

# The dynamics of change in India

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# Global Goal: Ensuring that each child

- **grows up in a safe and nurturing environment,**
- **has access to good education, health care and modern job skills,**
- **has equal opportunity to realize her/his potential fully**

In 1999 I became involved in HIV/AIDS education and prevention because I recognized that it is an exceptional pandemic

# **HIV/AIDS: a devastating modern pandemic**

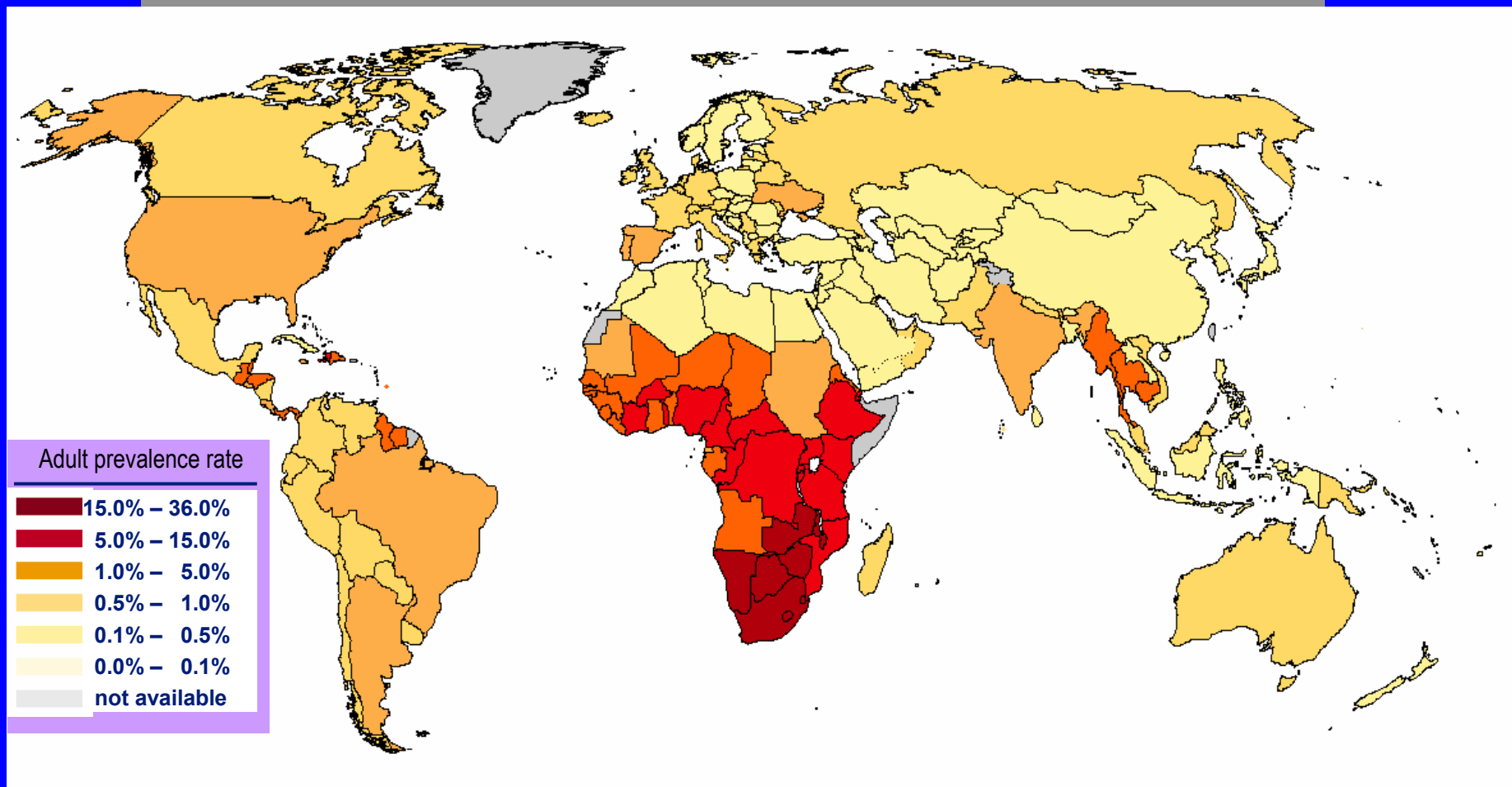


## **GLOBAL STATUS**

**2004**

# Global status of HIV infection

40 million people living with HIV/AIDS and about 30 million have died as of end 2004



