country continue developing, and will provide a better quality of life for the nation's citizens in the future.

Environment

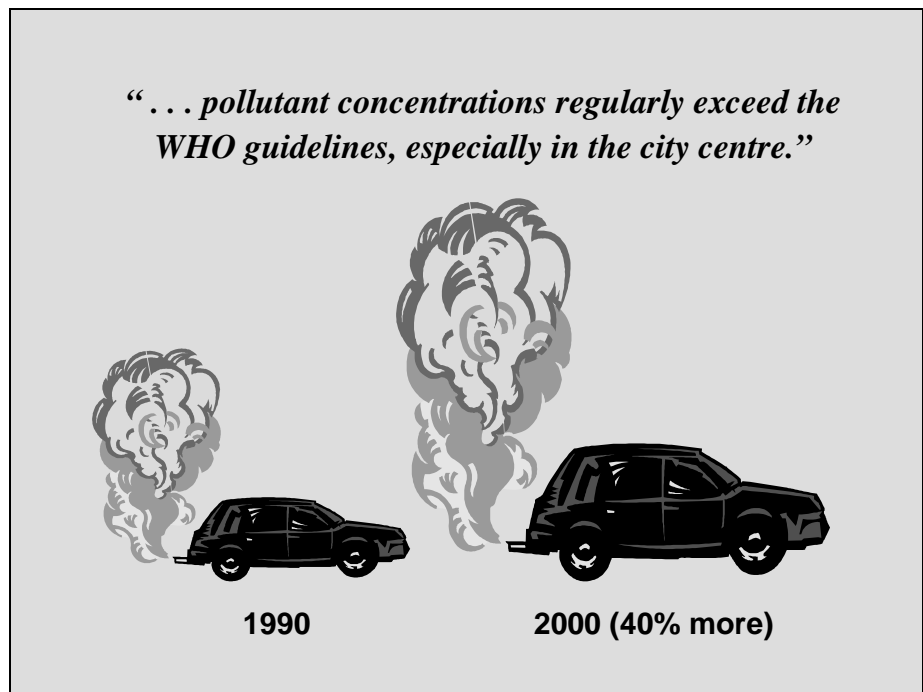


In the previous example, we assumed that the supply of renewable fresh water would remain fixed. This assumption, however, may be optimistic given the increasing levels of environmental pollution. Environmental pollution, which is greatly affected by increases in the size of the population, is contributing to reductions in the availability and quality of fresh water. Each day, tons of solid waste, pesticides, and other pollutants used by the growing population are dumped into the Nile. And few facilities are available to treat these pollutants. The World Health Organization, or WHO, estimates that 60,000 Egyptians die annually from water-borne diseases.

Environmental Pollution - Water



Air pollution is another example of population growth's effect on the environment. The air in urban areas, for example, is deteriorating due to the emissions of additional vehicles required to transport the population. In 1990, it was found that in Cairo, "... pollutant concentrations regularly exceed the WHO guidelines, especially in the city centre." This situation is expected to worsen over the next several years as the population increases. By 2000, the estimated pollution — as measured by carbon monoxide emissions — is expected to increase by 40%.



