TRENDS AND PATTERNS OF HIV/AIDS INFECTION IN SELECTED DEVELOPING COUNTRIES

Country Profiles

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Preface

The Center for International Research conducts specialized studies of population, economics, labor force, health and aging issues. However, the use of data not generated by the U.S. Bureau of the Census precludes performing the same statistical reviews normally conducted on Census Bureau data.

This research note is a compilation of briefing materials by country resulting from analysis conducted in the Health Studies Branch. This research note is intended for a rapid dissemination of results to a specialized audience, highlighting recent developments and emerging trends. Reports containing a more thorough presentation and discussion of research findings will continue to be issued in the Center for International Research Staff Paper series.

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TRENDS AND PATTERNS OF HIV INFECTION IN SELECTED DEVELOPING COUNTRIES

1. Introduction

A critical issue for policy makers and program planners in the development assistance community is current status and trends over time in the spread of HIV infection and the AIDS epidemic in developing countries. The identification of "hot spots" of the spread of infection is important in decision-making regarding the allocation of scarce program funds.

Until recently, data on levels of HIV infection for developing countries were not sufficiently voluminous to allow any but a one-time snapshot of the situation in a particular region or country. However, this picture is rapidly changing as repeated surveys and sentinel surveillance projects established over the past several years begin to use consistent methods of HIV serologic data collection over a period of years. These data are being compiled by the Center for International Research and are the focus of this report.

The data presented in each country profile were drawn from the HIV/AIDS Surveillance Database, a compilation of HIV seroprevalence information contained in journals, articles and public presentations. The database was developed and has been maintained at the U.S. Bureau of the Census since 1987, with funding support from the Africa Bureau and the Office of Health AIDS Division, U.S. Agency for International Development. Currently, the database contains over 12,000 individual data records drawn from over 1,600 publications and presentations. Although every attempt has been made to present the most reliable data, given the quality of the original data, the trends and patterns described should be considered tentative indications, rather than precise estimates, of the problem. Therefore, caution should be used in drawing conclusions.

These country profiles examine the patterns and trends of the epidemic using the best of the imperfect data available. In order to minimize the biases and confusion in using current seroprevalence estimates, we have developed several criteria to select the most representative sample estimate: larger samples are generally favored over smaller samples; more recent estimates are selected over older estimates, and better documented data are usually selected over poorly documented data. Each briefing highlights patterns of infection within population subgroups, patterns of infection by age, by sex, by race, and recent time trends in infection levels.

We will periodically revise these materials with the most recent and complete information. We will also, from time to time, issue briefings for additional countries. These materials have been 3-hole punched for use in a loose leaf binder and for ease of insertion or substitution of new materials.

We welcome copies of articles or reference to information which may have been overlooked.
AFRICA
In Cameroon the percent of HIV positive blood donors varies by sex. The rate has increased in women since 1987 but not in men. The overall rate however has increased just slightly.

The rates of HIV infection in commercial sex workers in Douala and Yaounde increased from 1987 to 1990. In Douala they nearly doubled from 6 percent to 10.9 percent. In Yaounde the rate increased from 7.1 percent in 1988 to 9.3 percent in the 1989-90 time period.

Central African Republic

- HIV infection in the general population in Bangui increased steadily from 1985 to 1989. The levels of infection more than tripled from 2.1 percent in 1985 to 9.8 percent in 1989.

- A 1989 study in Bangui, CAR reported the percent of blood donors positive for the HIV virus to be 9.2 percent.

- Annual surveys have documented the near doubling of HIV-1 infection in Bangui over the 1986-1989 period. Meanwhile, a study in Gamboula, on the border with Cameroon, found no infection in 1989.

• The level of HIV seroprevalence increased slightly among prostitutes in Bangui from 1987 to 1989.

• In Bangui, HIV infection for male and female STD clinic patients was high and showed a somewhat peaked age pattern, reaching a maximum of 29 percent for females and 20 percent for males, both in the ages 25-29 years.

Congo

- In 1989, the rate of HIV infection in blood donors in Brazzaville was 5.3 percent.

- The rate of HIV infection in pregnant women in Brazzaville doubled in recent years to around 7 percent in 1990.

- Recent studies conducted in Loubomo and in the port city of Pointe Noire have also found HIV infection rates ranging from 5 to 9 percent among pregnant women.

