

# THE CONTRIBUTION OF FAMILY PLANNING TO REDUCING MATERNAL DEATHS

**John Ross, Consultant**  
**Ann Blanc, Maternal Health Task Force, EngenderHealth**

Presented at the International Conference on Family  
Planning: Research and Best Practices, Kampala, Uganda,  
November 15-18, 2009

# THE CORE FOUR

1

Family  
planning with  
related  
reproductive  
health  
services

2

Skilled  
care during  
pregnancy  
and childbirth

3

Emergency  
obstetric care

4

Immediate  
postnatal care

# RESEARCH QUESTIONS

What have been the separate contributions of declines in fertility and in the maternal mortality ratio to reducing the number of maternal deaths over the past 15 years and what are the variations by major region?

# RESEARCH QUESTIONS

What have been the separate contributions of declines in fertility and in the maternal mortality ratio to reducing the number of maternal deaths over the past 15 years and what are the variations by major region?

How have maternal mortality rates declined?

# RESEARCH QUESTIONS

What have been the separate contributions of declines in fertility and in the maternal mortality ratio to reducing the number of maternal deaths over the past 15 years and what are the variations by major region?

How have maternal mortality rates declined?

In which countries is it most feasible to accelerate efforts to achieve declines in the number of maternal deaths?

# FOCUS ON NUMBER OF DEATHS

- Deaths = WRA x GFR x MMR
  - WRA: women of reproductive age (15-49)
  - GFR: general fertility rate (births/year/1000 WRA)
  - MMR: the maternal mortality ratio
- Deaths are directly related to each determinant.
  - For example, if the GFR declines by one third, deaths decline by one third.

# EXAMPLE

**Deaths = WRA x GFR x MMR**

**Sub-Saharan Africa**

**In 1990**

$$\begin{aligned} 117,817,000 \text{ WRA} \times 196 \text{ GFR} &= 23,000,000 \text{ Births} \times 920 \text{ MMR} \\ &= 212,000 \text{ deaths} \end{aligned}$$

**In 2005**

$$\begin{aligned} 179,061,000 \text{ WRA} \times 168 \text{ GFR} &= 30,000,000 \text{ Births} \times 900 \text{ MMR} \\ &= 270,000 \text{ deaths} \end{aligned}$$