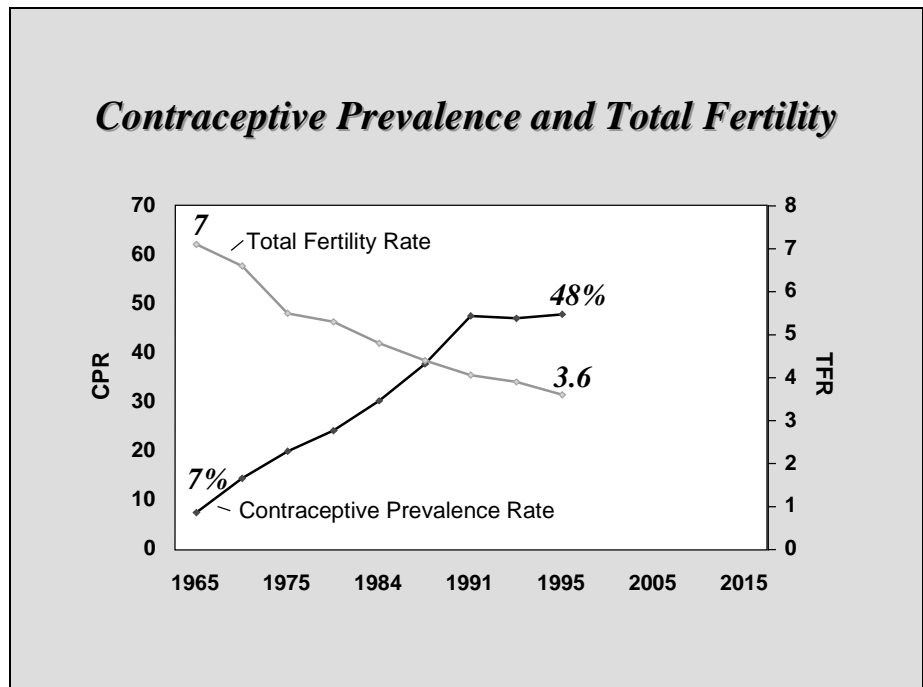
The government is under tremendous pressure to continue providing a habitable environment. Improving technological efficiency, reducing unnecessary consumption, strengthening environmental laws and regulations, and improving sewage treatment are all actions to be implemented. Reducing population growth, however, must be included as part of any comprehensive strategy to maintain a sustainable environment.

We've only examined a few consequences of future population growth. We could examine others, but the idea would remain the same. If the country is to continue on its path of development, it needs to continue its past progress in achieving lower rates of population growth.

How can lower rates of population growth be achieved? Let's turn to the final portion of the presentation and examine actions that can achieve and sustain these lower rates of growth.

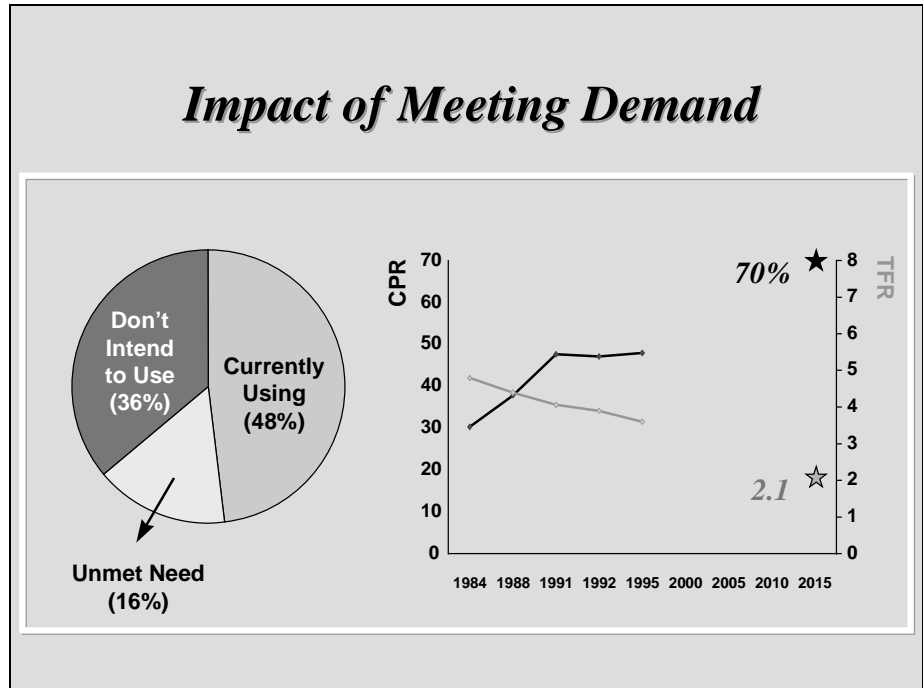
In general, the objectives of these approaches are: 1) to provide sufficient and appropriate family planning services to those couples currently desiring them, and 2) to increase the demand for these services. Achieving these objectives will lead to increased contraceptive prevalence and effectiveness; to reduced fertility; and, ultimately, to reduced population growth.

