

CLOSEOUT FILES



Resolved: When in conflict, the United Nations should prioritize global poverty reduction over environmental protection.

Introduction

Resolved: When in conflict, the United Nations should prioritize global poverty reduction over environmental protection. I feel pretty ambivalent about this resolution. On the surface, it's clear and precise. When in conflict, X should prioritize A over B. One would think the structure of the topic provides a very clear picture of what the debate should consist of, the pro argues A and con argues B. The problem is all too often the two issues are inseparable. Poverty and environmental degradation exist in a vicious cycle where the elimination of one cannot be accomplished while disregarding the other.

Another reason I'm not a huge fan of the topic is I predict a lot of rounds will lack any real clash. Hopefully, everyone agrees that poverty reduction and environmental protection are both worthy enough goals, so a lot of rounds will come down to teams conceding that the other side is a problem, but saying their side should be higher priority with little to no specific evidence supporting that. In reality, a policy of sustained development is most advantageous, but that isn't really pro or con ground here.

Make sure your opponent doesn't abusively define "when in conflict." The broadest way to frame it is to say that the poverty reduction and environmental protection along with every other problem the UN deals with are in constant conflict over resources (unless the policy seeks to simultaneously benefit both equally in which case it isn't topical). Also "when in conflict" could be defined to mean when accomplishing one comes at the direct expense of the other. For example, destroying the rainforest to plant crops, or eliminating vital hunting grounds to protect endangered species. Overall, I think a better similar topic would have been resolved: developing countries are justified in the short term spurring economic development by increasing their emissions.

On a final note, don't ignore the who part of the resolution. I think it opens up a lot of lines of argumentation in regards to what the UN's job is, and what the consequences of not prioritizing one side are in terms of countries addressing that side outside of the UN.

Good luck debating! I'm really curious how these rounds end up turning out. Feel free to send us an email about any questions you might have about the topic or run stuff by us at CloseoutFiles@yahoo.com

Pro Analysis

Global poverty affects millions around the world

Even though the effects of poverty are well known by the masses, you should start off your case showing how drastic the issue has become. It is not important to devote your entire case to proving that global poverty is an important issue because the con team is likely to agree with you, which doesn't make for any clash. There is so much information about the effects of global poverty so try not to overwhelm your judges with numbers. The intent of this point is not for your judge to know the specifics of global poverty but for them to feel sympathy and a desire to help those less privileged; the method by which you achieve those feelings is up to you. If you want to discuss children, according to the United Nations Human Development Report of 2003, "For the 1.9 billion children from the developing world, there are: 640 million without adequate shelter (1 in 3), 400 million with no access to safe water (1 in 5), 270 million with no access to health services (1 in 7)." That's just a small example of the statistics you can find on hunger, water scarcity, health, disease, education, and death. I would suggest you try to focus on making an emotional appeal that is supported by evidence to create the best balance for success.

Poverty is harming the environment

There is strong evidence to support the notion that poverty exacerbates environmental problems. People in unindustrialized nations are not advanced enough in many cases to properly balance survival and environmental stability. In areas with limited resources and opportunities, people must abuse the land just to make a living. There is some truth in the idea that the environment is the concern of the privileged. According to PollutionIssues.com, "Regardless of the reason or the area of the world in which a poor population lives, certain reciprocal elements will act on the population and its environment. Lack of education, oppression, lack of appropriate infrastructure—from water-treatment facilities to better roads and communication—all exacerbate the twin problems of poverty and environmental degradation. Agricultural practices that tax the soil lead to soil erosion, which lowers crop yields and pollutes rivers and streams with silt. The accumulation of the silt—from the loose eroded soil—kills the fish in the river and streams. Another cause of soil erosion is the cutting down of trees, in massive numbers, either for use as firewood (because the winters are harsh and there is no other way to stay warm) or to sell for much needed cash. Eventually, not only will the soil erode to a point where it can no longer sustain agriculture, but the trees would be gone too." By working towards ending global poverty, we can also prevent some of the environmental problems that contribute to global climate change.

Help people now opposed to possibly helping people in the future

There is plenty of evidence showing the negative effects of global poverty and there is an abundance of research that suggest the devastating consequences of climate change. You could debate over the facts for the weeks, especially climate change evidence, but that is not the point of this topic. I strongly suggest you stay away from nitpicking over details and debating over the truth in certain studies but there is one thing that you will need to negate from the pro side. You cannot let your opponents abusively claim global devastation from climate change without contextualizing the effects of global warming. It has become widely accepted that climate change is being accelerated by mankind, but there is controversy over how much and how long it will take for their to be real consequences. As the pro, you should minimize the effects of climate change and present that they will occur very gradually. The world is not going to end because of climate change in the next 10, 50, or even 100 years. Global warming is real, and should be near the top of the global agenda but it is not as important as reducing poverty. The debate boils down to whether or not we should prioritize helping people increase their quality of life in the present or maybe attempt to help people in the future, without the guarantee that our efforts will be effective. There is too much controversy over the effects of climate change and too much doubt on the ability of the United Nations to consciously reduce the effort to minimize world poverty. There are people who need help right now and it would be socially irresponsible not to take reasonable steps to improve their quality of life.

Individual countries have an incentive to address climate change on their own

Climate change is a world problem and affects each country individually; therefore, countries already have an incentive to make efforts to protect the environment. According to the United Nations Human Development Report Summary 2007/2008, "Political momentum is also gathering pace. Many governments are setting bold targets for cutting greenhouse gas emissions. Climate change mitigation has now registered firmly on the agenda of the Group of Eight (G8) industrialized nations. And dialogue between developed and developing countries is strengthening." We are already seeing countries mobilizing to change the status quo, which means it is less important for the United Nations to prioritize an issue when steps are already being made to remedy the situation. It is true that countries are personally effected by climate change, but, in regards to poverty, there is really only personal benefit to help the impoverished in one's own country. Unfortunately, the governments of countries with high numbers of people under the poverty line do not have the necessary resources to make any significant change; therefore, it must be the responsibility of the United Nations to address world poverty.

Prioritizing poverty reduction has a guaranteed benefit

The question must be asked, will the United Nations be more effective at poverty reduction or environmental protection? The truth is that it will be very difficult for the UN to see results that come from prioritizing protecting the environment. First, the UN will focus on large issues which takes the cooperation of many nations. Second, it will be difficult to get the international community to rally behind one specific plan of environmental protection. Finally, even if the UN could get international support for a particular strategy it will likely be as ineffective as the Kyoto Protocol (a notion that you would need to support if you choose to use this argument). Despite the fact that climate change is now a widely accepted belief, there is much controversy over how detrimental the effects will be. Given this, there is too large of an opportunity cost (what the UN would have to give up, in this case poverty reduction) to pursue protecting the environment. Prioritizing poverty reduction is a guarantee that beneficial results will be seen and that money will be going to the people who need it most, the poor.

Poverty can benefit the environment not the other way around

There are plenty of sources saying that poverty reduction and environmental protection are interlinked policies and both need to be implemented for the other to be effective. It is obvious that both poverty reduction and environmental protection are important issues and, in the real world, the United Nations should be doing both; however, neither side can advocate doing both without the other side saying the same. For example, the con should say we should prioritize environmental protection which will have the secondary effect of reducing poverty or the pro could say that we can reduce poverty and take steps to protect the environment. Either way, neither side gains any ground on their opponents. There is a problem with letting the con team say they can do both; the reality of prioritizing environmental protection is much different than a specific plan that has the intent to also benefit the poor. While it is true that a plan could be crafted to do both, a United Nations prioritization would mean that they would primarily focus on some sort of international cooperation to minimize carbon emissions opposed to benefitting the environmental issues the poor face. The goal must be to help the poor or environmental protection will most likely focus on benefitting industrialized nations or the world as a whole. A policy can be used, however, the focuses on benefitting the poor through methods that protect the environment, which is perfectly acceptable for the pro to advocate. Overall, if the UN were to prioritize environmental protection they would focus on issues much larger than lost fishing grounds or overgrazing of land.

Con Analysis

Mass devastation if climate change is not addressed

While everyone believes the effects of global poverty, the con must convince people about the reality and severity of climate change. It may be very tempting, but I advise you stay away from radical studies about global warming which depict a imminent apocalypse. You don't want there to be any ground for your opposition to debate you on the statistics of climate change, so you should stick to information from widely accepted sources. According to the United Nations Human Development Report 2007/2008, "Global warming is already happening. World temperatures have increased by around 0.7C since the advent of the industrial era—and the rate of increase is quickening. There is overwhelming scientific evidence linking the rise in temperature to increases in the concentration of greenhouse gases in the Earth's atmosphere. There is no hard-and-fast line separating 'dangerous' from 'safe' climate change." You can then move on to the effects of climate change which include food scarcity, rising sea levels, increased natural disasters, droughts, heat waves, and many other problems. It will also be important to prove that now is the time to act against climate change and that we should not postpone our efforts. Once again, the United Nations Human Development Report 2007/2008 states, "Prudence and care about the future of our children and their children requires that we act now. This is a form of insurance against possibly very large losses. The fact that we do not know the probability of such losses or their likely exact timing is not an argument for not taking insurance. We know the danger exists." Don't spend your entire case discussing climate change but make sure your include "climate change is real," "climate change will be devastating," and "now is the time for action."