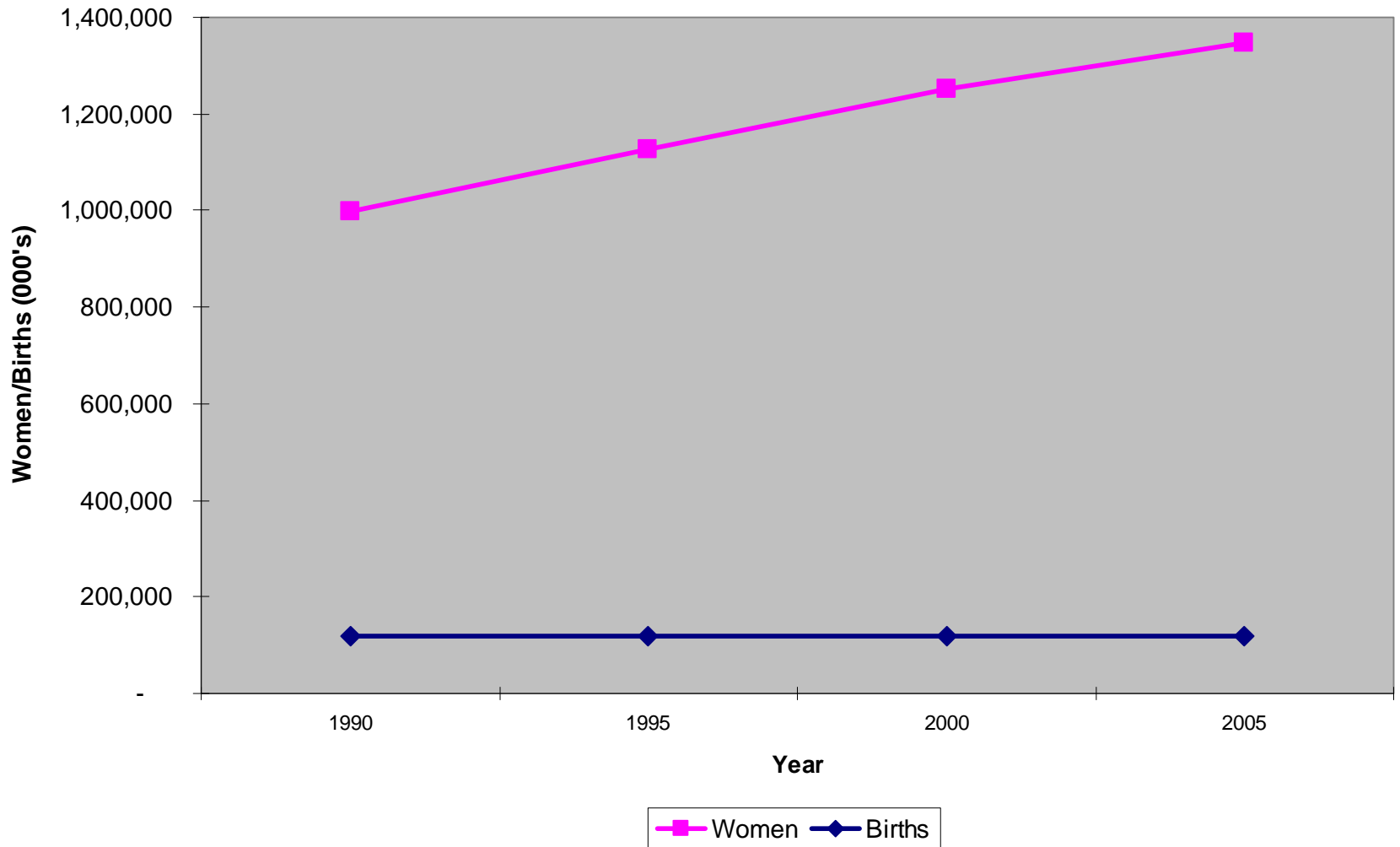
# DATA SOURCES

## UN Population Division 2008 Database

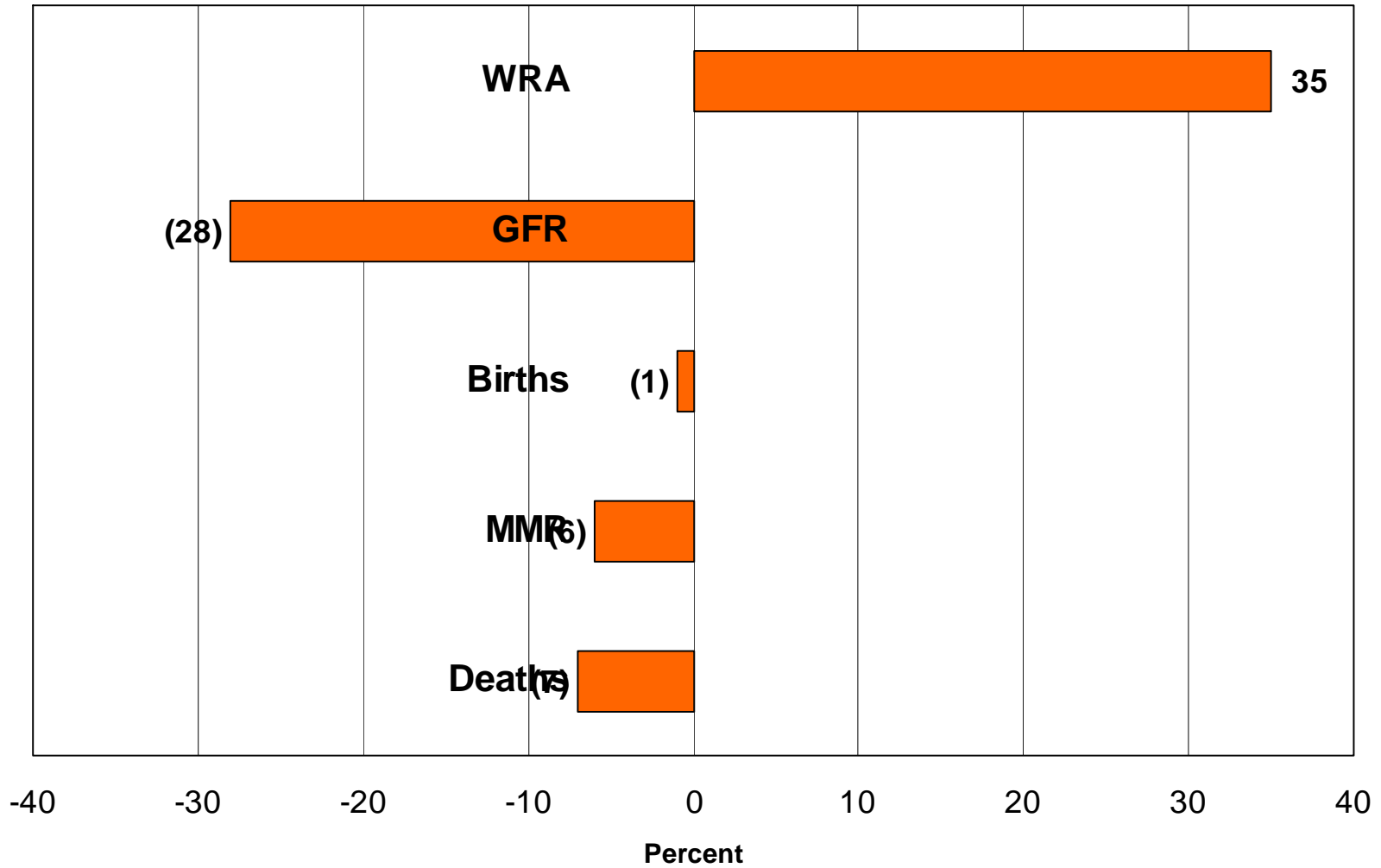
- No. of women of reproductive age
- Births

