

WHICH WORLD?

Scenarios for the 21st Century

The world is already so strongly interlinked that no country stands alone;
no region's future can be fully separated from that of others.

Allen Hammond



based on

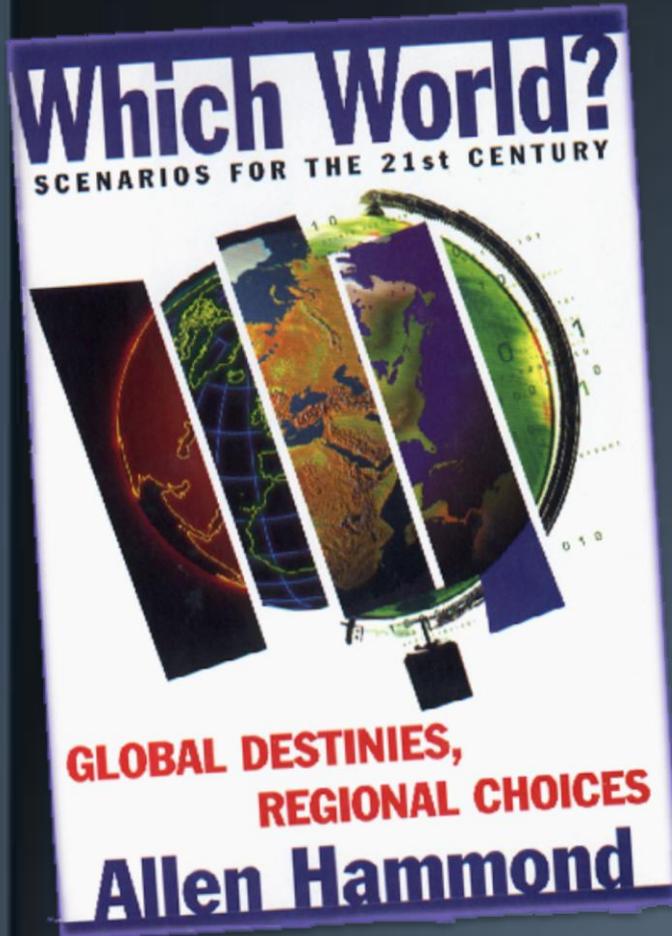
WHICH WORLD?

Scenarios for the 21st Century

*Global Destinies,
Regional Choices*

by

Allen Hammond



The world is changing rapidly...

- ☛ a globalizing economy
- ☛ transforming technologies

...but what vision will guide that change?



Three Possible Trajectories into the Future

- ☛ Market World
- ☛ Fortress World
- ☛ Transformed World

So we have three different visions of the future, three scenarios. How might they play out in different regions?



1st Scenario: Market World

A vision of the future characterized by...

- ☛ free markets
- ☛ private enterprise
- ☛ unprecedented technological innovation
- ☛ global integration
- ☛ based on the US model

...bring growing prosperity and
social progress



Why does the US model continue to spread?

- job creation/wealth creation success
 - proliferation of small businesses
 - huge profitability of many large businesses
- democratization of economic decisions
 - securitization of debt = new balance of power
 - financial markets, not banks, make decisions
- power of venture/angel finance fostering rapid innovation



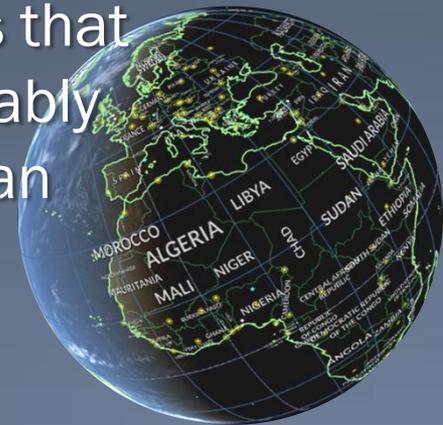
Market World continued

As you may have realized, Market World is more or less an extension of the US model, a world based pretty much on the US market economy.

Markets are important, but they can't do everything.

Left to themselves, they will not automatically solve environmental or social problems, and they may make equity problems worse.

Throughout this project we'll look at some trends that have enormous momentum, that could conceivably undercut Market World and that suggest it is an incomplete vision of the future.



2nd Scenario: Fortress World

A darker vision of the future characterized by...

- ☛ conflict between rich and poor
- ☛ widespread environmental degradation
- ☛ rising social instability
- ☛ potential for violence and chaos

...create fear and frustration
...a world with islands of prosperity surrounded
by an ocean of poverty and despair



Fortress World continued

We don't have to look too hard to see shadows of Fortress World around us. Private security forces now outnumber the police by 4 to 1 worldwide, 10 to 1 in places like South Africa and Russia.

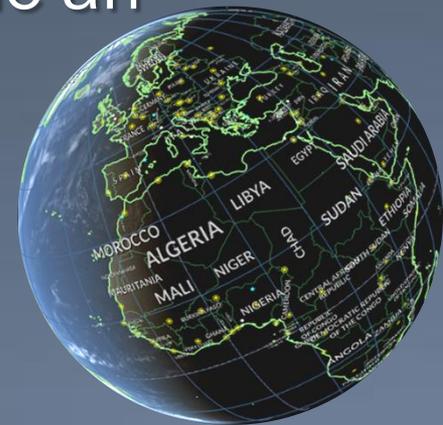
Look at the rise in gated communities in the US or the number of places where businessmen must live with bodyguards or send their children to school in armored cars.



Fortress World continued

Nor is it clear that the rich world can entirely wall itself off from chaos elsewhere – when the poor can't export anything else, they will export their misery.

It's not a future that anyone would desire. So if Market World is not enough, and Fortress World is not where we want to go, can we imagine an alternative?



3rd Scenario:

Transformed World

A vision of the future based on the possibility of fundamental change...

- ☛ Market World economic dynamism
plus
- ☛ bottom-up social change
- ☛ wider participation
- ☛ new social accountability
- ☛ new forms of governance

...a more peaceful, equitable,
environmentally stable world



Transformed World continued

Is Transformed World realistic or merely wishful thinking?

It takes more of a leap of faith than the other scenarios but it is a plausible future.

As this project progresses, we'll look at some of the trends that seem to support that.



What factors could affect our trajectory into the future?