Poverty best helped through increased business not aid

"Give a man a fish; you have fed him for today. Teach a man to fish; and you have fed him for a lifetime"—Author unknown. The debate over the effectiveness of international aid in combating poverty isn't this simple. What is obvious though, is that it takes business to remove poverty. Without industry, aid is just a drain without sustainable results. The causes of poverty derive from natural resources, climate, natural disasters, government, social factors, and inability to find work. There is only so much the United Nations can do to counter poverty without the most important element of business. According to the International Leaders Business Forum, "business has played a crucial role in providing routes from poverty to prosperity, pursuing profit and in the process generating wealth, products and services, innovation and technical advances, jobs and tax revenues." Business leads to economic progress, promotes stability and safety, and gives more resources to governments. Opponents might say that business is corrupt and will lead to abusive employment tendencies but they can hardly argue that a country would be better off without business. At time business can be brutal and value a profit over their workers, but it is a necessary evil for progress. The United Nations cannot force businesses to move into the areas they want to help, it must happen naturally. Now is not the best time for companies to expand globally; therefore, it would be futile to prioritize poverty reduction when the UN doesn't have the necessary tools to effectively combat poverty.

All anti-poverty efforts will be undermined by climate change

The degradation of the environment cannot be risked to better poverty. It has been this methodology that has resulted in much of the poverty seen today (the lost fishing grounds, over worked farmlands, overgrazing, and loss of hunting grounds). All of these trends have increased the level of poverty on this planet. The main reason this method cannot be used is that it is unsustainable and runs out of steam in the long run leaving people much worse off than they were before. A sustainable course of action for poverty alleviation must be found and can be done alongside of environmental management. Over the long term this will better their lifestyles and provide them a way out of poverty. The poor are also very vulnerable to environmental changes and the violent changes in climate have had a devastating impact on them. On a global level if these trends continue to deteriorate a large number of the poor will be very adversely affected. The environmental assets of poor households are under severe and increasing stress, reducing their livelihood opportunities and ability to escape poverty. Environmental assets are an essential source of wealth and strategic management of these assets will help the poverty strategies of developing countries. Any benefit derived from helping the poor now that comes at the cost of protecting the environment will be undermined by the effects of climate change. Attempts at helping the poor are futile when their lifestyles are so closely associated with the environment. Addressing poverty is only an approach to stop the symptoms; environmental protection will cure the illness.

United Nations is the only body that can incite a global effort

Individual countries can pass their own environmental laws and implement various policies based on their personal priorities but the world needs a global effort to counter climate change. The issue with leaving environmental protection to individual countries is that there will be no standard level of commitment. Many countries will allocate less resources to climate change to take advantage of those making a legitimate effort. If a country can see it benefitting economically or politically by gaining more power on the global stage then it is likely that they won't be doing their fair share to prevent global warming. The only way for there to be real results when it comes to reversing climate change is for there to be a global commitment where countries are held accountable for their actions. The only body capable of achieving this feat is the United Nations. It is not enough for one major country or a collection of smaller countries to make an effort; climate change is a world problem and there should be a global solution. It will undoubtedly be difficult but the most important things are rarely easy. Results will not be seen overnight, and people should not be deterred if it doesn't seem like anything is being accomplished. The United Nations is a method of achieving a global accord or protocol (hopefully one that is more effective than Kyoto Protocol). Even if the UN cannot accomplish that, prioritization can still be effective by creating an external pressure for change to occur in countries. The prioritization of combatting climate change by the United Nations would set a beneficial precedent for the rest of the world to follow. Overall, if we want to be serious about climate change, then the UN must be the actor to accomplish a legitimate effort.

Development will only fuel climate change

There are certain arguments that you will encounter in debate that are completely true and have legitimate impacts but they won't work for every judge. Each person has biases and preconceptions that make them respond positively or negative to some arguments. While I wish debate rounds were determined by who made the better arguments, much of the time it is determined by the arguments the judge prefers. As a disclaimer, the following argument is not for every judge despite its sound reasoning. Developing countries have been known for their lack of environmental conscientiousness; therefore, increasing the number of developing countries will only lead to more pollution and environmental degradation. The desired impact of the reducing poverty is to sustainably increase the standard of living. The most effective method of sustainable growth is to support the economy with business. As countries progress, they prioritize economic gains over environmental sustainability; thus, if the objective of poverty reduction is accomplished then we see ourselves facing the same issues with developing countries. Opponents can say that we can ensure the environmental stability of their growth as we assist them out of poverty, but the reality is that we don't even have the capacity yet to efficiently help ourselves in regards to clean energy or transportation. If our goal is to truly have a clean society, then we cannot rush into developing countries without the technology to ensure environmental sustainability. Until we have cost efficient methods of clean development, transportation, energy, water resources, and etc, then we should not prioritize poverty reduction. Without the means, we will only be setting ourselves up to have to deal with an even worse climate problem. As unfortunate as it is, there is something to be said about valuing the lives of Americans and peoples in other developed countries over those under the poverty line in underdeveloped countries. The choice is easy; protecting the livelihood of the United States far outweighs ineffectively addressing global poverty.

Pro Blocks

Mass devastation if climate change is not addressed

The threat posed by climate change is overstated to say the least. In addition, it's not necessarily a reason to affirm. Is it better to help those decisively most in need or focus our attention to something that theoretically may or may not be a problem in the future? The UN can have a real positive impact today when it comes to poverty, but the UN has shown little to no success when it comes to the environment. The Kyoto Protocol was a total failure, and how many more lives could have been saved if the UN had prioritized poverty instead? Also, the well-being of the environment affects everyone, so individual countries have an incentive to address it on their own. The same can't be said for poverty. Ideally both issues would be properly addressed, and that is exactly what would happen if the UN prioritized poverty reduction, because individual countries would then pick up the tab in terms of the environment.

UN is the only body that can incite a global effort

This might be true for poverty reduction, and the UN over the years has benefited the poor immensely with its aid. In terms of protecting the environment, the UN does not have as good of a track record, so why prioritize their resources towards something they aren't effective at combating? In addition, the UN isn't the only body that can help protect the environment, because the environment affects us all there is an incentive to address it on an individual/multilateral level outside of the UN.

Poverty best helped through increased business

The two aren't mutually exclusive. If this is the case, then the United Nations can help establish the foundation for business success in these impoverished areas through its efforts.

Development will only fuel climate change

As true as that may be, is it better to leave the poor poor then? It is pretty hard to answer yes to that question without looking bad.

All anti-poverty efforts will be undermined by climate change

Unless you see climate change as apocalyptic this isn't true. How is increasing the standard living of those most in need going to be undermined by climate change? Wouldn't they still be way better off than if we did nothing for them? Also this argument ignores the fact that the UN prioritizing poverty reduction doesn't mean the environment is going to be completely neglected. Instead it is simply going to be prioritized outside of the United Nations, and UN poverty reduction efforts historically have been far more effective than climate change efforts.

Con Blocks

Benefit the people who are the most in need/Poverty Bad

At what cost? Even if we could effectively help the people who are the most in need, in a utilitarian sense, prioritizing the environment is more beneficial, because it benefits everyone not just those considered to be in need. The main problem though is historically despite our good intentions efforts to help the poor at the expense of the environment have actually left the people worse off. It has been this methodology that has resulted in much of the poverty seen today (lost fishing grounds, over worked farmlands, overgrazing, loss of hunting grounds). Overall, degradation of the environment cannot be risked to better poverty, and it's unsustainable.

Future economic benefit from increased trade

This argument is speculative at best, and the benefits are negligible. Prioritizing the poor over the environment more often than not leaves the poor worse off, because it doesn't truly address the root of the problem. Despite years of efforts, we have seen little to no increase in trade with African countries. Overall help the people because you actually want to help the people, because if economics is your motivation, in an extremely cynical way, eliminating cheap labor sources probably does way more harm.

Individual countries have an incentive to address climate on their own

Not really. The incentive isn't big enough. Pollution and protecting the environment are some of the most often referenced negative externalities in basic economics, and negative externalities result in market inefficiencies unless proper action is taken. Priority from a large global body such as the United Nations is exactly what's needed in order to effectively address an issue as important as the climate. The problem can't be solved on an individual level, because the individual countries do not have to pay the full cost of their decisions.

Addressing poverty can also benefit the environment

First of all, the converse of this argument is probably stronger. Second, it ignores the first three words of the resolution, so it isn't topical. If what is being advocated simultaneously benefits both then it's hard to say the two are "in conflict".