- WHO/UNICEF/UNFPA/The World Bank
  - Maternal mortality ratios, 2005 and 1990

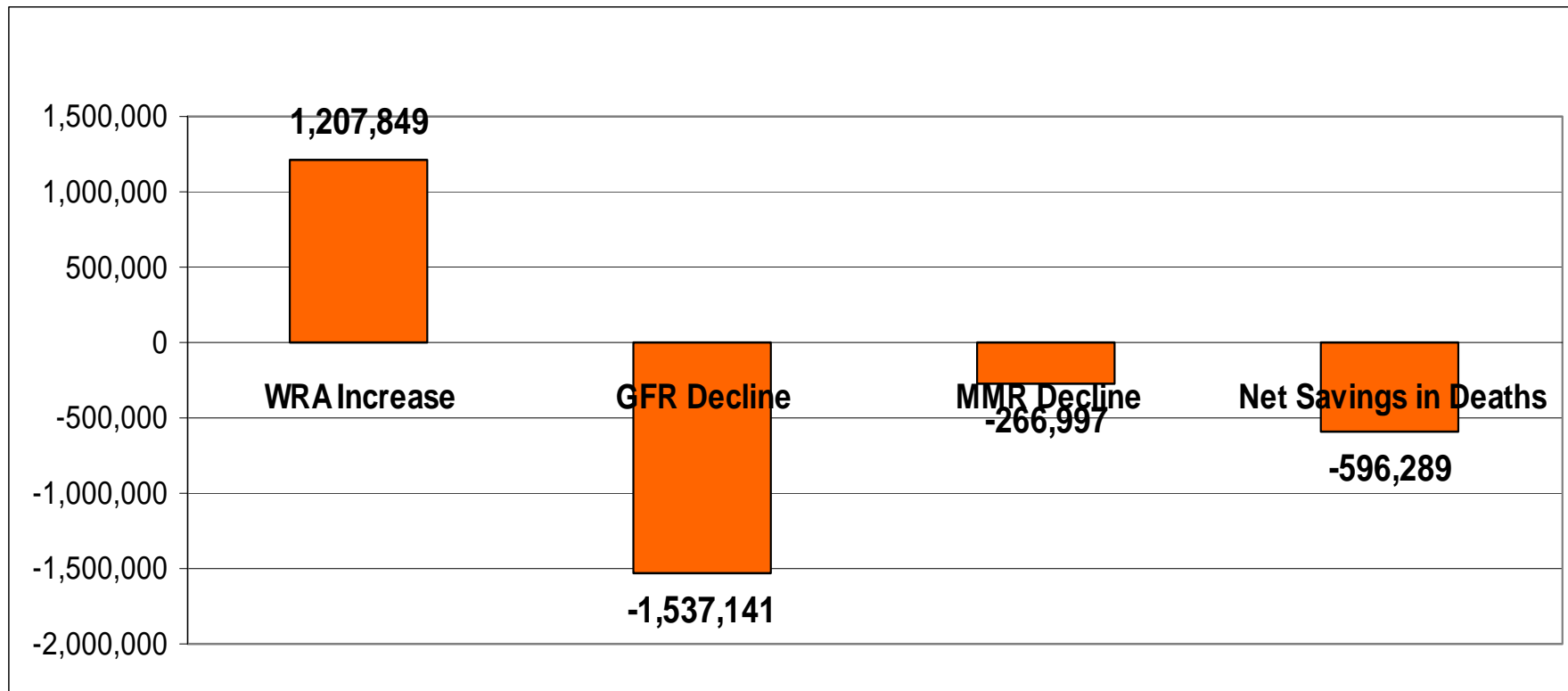
## Numbers of Women and Births in Developing Countries, 1990-2005