**SOURCE: UNAIDS**

# Adults and children estimated to be living with HIV/AIDS as of end 2004



**Total: 39.4(35.9-44.3) million**

**SOURCE:  
UNAIDS 2004**

# Estimated number of adults and children newly infected with HIV during 2004



**Total: 4.9(4.3-6.4) million**

**SOURCE:**  
UNAIDS 2004

# Estimated adult and child deaths from HIV/AIDS during 2004

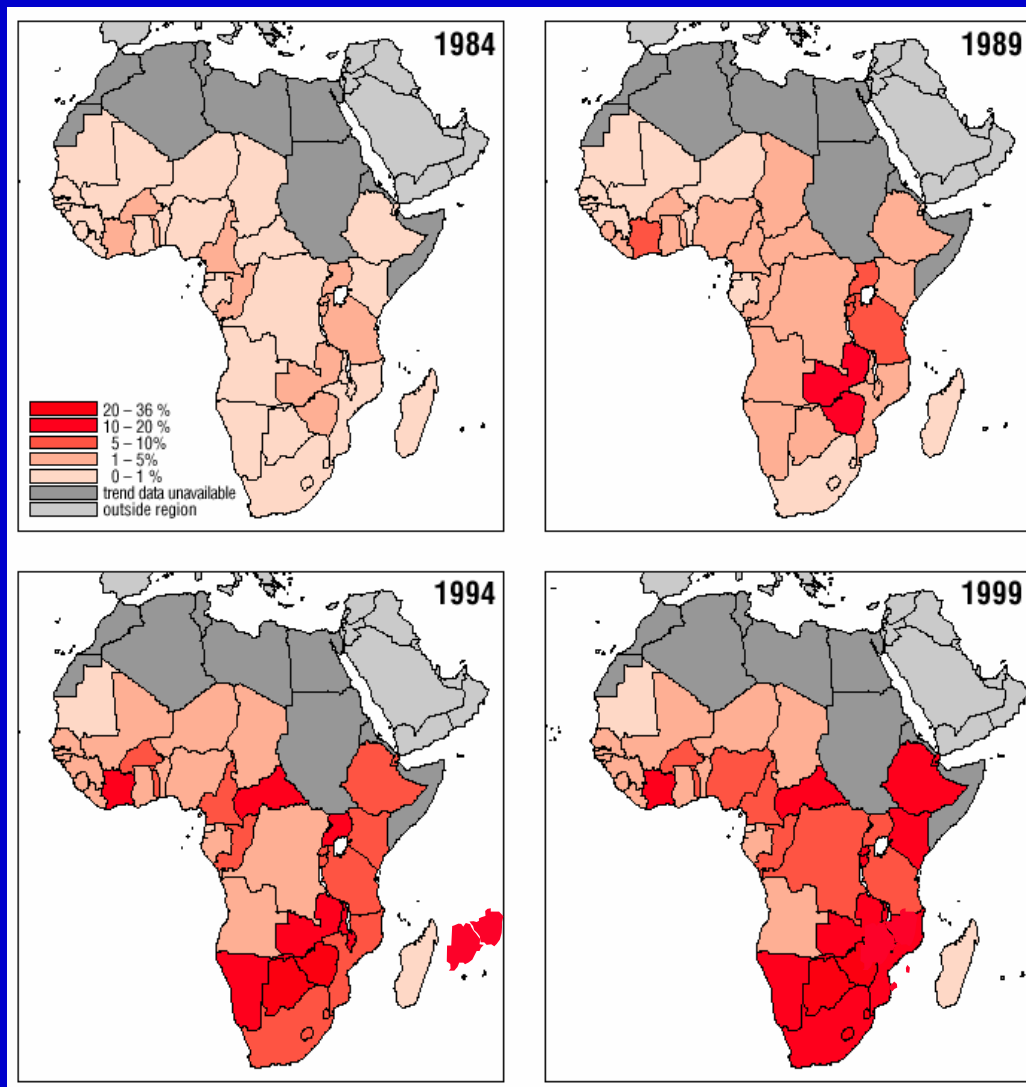


**Total: 3.1 (2.8-3.5) million**

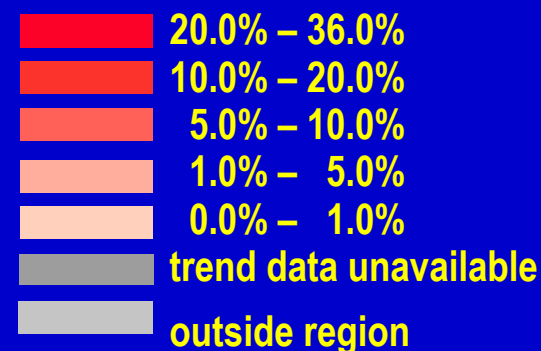
**SOURCE:**  
**UNAIDS 2004**



# Fast Spread of HIV in Sub-Saharan Africa, 1984 to 1999



Estimated percentage of adults  
(15-49) infected with HIV

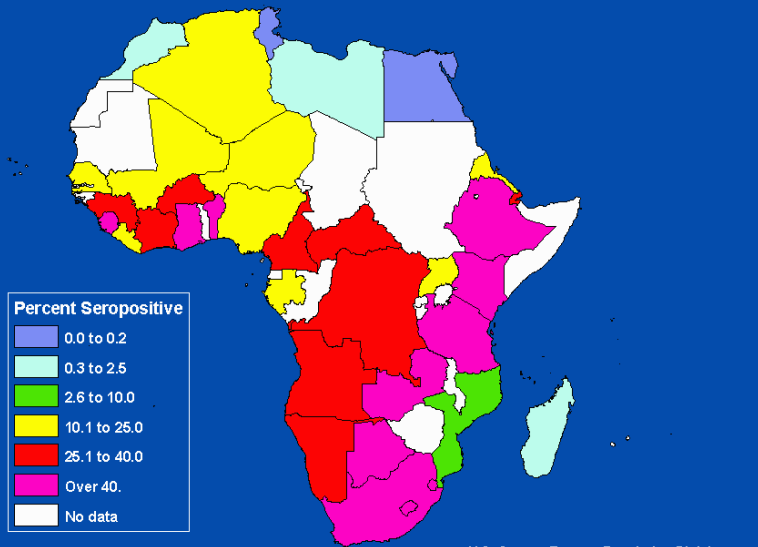


**SOURCE: UNAIDS 2000**

# CONSEQUENCES

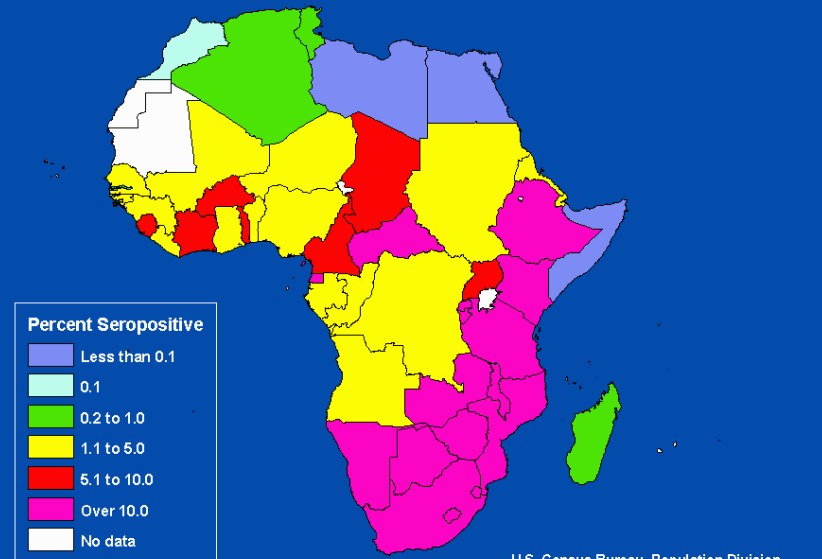
# Africa: 1980-2004 a runaway pandemic

African HIV1 Seroprevalence for High-Risk Urban Populations



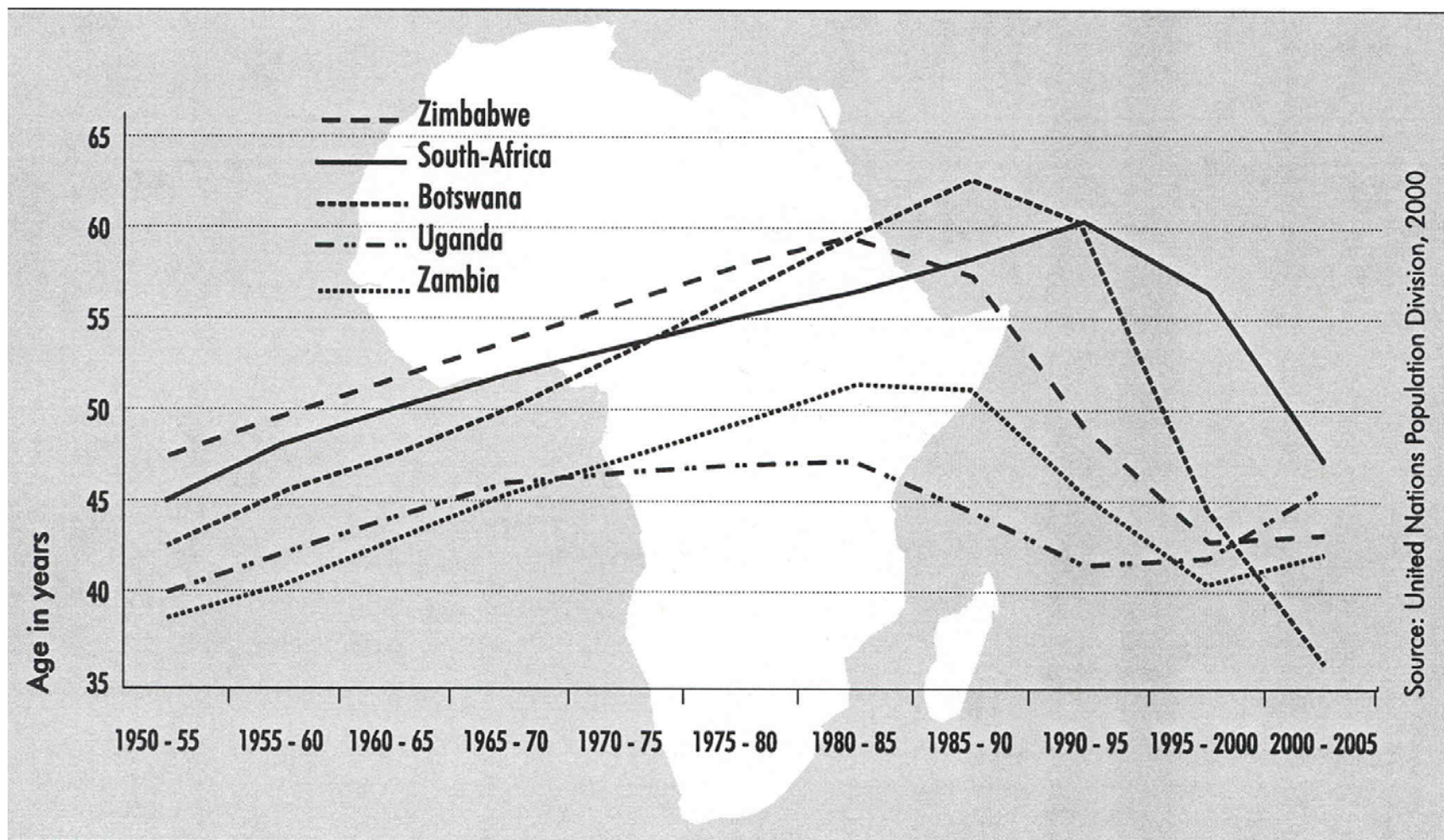
U.S. Census Bureau, Population Division,  
International Programs Center,  
HIV/AIDS Surveillance Data Base, September 2004.

African HIV1 Seroprevalence for Low-Risk Urban Populations



U.S. Census Bureau, Population Division,  
International Programs Center,  
HIV/AIDS Surveillance Data Base, September 2004.

# DECREASING LIFE EXPECTANCY; KILLING THE MOST PRODUCTIVE

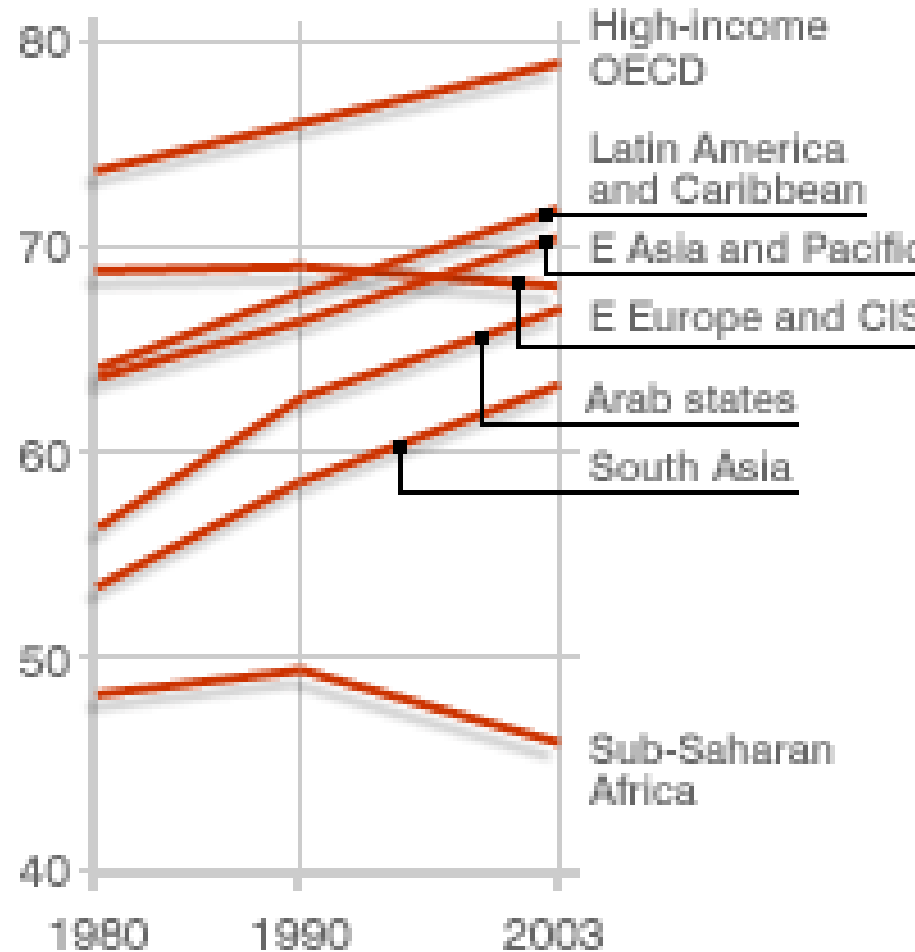


# MOST PRODUCTIVE SECTOR (YOUNG ADULTS) LOST



## CHANGING LIFE EXPECTANCY

Life expectancy (years)