UN Can't Combat Climate Change

The United Nations has the ability to combat climate change as can be seen by the Kyoto Protocol. Admittedly the Kyoto Protocol wasn't perfect, but it was a step in the right direction. It brought the issue to the table, and future treaties can learn from its flaws. Its biggest problem was its lack of universal participation, but this can be remedied in the future. The United States is willing to cooperate with a global cap-and-trade system that would apply to both industrialized nations and developing countries, and the UN is working to hopefully make that a reality in Copenhagen in December.

Crossfire

C: Wouldn't you agree the quality of the environment affects everyone?

P: Yes in the sense that every country has an incentive to address the climate on their own.

C: But shouldn't we prioritize the thing that is going to do the most good for everyone rather than a select few?

P: Well ideally outside of debate wouldn't both be prioritized?

C: Ideally.

P: Well isn't pro closer to that ideal considering you said it yourself the environment affects everyone. In a selfish rational way don't they have an incentive to address it on their own then? If the UN prioritizes poverty, the rest of the world could prioritize environmental protection.

C: No. Couldn't the same be said for the converse? If the UN prioritizes the environment, the rest of the world could prioritize poverty reduction.

P: No, because there isn't as big of an incentive to address poverty on an individual basis. We're essentially relying on countries' charity and altruism when we need not be in order to ensure ideally both are dealt with effectively.

C: Wouldn't you agree it is easier to prevent rather than reverse the effects of environmental degradation?

P:...

C: (if yes) then isn't that reason to prioritize the environment now before it's too late/costly (if no) How do you recreate destroyed rainforest, melted glaciers, or extinct species? It's much easier to prevent an egg from breaking than piece it back together afterwards.

C: Isn't a lot of the poverty seen around the world today a result of environment neglect such as the lost fishing grounds, overworked farmlands, overgrazing, loss of hunting grounds, etc.

P: The environment can contribute, but is by no means the main factor.

C: Well wouldn't any effort to reduce poverty that didn't address the root be unsustainable and counterproductive?

P: No because that isn't always the root, and also going into impoverished areas and helping their farmlands isn't really topical. If it's killing two birds with one stone, how are they in conflict like the resolution requires?

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Pro Evidence

Global Poverty Numbers

<http://hdr.undp.org/en/media/hdr03-summary.pdf>

SUMMARY HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

Published for the United Nations Development Programme (UNDP)

There are 59 top priority and high priority countries, where failed progress and terribly low starting levels undermine many of the Goals. It is on these countries that the world's attention and resources must be focused.

In the 1990s these countries faced many types of crises:

- *Income poverty*: poverty rates, already high, increased in 37 of 67 countries with data.\
- *Hunger*: in 19 countries more than one person in four is going hungry, and the situation is failing to improve or getting worse. In 21 countries the hunger rate has increased.
- *Survival*: in 14 countries under-five mortality rates increased in the 1990s, and in 7 countries almost one in four children will not see their fifth birthdays.
 - *Water*: in 9 countries more than one person in four does not have access to safe water, and the situation is failing to improve or getting worse.
 - *Sanitation*: in 15 countries more than one person in four does not have access to adequate sanitation, and the situation is failing to improve or getting worse.

More than 1.2 billion people—one in every five on Earth—survive on less than \$1 a day. During the 1990s the share of people suffering from extreme income poverty fell from 30% to 23%. But with a growing world population, the number fell by just 123 million—a small fraction of the progress needed to eliminate poverty. And excluding China, the number of extremely poor people actually increased by 28 million. South and East Asia contain the largest numbers of people in income poverty, though both regions have recently made impressive gains. As noted, in the 1990s China lifted 150 million people— 12% of the population—out of poverty, halving its incidence. But in Latin America and the Caribbean, the Arab States, Central and Eastern Europe and Sub-Saharan Africa the number of people surviving on less than \$1 a day increased.

A lack of sustained poverty-reducing growth has been a major obstacle to reducing poverty. In the 1990s only 30 of 155 developing and transition countries with data—about one in five—achieved per capita income growth of more than 3% a year. As noted, in 54 of these countries average incomes actually fell.

Global Poverty Numbers

<http://hdr.undp.org/en/media/hdr03-summary.pdf>

SUMMARY HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

Published for the United Nations Development Programme (UNDP)

<http://www.globalissues.org/article/26/poverty-facts-and-stats>

Almost half the world — over three billion people — live on less than \$2.50 a day.

At least 80% of humanity lives on less than \$10 a day.

The poorest 40 percent of the world's population accounts for 5 percent of global income. The richest 20 percent accounts for three-quarters of world income.

According to UNICEF, 25,000 children die each day due to poverty. And they “die quietly in some of the poorest villages on earth, far removed from the scrutiny and the conscience of the world. Being meek and weak in life makes these dying multitudes even more invisible in death.”

Around 27-28 percent of all children in developing countries are estimated to be underweight or stunted. The two regions that account for the bulk of the deficit are South Asia and sub-Saharan Africa.

Based on enrollment data, about 72 million children of primary school age in the developing world were not in school in 2005; 57 per cent of them were girls. And these are regarded as optimistic numbers.

Water problems affect half of humanity:

- Some 1.1 billion people in developing countries have inadequate access to water, and 2.6 billion lack basic sanitation.

- Close to half of all people in developing countries suffering at any given time from a health problem caused by water and sanitation deficits.

To these human costs can be added the massive economic waste associated with the water and sanitation deficit.... The costs associated with health spending, productivity losses and labour diversions ... are greatest in some of the poorest countries. Sub-Saharan Africa loses about 5% of GDP, or some \$28.4 billion annually, a figure that exceeds total aid flows and debt relief to the region in 2003.

Global Poverty Numbers

<http://hdr.undp.org/en/media/hdr03-summary.pdf>

SUMMARY HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

Published for the United Nations Development Programme (UNDP)

Shelter, safe water and health

For the 1.9 billion children from the developing world, there are:

- 640 million without adequate shelter (1 in 3)
- 400 million with no access to safe water (1 in 5)
- 270 million with no access to health services (1 in 7)

Survival for children

Worldwide,

- 10.6 million died in 2003 before they reached the age of 5 (same as children population in France, Germany, Greece and Italy)
- 1.4 million die each year from lack of access to safe drinking water and adequate sanitation

Health of children

Worldwide,

- 2.2 million children die each year because they are not immunized
- 15 million children orphaned due to HIV/AIDS (similar to the total children population in Germany or United Kingdom)

Background of Global Hunger

<http://www.unmillenniumproject.org/documents/Hunger-lowres-complete.pdf>

United Nations Millennium Project

Task Force on Hunger 2005

But 852 million people are still chronically or acutely malnourished. Most of them are in Asia, particularly India (221 million) and China (142 million). Sub-Saharan Africa has 204 million hungry and is the only region of the world where the prevalence of both general undernourishment and children's underweight status are increasing.

Hunger is both a cause and an effect of poverty—it holds back economic growth and limits progress in reducing poverty. The negative economic impact of hunger is dramatic, with annual losses of at least 6–10 percent in forgone GDP due to losses in labor productivity. Economic growth alone is insufficient for eliminating hunger because so many hungry people live in deep “poverty traps,” beyond the reach of markets. Poor and hungry people often face social and political exclusion, unable to demand their rights. They have little access to education, health services, and safe drinking water.

Most people with access to television have seen haunting images of the starvation that typically occurs during famines and disasters. But those suffering from such acute hunger represent only a small part—roughly 10 percent—of the world's hungry. Most of the hungry, approximately 90 percent, are chronically undernourished. Chronic undernourishment is caused by a constant or recurrent lack of access to food of sufficient quality and quantity, good healthcare, and necessary caring practices. It results in underweight and stunted children—as well as high child mortality brought about by associated diseases. Hidden hunger, caused by a lack of essential micronutrients (vitamins and minerals), afflicts more than 2 billion, even when they consume adequate amounts of calories and protein. The world has demonstrated its generosity in helping the victims of acute hunger.

Global Hunger has Expansive Repercussions

<http://www.unmillenniumproject.org/documents/Hunger-lowres-complete.pdf>

United Nations Millennium Project

Task Force on Hunger 2005

Approximately 852 million people worldwide cannot obtain enough food to live healthy and productive lives (FAO 2004). Hunger has many impacts. It is reflected in high rates of disease and mortality, limited neurological development, and low productivity among current and future generations. It is also a major constraint to a country's ability to develop economically, socially, and politically. Women and children living in developing countries are most vulnerable to the broad and devastating effects of hunger. Hunger, poverty, and disease are interlinked, with each contributing to the presence and persistence of the other two (WHO 1997).