Critical Trends

- ☞ demographics
- ☞ equity
- ☞ environment
- ☞ social stresses
- ☞ security



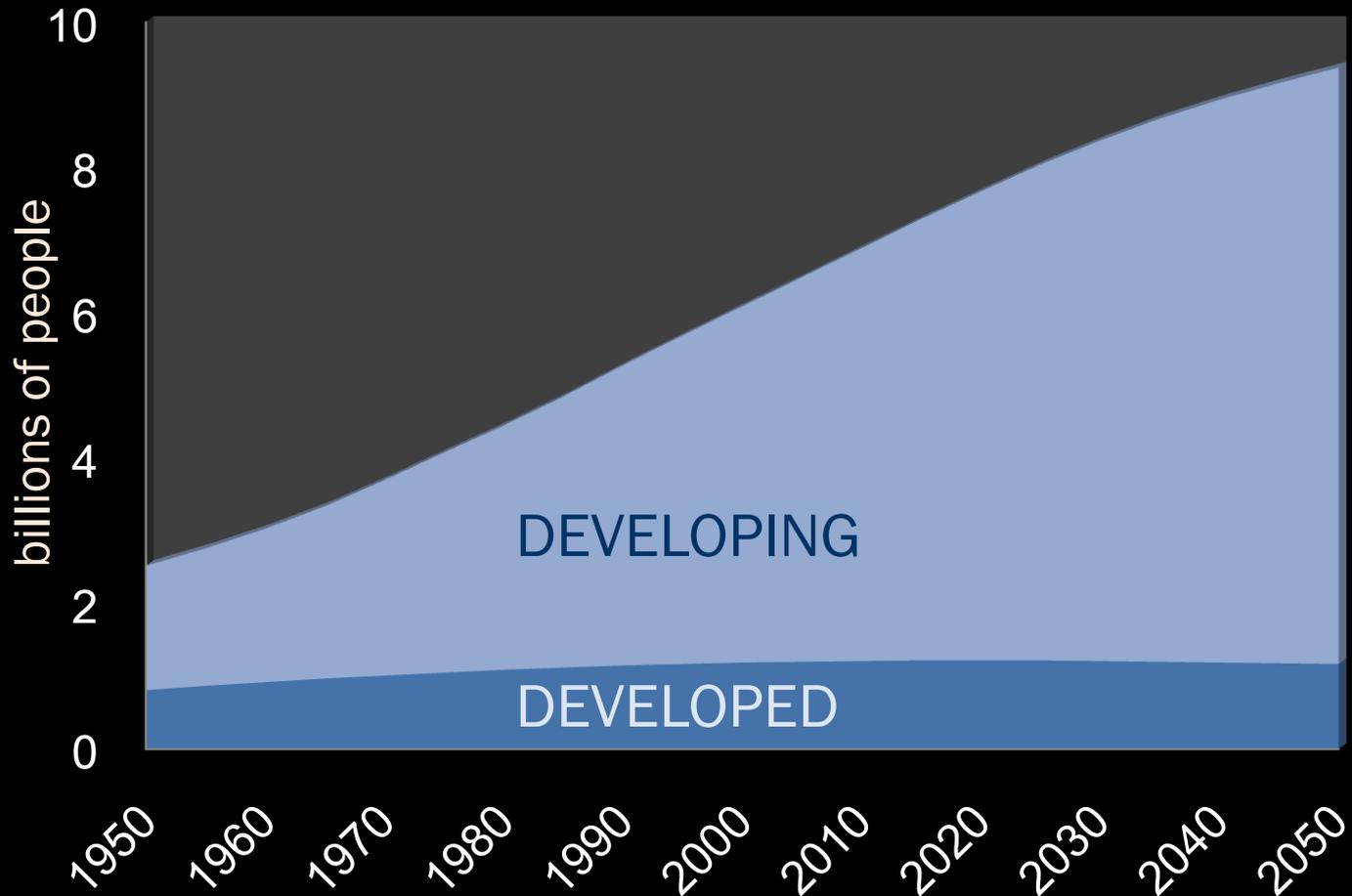
DEMOGRAPHIC TRENDS



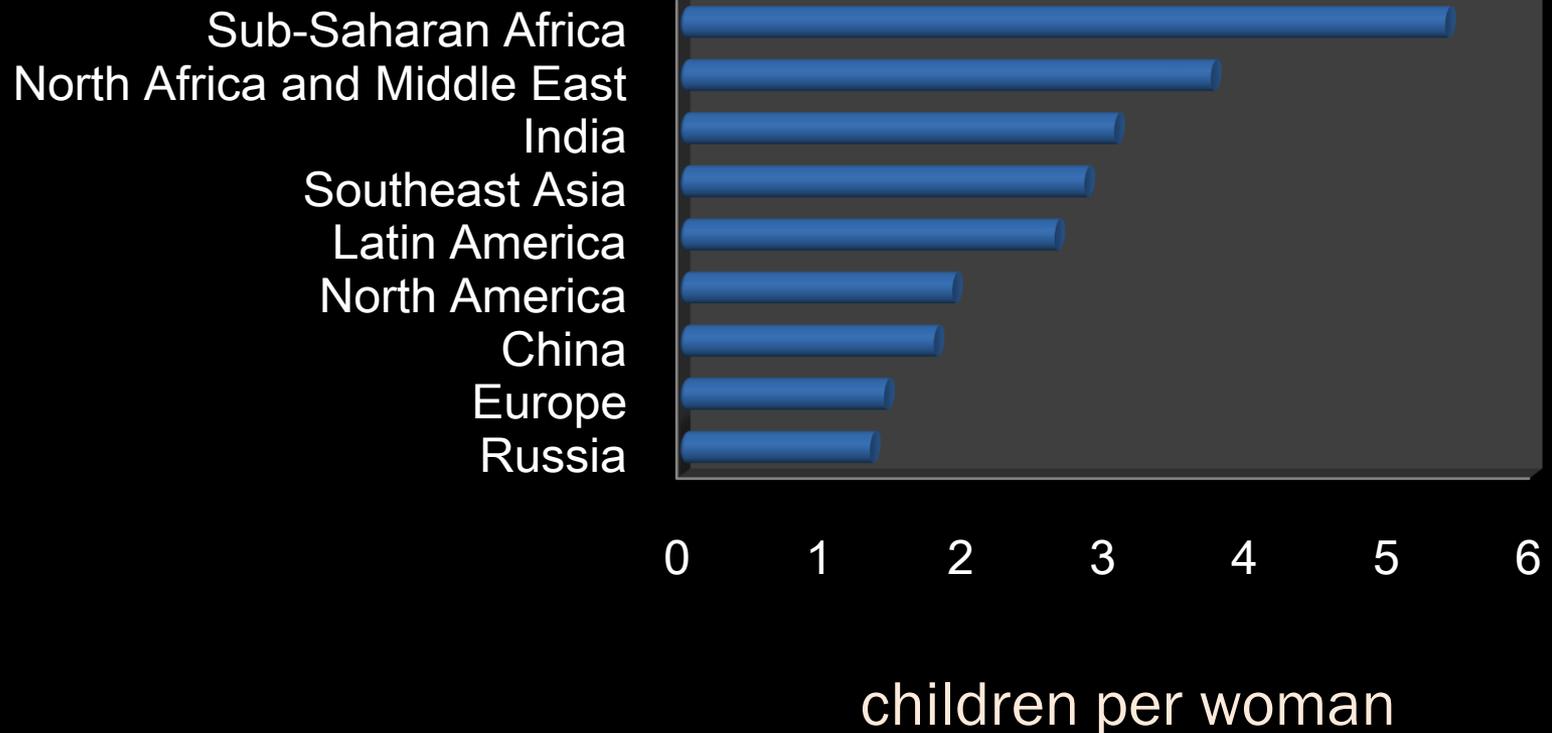
Demographics: Projected World Population Growth

The world's population is growing rapidly, and virtually all of that growth is occurring in developing regions.

Our population problem is not really global but rather a number of very different regional problems.