• In 1987, HIV infection was observed to be 34.3 percent among prostitutes in Brazzaville and 64.1 percent among prostitutes in Pointe Noire.

![HIV Seroprevalence for Prostitutes Brazzaville and Pointe Noire, Congo: 1987](image)

• In two successive 6-month periods in Brazzaville, HIV infection among STD clinic patients increased 2 percentage points from 16.5 to 18.5 percent in July-December 1990.

![HIV Seroprevalence for STD Clinic Patients in Brazzaville, Congo: 1990](image)

Ethiopia

- In high risk populations, significant levels of HIV infection have been seen in Ethiopia. In Addis Ababa, the HIV infection level among prostitutes increased from 5.9 percent in 1987 to 18.2 percent in 1989.

- Significant levels of HIV infection have also been observed outside of Addis Ababa. In 1989, the HIV levels of infection in Bahir Dar’s prostitutes, 38.2 percent, were double the rates seen in Addis Ababa. The level of infection observed in Gondar’s prostitutes was 12.5 percent.

- Studies conducted in Addis Ababa in 1987 and 1989 show more than a quadrupling of HIV infection for female STD patients and a doubling for males during this two-year period.

Very few studies of HIV infection in the general population of Ethiopia have been published. In 1989, a study conducted in the capital city, Addis Ababa, reported a level of HIV infection among pregnant women of 2.1 percent.

Guinea

- Although the HIV-1 prevalence rates among blood donors increased between 1987-88 and 1989-90, the current trend is uncertain. The levels of infection continue to be relatively low. In addition, infected or high risk individuals may have become less likely to donate blood, thus changing the base population.

- Both HIV-1 and HIV-2 are present in Guinea. In 1990-91, a study in six urban areas including the capital shows HIV infection levels for pregnant women to be less than 1 percent (0.5 for HIV-1 and 0.2 for HIV-2) with no evidence of a double infection. Prevalence of HIV infection among pregnant women is lower than that reported in other African urban areas.

- In Guinea, substantial regional variation is noted for HIV-1 infection among STD clinic attendees. HIV infection was 3 percent in one area while no infection was found in another.

Côte d’Ivoire

- The cumulative number of AIDS cases reported by Côte d’Ivoire to the World Health Organization has increased rapidly over the past year. This is due to better recognition of AIDS cases by health authorities as well as increasing numbers of cases occurring. By 1990, 0.3 cases were reported per 1,000 population.

- HIV-1 infection has risen rapidly in pregnant women in Abidjan over the past several years. The rate of HIV-2 infection, however, has remained under 4 percent. Abidjan’s infection level now places it among the more infected areas in Africa, surpassing areas which showed higher rates of infection in 1986.

- The pattern of infection by age in Abidjan is similar to that found in other countries, with peak infection levels for women in their twenties. HIV-1 infection in this population is greater than HIV-2.

Patterns of HIV infection among blood donors in Abidjan over the last several years show a mixed trend. As awareness of AIDS grows in the population, those considering themselves at risk may be declining to donate. HIV-2 is generally found to be less than HIV-1 in this population group.

The rates of HIV infection have increased dramatically in Abidjan between 1986 and 1983. In Abidjan, unlike Senegal, the rate of HIV-1 infection is higher than the rate of HIV-2.

Samples of males in STD clinics provides the best opportunity to study HIV infection among "high-risk" males. A recent study in Abidjan confirms the exposure of this group to the risk of infection.

Kenya

- Very few studies of HIV infection in blood donors for the capital of Kenya, Nairobi, have been published. In this study, the male prevalence rate (6.2) was more than double that of the females (2.9).

- Outside of Nairobi, the rate of HIV infection in blood donors was 4.3 percent in Nyanza province and 3.5 percent in the Coast province.

- Among the pregnant women, in Nairobi, HIV infection was not detected until about 1985. The HIV prevalence rates rose steadily from 1985 to 1989, but leveled off in 1990.

• The level of HIV infection has risen rapidly in prostitutes in Nairobi over the past 10 years. The level of infection has increased from 7.1 percent in 1980 to 87.8 percent in 1990.

• Those with sexually-transmitted diseases (STD's) continue to be at high risk for infection. The level of HIV infection among male STD clinic patients in Nairobi has increased rapidly over the past 10 years, so that nearly one-quarter were infected by 1990.
As might be expected, information on HIV in Madagascar is sparse. However, one recent study in six regional capitals and three tourist centers found HIV infection levels among several groups to be relatively low.