Poverty, war, natural disasters, disease epidemics, political and economic shocks—all affect not only the basic determinants of hunger (physical, technological, economic, political, social, and cultural), but also the underlying determinants (household food security, care, and health environment). Several analyses show that conditions at the household level (the underlying determinants of malnutrition) are extremely important (Haddad, Webb, and Slack 1997; Webb 1998; Smith and Haddad 2000). The results also show that individuals who are malnourished have been failed by many different sectors: agri- culture, health, education, social welfare, finance, and employment. To address hunger effectively requires understanding the many causes of malnutrition at the household, community, and regional levels. It also requires a multisectoral approach to develop solutions and design and implement policies specifically targeted at vulnerable populations.

Global Hunger leads to Death and Disease

<http://www.unmillenniumproject.org/documents/Hunger-lowres-complete.pdf>

United Nations Millennium Project
Task Force on Hunger 2005

Moreover, malnourishment weakens the immune system and strength of those affected by HIV/AIDS, making them succumb more quickly to the disease. Similarly, nearly 57 percent of malaria deaths are attributable to malnutrition.

Improvements in health, sanitation, water, and other basic services contributed to 20 percent of the reduction in child malnutrition from 1970 to 1995 (Smith and Haddad 2000). Of the nearly 12 million children under age five who died in 1995, about 70 percent were affected by one or more of just five conditions: malaria, measles, acute respiratory infections, undernutrition, and diarrhea. And the death rate from disease among undernourished children is much higher than among those better nourished (FAO 2001a).

It is estimated that chronic malnutrition—ranging from severe, through moderate, to mild—is linked to 54 percent of child deaths worldwide, while acute malnutrition on its own accounts for roughly 10 percent (Pelletier and others 1995; UN SCN 2004). Most child deaths linked to malnutrition are thus associated with its less visually dramatic manifestations (figure 1.2). Malnutrition and hunger are the number one risk factor for illness worldwide (WHO 2003b). For both children and adults, malnutrition reduces the body's natural defenses against most diseases. It is thus a critical factor predisposing people to infection and disease progression. Inadequate food consumption and malnutrition account for 7 of the 13 leading risk factors associated with the global burden of disease (WHO 2003b). Nutrition thus provides a broad platform for launching efforts to reduce infection and chronic disease throughout the world (figure 1.3).

Undernourishment in childhood is also associated with poor cognitive development in children (Grantham-McGregor, Fernald, and Sethuraman 1999a,b). Indeed, poor cognitive development begins before birth with malnourished pregnant women (Hack 1998). It is also associated with reduced breastfeeding (Grantham-McGregor, Fernald, and Sethuraman 1999a). And it has been shown that reduced cognitive development, especially in the first two years of life, results in lower productivity and lifetime earnings potential (FAO 2003).

Global Hunger Minimizes Economic Activity

<http://www.unmillenniumproject.org/documents/Hunger-lowres-complete.pdf>

United Nations Millennium Project
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In a study of 42 developing countries, the UN Standing Committee on Nutrition (UN ACC/SCN 1994) found a statistically significant relationship between GDP per capita growth and changes in underweight prevalence, with a 1 percent annual increase in the growth rate of GDP per capita leading to a 0.24 percent decrease in underweight prevalence. A similar study of 18 Latin American countries by the Economic Commission for Latin America and the Caribbean in 2001 found that, in 34 percent of the cases analyzed, the percentage of people living on less than \$1 a day was correlated with the percentage of the population underweight. In effect, 49 percent of the cross-country variability in the malnutrition rate (low weight-for-age) and 57 percent of the cross-country variability in moderate to serious chronic malnutrition (low height-for-age) could be attributed to differences in the percentage of people living in extreme poverty (ECLAC 2004).

Hunger carries both direct and indirect economic costs. Its negative impact is dramatic in forgone GDP per capita. For labor productivity alone, the annual losses are at least 6–10 percent (figure 1.4). Gains in productivity of this magnitude would be headline news in any country—but they would be especially good news in developing countries seeking to compete in the global economy. Iron deficiency alone accounts for between 2 percent and 7 percent of forgone GDP in the 10 developing countries with good estimates (figure 1.5). The impacts of hunger on an individual's labor productivity are determined early in life. Malnourished infants tend to enter primary school later and to drop out earlier. When in school, they tend to be less able to learn than better nourished children. These disadvantages in early childhood typically persist, significantly diminishing the individual's earnings throughout her or his working life. Productivity in nonmarket activities—such as care for infants, children, and other dependents—and in other household activities is also reduced. Moreover, the multiplier effect of strong and healthy human capital on the productivity of other assets—such as financial, social, natural, and physical capital—will be forgone.

Global Hunger Minimizes Economic Activity

<http://www.unmillenniumproject.org/documents/Hunger-lowres-complete.pdf>

United Nations Millennium Project

Task Force on Hunger 2005

To the extent that hunger affects the lives and productivity of individuals, they are bound also to affect the economic growth performance of nations, especially those with a high incidence of chronic undernourishment. In a study for the FAO, Arcand (2001) demonstrated that, if developing countries had raised nutritional standards to adequate levels in the last half of the twentieth century, they would have improved human welfare and raised the rate of economic growth. These findings reinforce the conclusion that significant economic benefits are to be gained from measures that lead to the elimination of hunger. They suggest that it may be possible, especially in low-income countries, to induce increases in GDP growth rates by giving priority to investments reducing hunger.

What is clear is that there are strong moral grounds for eradicating hunger, grounds sufficient for accelerating action worldwide. But eradicating hunger also can be a high-yielding economic investment. So, from both a moral and an economic perspective, there are forceful arguments for increasing the investment funds for reducing hunger. It can also be argued from a tactical perspective that reducing hunger must be a critical element of any poverty reduction strategy, recognizing that little progress in poverty reduction is likely to be possible as long as large numbers of people suffer from hunger and malnutrition.

Lack of Education for Impoverished Peoples

<http://www.unmillenniumproject.org/documents/Education-complete.pdf>

United Nations Millennium Project

Task Force on Education and Gender Equality 2005

More than 100 million children of primary school age are not in school, with the worst shortfalls in Africa and South Asia. Girls are disproportionately affected, particularly in Sub-Saharan Africa, South Asia, and East Asia and the Pacific, where 83 percent of all out-of-school girls live.

Completion of schooling is a significant problem. While enrollment has been increasing, many children drop out before finishing the fifth grade (UNESCO 2004b). In Africa, for example, just 51 percent of children (46 percent of girls) complete primary school. In South Asia 74 percent of children (and just 63 percent for girls) do so.

Low levels of enrollment and completion are concentrated not only in certain regions but also among certain segments of the population. In every country completion rates are lowest for children from poor households. In Western and Central Africa, the median grade completed by the bottom 40 percent of the income distribution is zero, because less than half of poor children complete even the first year of school.

The education income gap also exacerbates gender disparities. In India, for example, the gap between boys and girls from the richest households is 2.5 percent, but the difference for children from the poorest households is 24 percent (Filmer 1999).

In some countries the main reason for low educational attainment is that children do not enroll in school. In Bangladesh, Benin, Burkina Faso, Côte d'Ivoire, India, Mali, Morocco, Niger, and Senegal more than half of children from the bottom two income quintiles never even enroll. Elsewhere, particularly in Latin America, enrollment may be almost universal, but high repetition and drop-out rates lead to low completion rates. In both cases poor students are much more likely not to complete school.

Benefits of Education for Impoverished Peoples

<http://www.unmillenniumproject.org/documents/Hunger-lowres-complete.pdf>

United Nations Millennium Project

Task Force on Hunger 2005

Research has found that women's education was associated with 43 percent of the reduction in child malnutrition between 1970 and 1995, followed by increases in agricultural production (26 percent), and improvements in the health environment (19 percent) and in women's status relative to men (12 percent).

Health Problems of Impoverished Peoples

<http://www.unmillenniumproject.org/documents/maternalchild-complete.pdf>

United Nations Millennium Project

Task Force on Child Health and Maternal Health 2005

The state of children's health and women's health in the world today can be described through data and statistics that catalogue death, disability, and suffering. On this score alone the picture is "staggering," to quote the World Bank, "dire," to quote USAID, "a human disaster," to quote the World Health Organization, a "health emergency," to quote the African Union (Konare 2004; USAID 2004; Wagstaff and Claeson 2004; WHO 2003g).

Other aspects of maternal health present a mixed picture. While fertility has declined dramatically—from a total fertility rate of 5.0 births per woman in 1960 to 2.7 in 2001—an estimated 201 million women who wish to space or limit their childbearing are not using effective contraception that would enable them to do so. The result is about 70–80 million unintended pregnancies each year in developing countries alone (Singh and others 2003).

The primary health interventions needed to address most of these conditions are known. The Bellagio Study Group on Child Survival estimated that with 99 percent coverage of proven effective interventions, 63 percent of child mortality would be averted (Jones and others 2003) (figure 1). The World Bank has estimated that if all women had access to the interventions for addressing complications of pregnancy and childbirth, especially emergency obstetric care, 74 percent of maternal deaths could be averted (Wagstaff and Claeson 2004) (figure 2). Moreover, universal access to sexual and reproductive health information and services would have far-reaching effects for both the maternal health and child health Goals and for virtually every other Goal, including those for HIV/AIDS, gender, education, environment, hunger, and income poverty.