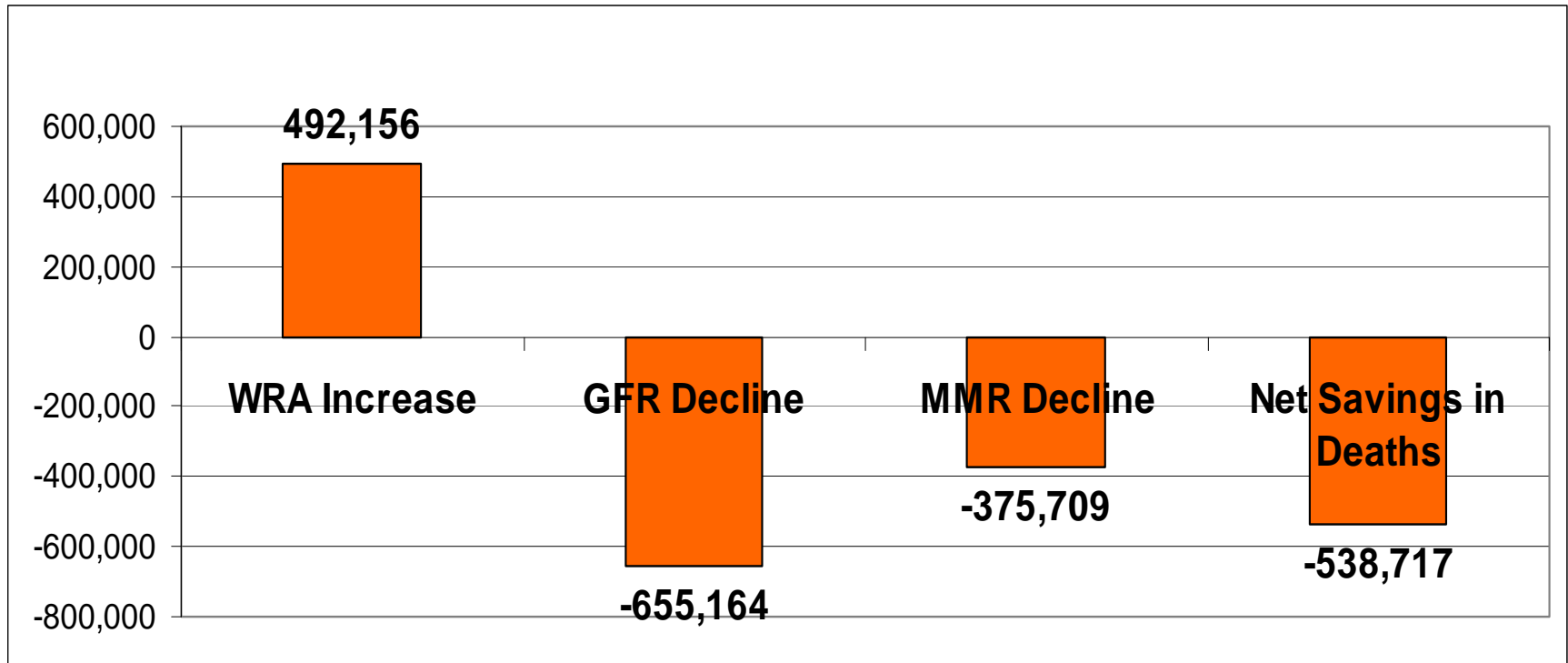
# Changes in Determinants of Number of Maternal Deaths Developing Countries, 1990 to 2005