SOURCE: UN

# 15 MILLION AIDS ORPHANS (2003)

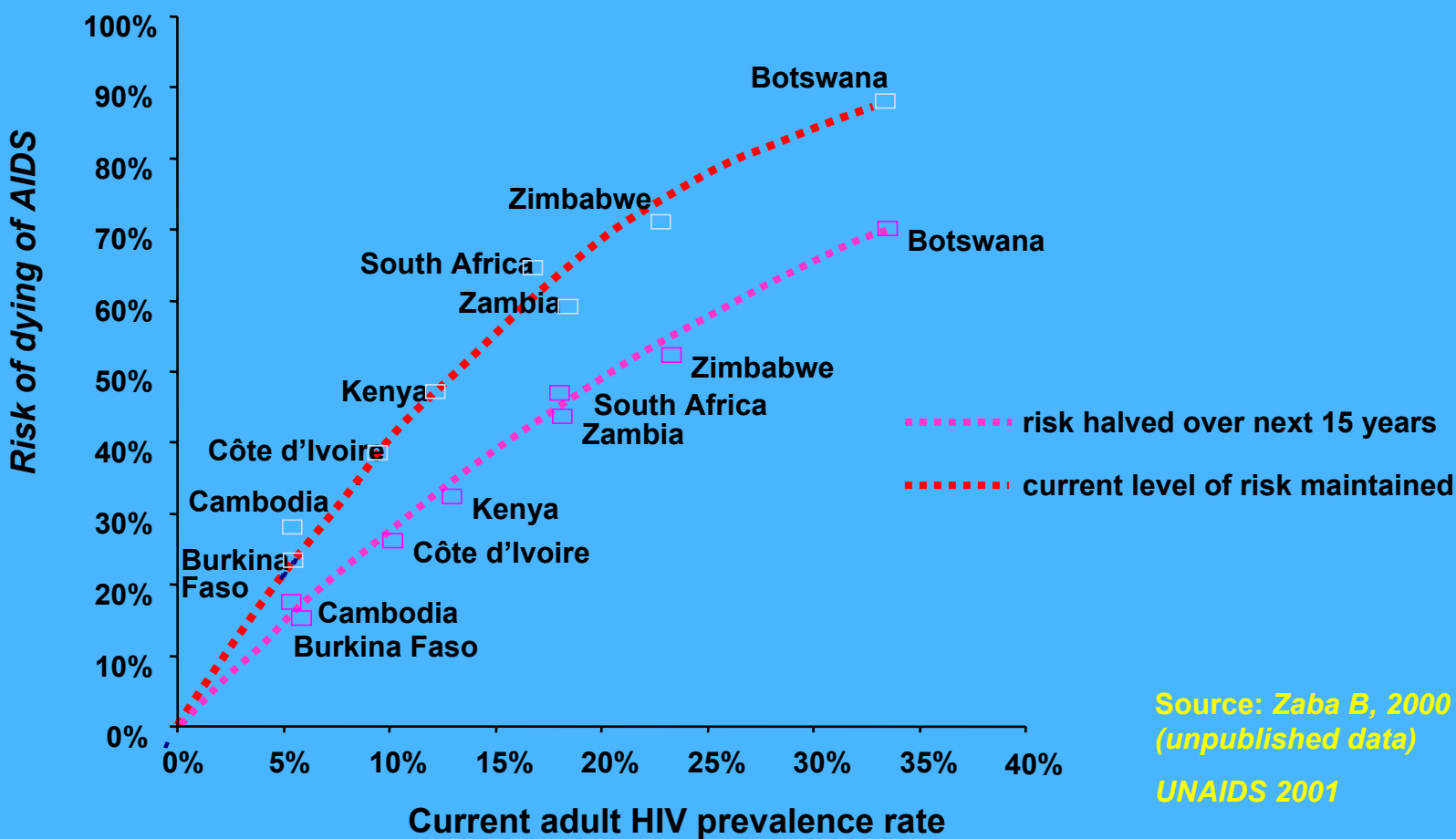


Photo: James Nachtwey

What is their future?



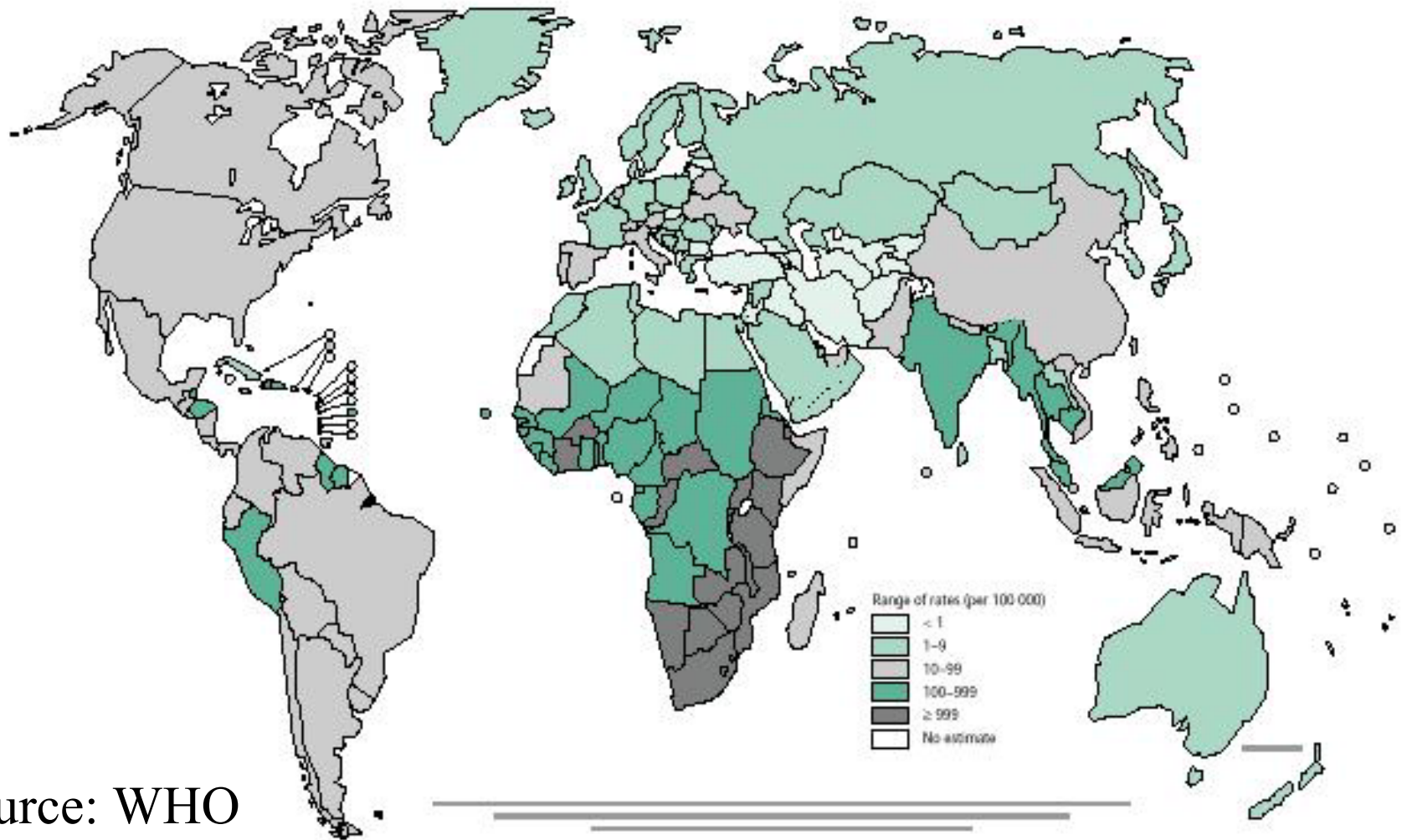
# Lifetime risk of AIDS death for 15-year-old boys, assuming unchanged or halved risk of becoming infected with HIV, selected countries



Source: Zaba B, 2000  
(unpublished data)  
UNAIDS 2001

# TB and HIV Co-infection

## 2. Estimated TB/HIV co-infection rates, 1997



Source: WHO



# What makes HIV/AIDS exceptional

- Long asymptomatic infectious period (~10 years)
- Almost always fatal
- No cure. No vaccine. None expected soon!
- Stigma keeps risky sex and IV drug use – major transmission routes – underground
- Governments/people caught between adopting harm reduction strategies and maintaining moral values
- Poor, marginalized populations most vulnerable
- Kills the most productive – young adults & parents
- Increasing burden of orphans and ruined families

The continued spread of HIV/AIDS in Africa highlighted a much larger problem

THE VERY FUTURE OF THE POOR, THE ILLITERATE, AND THE MARGINALIZED

**FUTURE**

**The Second Wave**

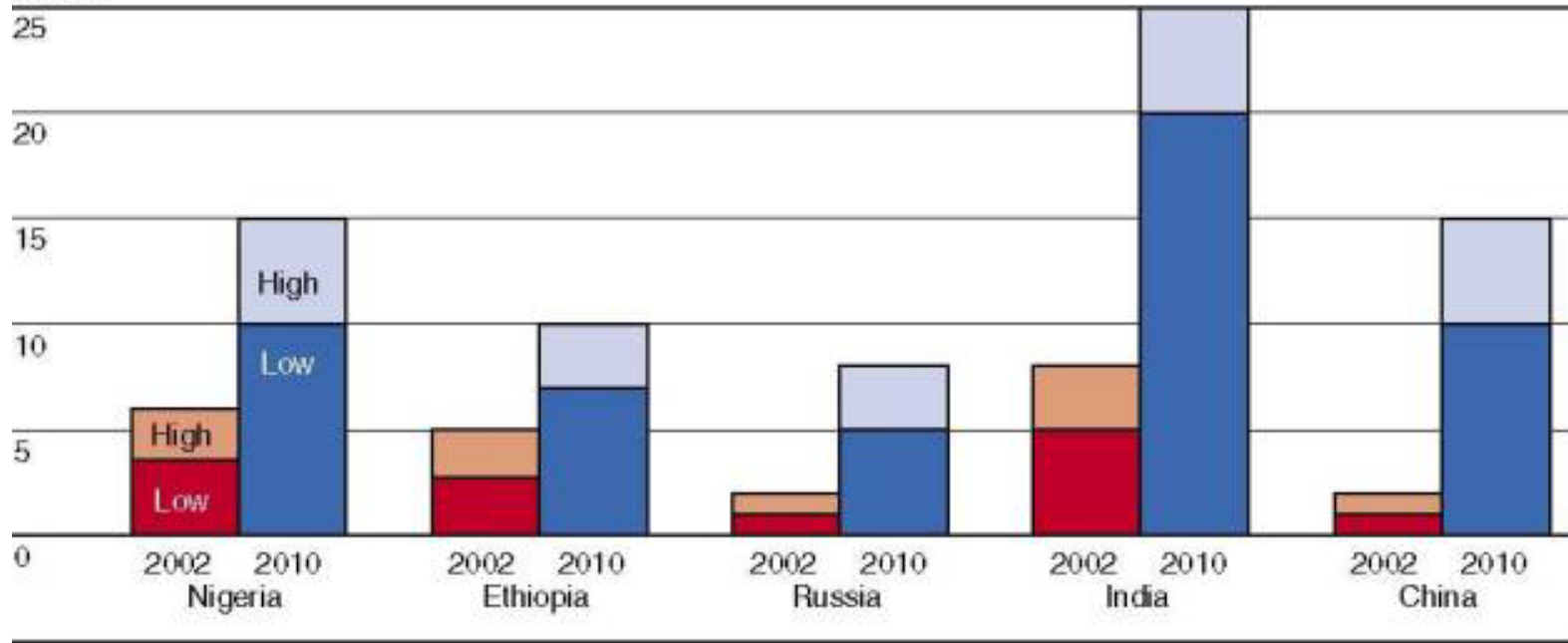
The 2002 NSC/CIA report lists 5 important countries in the next wave