For children, much can be accomplished without the involvement of the health system. Improved water supplies and sanitation and cleaner sources of energy to reduce indoor air pollution could significantly reduce the incidence of some of the more common diseases of childhood. Exclusive breastfeeding for the first six months and appropriate complementary feeding could prevent almost 20 percent of childhood deaths in the 42 countries where 90 percent of those deaths occur (Jones and others 2003). Teaching mothers and other primary caretakers how to recognize the early signs of potentially fatal illnesses and where to seek care for them is also essential.

Poverty is Harming the Environment

<http://www.pollutionissues.com/PI-Re/Poverty.html>

Poverty, the Environment, and Pollution

Regardless of the reason or the area of the world in which a poor population lives, certain reciprocal elements will act on the population and its environment. Lack of education, oppression, lack of appropriate infrastructure—from water-treatment facilities to better roads and communication—all exacerbate the twin problems of poverty and environmental degradation. One cannot ask people to heal the environment, or even just mind it, if they can barely sustain themselves. For example, tropical fish are considered to be either delicacies or exotic pets by people who can pay for them and people in tropical regions can earn good money for catching these fish. But to catch the fish more easily they use cyanide or dynamite to stun the fish. The former pollutes (and moves up the food chain) and the latter destroys the reef environment. Agricultural practices that tax the soil lead to soil erosion, which lowers crop yields and pollutes rivers and streams with silt. The accumulation of the silt—from the loose eroded soil—kills the fish in the river and streams. Another cause of soil erosion is the cutting down of trees, in massive numbers, either for use as firewood (because the winters are harsh and there is no other way to stay warm) or to sell for much needed cash. Eventually, not only will the soil erode to a point where it can no longer sustain agriculture, but the trees would be gone too. The above examples show that practices that fail to consider environmental health perpetuate the poverty cycle, thereby further destroying the environment.

Poverty is Harming the Environment

<http://www.unpei.org/PDF/Attacking-Poverty-win-win-Eng.pdf>

The United Nations Development Program and European Commission

Conventional wisdom dictates that poor people are too impoverished to mobilize resources for enhancing the environment. In other words, they suffer from “conservation-investment poverty.” In some cases this is true. However, the cut-off for this inability to invest is site-specific and is a function of local labor and non-labor input-costs in addition to the types of investment that are needed for the particular environment problems or risks faced. Numerous experiences worldwide are now demonstrating that when the incentives are favorable, even poor people can mobilize enormous\ resources, particularly labor resources. Studies in the forestry sector, for example, show that there is seldom evidence that cost is a constraint to tree planting; tenure issues are more likely to constrain investment. In Gujarat, India, for example, poor tribal people helped by Aga Khan Rural Support Programme (AKRSP), an NGO, are paying the full cost of pump irrigation, while richer farmers receive government subsidies for their water. In urban areas, people living in poverty typically pay more per unit for their water and energy services than better off citizens. Poor people are often more willing to pay for energy services than is conventionally assumed, and typically do so for batteries, battery-charging, small quantities of kerosene and, in some cases, fuelwood. For example, kerosene used in household lamps by the poor can be twice as expensive and up to 19 times less efficient per lumen of output as electric fluorescent lights. In some situations, the urban poor pay up to 20 percent of their income just for drinking water. Those in squatter settlements may pay private water-vendors between 4-100 times as much per unit volume as the middle- and upper-income groups pay for publicly provided piped water. Helping poor people overcome the high initial costs associated with gaining access to cheaper services is an important policy issue.⁷ However, poor people are too poor to pay for badly conceived projects that hold little benefit for them. But when the benefits are demonstrable and the incentives clear, the poor can be willing to contribute substantial resources.

Poverty Reduction can become Environmental Protection

<http://www.un.org/Docs/SG/envIRON.htm>

United Nations Agenda for Development

At UNCED an integrated approach towards development and environment was adopted, whereby the protection of the environment would constitute an integral part of the development process and could not be viewed in isolation from it. Depletion and degradation of nature and its resources endanger the prospects for development, for our generation and even more so for the future generations. The cost of reversal will be far higher than the cost of prevention. Therefore, sustainable development strategies and programmes which aim at integrating environmental protection requirements into economic, social and development policies should be formulated and implemented at all levels.

Eradication of poverty should have the highest priority on the international agenda. One of the adverse effects of poverty, which affects mostly developing countries, is related to environmental and natural resource degradation. The essential task of eradicating poverty is an indispensable requirement for sustainable development in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world. Strategies aimed at poverty eradication are also important in avoiding degradation of resources. While poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable patterns of consumption and production, particularly in industrial countries, which is a matter of grave concern, aggravating poverty and imbalances. Promoting changes in such consumption and production patterns should also be of the highest priority. All countries should strive to promote sustainable consumption and production patterns.

http://www.un.org/esa/dsd/agenda21/res_agenda21_03.shtml

UN department of economic and social affairs

Division for sustainable development

While managing resources sustainably, an environmental policy that focuses mainly on the conservation and protection of resources must take due account of those who depend on the resources for their livelihoods. Otherwise it could have an adverse impact both on poverty and on chances for long-term success in resource and environmental conservation. Equally, a development policy that focuses mainly on increasing the production of goods without addressing the sustainability of the resources on which production is based will sooner or later run into declining productivity, which could also have an adverse impact on poverty. A specific anti-poverty strategy is therefore one of the basic conditions for ensuring sustainable development. An effective strategy for tackling the problems of poverty, development and environment simultaneously should begin by focusing on resources, production and people and should cover demographic issues, enhanced health care and education, the rights of women, the role of youth and of indigenous people and local communities and a democratic participation process in association with improved governance.

Poverty Reduction can become Environmental Protection

http://www.rainforest-alliance.org/resources/documents/environment_role.pdf

The Sustainable Development Legal Initiative (SDLI) of the Leitner Center for International Law and Justice at Fordham University School of Law

Although no attempt has been made to analyze all the innumerable areas in which development and conservation intersect, this volume offers a guide to many of the most promising and significant opportunities for both sustaining and improving life on earth. As asserted in Part I, a new paradigm has emerged that views poverty eradication and sound environmental management as not only nonexclusive, but also completely dependent on one another. Investing in environmental conservation is essential for successful long-term development; conversely, environmental sustainability cannot be achieved without parallel gains in poverty eradication. In-depth analyses of the importance of environmental wealth to poor people and nations, as well as of the potential of environmental investment, ecoagriculture, sustainable production and consumption patterns, and ecosystem renewal, demonstrate the many options available for addressing the needs of the poor and of the planet. Environment and development are, likewise, essential to the success of efforts to reduce and recover from natural disasters. In Part II, the reader learns that natural disasters are more often the product of converging environmental degradation and poverty-driven vulnerabilities than inescapable acts of nature. Furthermore, natural disasters have undermined advances made in reversing poverty and ecosystem decline time and again, often quite literally wiping them out. The lessons we can learn from the profound tragedies of the South Asian tsunami of 2004 and Hurricane Katrina center on the intersection of economic and environmental degradation. Proper management of natural resources is critical to protecting the most vulnerable and safeguarding their path out of poverty.

Part III addresses the reality that knowledge about the role of the environment in meeting poverty alleviation goals will not lead to their achievement per se. Knowledge can bring about change only when it is learned and applied. The democratization of knowledge creation and exchange is shown to be important, particularly the development of a learner-centered collaborative approach. A strong case is made for granting poor nations and people free and open access to environmental information in order to support and enhance their vital conservation and development efforts. In particular, knowledge of social impacts, financial viability, design innovation, and balanced leadership is indispensable to the entrepreneurs and investors who can drive viable, scalable, and sustainable social change. Economic valuation of ecosystem services is, likewise, essential for bringing natural capital and conservation into the cost-benefit calculations that inform public decision making and therefore affect the environment and the communities it sustains.

Poverty Reduction can become Environmental Protection

http://www.rainforest-alliance.org/resources/documents/environment_role.pdf

The Sustainable Development Legal Initiative (SDLI) of the Leitner Center for International Law and Justice at Fordham University School of Law

The need to conserve natural resources and safeguard the health of our planet is urgent. Demonstrating the roles the environment can and should play in poverty alleviation, the authors advance a worldview in which the environment is not only the necessary backdrop for human growth and development, but also has an integral role to play. That we need the environment to survive is long settled and beyond dispute; this volume has sought to contribute to our understanding of a newfound, but vital, dynamic that promises far more: the many ways in which nature can help us to thrive.