Malawi

- Through 1990, Malawi has reported 7160 AIDS cases to the World Health Organization. This corresponds to a cumulative incidence of 0.79 per 1,000 population. Among African countries, only Uganda, Zaire, and Kenya have reported more cases, and Malawi has the highest cumulative incidence rate among these countries.

- HIV infection levels among pregnant women in Blantyre and Lilongwe have increased 10-fold over the past 5 years. Available data from rural areas suggests that current rural infection levels may approximate the urban infection levels of 5 years ago.

- According to this study, levels of HIV infection among STD patients is very high in the capital, Lilongwe.

Commercial sex workers are at particularly high risk of HIV infection, as suggested by this study of prostitutes in Blantyre several years ago.

Both HIV-1 and HIV-2 are present in Mali. In 1987 a study found infection levels for pregnant women in Bamako to be 0.4 percent for HIV-1 and 1.4 percent for HIV-2.

Data from blood donors suggests that infection is increasing rapidly in Bamako. In 1988 the overall HIV infection level was more than double that recorded in the previous year.

The potential for greatly increased infection levels is demonstrated by results from a study of prostitutes in Bamako in 1987. Nearly one-quarter of the sample was infected by HIV-1, while an even larger proportion was HIV-2 seropositive. Clients of prostitutes run a clear risk of exposure to infection.

Mozambique

- The blood bank in Maputo City reported varying rates of HIV seropositivity in blood donors by month for the year 1989. The rates ranged from 4.3 to 20.4 percent. Levels of HIV-1 were higher than levels of HIV-2. HIV-1 varied from 3 to 12.6 percent; HIV-2 varied from 1.8 to 7.8 percent of blood donors.

- The percent of blood donors positive for HIV varies by city in Mozambique. In September, 1989, the blood banks reported rates ranging from 8.6 in Sofola to 20.2 percent of blood donors in Nampula.

- HIV information on pregnant women in Mozambique, especially in Maputo, is very sparse. A study in 1988 found infection levels to be less than 1 percent for both HIV-1 and HIV-2.

A study conducted in 1987 of STD clinic patients in Maputo showed that the prevalence of HIV-1 did not differ by sex (2.4 percent for females and 2.7 percent for males). While there was no evidence of HIV-2 infection in females, 1.4 percent of males were infected.

Nigeria

- Nigeria is a large and diverse nation and to date relatively few HIV seroprevalence studies have been conducted. One recent study in three states found HIV-1 infection levels in the general population below 1 percent. HIV-2, spreading from West Africa, was under 1 percent in Borno and Cross River, but nearly 1.5 percent in Lagos.

- Other studies in Lagos have found levels of HIV-1 infection among prostitutes to be several times that found among blood donors, although current seroprevalence for prostitutes is much lower than in many other African countries. The HIV-2 infection levels in this small sample of blood donors are probably not representative.

- In another area of Nigeria, studies among several groups show the presence of HIV-1 and HIV-2 in most groups. Although current infection levels are low by African standards, the experience of rapid increases in other African countries should motivate current prevention efforts.

- Data from STD clinic attendees in Maiduguri, Nigeria show a steady increase in HIV infection between 1987 and 1990, reaching 1.7 percent of the sampled population in 1990.

Rwanda

- In 1988, the HIV seroprevalence for blood donors in the urban areas of Rwanda was much higher than the seroprevalence of blood donors in the rural areas (18 percent compared to 2 percent).

- In Butare, HIV infection for pregnant women showed a somewhat peaked age pattern, reaching a maximum of 14.5 percent for ages 20-24 years.

- A study conducted in Kigali, Rwanda shows a similar age pattern among pregnant women as in Butare. However, the HIV seroprevalence levels are much higher in Kigali.

This study in Rwanda in 1986-87 reported a high level of HIV infection among STD patients (57.1 percent).

Senegal

- The levels of HIV seroprevalence in blood donors are low in several regions of Senegal. In the Dakar region, 0.8 percent of the blood donors were positive for HIV-1, 0.5 percent for HIV-2 and 0.1 percent for dual infection (HIV-1 and HIV-2).

- In studies of registered prostitutes in Dakar over the past 5 years, HIV-1 infection levels have increased from 0 in 1985 to 3 percent in 1990. Over the same period, infection levels of HIV-2 have increased from 7.0 percent in 1985 to 9.7 percent in 1990. Studies in other cities in Senegal among registered prostitutes show a similar pattern.