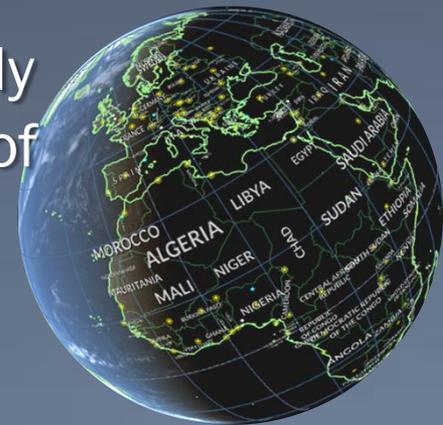
Demographics: Total Fertility



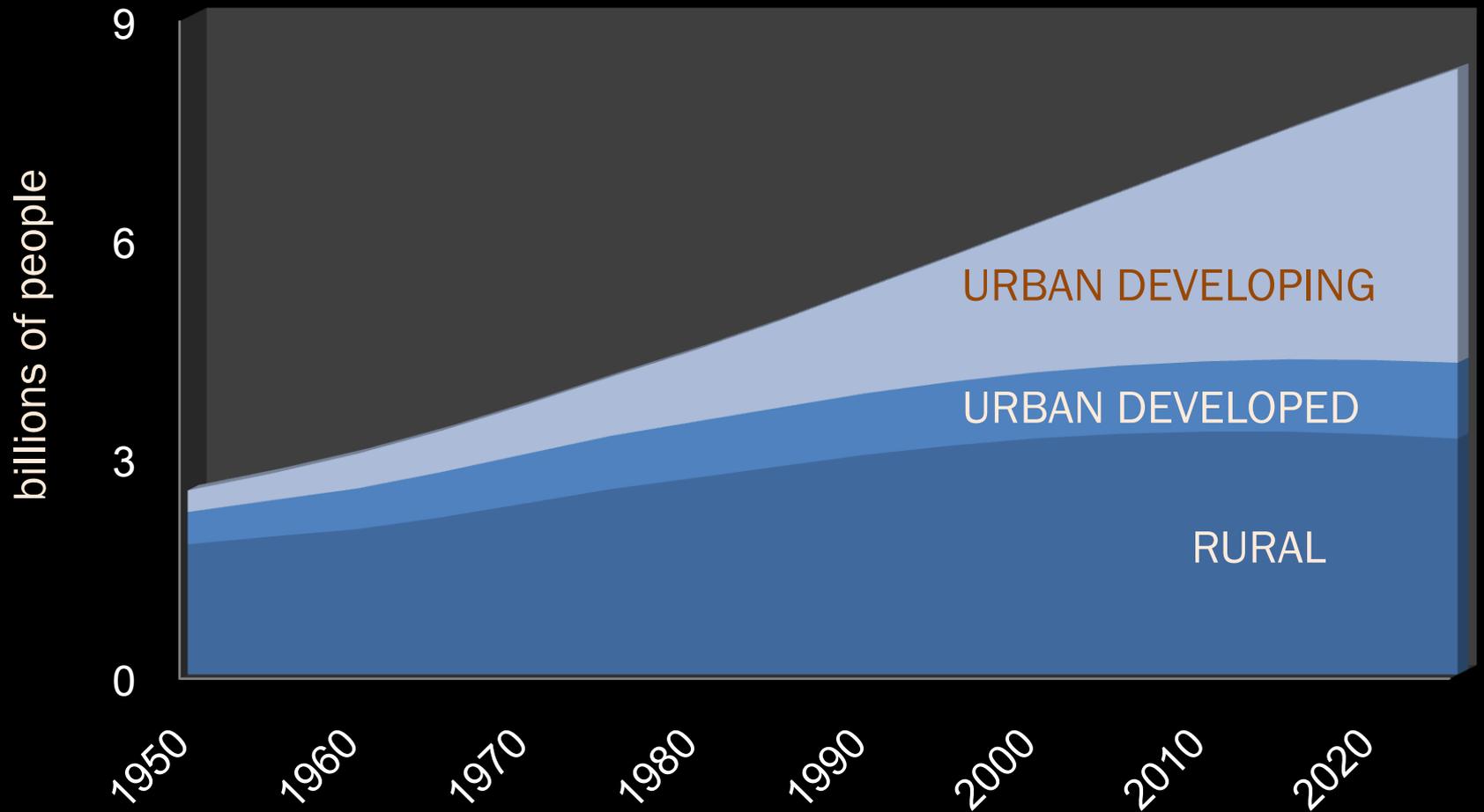
Total Fertility continued

Notice the population trends on the previous slide.

- Sub-Saharan Africa's population is expected to triple by 2050.
- Russia's population, in contrast, is expected to decline 25%.
- Both of those have profound, but very different implications for those regions.
- And notice that North America's population is expected to grow more than that of China largely because of immigration and the higher fertility of immigrants.



Demographics: Urbanization



Urbanization continued

- *Where* people live is important. As the previous slide shows, the world is experiencing an enormous surge of urbanization.
- Over the next 25 years, 95% of the world's population growth will occur in the urban areas of developing regions.
- Cities must now accommodate 1 million new urban residents every week, an enormous amount of new infrastructure to build, especially for fragile economies.
- Will there be enough housing, clean water, jobs?

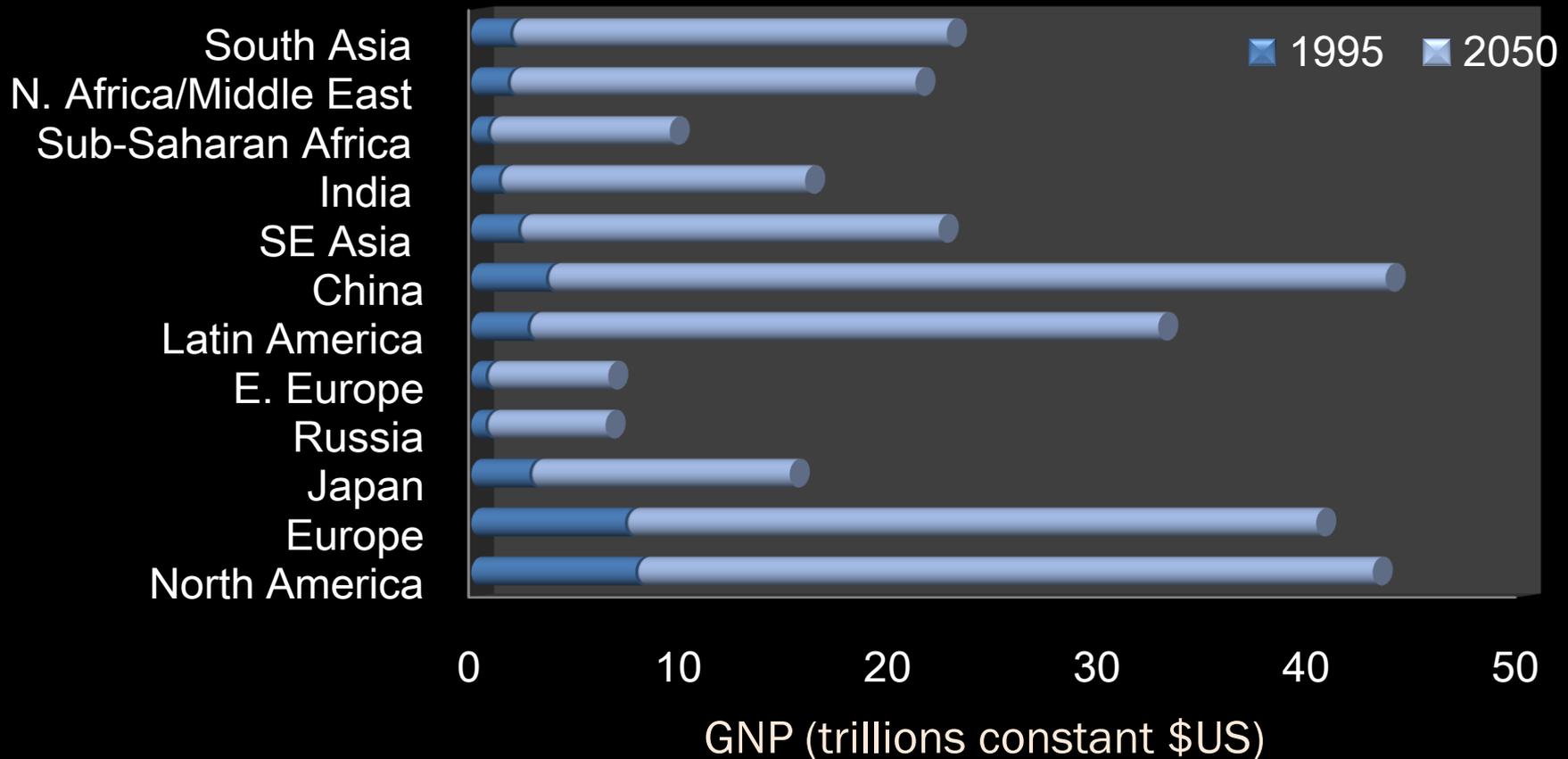


EQUITY TRENDS



Equity:

Projected Economic Growth

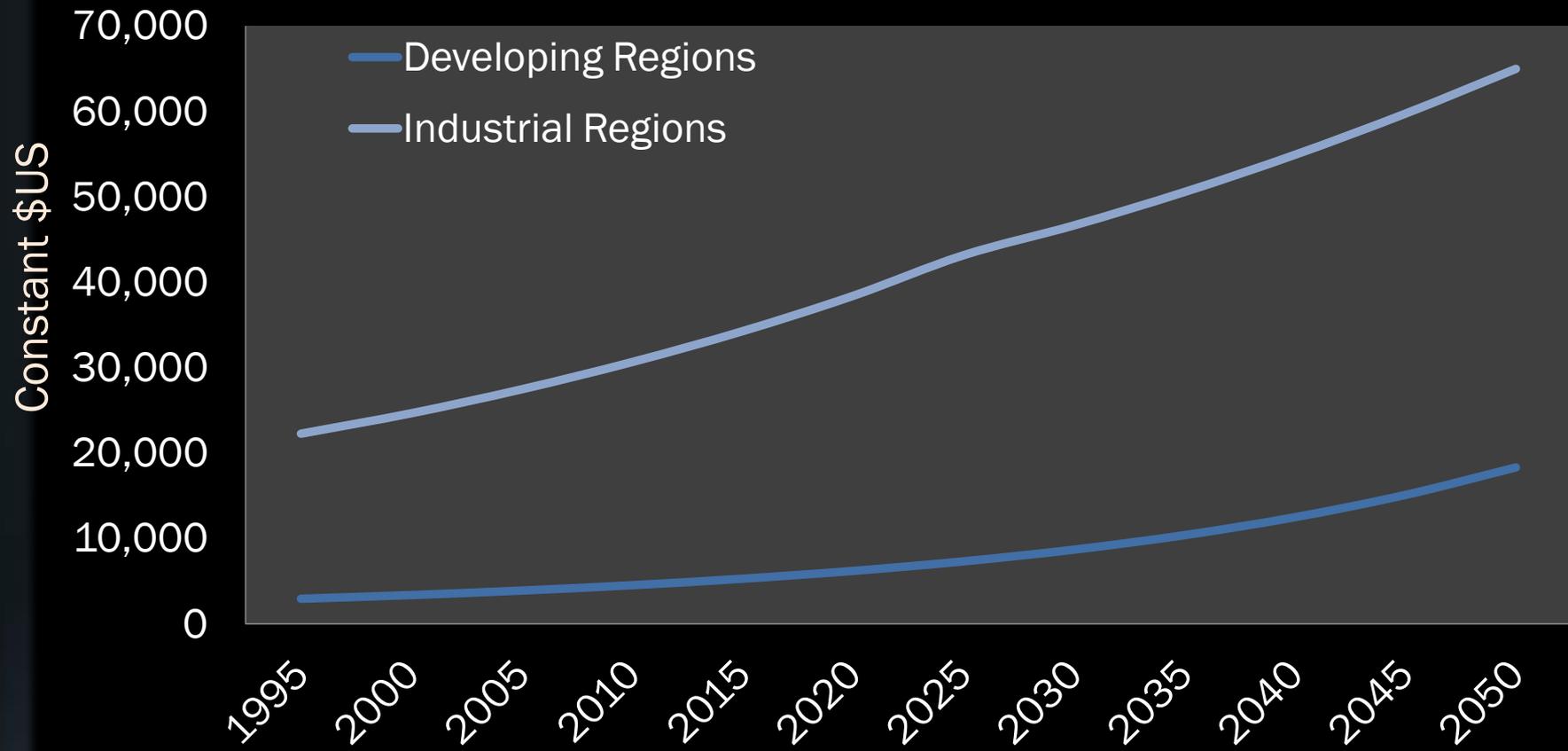


Economic Growth continued

- What about economic trends? Even using data that puts developing economies in the most favorable light, there are only a few major players.
- What if developing economies grow rapidly over the next 50 years? Then we might witness a huge transfer of economic power, with many major players.
- What would that mean for average incomes?



Equity: Income Gaps



Income Gaps continued

- As you see on the previous slide, the gap in average incomes between the present industrial regions and developing regions gets wider and wider over the next 50 years.
- Is such a world likely to be stable? Might such rising disparities increase the incentive for illegal migration? Might they be a barrier to forging global solutions to global problems, like climate?
- Income disparities are also rising *within* states -- in the US and in most regions (except Europe and SE Asia).





ENVIRONMENTAL TRENDS



Environment: The Materials Cycle



The Materials Cycle continued

The cartoon model on the previous slide illustrates how today's industrial economies work:

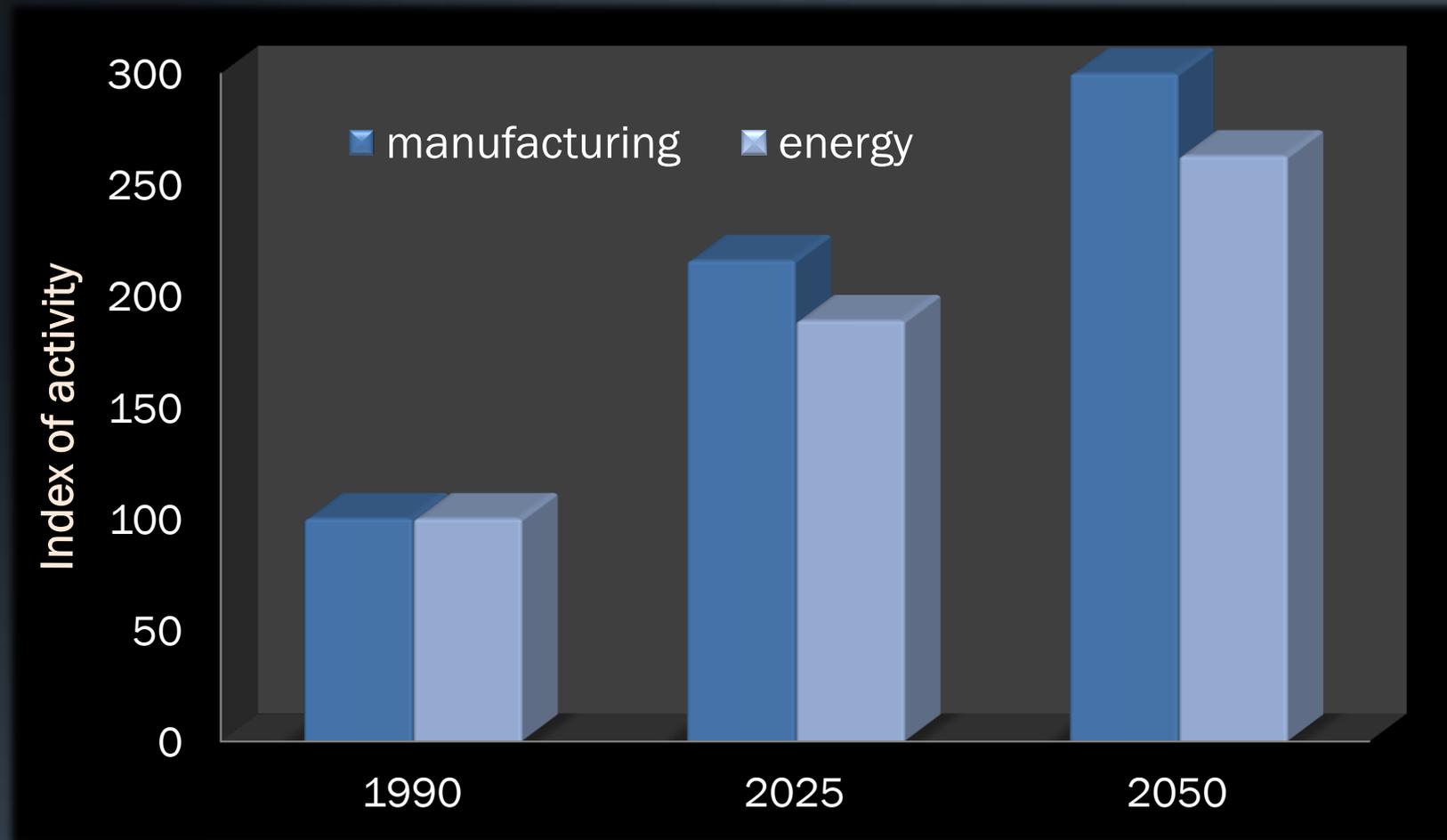
They take raw materials from the earth, make goods and services from them, then dump them back on the earth in what is still primarily a once-through system.

We've recently measured the size of this pipe: it takes 80 metric tons of raw materials per person per year to support the US or the German GDP, and about half that much for the Japanese lifestyle.

That's an awful lot of stuff. But the real question is how much larger is the pipe going to get as industrialization spreads around the world?