Egypt has been extremely effective in the past in increasing contraceptive prevalence, both by supplying family planning services and by generating demand for their use. These efforts have been instrumental in bringing about a decline in fertility. When the family planning program was started in 1965, contraceptive prevalence was only 7%. From that time, contraceptive prevalence rose steadily until 1991, when it reached nearly 48%. Simultaneously, the total fertility rate dropped from 7 to 3.6 — primarily because of the increase in contraceptive prevalence.



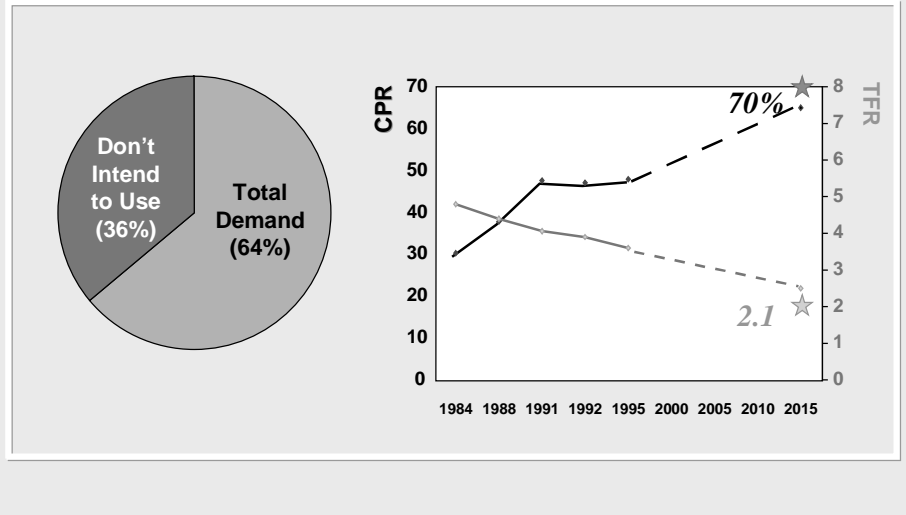
Supply. The family planning program has been extremely successful in providing services to couples desiring them. There remains, however, a significant amount of unmet need for family planning services. (Unmet need is represented by married women who do not want a pregnancy at the current time but are not using any family planning method.)

The total amount of unmet need for family planning services throughout the country is estimated to be about 16%.



Unmet need is particularly high in rural Upper Egypt. If the family planning program could reach all couples with an unmet need, contraceptive prevalence would increase from 48% to 64% and the total fertility rate would drop to 2.4 children, changes that are significant but still several steps away from the targets of 70% and 2.1 children.

Impact of Meeting Demand



A number of programs are being advanced to enhance the supply of family planning services.

- Efforts are being made to improve the quality and increase accessibility of services by providing clinical training to health-care workers, improving health facilities, and introducing new contraceptive technologies.
- Outreach programs seek to meet the needs of specific under-served groups, such as young women and women in rural Upper Egypt.
- Support for the private sector and nongovernmental organizations, or NGOs, greatly expands family planning coverage while alleviating strain on government services.
- Expanding the scope of services to include reproductive and women's health takes advantage of natural linkages between health care and family planning to reach greater numbers of women.

To significantly increase contraceptive prevalence, however, these efforts need to be intensified. Doing so will require strong political support and a strong commitment of resources.

Demand. Although enhancing the supply of family planning services to satisfy unmet need will significantly reduce fertility, replacement-level fertility cannot be achieved without corresponding increases in demand. Even where high-quality services are readily available, many women do not want to use them because they have a negative image of contraception, or because they desire a large family.

Therefore, the second part of the strategy requires increasing the demand for family planning services. Again, a number of programs are being used to generate new demand, and to strengthen existing demand.