- The rates on HIV infection in commercial sex workers vary by region in Senegal. In all cases however, the rate of HIV-2 or the rate of dual infection (HIV-2 and HIV-1) is higher than the rate of HIV-1.

Since 1985 in Dakar, levels of HIV-1 infection among STD clinic attendees have remained relatively steady, while there has been some fluctuation in HIV-2 and dual infections. Other studies in Senegal over this period document the gradual spread of HIV-1 to other regions of the country.

South Africa

- Current HIV infection levels among most population groups in South Africa are relatively low. National data from the blood banks shows 0.1 percent infection for blood from black donors and lower levels for other groups. Potential blood donors, however, may choose not to donate if they consider themselves to be at risk of infection.

- A study of pregnant black women in Kwazulu region found infection levels close to 1 percent. Concern has been expressed regarding the potential for rapid increases in infection levels in the general population.

- All population groups should be considered to be at risk if they are engaging in high-risk behavior. A study of STD clinic patients in Johannesburg showed similar levels of infection--1 to 2 percent--among the Black, White and Coloured populations visiting the clinic.

Tanzania

- A population-based survey in the Kagera region in northwest Tanzania was carried out in 1987. The prevalence of HIV infection within the region differed considerably from one area to another. HIV seroprevalence levels of the selected population were higher in Bukoba, the regional capital, compared to other areas.

- In the Mbeya region in the southwest of Tanzania, HIV seroprevalence among blood donors rose from 9.3 percent in 1988 to 10.8 percent in 1990.

- In different areas of Tanzania, the level of HIV infection among pregnant women varies greatly. The levels of infection in Dar es Salaam and Bukoba town are high, while in other regions levels of infection range from 0.4 percent to 7.0 percent.

• The level of HIV infection varies by region and by type of commercial sex worker. Prostitutes generally have higher seroprevalence than the barmaids, probably due to differences in the number of sexual partners.

• Studies of STD clinic patients in Kagondo and Mbeya region show the levels of infection (30.9 and 29.2 percent, respectively) more than double the level of infection among STD clinic patients in Dar es Salaam (14 percent).

Uganda

- The AIDS epidemic in Uganda is probably as severe as anywhere in the world. Infection levels for pregnant women in Kampala were already high in the mid-1980s and have increased to about one-quarter of the population. Infection levels for pregnant women nationwide may be 10 percent or more. Perinatal transmission and orphanhood are important issues anywhere infection reaches such levels.

- In Uganda, the HIV seroprevalence in blood donors varies by age, sex and type of donor. Female blood donors have higher rates of HIV seroprevalence, the highest being in the 21-30 age group. Family members have higher rates of HIV infection than volunteer blood donors.

- A nationwide survey documented the pattern of infection by age and sex. Young women and men in their twenties and thirties had the highest levels of infection, but infection is widespread through most adult ages. Subsequent mortality will also affect nearly all ages.

Those with sexually-transmitted diseases continue to be at greatest risk for infection. The combination of high-risk behavior and increased susceptibility are considered to contribute to their high levels of infection. In this study in Kampala, women visiting STD clinics had levels of infection twice that in the general population.

Several studies of blood donors have been carried out in various regions of Zaire. Kinshasa and Lubumbashi are major urban areas, while Nyankunde is a rural area in the northeast. Shaba province is in the south and includes Lubumbashi and the rural areas Kabongo and Musoshi. Only Basankusu shows a striking difference, perhaps due to its situation on the Zaire River, a major travel route.

In Kinshasa, Zaire, the level of HIV infection in pregnant women has remained virtually the same over the past 5 years, fluctuating between 5 and 6 percent.

In Kananga, HIV infection levels reached 6 percent among pregnant women in 1990, while in Lubumbashi, a study in 1989-90 found 3 percent of pregnant women to be infected.

In the capital city of Zaire, Kinshasa, the HIV infection level for prostitutes was reported to be nearly 40 percent in 1989.

Zambia

- The percent of HIV seropositive blood donors declined in Lusaka but remains nearly the same in the other three cities reported here. The lack of increase is probably due to either screening at the blood banks for high risk individuals or to self selection.

- The level of HIV seroprevalence has been increasing rapidly in Zambia. In Lusaka, the level of infection in pregnant women has increased from 8 percent in 1985 to nearly 25 percent in 1990.