Environment: Global Industrial Growth



Global Industrial Growth continued

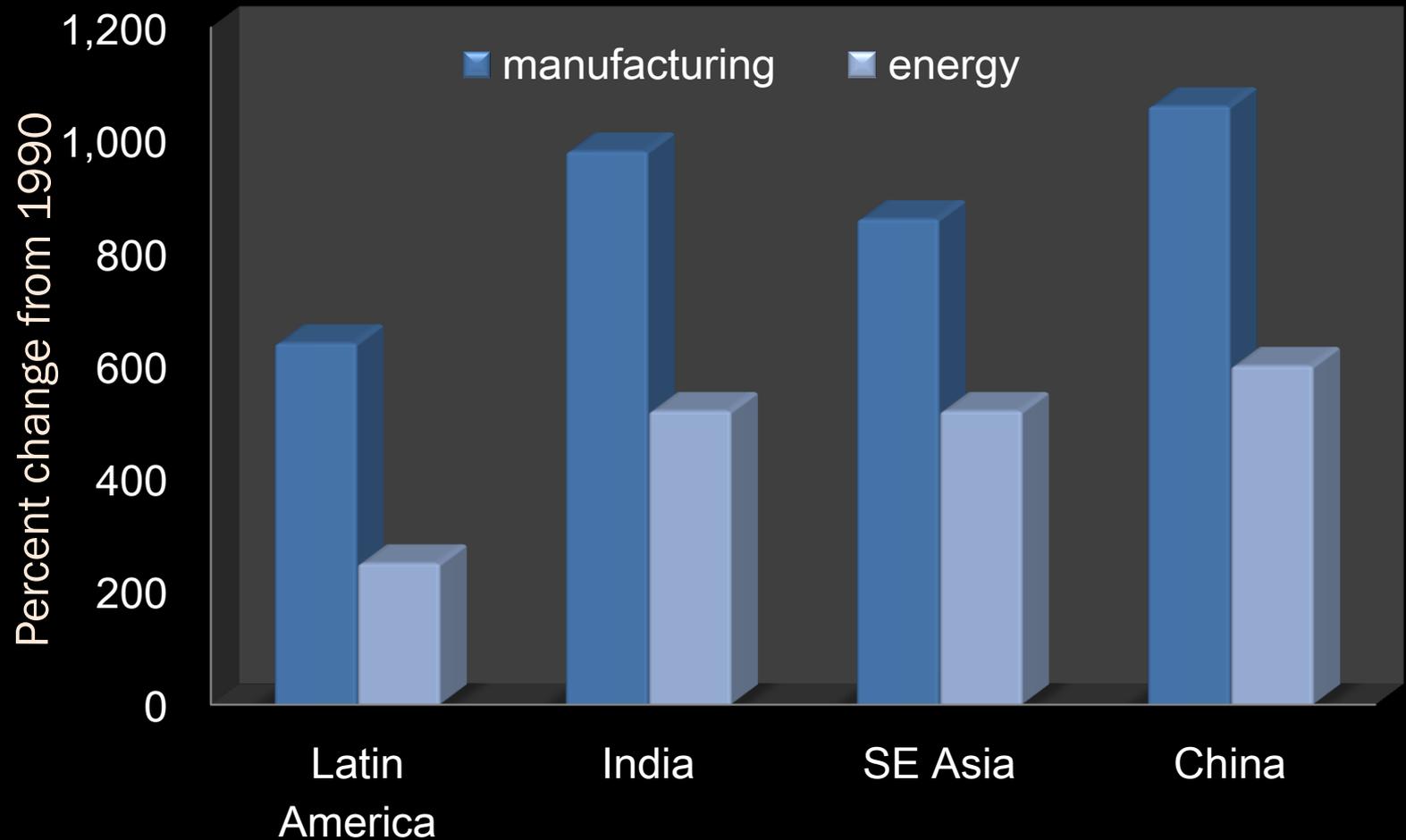
- Demand studies suggest that under business as usual, world energy use is going to grow by about a factor of 2.5 and manufacturing activity about 3-fold.
- That means the global consumption of raw materials pipe is going to get about 2.5 to 3 times larger.
- That's daunting from an environmental perspective but let's look at the regional picture.



Environment:

Regional Industrial Growth

(2050 pollution potential)



Regional Industrial Growth continued

- China's energy use could grow 6-fold and its manufacturing activity more than 10-fold in the next 50 years, with similar but smaller growth in other rapidly-industrializing regions.
- In developing regions, poor regulatory systems and more energy use means more air pollution and more manufacturing means more use of toxic materials and hence a rising potential for toxic pollutants. The potential for increased pollution is huge.



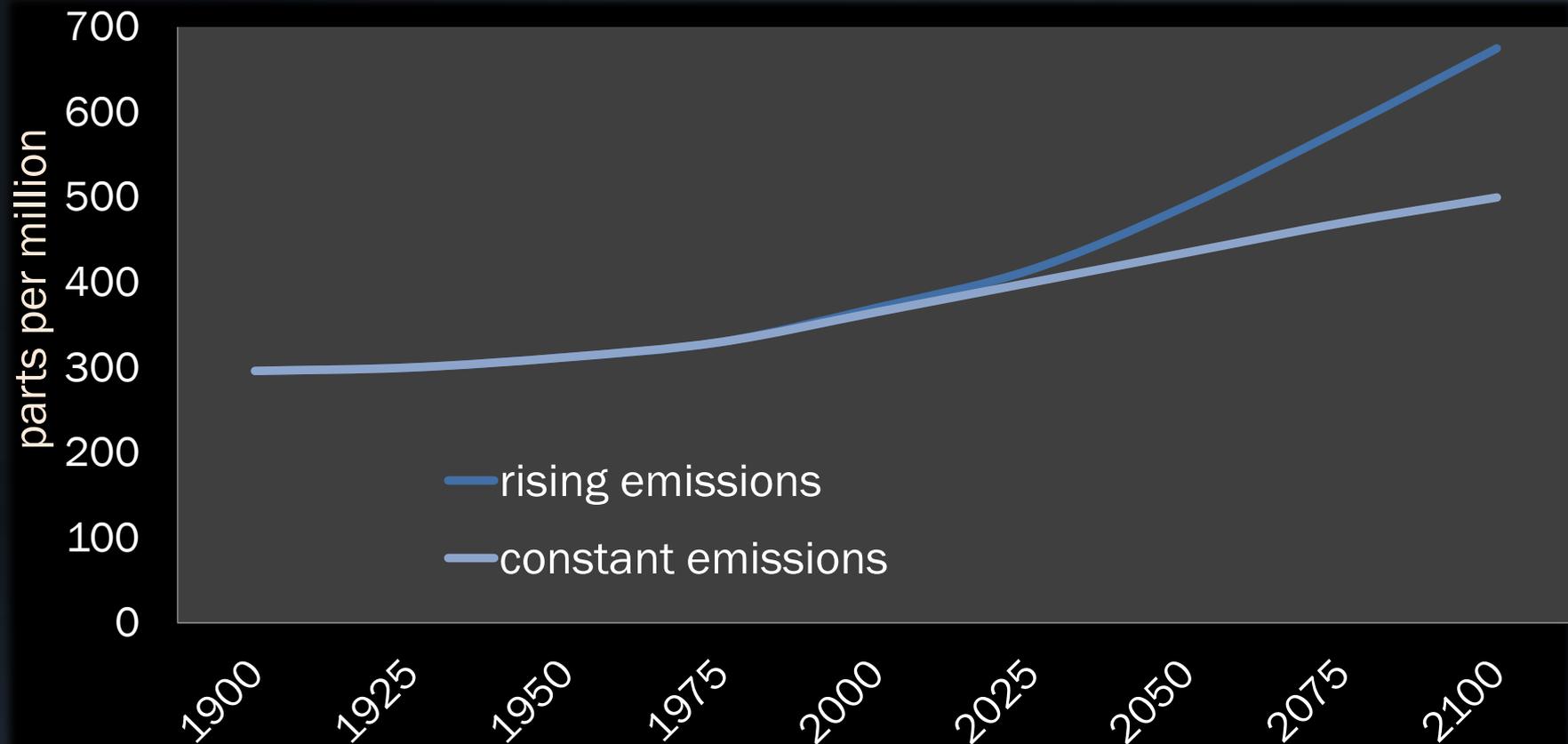
Regional Industrial Growth continued

- Most of these activities will take place in rapidly growing urban areas and the potential for human exposure is enormous.