- **Nigeria**
- **Ethiopia**
- **India**
- **China**
- **Russia**

# PROJECTIONS

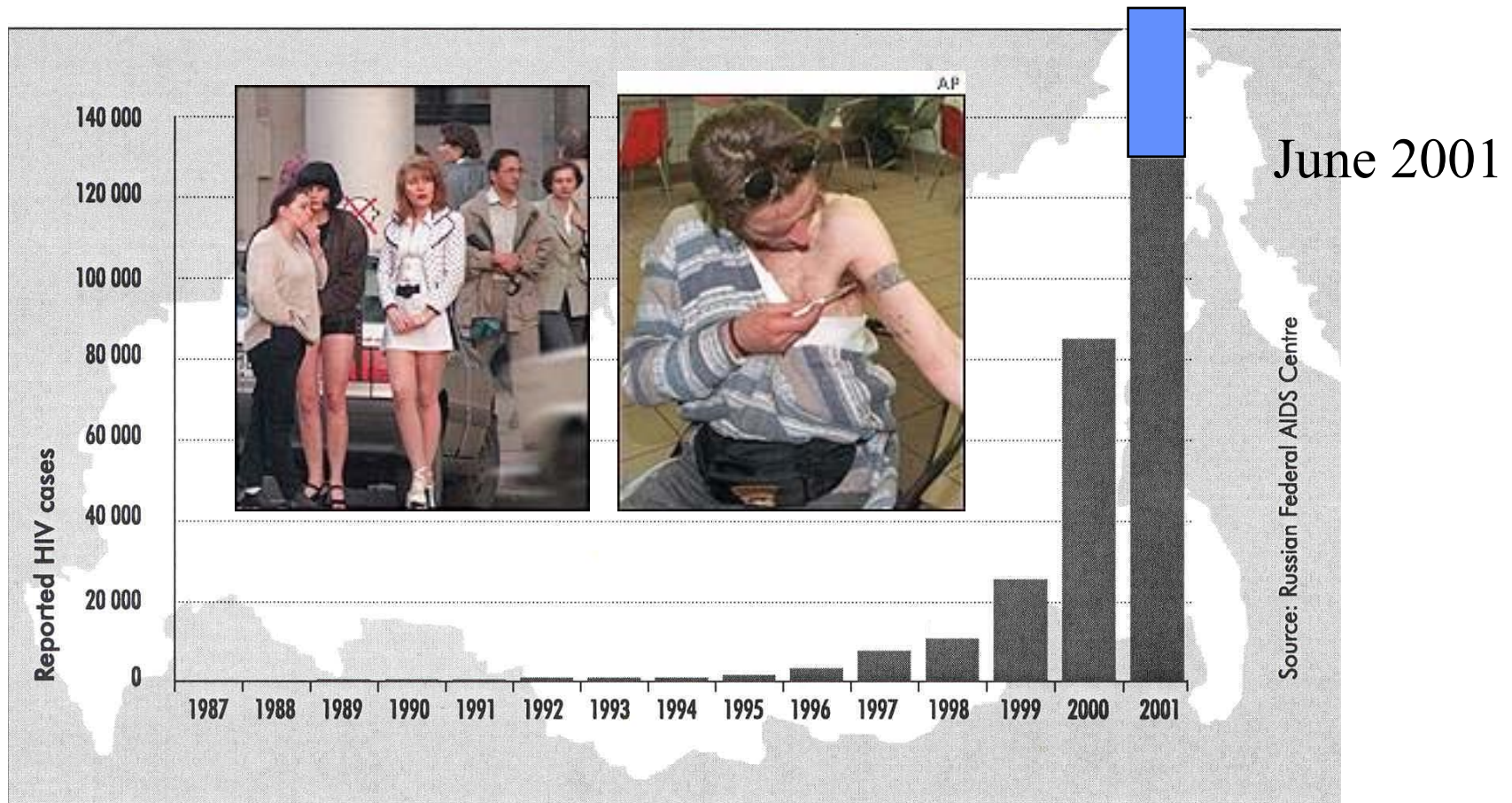
**Figure 1**  
**High and Low Estimates of Current and Future**  
**HIV/AIDS-Infected Adults in Next-Wave Countries, 2002 and 2010**

*Millions*



Source: NSC/CIA report 2002

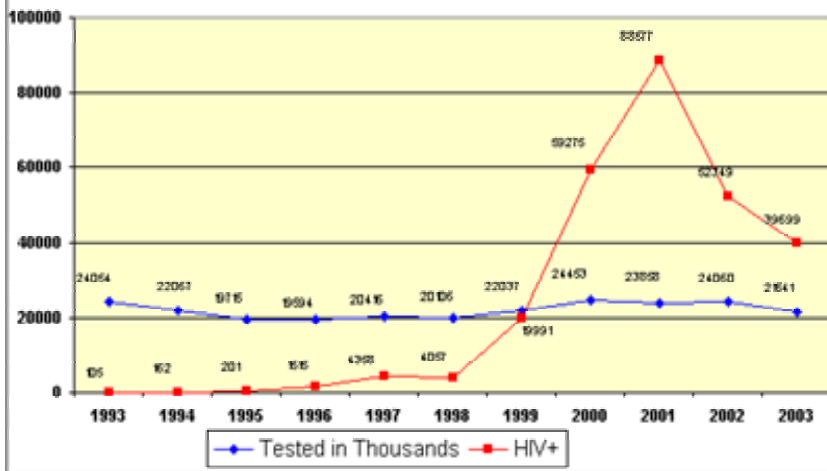
**RUSSIA**: NIC concluded that at this rate of growth, 10% of all Russians aged 15-49 will be HIV+ by 2010



**Estimated Infections (2004) ~900,000**

# Russia: Health and Demographic Crisis

Figure 2: Annual HIV-Antibody Testing (in Thousands) and Reported HIV+ Incidence, Total Population, Russia: 1993 to 2003



Official HIV+ Numbers: 300,000

Expert Estimates: 900,000

Life Expectancy M 60.5

Expectancy F 74.0

Population decline by ~ 800,000/year

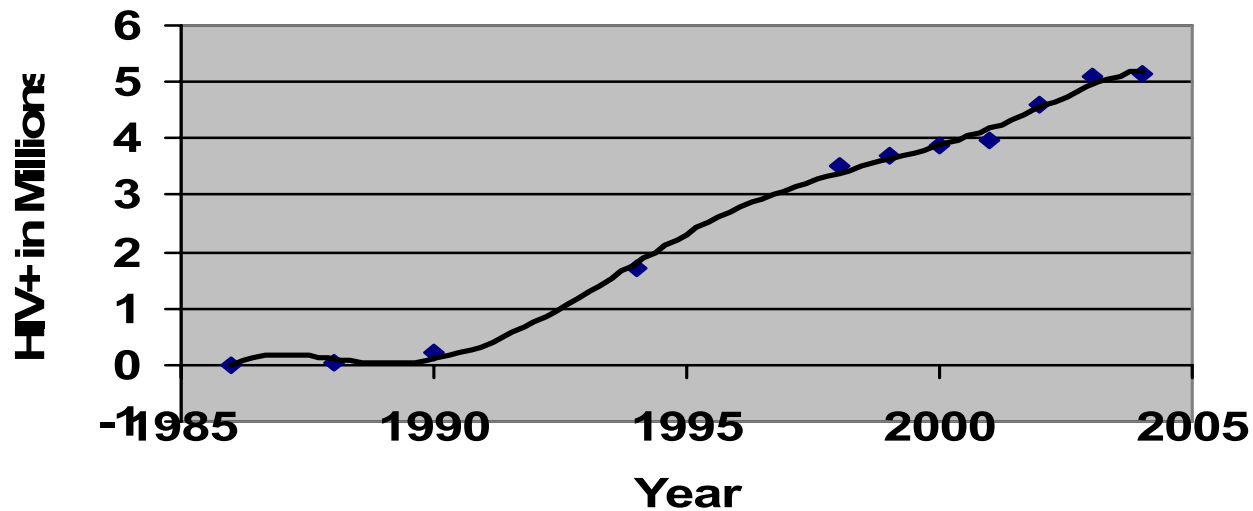
BIRTHS AND DEATHS IN RUSSIA: 1985 TO 2004



	1985'	1986'	1987'	1988'	1989'	1990'	1991'	1992'	1993'	1994'	1995'	1996'	1997'	1998'	1999'	2000'	2001'	2002'	2003'	2004'
Births	2375	2486	2500	2349	2161	1989	1795	1588	1378	1408	1364	1305	1260	1283	1216	1267	1312	1397	1477	1508
Deaths	1625	1498	1532	1569	1584	1656	1691	1807	2129	2301	2204	2082	2016	1989	2140	2225	2255	2332	2366	2298
difference	749.8	987.9	968.4	779.4	576.9	332.9	103.9	-220	-751	-893	-840	-778	-756	-705	-925	-959	-943	-935	-889	-790