Status Quo Will not lead Countries out of Poverty

http://hdr.undp.org/en/media/hdr03_complete.pdf

United Nations HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

Breaking out of poverty traps requires a multifaceted approach—one that goes beyond the usual sound commandments of good economic and political governance. For countries trapped in poverty, six policy clusters are crucial:

- Investing in human development—nutrition, health (including reproductive health), education, water and sanitation—to foster a productive labour force that can participate effectively in the world economy.
- Helping small farmers increase productivity and break out of subsistence farming and chronic hunger—especially in countries with predominantly rural populations.
- Investing in infrastructure—power, roads, ports, communications—to attract new investments in non-traditional areas.
- Developing industrial development policies that bolster non-traditional private sector activities, with special attention to small and medium-size enterprises. Such policies might include export processing zones, tax incentives and other initiatives to promote investment and public spending on research and development.
- Emphasizing human rights and social equity to promote the well-being of all people and to ensure that poor and marginalized people—including girls and women—have the freedom and voice to influence decisions that affect their lives.
- Promoting environmental sustainability and improving urban management. All countries, but especially the very poorest, need to protect the biodiversity and ecosystems that support life (clean water and air, soil nutrients, forests, fisheries, other key ecosystems) and ensure that their cities are well managed to provide livelihoods and safe environments.

Business Alone is Not Enough to Combat Poverty

http://hdr.undp.org/en/media/hdr03_complete.pdf

United Nations HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

In the 1980s and much of the 1990s many development efforts by international financial institutions and major donor countries were guided by the belief that market forces would lift all poor countries onto a path of self-sustaining economic growth. Globalization was seen as the great new motor of worldwide economic progress.

Poor countries were assumed to be able to achieve economic growth as long as they pursued good economic governance, based on the precepts of macroeconomic stability, liberalization of markets and privatization of economic activity. Economic growth, in turn, was expected to bring widespread improvements in health, education, nutrition, housing and access to basic infrastructure, such as water and sanitation—enabling countries to break free of poverty.

For countries stuck in poverty traps, growth will not come on its own, and domestic investments in human development will be inadequate. To break out of poverty traps, countries require greatly expanded donor financing to invest much more heavily in health, education, agriculture, water and sanitation and other key infrastructure even before economic growth occurs. Such investments are vital to create the conditions for sustained economic growth.

The message is simple: escaping poverty traps requires countries to reach certain critical thresholds—of health, education, infrastructure and governance—that will permit them to achieve takeoff to sustained economic growth. Dozens of poor countries fall below those thresholds, often through no fault of their own and for reasons utterly beyond their control. Here is where the Compact between rich and poor countries must come in. If a country pursues the right policies and commits to good governance in implementing those policies, the world community— international agencies, bilateral donors, private actors, civil society organizations—must help the country reach the critical thresholds through increased assistance.

The UN can Effectively Address Poverty

http://hdr.undp.org/en/media/hdr03_complete.pdf

United Nations HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

UN agencies have a vital role in helping countries meet the Millennium Development Goals, especially through expert assistance in designing and implementing development programmes. The United Nations has extensive expertise in every focus area of the Goals, including education, health, development planning, technological development, the rule of law, agriculture and many others. Each of the main UN agencies should develop a strategy for helping low-income, low-human-development countries—especially the priority ones— implement their national strategies.

UN Can Encourage Globalization

http://hdr.undp.org/en/media/hdr03_complete.pdf

United Nations HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

Though this optimistic vision has proven hugely inadequate for hundreds of millions of poor people, it still has considerable merit for much of the world. Despite protests against globalization in recent years, world market forces have contributed to economic growth—and poverty reduction—in China, India and dozens of other developing countries. Billions of people are enjoying higher living standards and longer lives as a result of global market forces and national policies that help harness those forces.

Those include policy changes by rich countries and much larger investments in infrastructure, disease control and environmental sustainability by poor countries, backed by more financial assistance from donor governments. Thus the need for the Millennium Development Compact: without it, poor countries will remain trapped in poverty, with low or negative economic growth.

Economic growth also works indirectly, reducing non-income poverty by raising government revenues and enabling increased public investments in education, basic infrastructure, disease control and health (particularly maternal and child health). In addition to reducing non-income poverty, these investments expedite economic growth by raising worker skills and productivity—and thus poor people's market incomes.

The UN has a Successful History

http://hdr.undp.org/en/media/hdr03_complete.pdf

United Nations HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

But UN goals have also achieved many successes— some spectacular. An immunization goal dramatically increased coverage, from 10–20% in 1980 to more than 70% in 1990 in more than 70 countries. And even when quantitative targets have not been achieved by their target dates, they have accelerated progress. For example, by 2000 life expectancy had been raised to at least 60 years in 124 countries. In the 1990s child mortality was reduced by a third or more in only 63 countries—but in more than 100 it was cut by a fifth. Thus global goals can raise ambitions and spur efforts (box 1.2).

Since the earliest days of the United Nations, its member governments have set global goals, with several recurring objectives. Ending colonialism was a major theme of the 1950s and 1960s. Accelerating economic growth and advancing other economic goals—such as employment, industrialization and international assistance—were major themes of the first, second and third development decades (1960s, 1970s, 1980s). Goals for literacy, schooling, health, survival and water and sanitation were set from the early 1960s into the 1990s, culminating in the 2000 Millennium Declaration.

UN goals are often dismissed as overly ambitious and rarely achieved.

Yet many goals have been achieved:

- Eradicating smallpox (World Health Organization declaration, 1965)— achieved in 1977.
- Immunizing 80% of infants (before their first birthday) against major childhood diseases by 1990 (World Health Organization declaration, 1974, refined in 1984)—achieved in about 70 countries, though the achievements have not been maintained in Sub-Saharan Africa and South Asia.
- Reducing children’s deaths from diarrhoea by half (World Summit for Children, 1990)— achieved in the 1990s.
- Cutting infant mortality to less than 120 per 1,000 live births by 2000 (World Summit for Children, 1990)—achieved in all but 12 developing countries.
- Eliminating polio by 2000 (World Summit for Children, 1990)— achieved in 110 countries. More than 175 countries are now polio free.

The UN has a Successful History

http://hdr.undp.org/en/media/hdr03_complete.pdf

United Nations HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

- Eliminating guinea-worm disease by 2000 (World Summit for Children, 1990)—by 2000 the number of reported cases had declined by 97%, and the disease has been eliminated in all but 14 countries. Significant progress has been made on many other goals even though they were not fully achieved:
- Accelerating economic growth in developing countries to 5% a year by the end of the 1960s and to 6% in the 1970s (UN resolution, 1961)— during the 1960s, 32 countries exceeded 5%, and during the 1970s, 25 countries exceeded 6%. (Though the record in the 1980s and 1990s was far more disappointing; see chapters 2 and 4.)
- Increasing developing countries' share in global industrial production (United Nations Industrial Development Organization declaration, 1975)— the share rose from 7% in 1970 to 20% in 2000, though these gains were limited to a small number of countries.
- Raising life expectancy to 60 years by 2000 (UN General Assembly resolution, 1980) achieved in 124 of the 173 countries that fell below this threshold (almost all of them among the least developed countries, with many in Sub-Saharan Africa).
- Reducing child mortality by at least one-third more during the 1990s (World Summit for Children, 1990)—63 countries achieved the goal, and in more than 100 countries child deaths were cut by 20%.
- Eliminating or reducing hunger and malnutrition by 2000 (Third Development Decade, 1980s; World Summit for Children, 1990)—in developing countries malnutrition dropped 17% between 1980 and 2000, but in Sub-Saharan Africa the number of undernourished people rose by 27 million in the 1990s.
- Achieving universal access to safe water by 1990, then by 2000 (Third Development Decade, 1980s; World Summit for Children, 1990)—access increased by 4.1 billion people, reaching 5 billion. Still, some goals have failed almost entirely:
- Increasing official development assistance to 0.7% of rich countries' GNP starting in 1970 (UN General Assembly resolution, 1970; International Development Strategy for the 1970s)— assistance has actually fallen as a share of GNP, and in the 1990s only four countries achieved the 0.7% target (Denmark, the Netherlands, Norway and Sweden).

The UN has a Successful History

http://hdr.undp.org/en/media/hdr03_complete.pdf

United Nations HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

- Allocating 0.15% of GNP for official development assistance to the least developed countries in the 1980s and 1990s (UN Conference on the Least Developed Countries, 1981)—8 of 16 members of the OECD’s Development Assistance Committee achieved the 0.15% target in the 1980s, but only 5 of 20 did so in the 1990s.
- Halving adult illiteracy by 2000 (World Summit for Children, 1990)— illiteracy fell from 25% in 1990 to just 21% in 2000.
- Eradicating malaria (World Health Organization declaration, 1965)— although there was success in Asia and Latin America, the “global” antimalaria programme of the 1960s largely bypassed Africa (due to the perceived intractability of the disease there) even though it suffers the largest malaria burden. Over the next several decades the international community devoted little attention and scant resources to malaria, leading to fragmented interventions.