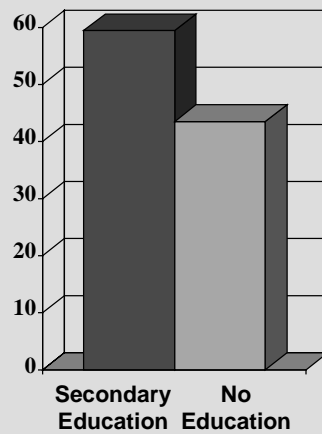
In order to combat negative rumors, intensive communication campaigns seek to provide women with accurate information about contraception and to increase women's interest in using family planning.

- Efforts are being made to increase the active involvement of men in the family planning program.
- Other program efforts employ outreach workers to educate women about family planning, and train clinic workers to counsel women more effectively.
- Research studies enhance understanding of women's needs and concerns and help to design more effective communication strategies.

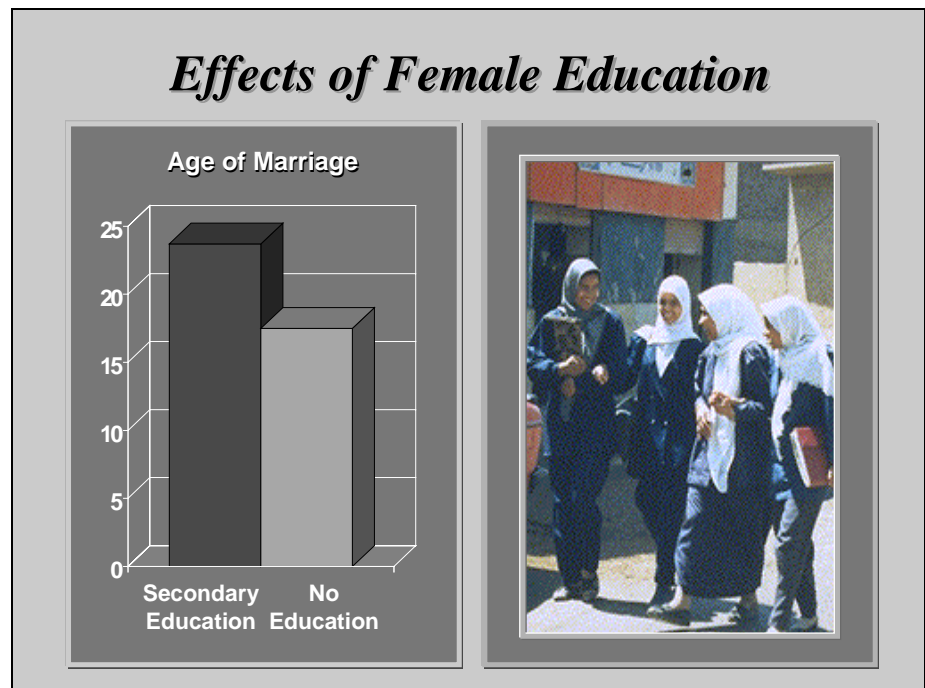
The status of women is also a very important determinant of contraceptive use. Educated women and women working for cash typically have much higher contraceptive prevalence rates and therefore, lower fertility rates than uneducated women and those not working for cash. For example, women with a secondary or higher education have a contraceptive prevalence rate of 57%, while women with no education have a contraceptive prevalence rate of 41%.