M. Feshbach 05(WWCS)  
HIV/AIDS in Russia.

# HIV Estimates: India

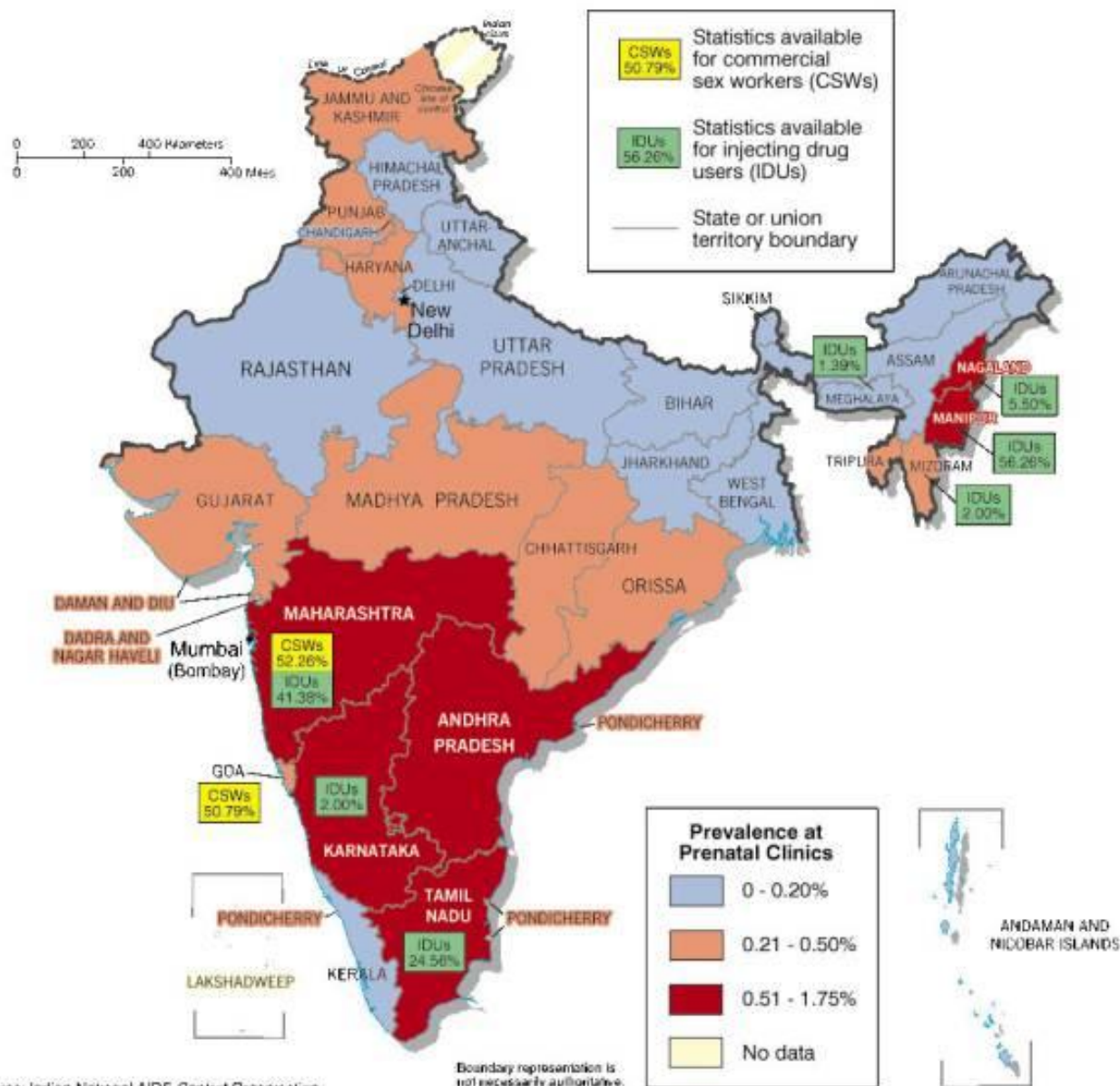


Year	Total HIV positive persons
1998	3.5 million
1999	3.7 million
2000	3.86 million
2001	3.97 million
2002	4.58 million
2003	5.11 million
2004	5.134 million

- Estimates of 5.134 million based on cumulative 111,608 reported cases!
- No estimates of deaths
- 2004 anomaly due to change in analysis in 2003



# India: HIV Prevalence Among Women Attending Prenatal Clinics, Commercial Sex Workers, and Injecting Drug Users, 2001



**The continued spread of  
HIV/AIDS highlights**

**Risky life-styles and the  
plight of the have-nots**

# Containing HIV requires a social transformation

	Industrialized	Developing
Education	✓	✗
Health care	✓	✗
Jobs (economic development)	✓	✗
Good governance	? ✓	✗
Stigma (marginalized groups)	? ✗	✓
Women's empowerment	✓	✗
Healthy lifestyles	?	✗

**What is needed to seed this transformation?**

In developing countries HIV/AIDS will not be controlled as an isolated health problem.

We will need to simultaneously address issues of poverty and development.

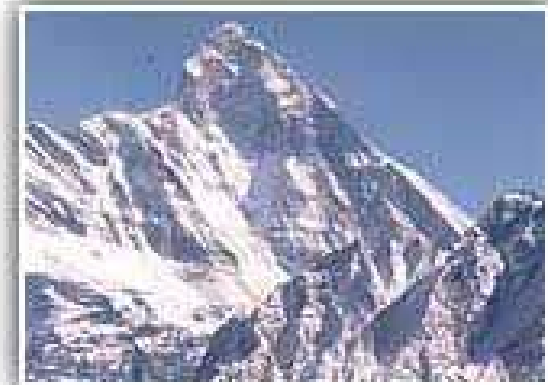
Intervention will require a long-term holistic approach that builds local leadership and institutions



# India



**A very complex, diverse,  
chaotic, vibrant country full  
of extremes, exceptions and  
contradictions**



# India: a pivotal strategic region

- 1/6 of world population
- 1/4 of world poverty
- Strategically located
- Democratic, free, secular
- Values education:  
English and math skills
- Rising middle class



**Can India provide adequate resources to 1.1 billion people?**

# “India Everywhere”: Business Landscape

- A new breed of talented, confident, cocky entrepreneurs (especially post 2002)
  - Very global in outlook and willing to compete at all levels
  - Creating their own infrastructure (electricity, water) decoupled from public works
- India offers better opportunities for small businesses (bottom up) than China

***There are at least three Indias:  
Progressive, “Bimaru”, unstable states***

# Information Technology

PBS 1-800-INDIA



**350,000 IT workers have put India on the Map**



# Rural India

- About 650,000 villages – 750 million people
- 80% agricultural
- 1<sup>st</sup> Slogan: Roti, Kapra, Makan
  - (Food, Clothes, Shelter)
- 2<sup>nd</sup> Slogan: Sadhan, Bijli, Pani
  - (livelihood, electricity, water)



**Needs transition strategy as agriculture becomes mechanized business competing in global economy**

# India faces severe challenges

- Falling groundwater tables
- Increasing salinity of soil in irrigated areas
- Air and water pollution
  - Pesticides, fertilizers, industrial and domestic waste in water systems
  - Crowded, polluted cities
- Deforestation and loss of ecosystems
- Overuse of soil – depletion of soil nutrients
- Urban sprawl: growth of cities without adequate resources or infrastructure

(1) Global population  
increase

2 billion in 21<sup>st</sup> century

Resources  
& Skills



1.5 B  
people

3 billion in 18<sup>th</sup> century  
with less than \$2 per day  
(population growth is happening here)

# Projected population growth (PRB)

	<b>2005</b>	<b>2025</b>	<b>2050</b>
<b>N. America</b>	329	386	457
<b>C.A.&amp; Caribbean</b>	186	235	269
<b>S. America</b>	373	467	536
<b>Europe</b>	730	716	660
<b>Oceania</b>	33	41	46
<b>Africa</b>	<b>906</b>	<b>1350</b>	<b>1970</b>
<b>Asia (-China)</b>	<b>2617</b>	<b>3283</b>	<b>3888</b>
<b>China</b>	1304	1476	1437
<b>India</b>	1104	1363	1628

Vulnerable population  
under 15

# Of the 3 billion living on less than \$2 (PPP) per day, about a billion are children below age 15 who

- live amidst violence and poverty
- have little or no family supervision
- are not part of the knowledge society
- will not have access to higher education
- lack distinction between right and wrong
- are vulnerable to diseases and poor health



**Who will provide them hope and what will keep them from becoming destructive?**

Region	Population (Millions)	Population under 15 (millions)	<b>Vulnerable Pop. under 15 (millions)</b>
Africa	861	362 (42%)	~290 (80%)
Cent. America	144	50 (35%)	~25 (50%)
South America	358	111 (31%)	~50 (45%)
West Asia	204	73 (36%)	~30 (40%)
S&C Asia	1563	580 (37%)	~350 (60%)
South East Asia	544	180 (31%)	~90 (50%)
East Asia	1519	334 (22%)	~110 (33%)
Eastern Europe	301	54 (18%)	~11 (20%)

Source: Population data are from Population Reference Bureau 2003



# India: key population statistics

(PRB 2005)

- Population (millions): 1104 (2005); 1363 (2025); 1628 (2050)
- Population increase: (25-9  $\approx$  16) million per year
- Population below 15 years old: 36%  $\approx$  400 million
- Rural population: 72%  $\approx$  800 million
  
- Births by attendants: 43%
- IMR: 56/1000 live births (CIA, 2005)
- TFR: 3.4 (low 20%) 2.6 (mid 20%) 1.8 (top 20%)
  
- Vaccinated: 21% (low20%) 41%(mid 20%) 64%(top 20%)
  
- Most used birth control method: Female Sterilization

# **CAMPAIGN: Reproductive Health & Family Planning**

**Provide every man and women with easy and free access to modern family planning and disease prevention methods (pill, IDU, condom, vaccines, ...)**

**A Global Fund for free "pills" and condoms. \$15B per year**

# Demographics and Population Growth

**Population will stabilize if modern means of birth control are provided.**

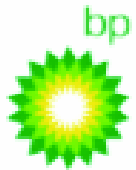
**Much better solution if people have opportunities at “home” rather than dealing with hordes of “boat people”**