- In 1990, studies conducted in Northern Zambia found HIV infection among pregnant women ranging from 9 to 30 percent.

Studies in Zambia show high levels of HIV infection among both male and female STD clinic attendees, in all regions of the country. By province, no fewer than 33 percent and as many as 71 percent of STD clinic patients were found to be HIV seropositive in a 1991 study.

Zimbabwe

- Through 1990, Zimbabwe has reported a total of 3134 AIDS cases to the World Health Organization. The latest report was as of July, 15, 1990. This corresponds to a cumulative incidence of 0.3 per 1,000 population.

- Very few studies of HIV infection in the general population of Zimbabwe have been published. This sample of blood donors shows that infection was already well established in 1985 in the urban population. Behavioral studies have shown that contact with prostitutes and experience with STDs are common among urban males.

- The Herald Newspaper reported that 18 percent of expectant mothers tested were found to be HIV positive. Among the STD patients, 28.6 percent of unskilled workers were HIV positive.

• The rural population of Zimbabwe is also at risk of infection. Zimbabwe’s well-developed roads facilitate communication and the spread of infection. In a study conducted in 1987, pregnant women in one rural area showed a significant level of HIV infection.

• In this same rural area, STD patients were several times more likely to be infected than pregnant women. Both males and females were at risk.

ASIA/OCEANIA
India

- Levels of HIV seropositivity have been steadily increasing in Pune for blood donors. This study shows the level of HIV infection increased from 0 percent in 1986 to 5.9 percent in 1989.

- Levels of HIV seroprevalence in blood donors varies by type of donor and area in India. Levels are generally low however, one study in Bombay from March 1988 to November 1989 reported a seroprevalence level of 10.3 percent in paid blood donors.

- Much of the recent attention on AIDS in India has centered on infection levels among high-risk populations such as prostitutes. Data from Madras for the past several years shows an increase from 0 percent to 1.3 percent among pregnant women attending an antenatal clinic. In Bombay, data for the 1986-90 period show infection at 0.4 percent.

Studies conducted in several cities in India show the levels of HIV infection among the prostitutes vary greatly. The highest level of HIV infection is in the capital city, New Delhi of 30.1 percent. Vellore and Madras had levels of 9.8 and 4.5 percent, respectively. However, there is no evidence of HIV infection in Goa, Jabalpur, and Pune cities and very little in Delhi city.

According to this study, HIV infection levels among prostitutes in Bombay have increased more than 10-fold over the past 5 years, reaching 18.1 percent in 1990.

A variety of studies conducted in selected cities in India since the late 1980's document the toehold that HIV has achieved across India at this point in time. India appears poised for explosive growth in infection.

Evidence of this potential is shown in very recent data from Bombay, where nearly one-third of STD clinic patients were HIV-1 positive in 1991. An additional 5 percent of STD clinic patients were positive for HIV-2.

Philippines

There is very little information on HIV seroprevalence in the Philippines. However, this study reports very low levels of HIV infection among prostitutes in various towns. The highest level is 0.4 percent, in Fernando town.

According to this study, the HIV infection level among homosexuals is relatively low. There is no evidence of HIV infection among blood donors.

Thailand

- The situation in Thailand is changing rapidly, and should serve as a warning to other countries where the epidemic growth of HIV infection is not yet visible. Although the data is incomplete for June 1991 (not all sentinel-surveillance sites are included) the rates of infection in blood donors show a marked increase over the one year period.

- In Chiang Mai, Thailand, the levels of HIV infection vary by type of donor but once again show a marked increase in a one year period.

- The median level of infection for antenatal women sampled in provinces in Thailand has increased from 0 to 0.7 percent in just one year. Infection levels among pregnant women are as high as 8 percent in some provinces, based on sentinel surveillance data.

Levels of HIV seroprevalence have increased steadily in commercial sex workers from June 1990 to June 1991. The levels are the highest in the North where the rates have increased from 25.8 percent to 36.7 percent. Overall, the rates for June 1991 range from 14.9 percent to 36.7 percent.

Over the June 1990 to June 1991 period, Thailand’s sentinel surveillance system has documented a near doubling of HIV infection among STD clinic attendees in all regions of the country.