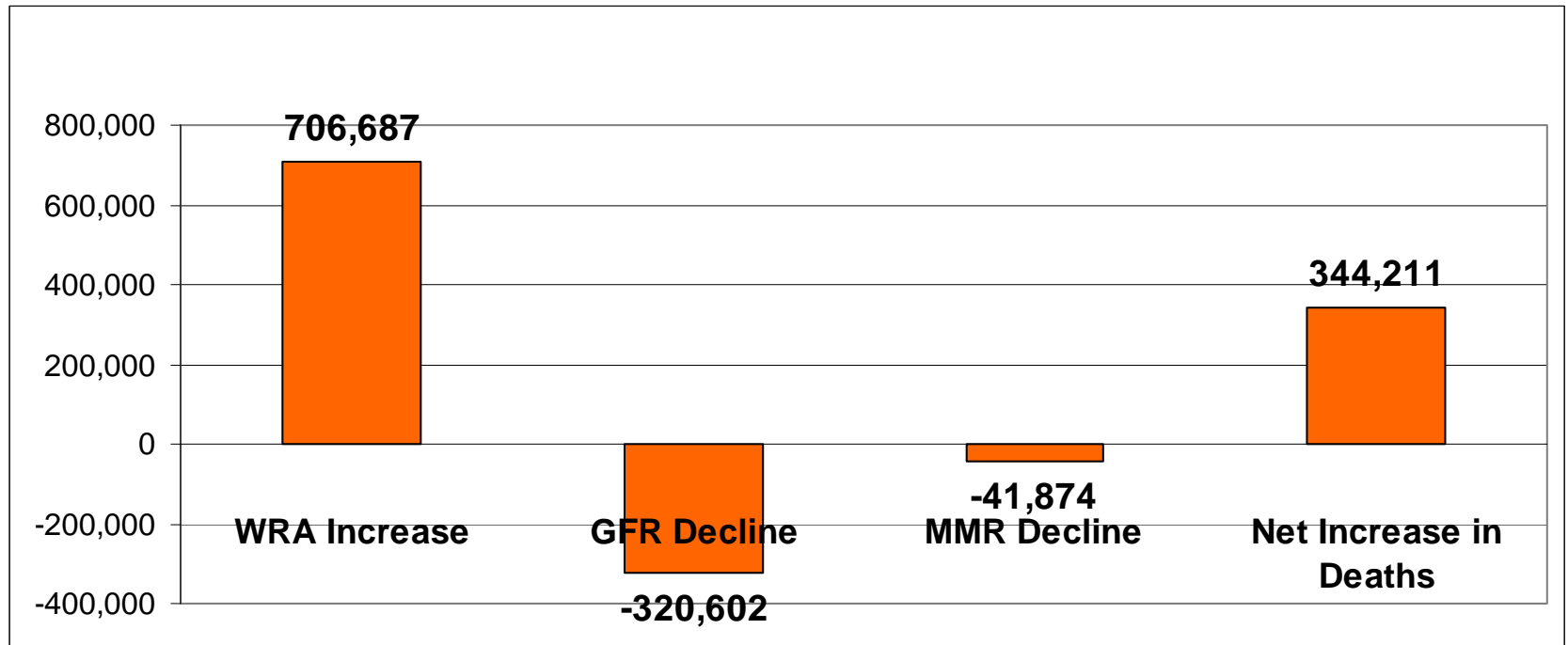
# Upward and Downward Forces on Numbers of Deaths Developing Countries, 1990-2005