Missing Numerical Targets does not mean that UN Failed

http://hdr.undp.org/en/media/hdr03_complete.pdf

United Nations HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

Whether the numerical target of a global goal was achieved is an important but inadequate measure of success, because it does not indicate whether setting the goal made a difference. In many cases enormous progress has been made even though numerical targets have not been reached—as with the International Drinking Water Supply and Sanitation Decade of the 1980s (UN General Assembly, 1980), during which hardly any developing country achieved universal coverage. But the setting of global goals drew attention to these needs, and in the 1980s access to safe water increased 130% and access to sanitation increased 266%, both much more than in the 1970s or 1990s. Yet the decade has often been viewed as a failure simply because the numerical targets were not met.

Once set, goals agreed to at the United Nations have been followed up in very different ways. At one extreme have been goals like accelerating economic growth, where there has been little mobilization for implementation by the international community. At the other extreme have been goals like eradicating smallpox, expanding immunizations and reducing child mortality, where the international community—led by the World Health Organization and the United Nations Children’s Fund—have supported country action.

Kyoto Protocol was Ineffective

THE KOREA HERALD

September 21, 2007 Friday

A turning point in global efforts on **climate** change

Keeping the sense of urgency to address **climate** change in mind, the international community has come to share a common view that a future **Climate** Change Framework should be instrumental in stabilizing greenhouse gases in the atmosphere. Despite its ambitious start, the Kyoto Protocol unfortunately has revealed a number of limitations and has failed to be effective in combating **climate** change. Above all, it failed to induce major emitters of greenhouse gas to join the global regulatory effort, regulating only 30 percent of global greenhouse gases emissions within its oversight structure.

The international negotiations for building up a Post-2012 **Climate** Change Framework will be launched at the U.N. **Climate** Change Convention Meeting scheduled for this December in Bali, Indonesia. In order for the Post-2012 Framework to be practical and effective against **climate** change, it needs to embrace all developed countries including the United States and Australia as well as major developing countries such as China and India. All stake-holders should voluntarily prepare and implement appropriate **climate** policies in accordance with their capacities and national circumstances. This will enable the Bali Meeting to successfully adopt a road map that provides clear guidance for Post-2012 negotiations.

<http://www.independent.co.uk/environment/climate-change/scientists-say-kyoto-protocol-is-outdated-failure-397801.html>

Scientists say Kyoto protocol is 'outdated failure'

By Steve Connor, Science Editor

Thursday, 25 October 2007

"The Kyoto protocol... as an instrument for achieving emissions reductions, has failed," it says. "It has produced no demonstrable reductions in emissions or even in anticipated emissions growth.

"Gwyn Prins, of the London School of Economics, and Steve Rayner, of Oxford University, criticise Kyoto for being the wrong tool for controlling emissions.

Too often, they say, its failure is blamed on the US and Australia for not signing up to it. They argue that the protocol was misconceived from the start because it was based on previous international treaties to protect the ozone layer, to stop acid rain and to control the proliferation of nuclear weapons.

"This borrowing simply failed to accommodate the complexity of the climate-change issue," they say. "Kyoto has failed... also because it has stifled discussion of alternative policy approaches

Efforts to Remedy Climate Change Already Occurring

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

Climate change scepticism was a flourishing industry. Today, the debate is over and climate scepticism is an increasingly fringe activity. The fourth assessment review of the International Panel on Climate Change has established an overwhelming scientific consensus that climate change is both real and man-made. Almost all governments are part of that consensus. Following the publication of the Stern Review on *The Economics of Climate Change*, most governments also accept that solutions to climate change are affordable—more affordable than the costs of inaction.

Political momentum is also gathering pace. Many governments are setting bold targets for cutting greenhouse gas emissions. Climate change mitigation has now registered firmly on the agenda of the Group of Eight (G8) industrialized nations. And dialogue between developed and developing countries is strengthening.

UN Money Spend on Environment Ineffective

http://www.cato.org/pubs/policy_report/cpr-19n1-6.html

The Cato Institute

Cato Policy Report, January/February 1997

The United Nations & Global Intervention

Even on nonmilitary matters, the UN's performance has been uninspiring. As the United Nations enters its sixth decade, the organization is plagued by problems of mismanagement and corruption. Much of the UN's energy and funds has been devoted to pushing such pernicious measures as the Law of the Sea Treaty and holding pretentious summits on the environment, world population, and other issues.

Con Evidence

Climate Change Information

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

Global warming is already happening. World temperatures have increased by around 0.7C since the advent of the industrial era—and the rate of increase is quickening. There is overwhelming scientific evidence linking the rise in temperature to increases in the concentration of greenhouse gases in the Earth's atmosphere. There is no hard-and-fast line separating 'dangerous' from 'safe' climate change. Many of the world's poorest people and most fragile ecological systems are already being forced to adapt to dangerous climate change. However, beyond a threshold of 2C the risk of large-scale human development setbacks and irreversible ecological catastrophes will increase sharply.

Business-as-usual trajectories will take the world well beyond that threshold. To have a 50:50 chance of limiting temperature increase to 2C above preindustrial levels will require stabilization of greenhouse gases at concentrations of around 450ppm CO₂e. Stabilization at 550ppm CO₂e would raise the probability of breaching the threshold to 80 percent. In their personal lives, few people would knowingly undertake activities with a serious injury risk of this order of magnitude. Yet as a global community, we are taking far greater risks with planet Earth. Scenarios for the 21st Century point to potential stabilization points in excess of 750ppm CO₂e, with possible temperature changes in excess of 5ÅãC.

Temperature scenarios do not capture the potential human development impacts. Average changes in temperature on the scale projected in business-as-usual scenarios will trigger large scale reversals in human development, undermining livelihoods and causing mass displacement. By the end of the 21st Century, the spectre of catastrophic ecological impacts could have moved from the bounds of the possible to the probable. Recent evidence on the accelerated collapse of ice sheets in the Antarctic and Greenland, acidification of the oceans, the retreat of rainforest systems and melting of Arctic permafrost all have the potential—separately or in interaction—to lead to 'tipping points'.

Countries vary widely in their contribution to the emissions that are driving up atmospheric stocks of greenhouse gases. With 15 percent of world population, rich countries account for almost half of emissions of CO₂. High growth in China and India is leading to a gradual convergence in 'aggregate' emissions. However, per capita carbon footprint convergence is more limited. The carbon footprint of the United States is five times that of China and over 15 times that of India. In Ethiopia, the average per capita carbon footprint is 0.1 tonnes of CO₂ compared with 20 tonnes in Canada (figure 2 and map 1). What does the world have to do to get on an emissions trajectory that avoids dangerous climate change? We address that question by drawing upon climate modeling simulations. These simulations define a carbon budget for the 21st Century.

Climate Change Information

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

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If everything else were equal, the global carbon budget for energy-related emissions would amount to around 14.5 Gt CO₂ annually. Current emissions are running at twice this level. The bad news is that emissions are on a rising trend. The upshot: the carbon budget for the entire 21st Century could expire as early as 2032 (figure 3). In effect, we are running up unsustainable ecological debts that will lock future generations into dangerous climate change.

Changing this picture will require deep adjustments. If the world were a single country it would have to cut emissions of greenhouse gases by half to 2050 relative to 1990 levels, with sustained reductions to the end of the 21st Century (figure 4). However, the world is not a single country. Using plausible assumptions, we estimate that avoiding dangerous climate change will require rich nations to cut emissions by at least 80 percent, with cuts of 30 percent by 2020. Emissions from developing countries would peak around 2020, with cuts of 20 percent by 2050.

Global warming is evidence that we are overloading the carrying capacity of the Earth's atmosphere. Stocks of greenhouse gases that trap heat in the Earth's atmosphere are accumulating at an unprecedented rate. Current concentrations have reached 380 parts per million (ppm). Climate change provides a potent reminder of the one thing that we share in common. It is called planet Earth. All nations and all people share the same atmosphere **summary** human development report **2007/2008** of carbon dioxide equivalent (CO₂e) exceeding the natural range of the last 650,000 years. In the course of the 21st Century, average global temperatures could increase by more than 5 C (figure 1).

To put that figure in context, it is equivalent to the change in temperature since the last ice age—an era in which much of Europe and North America was under more than one kilometre of ice. The threshold for dangerous climate change is an increase of around 2°C. This threshold broadly defines the point at which rapid reversals in human development and a drift towards irreversible ecological damage would become very difficult to avoid. Behind the numbers and the measurement is a simple overwhelming fact. We are recklessly mismanaging our ecological interdependence. In effect, our generation is running up an unsustainable ecological debt that future generations will inherit. We are drawing down the stock of environmental capital of our children. Dangerous climate change will represent the adjustment to an unsustainable level of greenhouse gas emissions.

Climate Change Information

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

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Table 1 Carbon footprints at OECD levels would require more than one planet a

- a. As measured in sustainable carbon budgets.
- b. Refers to global emissions if every country in the world emitted at the same per capita level as the specified country.
- c. Based on a sustainable emissions pathway of 14.5 Gt CO₂ per year.
- d. Current global carbon footprint.