## **(2) India: Energy a choke point**

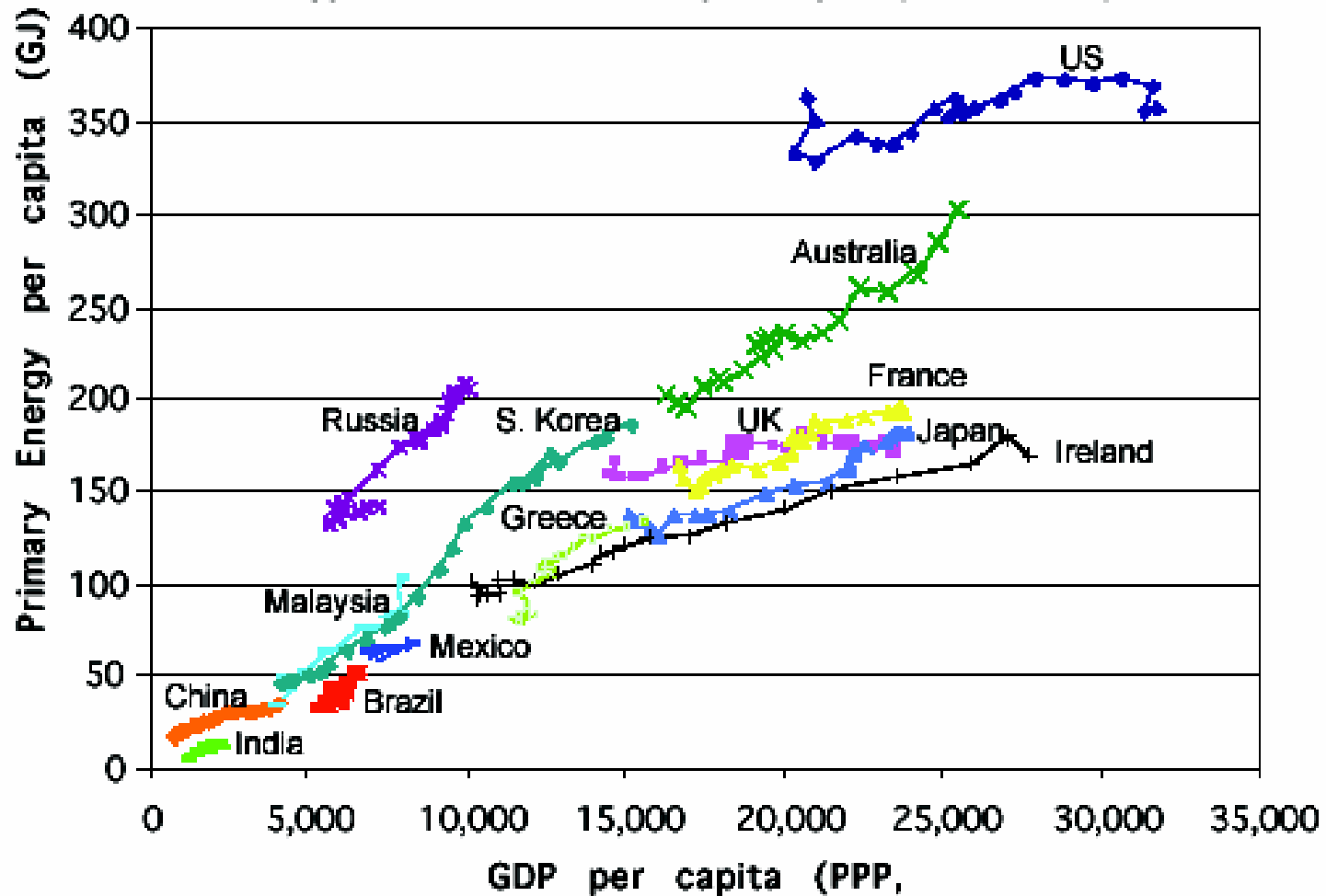
- **In 2004 India consumed 2.4 M barrels a day**
- **Growth in demand ~ 4% per year**
- **Oil and gas reserves are small**
- **Importing 1.6 M barrels a day**
  - **Cost at \$60/barrel = \$35 billion**
  - **Oil imports = 47% of export earnings of \$74 billion**
- **Growth in use of coal (high ash content) will require strict pollution controls.**



# Energy use grows with economic development

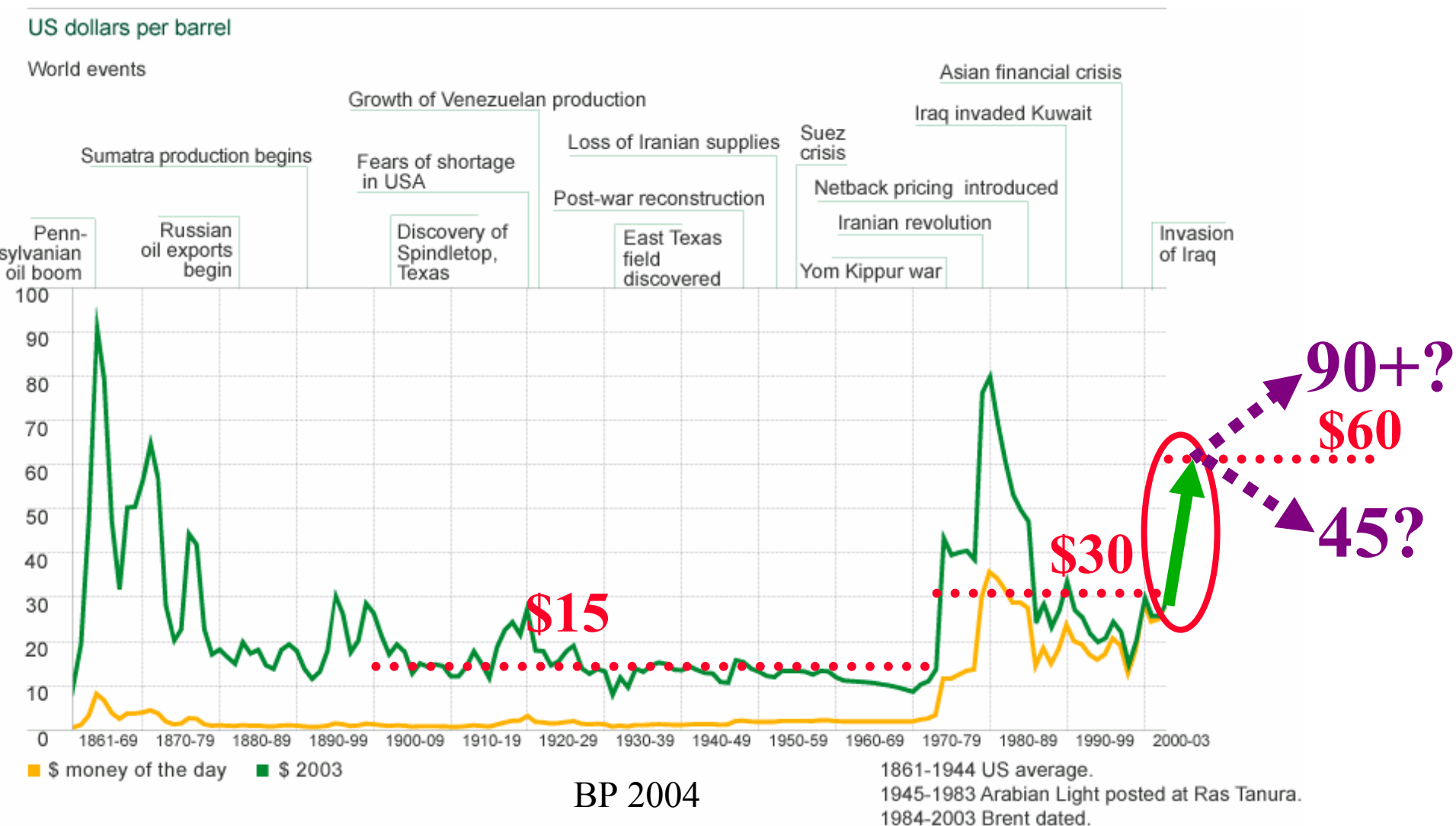


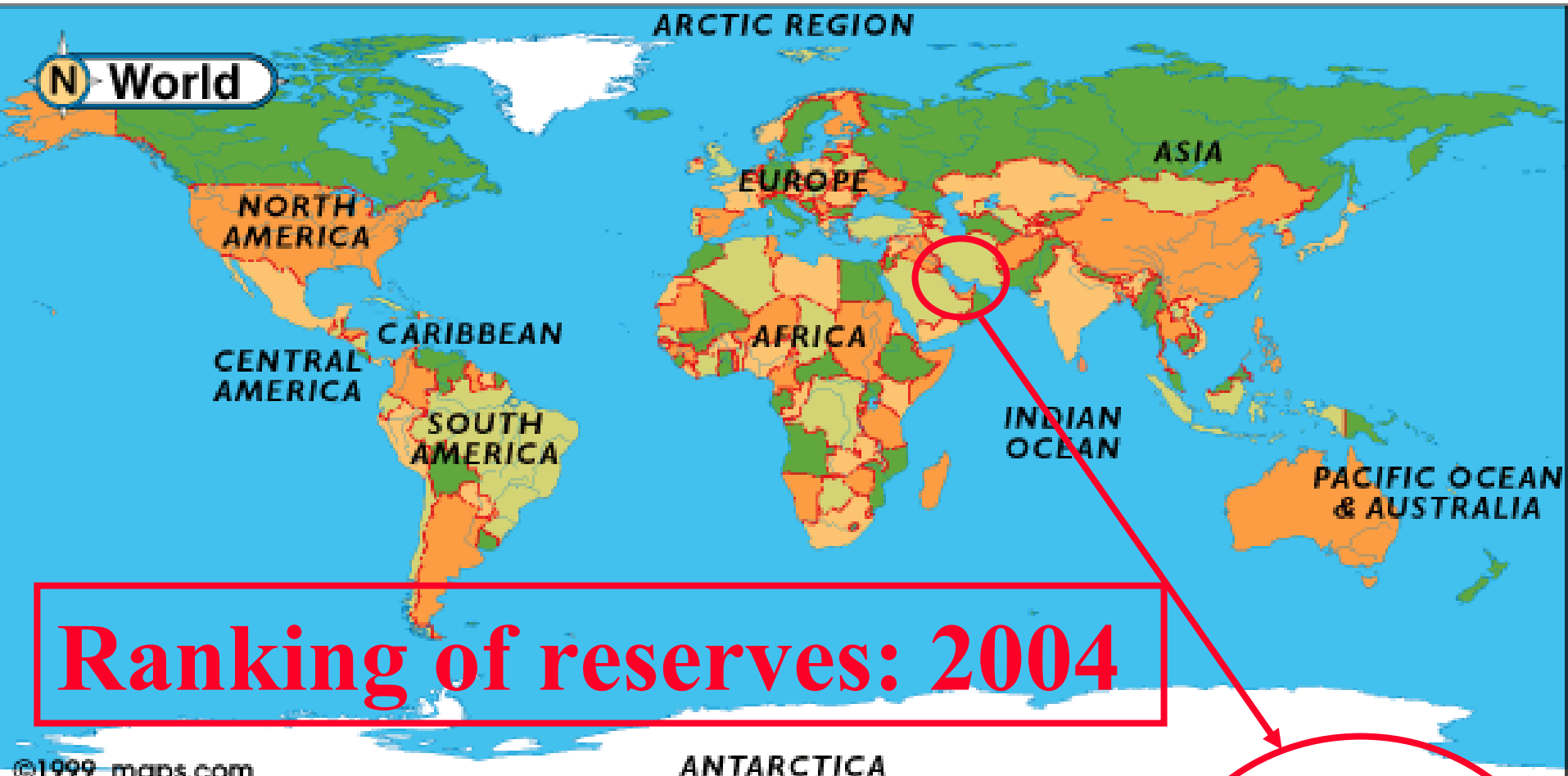
energy demand and GDP per capita (1980-2002)