Effects of Female Education

Contraceptive Prevalence

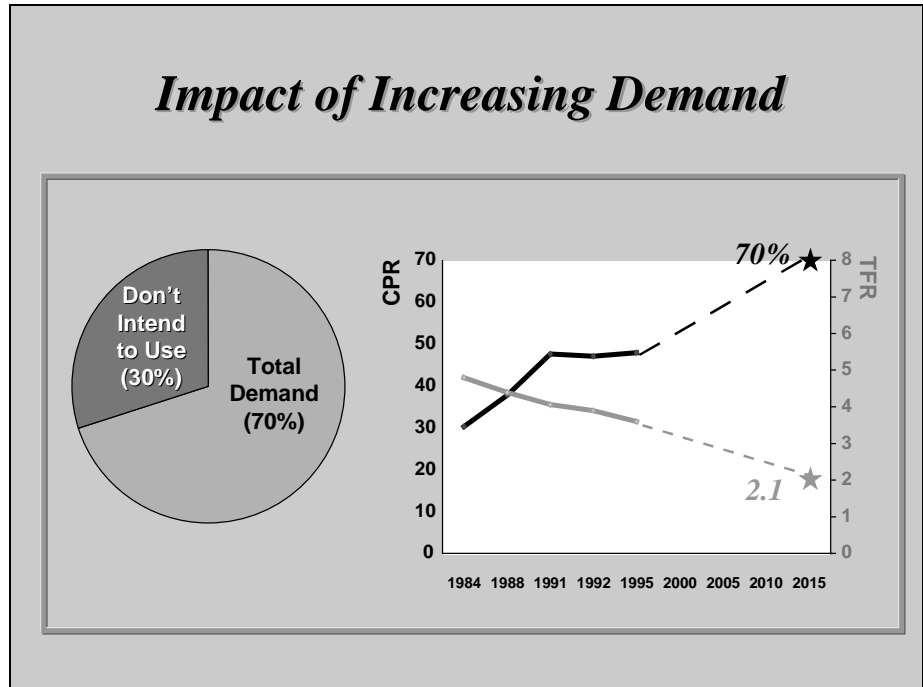


Female education and employment status also reduce fertility by delaying the age at marriage. Women who marry later reduce the total number of years they are reproductively active, and thus have fewer children than women who marry young. Women with a secondary or higher education have a median age at first marriage of 23.7 years, while women with no education have a median age at first marriage of 17.5 years.



Therefore, promoting girls' education and encouraging women's participation in the formal labour force are key to increasing the demand for family planning services and reducing total fertility rates.

As was mentioned earlier, the total existing demand for family planning services is 64% — a significant increase over the past 30 years. However, if replacement-level fertility — 2.1 children per woman — is to be achieved, contraceptive prevalence must reach 70%. This will require that demand be increased by another 6 percentage points.



Despite current interventions, many women continue to fear using contraceptives because of false information, and many other women are still poorly educated and have no opportunity to work for cash. Programs must do more to inform women about contraception and to increase educational and employment opportunities if demand for family planning services is to increase.

The reduction in the total fertility rate to 3.6 over the past three decades is commendable. However, there is still more room for improvement, because even at this level of fertility, the implications for the future population are alarming. As we've seen throughout the presentation, population growth, infant and maternal health, and continued social and economic development are directly affected by these high levels of fertility.

In today's presentation, we've examined interventions that can help slow future population growth. The family planning program has been extremely successful in the past, but it must do more if its successes are to continue. The program needs to be strengthened and expanded.

Doing so will require the following actions:

- Adopting and implementing population policies which recognize the importance of population growth and support the use of family planning to reduce that growth;
- Allocating increased levels of financial and human resources to support those policies;
- Increasing the role of the private sector in providing family planning services;
- Improving information messages and communication channels so that all couples throughout Egypt become more educated about family planning methods;
- Increasing the awareness of the importance of family planning on the part of all Egyptians — from the household level to the highest levels of government; and
- Exhibiting strong leadership in support of the program by the country's leaders.

By taking these actions, the country can break out of the current prevalence plateau and the rate of population growth can, once again, resume its decline.