Environment:

Atmospheric CO₂ Concentrations



Atmospheric CO₂ Concentrations continued

- ☛ Rising demand curves for energy from fossil fuels mean rising emissions of greenhouse gases and atmospheric concentrations.
- ☛ The previous slide is the IPCC business as usual projections. Even if we freeze global emissions at today's levels, concentrations will continue rising.
- ☛ We are likely to find out what global warming really means by conducting a planetary experiment!



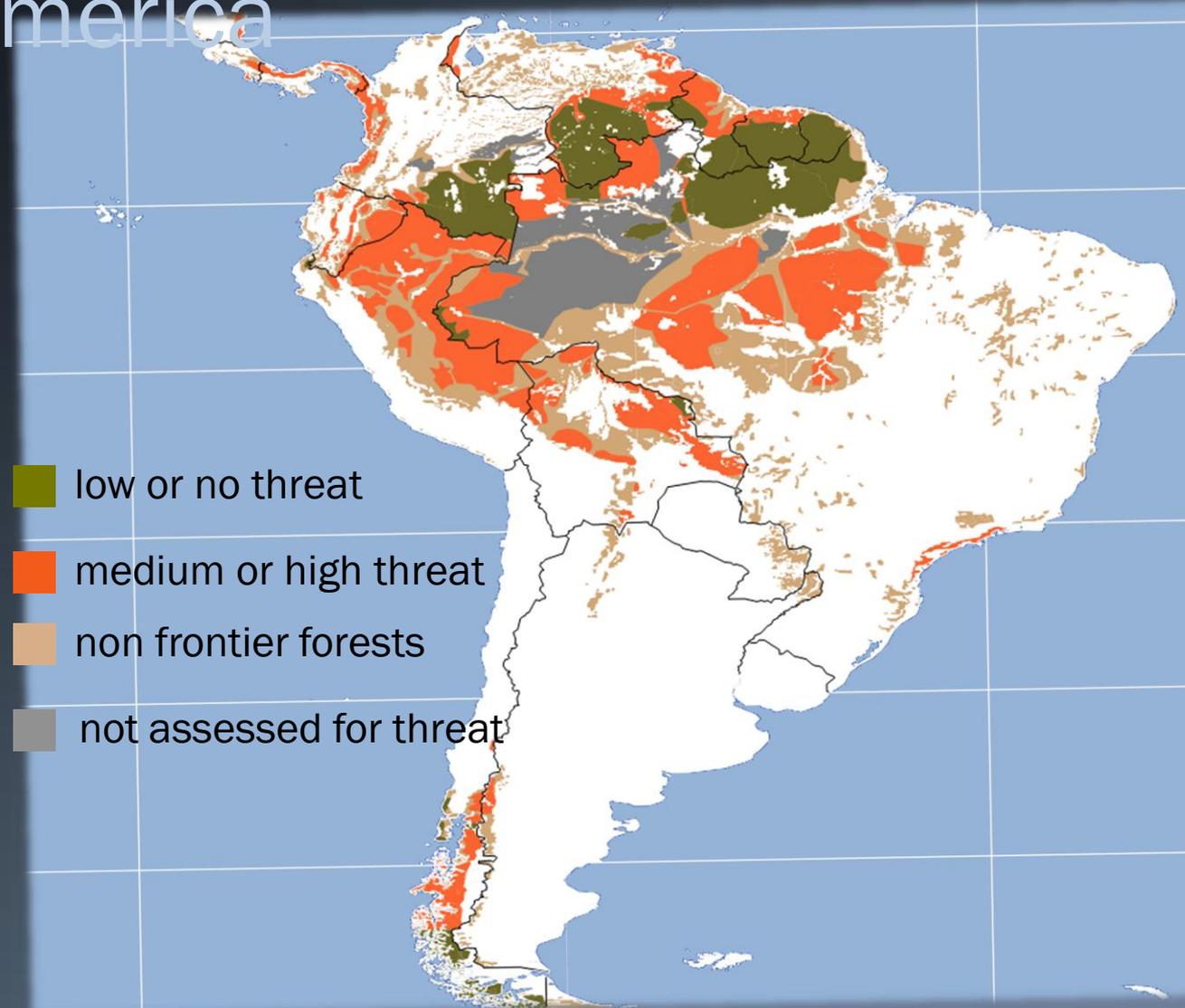
Biosystems Degradation

As daunting as the problems associated with industrialization seem, there is a second class of environmental problems that may be far more serious, in terms of their direct impact on people. And that is the degradation of the biological systems that provide the basic life support system for all living things.

As just one example of that degradation, let's look at forests.