Source: UN and DOE EIA

# Increased volatility and high prices post 2004?





# Ranking of reserves: 2004

©1999 maps.com

USA 12,6,1

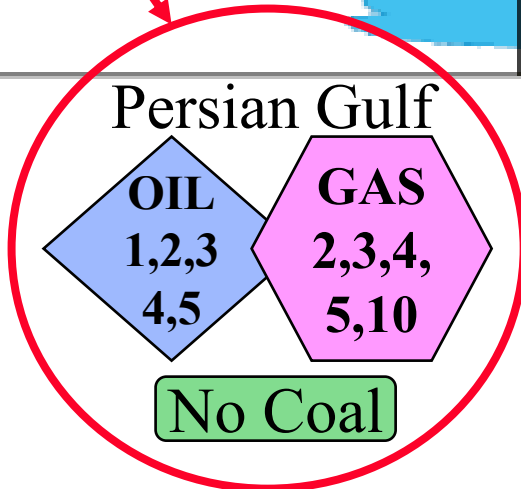
China 11,-,3

EU -, -, 4

Russia 8,1,2

India -, -, 5

AT -, -, -





**Fast forward to 2020**

USA -, -, 1

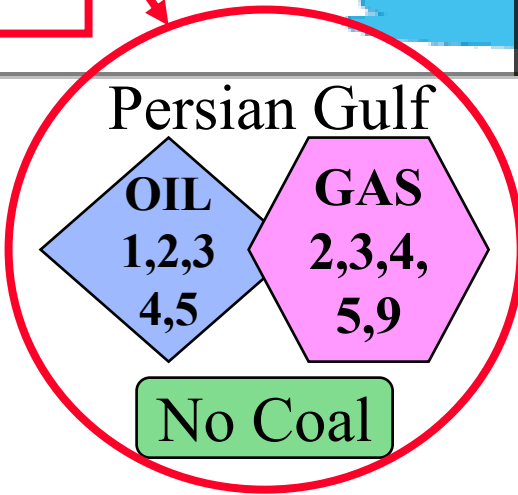
China -, -, 3

EU -, -, 4

Russia -, 1, 2

India -, -, 5

AT -, -, -

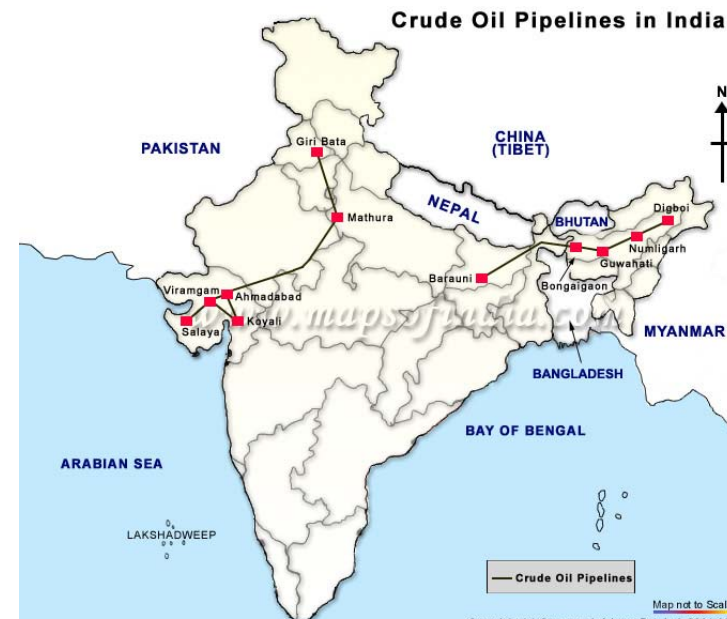




# Energy Priorities

- Develop Iran, Pakistan, India gas pipeline (USA wants to isolate Iran)
- Develop refinery capacity for Middle East oil (happening)
- Promote renewables (wind, solar, biomass, small hydro) and distributed generation
- Develop nuclear power with advanced fuel cycle (Thorium)

**Developed countries have to lead the R&D for cheap clean energy**



# **Campaign: Provide each poor family with at least 6 hours per day of electricity**

- **Energy for cooking**
- **Energy for clean water**
- **Light (kids can study)**
- **Energy to start micro enterprises**



**Allow women to step out of the kitchen**

# Access to basic enabling technologies

- **Medicines and vaccines**
  - **Global jackpot fund for essential medicines and vaccines**
- **Cheap and clean energy**
- **Quantity and quality of water**

Need small scale inexpensive solutions

# (3) Nurturing 21<sup>st</sup> century global citizens


*Emphasis on novelty, math and science skills, ability to perform under pressure, intra-personal skills*

# Thresholds are increasing rapidly

- Nurturing children fit for the 21<sup>st</sup> century takes 22+ years of investment
  - Health care and nutrition
  - Good education (at least bachelor's degree)
  - Stable home environment (emotional health)
  - Healthy leisure time activities
- Infrastructure → job creation
- Access to energy and potable water

**Poor cannot access these without significant help**

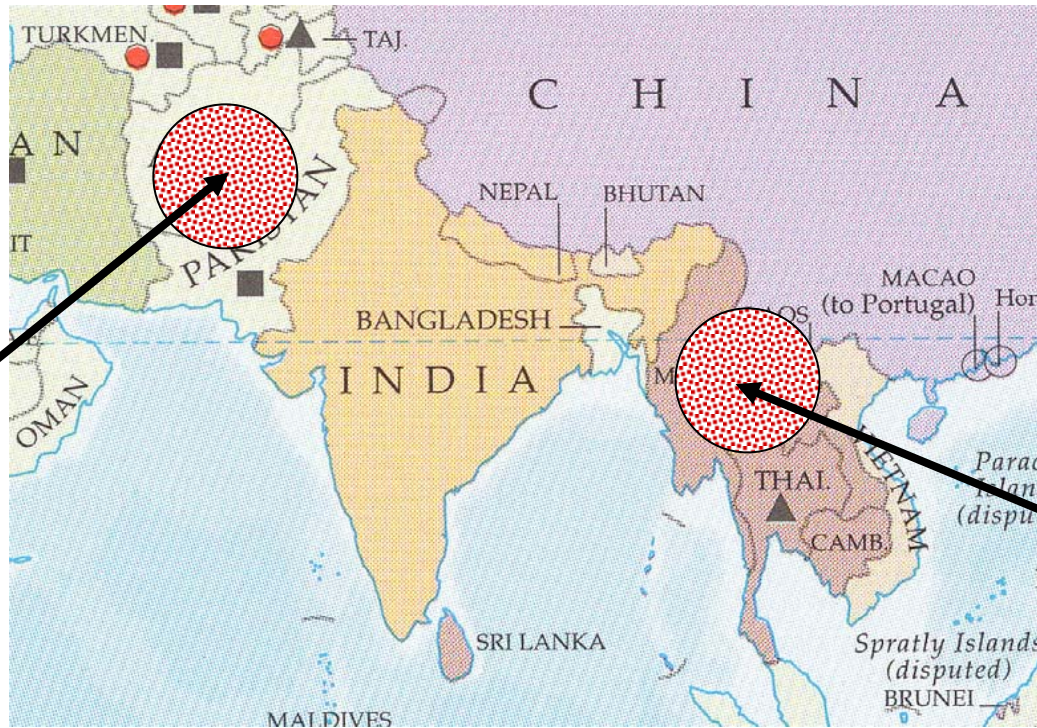
# **In the absence of healthy leisure time activities people gravitate towards**

- **Shallow television**
  - **Gambling**
  - **Alcohol and drugs**
  - **Risky sex** → **HIV/AIDS**
- 

**Need education and meaningful jobs**

# HEROIN THREAT

The golden  
crescent  
(~90%)



The golden  
triangle  
(~5%)

**India will increasingly be targeted  
by drug cartels as prosperity grows**

# Confront criminal organizations and rogue economies

- **Alcohol** (*major impediment to development*)
- **Tobacco**
- **Drugs**
- **Weapons**
- **Money laundering**
- **Corporate/government corruption**
- **Illegal trade in resources**



**Harmful to rich and poor nations**





The universal number one complaint by women is alcohol abuse by their men

Despondency: Landless labor works only 8-15 days a month



Markets are driven by  
profit and not long-term  
environmental, social,  
health impacts and costs

# GUTHKA: (chewing tobacco 1990 - )

- *Single shot: vacuum sealed pouches preserve flavor*
- *Marketing: colorful, shiny pouches, eye-catching display*
- *Low cost (2-7 cents): even poor children can buy*
- *Palatable: sweetened combination liked by kids*
- *Easy access: Any shop can sell them (illegally)*
- *Ready access: can carry anywhere in one's pocket*
- *Shopkeepers give guthka in lieu of small change*
- *No social barrier to consumption*