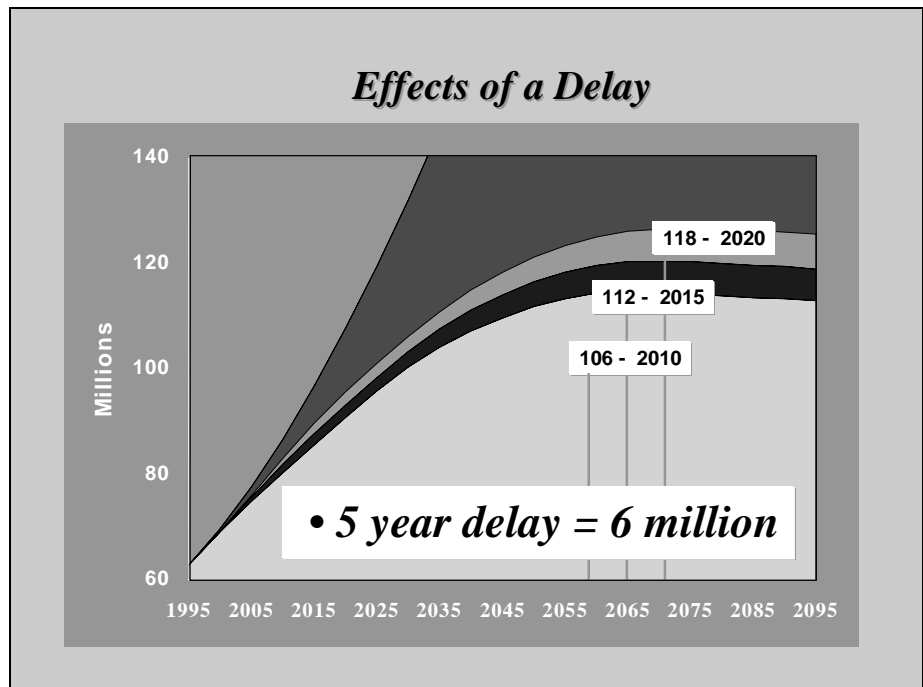
Obtaining financial support in the midst of many competing demands on government resources is one of the most difficult challenges facing the program. It should be kept in mind, however, that while family planning programs are one of the most effective ways to reduce population growth, they are also one of the most cost-beneficial ways for a government to invest its scarce financial resources.



Examples from around the world consistently demonstrate this relationship: every pound invested in family planning in Tunisia yields 8.6 pounds in government savings; every pound invested in family planning in Indonesia yields 12.5 pounds in government savings; and in Thailand, every pound invested in the program yields 14 pounds in government savings. None of these countries' programs, however, compares with the benefits returned through Egypt's family planning program. A study done in 1994 demonstrated that every pound invested in the Egyptian family planning program yields 30 pounds in government savings.

It is imperative to achieve replacement-level fertility, to achieve it quickly, and to begin achieving it immediately. For every one-year delay in achieving replacement fertility, the country's eventual population will be larger. If replacement-

level fertility were reached by the year 2010, the population would eventually grow to 106 million. If replacement levels were reached by 2015 — reflecting the government's goal — the population would eventually grow to 112 million. If replacement levels were reached 5 years later, by the year 2020, the population would grow to 118 million. And we've already seen what will happen if the replacement levels are not achieved. For every five-year delay in achieving replacement-level fertility, the population would eventually be 6 million more.



Egypt has a choice. It can continue its current efforts — which have proven to be successful in the past, although even to maintain its past successes will require some increase in effort; or it can continue its current efforts and actively implement the actions we've presented today. All these actions require your support. If the goal of sustainable development is to be achieved, that support is critical. Egypt's future depends on it.

Registration

If you have not already registered your copy of Spectrum, please take a moment to complete this form and return it to us. This will ensure that you receive information about future updates to Spectrum.

Name: _____ Title: _____

Institution: _____

Address: _____

City: _____

State or District: _____ Postal Code: _____

Country: _____

Telephone number: _____ Fax Number: _____

E-mail address: _____

Do you have access to the internet? _____

Spectrum Version Number: _____

What type of computer are you using with Spectrum? _____

How large is your hard drive? _____

What kind of printer are you using? _____

What language are you using with DemProj?

English _____ Spanish _____ French _____ Other _____

How do you plan to use Spectrum? _____

What additions to Spectrum would you like to see? _____

Additional Comments _____

Please return this form to:

Registration Department
The POLICY Project
The Futures Group International
Suite 1000
1050 17th Street, N.W.
Washington, DC 20036 USA
Fax: (202) 775-9694