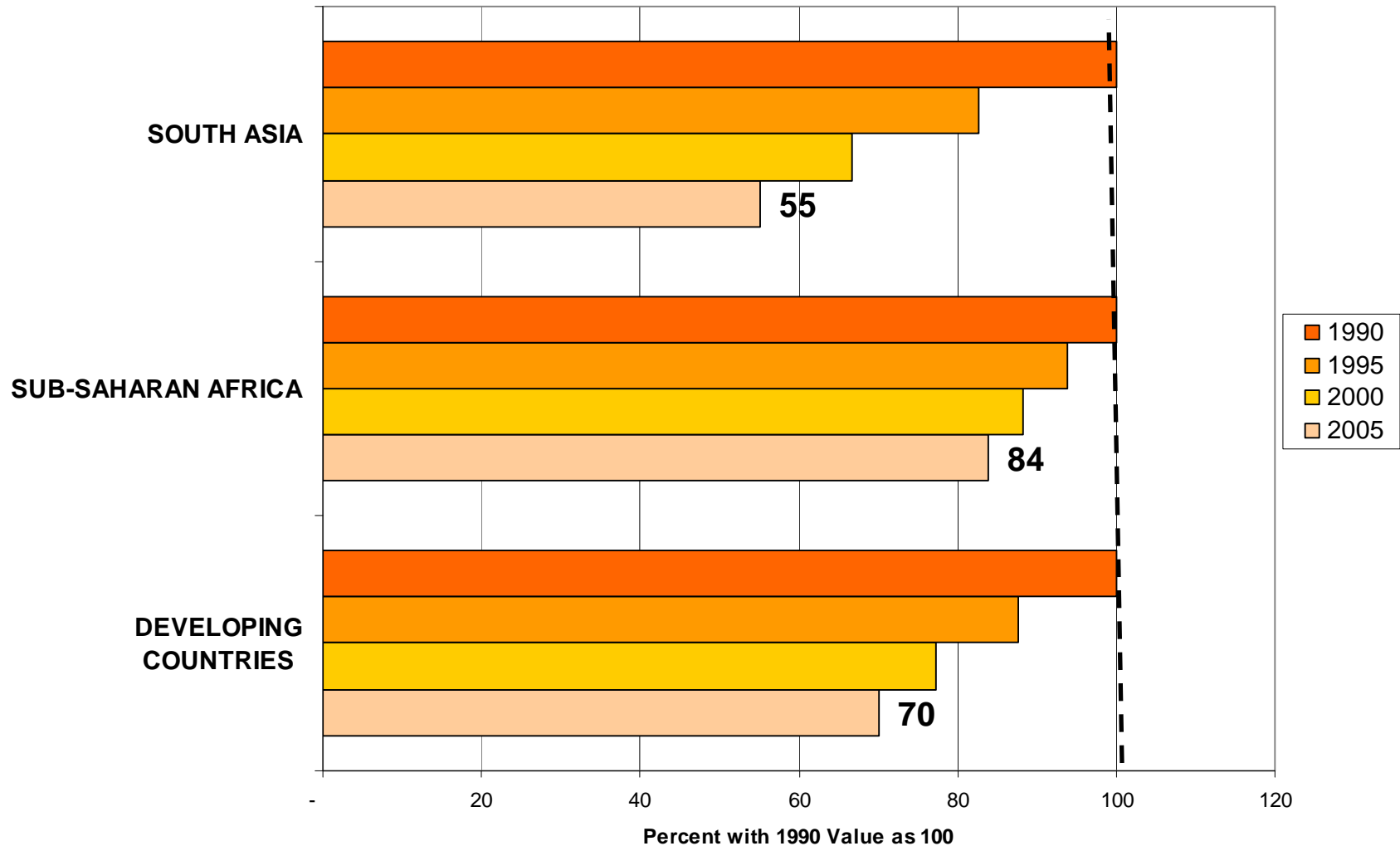
# Upward and Downward Forces on Numbers of Deaths South Asia, 1990-2005