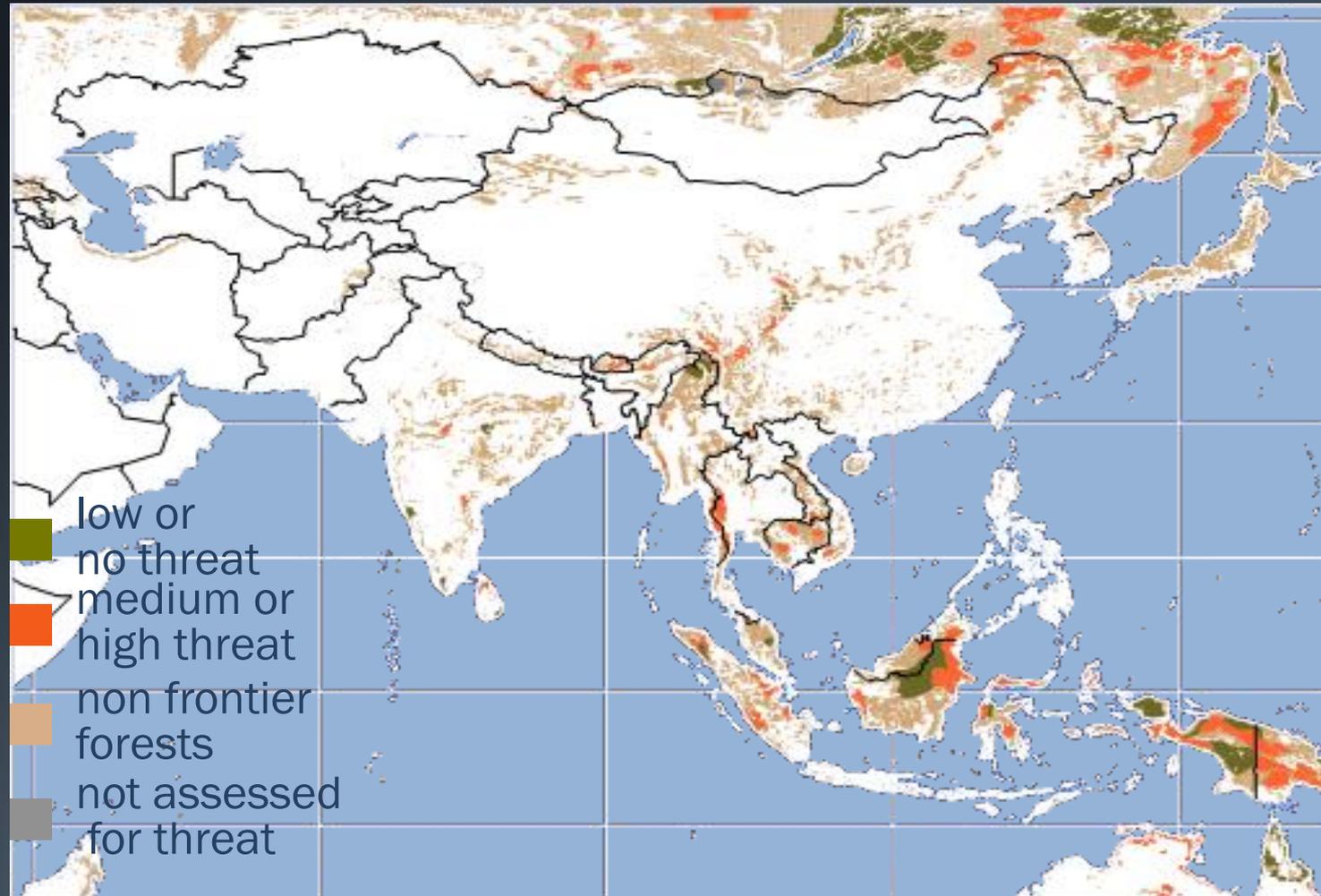


Environment: Threatened Frontier Forests of South America



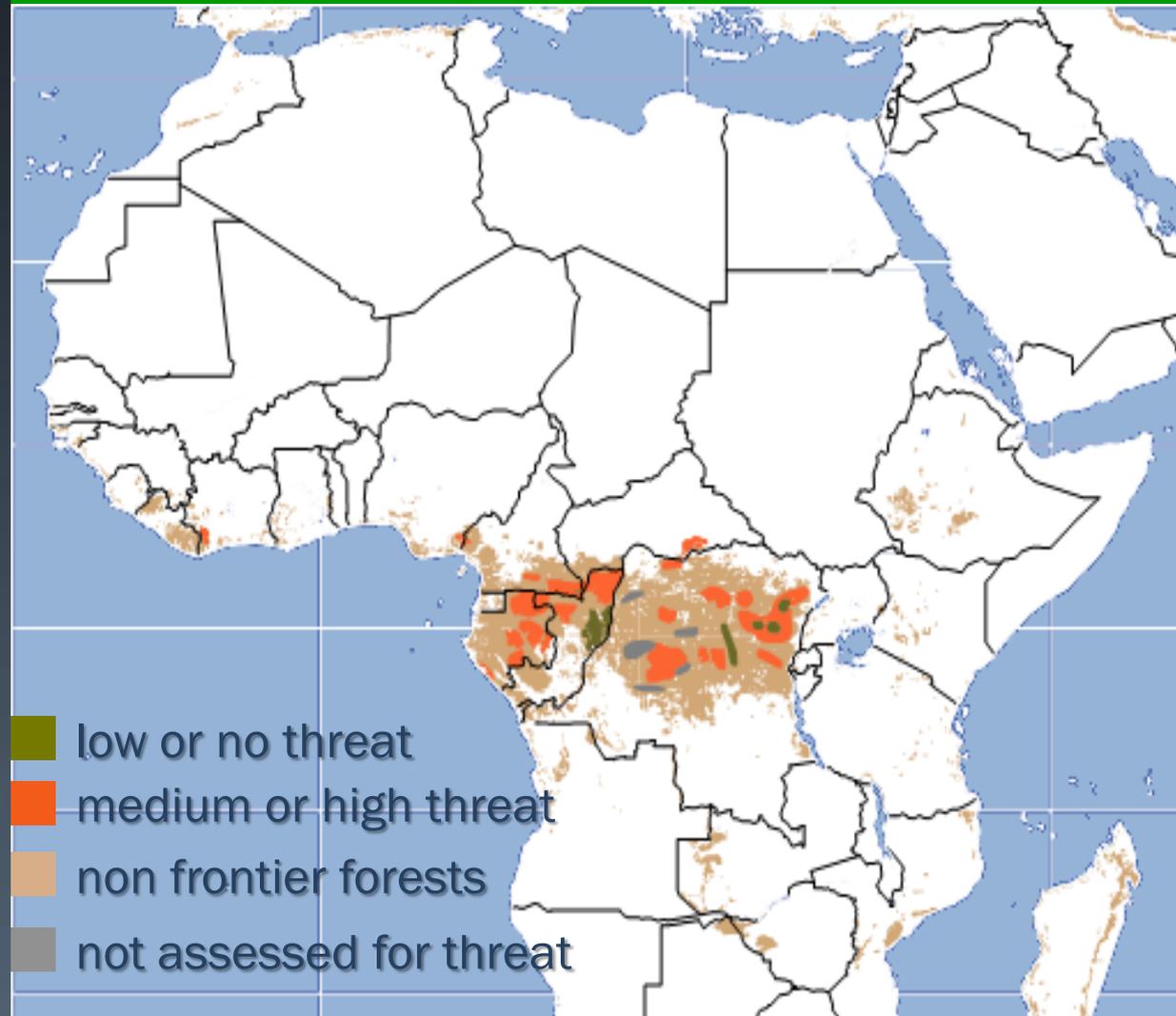
Environment:

Threatened Frontier Forests of Asia



Environment:

Threatened Frontier Forests of Africa



Threatened Frontier Forests continued

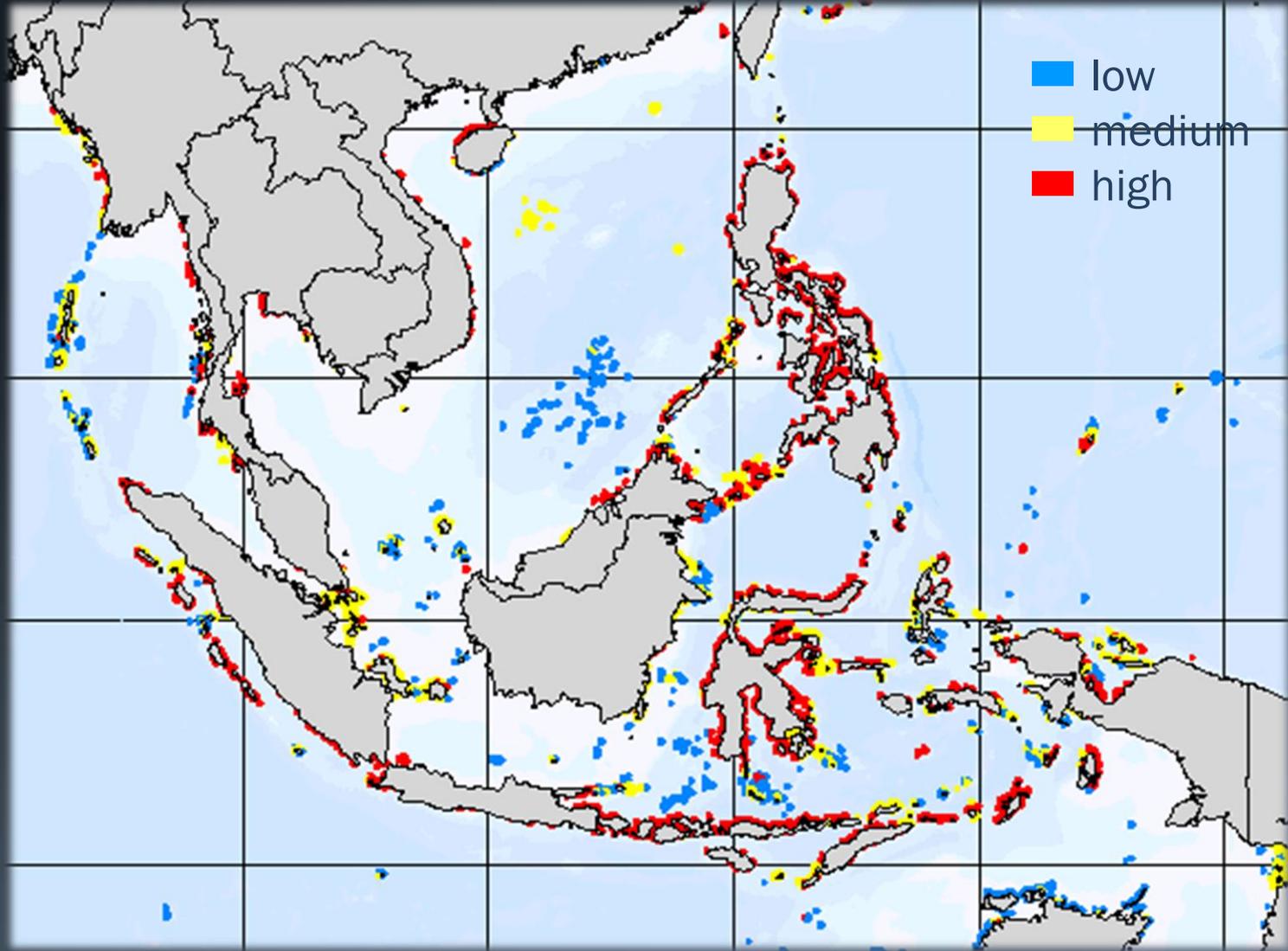
As you saw on the previous slides, there aren't many forests left in some areas.