In Bangkok, no HIV infection was detected among STD clinic attendees as recently as June, 1989. By December, 1990, however, infection was over 7 percent. In the city of Chiang Mai in Thailand’s north, HIV infection has more than doubled over the past two years, reaching 22 percent of STD patients in June, 1991.
LATIN AMERICA/CARIBBEAN
Brazil

- Available evidence shows HIV infection levels in Brazil’s urban areas increasing rapidly. In one area of Sao Paulo state, infection among pregnant women increased from 0.2 percent to 1.3 percent between 1987 and 1990. Infection levels in other urban areas are also increasing. Little is available on infection levels among the less urbanized population.

- A National survey conducted in 1989 reported a low level of HIV infection among blood donors (0.6 percent).

- Data from Brazil in 1989 show evidence of HIV infection among STD clinic patients in Salvador (0.6 percent), however, no infection was observed among STD clinic attendees in a study conducted in Belo Horizonte.

Dominican Republic

- HIV infection in Dominican Republic blood donors is very low. A recent study shows the HIV infection levels for 1988 and 1989 to be 0.6 percent and 0.8 percent, respectively.

- The HIV infection level among prostitutes has tripled in the past two years, from 1.4 percent in 1987 to 4.4 percent in 1989-90.

- This study conducted in Santo Domingo in 1989, shows that males are twice as likely to be HIV positive than females.

Haiti

- The cumulative number of AIDS cases reported by Haiti to the World Health Organization has increased steadily since 1983. By the end of 1989 (the latest reported data), Haiti had reported 0.4 cases per 1,000 population.

- By as early as 1986, infection levels among pregnant women in the capital, Port-au-Prince were quite high, and show the expected peak of infection among women in their early twenties.

- In Cite Soleil, a low socioeconomic area near the capital of Haiti, data over the past 5 years shows a flat epidemic. The variation seen over this time period is probably due to sample variation rather than to any actual difference over the years.

• HIV infection among blood donors over the past several years conforms to age patterns of infection found elsewhere. Peak infection levels for men occur at somewhat older ages than among women.

• Infection levels among prostitutes are several times the level found in the general population. In Port-au-Prince, HIV infection has remained above 40 percent since 1986.

Jamaica

- National data show the HIV infection levels for blood donors and STD patients to be relatively low, less than 0.5 percent, while the levels of HIV infection in the homosexual population are several times higher.

- Very few studies of HIV infection in prostitutes for Jamaica have been published. However, a study conducted in 1990 shows significant levels of HIV infection among prostitutes.

Reported levels of HIV infection in blood donors are very low in Martinique. In this study the level of HIV infection was 0.2 percent.

Between 1985 and 1989, HIV infection among pregnant women in Martinique increased from 0.1 to 0.9 percent. While still showing relatively low infection levels, the rate of increase over this four-year period is cause for concern.

The rates of HIV infection in commercial sex workers in Martinique increased steadily from 1985 to 1988. The levels of infection increased 50% from 1985 (33.3 percent) to 1988 (50 percent).

In Martinique, a study conducted over the 1985-88 period shows that males visiting STD clinics were twice as likely to be HIV positive as females. Data by age show a progression of infection levels to age 30-39.

While studies of -1° section among men in the 1970s showed no evidence of -1° section, studies among men in the 1980s showed the same trend. However, significant eyes in the 1980s, -1° section eyes were the highest among persons a decade. Among 1° myopic eyes, the change was similar. -1° section eyes were 1.3 percent respectively.

It is not clear how -1° section eyes among 1° myopic cases was 1.3 percent. It is not clear if there was any evidence of -1° section among persons aged 70.

In the survey conducted in the 1980s, the -1° section among male patients was more than expected in the male section.
Sources for Figures

The following list contains the sources for data used in text figures. These data are contained in the HIV/AIDS Surveillance Data Base, maintained by the U. S. Bureau of the Census. When the source is preceded by an asterisk (*), data shown in the graph are calculated based on reported data.

AFRICA

Cameroon


Central African Republic


Congo


Ethiopia


Guinea


Ivory Coast


Kenya


Madagascar


Malawi

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Mali


Mozambique


Nigeria

Rwanda


Senegal


South Africa

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Tanzania


Uganda


Zaire


Zambia


Zimbabwe


ASIA

India


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Philippines


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Thailand


LATIN AMERICAN/CARRIBBEAN

Brazil


Dominican Republic


Haiti


Jamaica


Martinique


Trinidad and Tobago