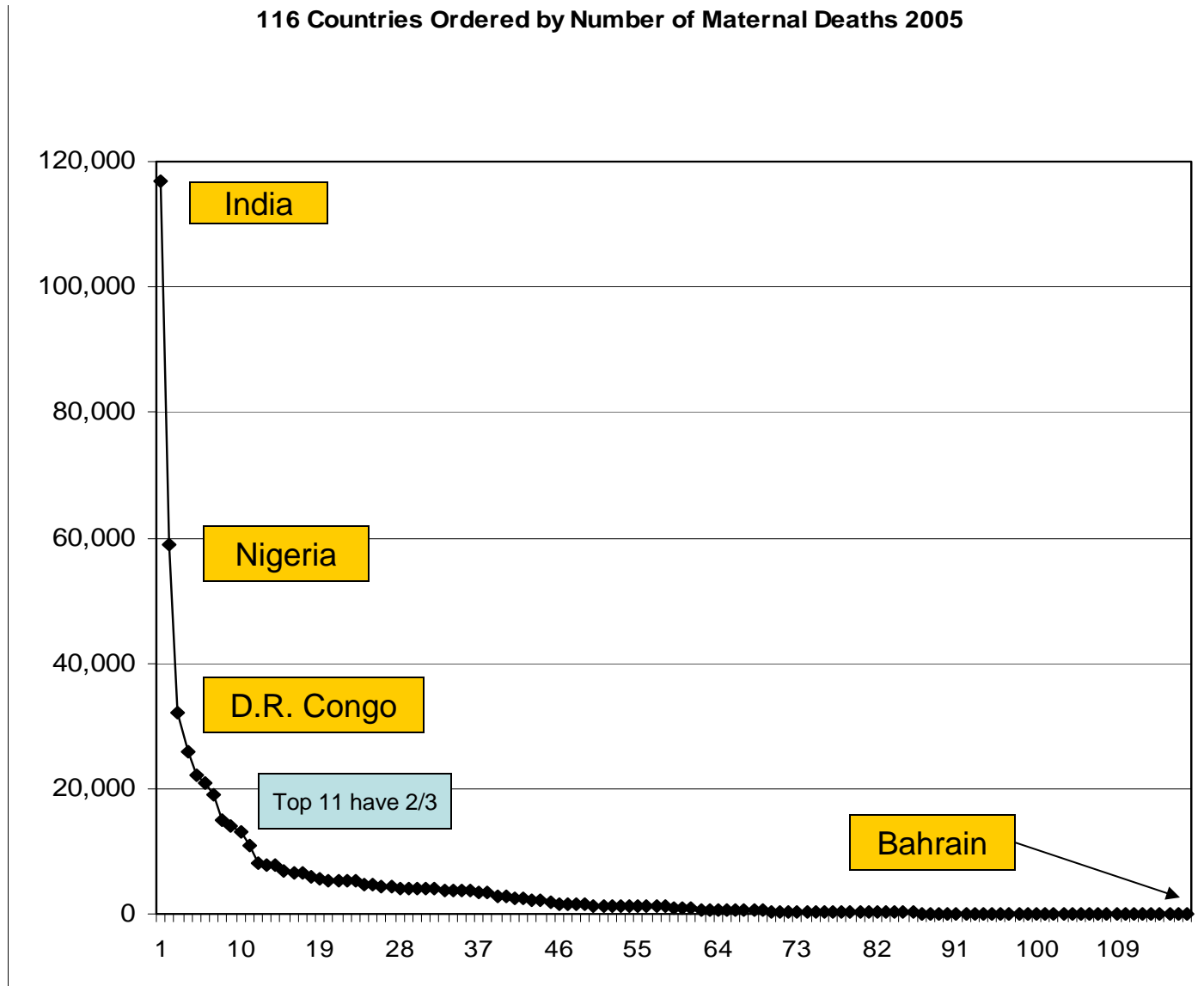
# Upward and Downward Forces on Number of Deaths Sub-Saharan Africa, 1990-2005



The maternal mortality RATE fell by half in South Asia, 16 percent in Sub-Saharan Africa, and 31 percent in the developing world.