# The full cost of chewing tobacco



Cheek cancer



Removal of  
cancerous cheek



Skin graft to patch  
hole

# **Campaign: Ban international trade in cigarettes**

- **Smoking a recognized health hazard**
- **Growth predominately in developing countries**
- **Advertisements target the youth**
- **Savings in health care costs will offset losses**
- **Moral victory for developed nations**

**Ratify the WHO lead Framework Convention on Tobacco Control, and work towards a ban**

# (4) Good Governance

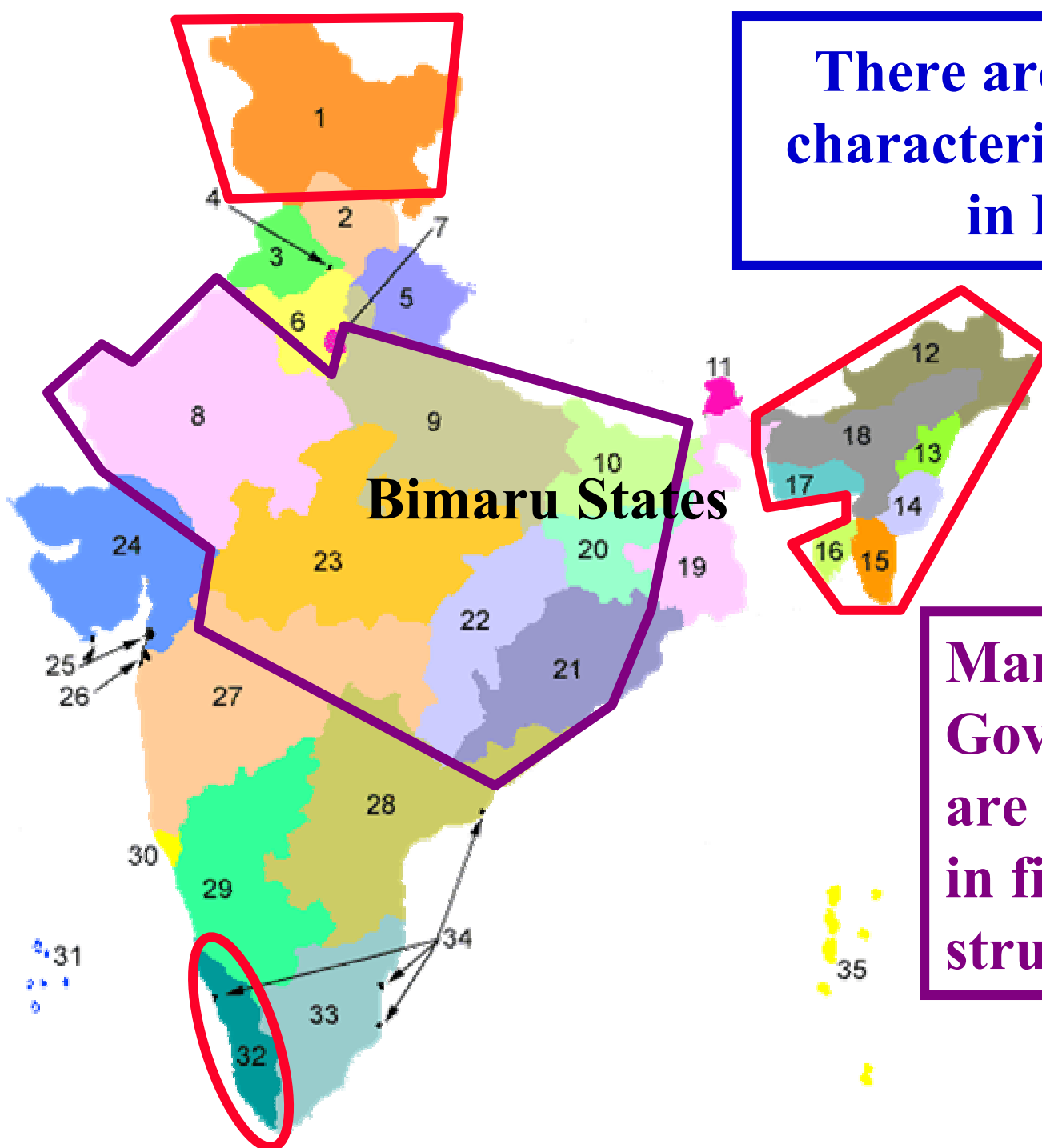
Developing Local Leadership to  
Sustain Change

# India: Political Landscape

- Few national parties (Congress, BJP, Janta Dal)  
many regional parties
- Coalition governments: national+regional parties
- Caste, communal, religious card played often
- ❖ Many politicians have criminal records
- ❖ Corruption has become “normal”—a way of life
- ❖ Inflated, inefficient, corrupt bureaucracy

❖ *Rich muddle through; Poor are devastated*

**There are at least 7  
characteristic regions  
in India**



**Many State  
Governments  
are corrupt and  
in financial and  
structural chaos**



How do we affect change under dysfunctional corrupt governments?

**Empower local communities, make schools work, and create jobs**

# **Developing local leadership takes time and nurturing**

- **At village level to energize communities**
- **Non Government Organizations (NGO)**
- **In all social activities: education, public health, medicine, gender equality, ....**

**Need to identify, train and empower potential leaders**

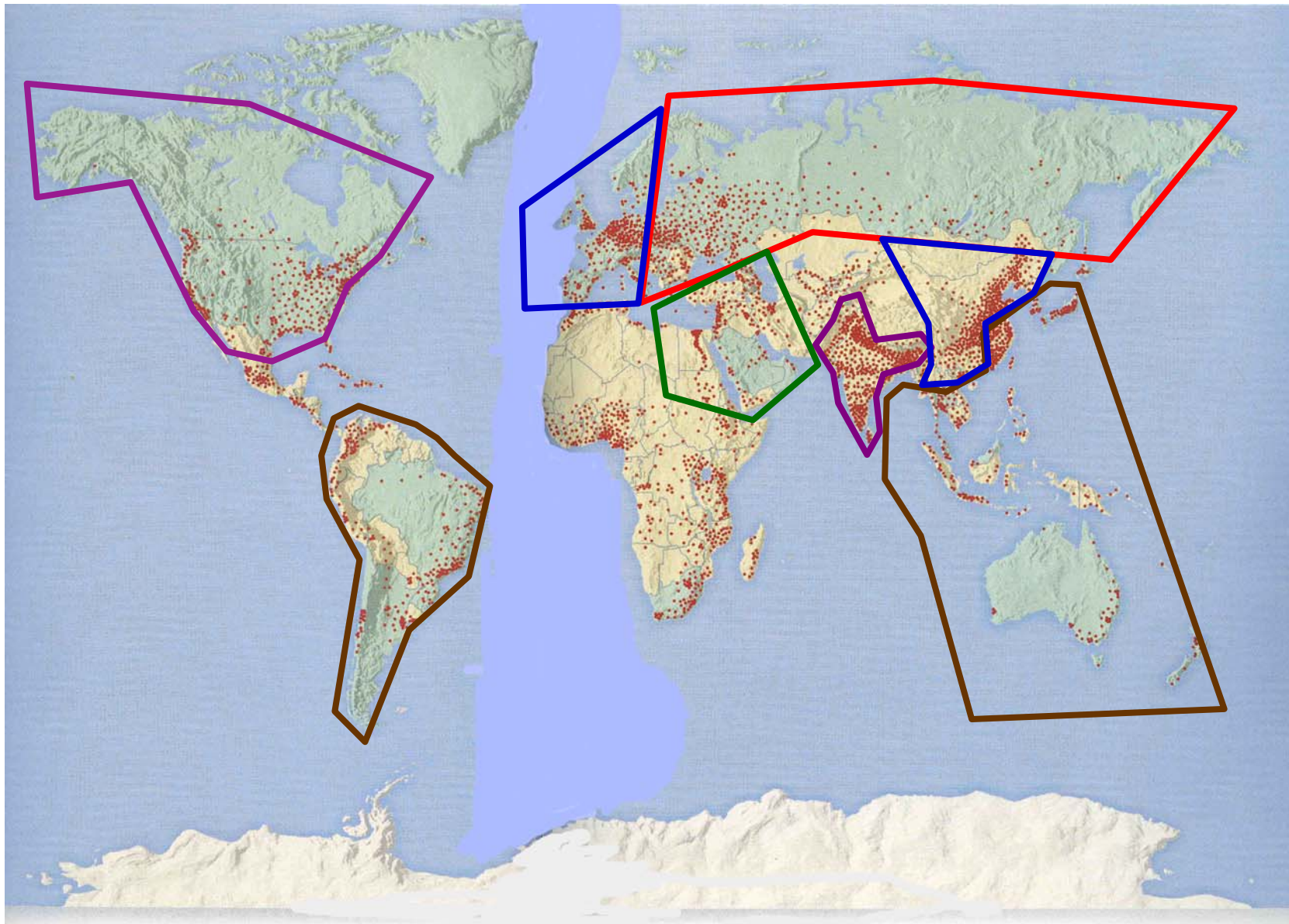
**The number of good NGOs in India  
make its development a hopeful case!**

# **Migration and Reinvestment**

- **Migration created a global Indian community**
- **This community has skills, capital, entrepreneurship**
- **Helped create the IT revolution in US & India**
- **Many are keen to help and invest**
- **Can engage meaningfully in poverty reduction and development**
- **Promote and facilitate the engagement of migrant communities**

# Scenario Under Business-as-Usual

# Eight Economic Zones: each of about 400M “global” people



# **Impediments to development: Sharks and Barracudas come in many guises**

- **Despotic, corrupt governments**
- **National and transnational criminals**
- **Fanatics and terrorists**
- **Exploitative multinationals**

The more we ignore the  
needs of the poor and  
marginalized, the more  
we empower the  
despots, the sharks  
and the barracudas!

# Conclusion

**500 million Indians need education, health care, job skills, energy and potable water to develop.**

**Their fate, and the future of 3 billion people worldwide that live on less than \$2 per day, depends on the rich making an exceptional commitment to global development today.**