And yet the global demand for fiber and for wood as a construction material and as a fuel is expected to increase nearly 50% over the next decade and a half. That may put most of the world's remaining forests into play.



Environment:

Threatened Coral Reefs



Threatened Coral Reefs continued

We can do the same analysis for coral reefs. In Southeast Asia, shown on the previous slide, and in the Caribbean, about 70% is already at high risk.

And yet, the demand for nitrate-based fertilizers are expected to grow by 50% in the next decade and a half, with the potential for increased run-off, increased eutrophication and increased reef damage.

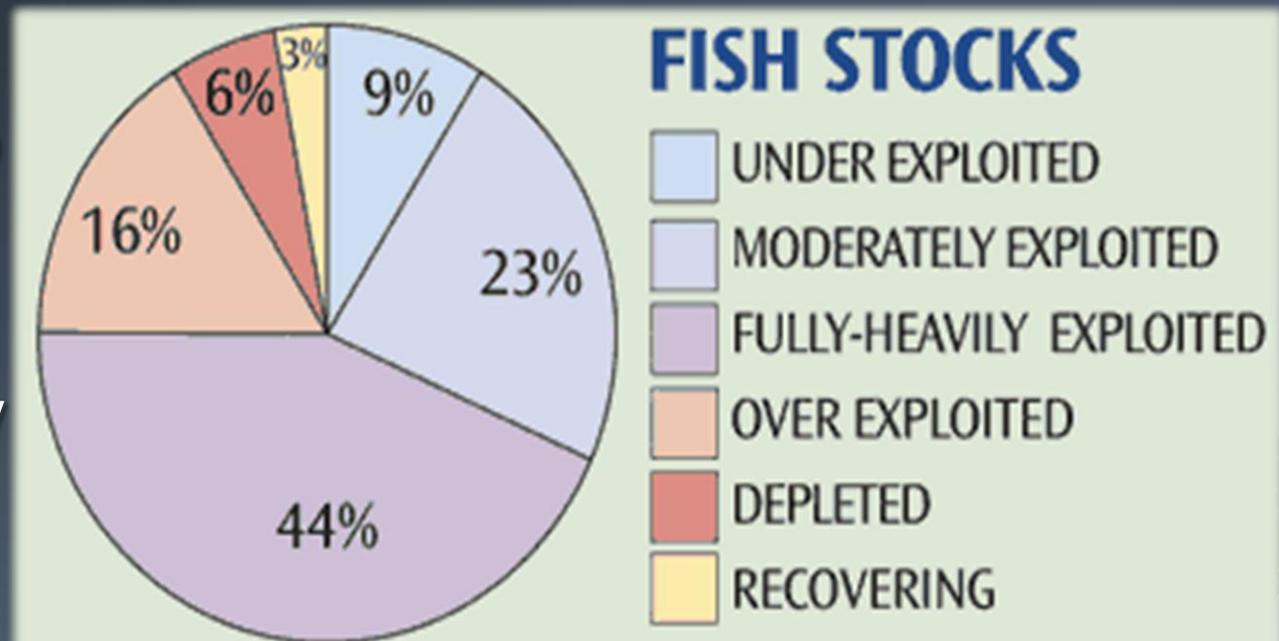


Environment:

Threatened Fish Stocks

Fisheries show the same pattern: virtually all major marine fisheries are fully exploited and about half are seriously over-exploited.

And remember that nearly 900 million people depend on fish as their primary source of protein.



Environment:

The biosphere is under stress.

- ☛ degradation
- ☛ growing resource scarcity
- ☛ diversion of resources
 - ↙ rural impoverishment
 - ☛ undercutting livelihoods
 - ☛ undermining social stability
 - ↙ potential resource conflicts



Environmental Trends

- Biosystems are being degraded.
- Rising populations mean potential shortages of fertile land and especially of water.
- Cities and industrial regions can outbid rural areas for water, food or tropical hardwoods.
- Biological impoverishment can mean human impoverishment and a rising potential for resource conflicts.



SOCIAL STRESSES



Social Stresses

- ☛ persistent poverty, malnutrition
- ☛ stresses on families
- ☛ a tide of HIV orphans
- ☛ the global teenager



Social Trends

- ☛ Some social trends are positive -- literacy is rising, for example -- but stresses on families are also rising nearly everywhere.
- ☛ Especially in Africa and south Asia, HIV is creating such large numbers of orphans as to overwhelm support systems.
- ☛ The global economy means that western advertising and western tourists are everywhere, putting pressure on traditional cultures.



Social Trends continued

- At the turn of the century, there will be 1 billion teenagers in the world, most of them in developing states and, like teenagers everywhere, a restless, volatile group, easily attracted both to idealistic causes and to nihilistic ones, such as terrorist groups.



SECURITY ISSUES



Security:

New Threats to Security and Stability

- ☛ economic instability
- ☛ terrorism and global crime
- ☛ unemployment and urban instability
- ☛ illegal migration
- ☛ emerging new diseases
- ☛ global climate change



Security Issues

The world faces a whole new set of security threats.

The last several years have been a case study in global economic instability -- evidence that we don't yet know how to manage a global economy

And we are seeing the rise of new and more deadly forms of terrorism, potentially armed with weapons of mass destruction.

The estimated take of the drug cartels is \$500 billion/year, more than the GDP of any developing state -- so global crime is a powerfully corruptive force.



Security Issues continued

We have the potential for large scale unemployment in urban areas and income gaps that might fuel increased illegal migration.

The World Health Organization has identified 30 new diseases in the past 20 years, nearly all arising in the distressed ecosystems in developing regions, and they expect more -- all just a plane ride away.

And of course there are the uncertainties of global climate change.



REASONS FOR HOPE



What can influence the outcome ... the *tipping point* factors?

- ☛ enlightened business leadership
- ☛ radically new business strategies
- ☛ new global partnerships between civil society and business
- ☛ innovations that transform opportunities ... a digital renaissance?



Reasons for Hope

- ☛ An Action Agenda for a Transformed World
 - ☛ rising literacy
 - ☛ innovation and technological change
 - ☛ the rise of civil society
 - ☛ greening of global corporations
 - ☛ accelerating development



Reasons for Hope continued

- Literacy has increased faster in developing regions over the past 30 years than it ever did in the industrial world.
- Technology is creating remarkable new opportunities, if we can use them creatively to address our problems.



Reasons for Hope continued

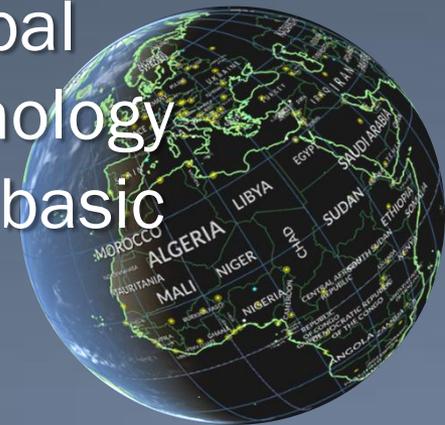
- Some examples:

- Civil society groups are emerging as a powerful new force at local, national and international levels. These groups are increasingly linked by email and by the internet linking people together in new ways. We are seeing the emergence of a new social accountability -- still erratic but almost a new form of governance.



Reasons for Hope continued

- ☛ Some examples:
 - ☛ Increasingly, major companies are incorporating high social and environmental expectations into their core strategies and that will pressure others to do the same.
- ☛ All these together create the opportunity to accelerate development, to harness global companies and market forces and technology in public/private partnerships to deliver basic services in novel ways.



New Actors, New Technologies

With new actors and new technologies, we could dramatically improve...

- industrial efficiency
 - new ways to meet societal needs, such as e-commerce
- environmental productivity
 - transform the management of natural resources, protect special places
- human development
 - expand access, accelerate education, widen social perspectives, increase opportunity



The End