# Maternal deaths are concentrated in only a few countries.



## 116 Countries Distributed by No. of Deaths and Social Setting Index\*

### SOCIAL SETTING INDEX\*

# DEATHS	HIGHEST		MEDIUM		LOWEST	Total Countries/Deaths											
<b>HIGHEST</b>	Nigeria 59,000	Congo DR 32,000	Afghanistan 26,000	Ethiopia 22,000	Niger 14,000	Tanzania 13,000	Angola 11,000	Uganda 8,100	Total 185,100	India 117,000	Bangladesh 21,000	Indonesia 19,000	Pakistan 15,000	China 7,800	Kenya 7,700	Total 187,500	14 372,600 <div style="border: 1px solid black; padding: 2px; display: inline-block;">70%</div>
<b>MEDIUM</b>	18 countries 82,700		9 countries 37,900														27 120,600 <div style="border: 1px solid black; padding: 2px; display: inline-block;">23%</div>
<b>LOWEST</b>	14 countries 14,890		23 countries 10,110		38 countries 5,465												75 40,465 <div style="border: 1px solid black; padding: 2px; display: inline-block;">7%</div>
<b>TOTALS</b>	40 countries		38 countries		38 countries												116 countries 533,665
<b># Countries</b>																	
<b># Deaths</b>	282,690		235,510		15,465												

\*"Social Setting Index" includes 7 measures of SES and health system strength

## 116 Countries Distributed by No. of Deaths and Social Setting Index\*

### SOCIAL SETTING INDEX\*

# DEATHS	HIGHEST		MEDIUM		LOWEST	Total Countries/Deaths
<b>HIGHEST</b>	Nigeria Congo DR Afghanistan Ethiopia Niger Tanzania Angola Uganda Total	59,000 32,000 26,000 22,000 14,000 13,000 11,000 8,100 185,100	India Bangladesh Indonesia Pakistan China Kenya Total	117,000 21,000 19,000 15,000 7,800 7,700 187,500		14 372,600
<b>MEDIUM</b>	18 countries	82,700	9 countries	37,900		27 120,600
<b>LOWEST</b>	14 countries	14,890	23 countries	10,110	38 countries 5,465	75 40,465
<b>TOTALS</b>						
<b># Countries</b>	40 countries		38 countries		38 countries	116 countries
<b># Deaths</b>	282,690		235,510		15,465	533,665

\*" Social Setting Index" includes 8 measures of SES and health system strength

# CONCLUSIONS

About half of all maternal deaths occur in six countries – India, Nigeria, D.R. Congo, Bangladesh, Afghanistan, Indonesia.

Where the use of contraception is low – Nigeria, D.R. Congo, and Afghanistan - substantial gains in the number of maternal deaths could be made through increases in use, although these are among the most difficult settings.

# CONCLUSIONS

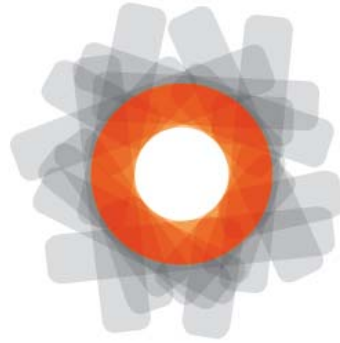
In countries where contraceptive prevalence is higher - India, Bangladesh, and Indonesia - a priority would be to expand and sustain access to:

- multiple contraceptive methods
- skilled care at delivery
- emergency obstetric services, and
- postpartum and postabortion care.

# CONCLUSIONS

Without past declines in fertility – due largely to increased contraceptive use - the numbers of maternal deaths would have been about 19% higher, with 1.5 million more deaths between 1990 and 2005.

The MMR has declined by 6% as maternal health services have improved. This improvement has prevented deaths of mothers by lowering the risk of dying once pregnant. Without this decline, the numbers of maternal deaths would have been about 267,000 higher.



Maternal Health **Task Force**

Please register at:  
[www.maternalhealthtaskforce.org](http://www.maternalhealthtaskforce.org)