Source: HDRO calculations based on Indicator Table 24. **summary** human development report **2007/2008 11** carbon dioxide (CO₂) and other greenhouse gases stay in the atmosphere for a long time. There are no rapid rewind buttons for running down stocks. People living at the start of the 22nd Century will live with the consequences of our emissions, just as we are living with the consequences of emissions since the industrial revolution. Time-lags are an important consequence of climate change inertia. Even stringent mitigation measures will not materially affect average temperatures changes until the mid-2030s—and temperatures will not peak until 2050. In other words, for the first half of the 21st Century the world in general, and the world's poor in particular, will have to live with climate change to which we are already committed.

The cumulative nature of the climate change has wide-ranging implications. Perhaps the most important is that carbon cycles do not follow political cycles. The current generation of political leaders cannot solve the climate change problem alone because a sustainable emissions pathway has to be followed over decades, not years. However, it has the power either to prise open the window of opportunity for future generations, or to close that window.

Urgency is the second feature of the climate change challenge—and a corollary of inertia. In many other areas of international relations, inaction or delayed agreements have limited costs. International trade is an example. This is an area in which negotiations can break down and resume without inflicting long-term damage on the underlying system—as witnessed by the unhappy history of the Doha Round.

With climate change, every year of delay in reaching an agreement to cut emissions adds to greenhouse gas stocks, locking the future into a higher temperature. In the seven years since the Doha Round started, to continue the analogy, stocks of greenhouse gases have increased by around 12 ppm of CO₂e—and those stocks will still be there when the trade rounds of the 22nd Century get underway.

Climate Change Information

<http://www.epa.gov/climatechange/science/futurecc.html>

U.S. Environmental Protection Agency

Greenhouse gas concentrations in the atmosphere will increase during the next century unless [greenhouse gas emissions](#) decrease substantially from present levels. Increased greenhouse gas concentrations are very likely to raise the Earth's average temperature, influence precipitation and some storm patterns as well as raise sea levels ([IPCC, 2007](#)). The magnitude of these changes, however, is uncertain.

The amount and speed of future climate change will ultimately depend on:

- Whether greenhouse gases and aerosol concentrations increase, stay the same or decrease.
- How strongly features of the climate (e.g. temperature, precipitation and sea level) respond to changes in greenhouse gas and aerosol concentrations.
- How much the climate varies as a result of natural influences (e.g. from volcanic activity and changes in the sun 's intensity) and its internal variability (referring to random changes in the circulation of the atmosphere and oceans).

Climate Change Information

<http://www.epa.gov/climatechange/science/futuretc.html>

U.S. Environmental Protection Agency

Most climate change scenarios project that greenhouse gas concentrations will increase through 2100 with a continued increase in average global temperatures ([IPCC 2007](#)). How much and how quickly the Earth's temperature will increase remains unknown given the uncertainty of future greenhouse gas, aerosol emissions and the Earth's response to changing conditions. In addition, natural influences, such as changes in the sun and volcanic activity, may affect future temperature, although the extent is unknown because the timing and intensity of natural influences cannot be predicted.

Due to uncertainties about future emissions and concentrations of greenhouse gases, their net warming effect in the atmosphere, and the response of the climate system, estimates of future temperature change are uncertain. With these caveats in mind, the IPCC made the following projections of future warming ([IPCC, 2007](#)):

- The average surface temperature of the Earth is likely to increase by 2 to 11.5°F (1.1-6.4°C) by the end of the 21st century, relative to 1980-1990, with a best estimate of 3.2 to 7.2°F (1.8-4.0°C) (see Figure 1). The average rate of warming over each inhabited continent is very likely to be at least twice as large as that experienced during the 20th century.
- Warming will not be evenly distributed around the globe (see Figure 2):
 - Land areas will warm more than oceans in part due to water's ability to store heat.
 - High latitudes will warm more than low latitudes in part due to positive feedback effects from melting ice (as discussed above).
 - Most of North America; all of Africa, Europe, northern and central Asia; and most of Central and South America are likely to warm more than the global average. Projections suggest that the warming will be close to the global average in south Asia, Australia and New Zealand, and southern South America.
- The warming will differ by season, with winters warming more than summers in most areas.
- For additional explanatory information about some of the projected spatial and seasonal differences in warming, see the NOAA Geophysical Fluid Dynamics Laboratory (GFDL) fact sheet "[Patterns of Global Warming](#)" (PDF, 1 pp., 15 KB, [About PDF](#))

Climate Change Information

<http://www.epa.gov/climatechange/emissions/index.html#ggo>

U.S. Environmental Protection Agency

Greenhouse Gas Overview

Gases that trap heat in the atmosphere are often called greenhouse gases. This section of the EPA Climate Change Site provides information and data on emissions of greenhouse gases to Earth's atmosphere, and also the removal of greenhouse gases from the atmosphere. For more information on the science of climate change, please visit EPA's [climate change science home page](#).

Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are:

- **[Carbon Dioxide \(CO₂\)](#)**: Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is also removed from the atmosphere (or “sequestered”) when it is absorbed by plants as part of the biological carbon cycle.
- **[Methane \(CH₄\)](#)**: Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- **[Nitrous Oxide \(N₂O\)](#)**: Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- **[Fluorinated Gases](#)**: Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for [ozone-depleting substances](#) (i.e., CFCs, HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases (“High GWP gases”).

Effects of Climate Change

http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

United Nations Human Development Report 2007/2008

Climate change is now a scientifically established fact. The exact impact of greenhouse gas emission is not easy to forecast and there is a lot of uncertainty in the science when it comes to predictive capability. But we now know enough to recognize that there are large risks, potentially catastrophic ones, including the melting of ice-sheets on Greenland and the West Antarctic (which would place many countries under water) and changes in the course of the Gulf Stream that would bring about drastic climatic changes.

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

Vulnerability to climate shocks is unequally distributed. Hurricane Katrina provided a potent reminder of human frailty in the face of climate change even in the richest countries—especially when the impacts interact with institutionalized inequality. Across the developed world, public concern over exposure to extreme climate risks is mounting. With every flood, storm and heat wave, that concern is increasing. Yet climate disasters are heavily concentrated in poor countries. Some 262 million people were affected by climate disasters annually from 2000 to 2004, over 98 percent of them in the developing world. In the Organisation for Economic Co-operation and Development (OECD) countries one in 1,500 people was affected by climate disaster. The comparable figure for developing countries is one in 19—a risk differential of 79.

Agricultural production and food security. Climate change will affect rainfall, temperature and water availability for agriculture in vulnerable areas. For example, drought affected areas in sub-Saharan Africa could expand by 60–90 million hectares, with dry land zones suffering losses of US\$26 billion by 2060 (2003 prices), a figure in excess of bilateral aid to the region. Other developing regions—including Latin America and South Asia—will also experience losses in agricultural production, undermining efforts to cut rural poverty. The additional number affected by malnutrition could rise to 600 million by 2080 (figure 6).

- *Water stress and water insecurity.* Changed run-off patterns and glacial melt will add to ecological stress, compromising flows of water for irrigation and human settlements in the process (figure 7). An additional 1.8 billion people could be living in a water scarce environment by 2080. Central Asia, Northern China and the northern part of South Asia face immense vulnerabilities associated with the retreat of glaciers—at a rate of 10–15 meters a year in the Himalayas. Seven of Asia's great river systems will experience an increase in flows over the short-term, followed by a decline as glaciers melt. The Andean region also faces imminent water security threats with the collapse of tropical glaciers. Several countries in already highly water-stressed regions such as the Middle East could experience deep losses in water availability.

Effects of Climate Change

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

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- *Rising sea levels and exposure to climate disasters.* Sea levels could rise rapidly with accelerated ice sheet disintegration. Global temperature increases of 3–4°C could result in 330 million people being permanently or temporarily displaced through flooding. Over 70 million people in Bangladesh, 6 million in Lower Egypt and 22 million in Viet Nam could be affected. Small island states in the Caribbean and Pacific could suffer catastrophic damage. Warming seas will also fuel more intense tropical storms. With over 344 million people currently exposed to tropical cyclones, more intensive storms could have devastating consequences for a large group of countries. The 1 billion people currently living in urban slums on fragile hillsides or flood prone river banks face acute vulnerabilities.

Human health. Rich countries are already preparing public health systems to deal with future climate shocks, such as the 2003 European heatwave and more extreme summer and winter conditions. However, the greatest health impacts will be felt in developing countries because of high levels of poverty and the limited capacity of public health systems to respond. Major killer diseases could expand their coverage. For example, an additional 220–400 million people could be exposed to malaria—a disease that already claims around 1 million lives annually. Dengue fever is already in evidence at higher levels of elevation than has previously been the case, especially in Latin America and parts of East Asia. Climate change could further expand the reach of the disease.

<http://www.epa.gov/climatechange/science/futurepsc.html>

U.S. Environmental Protection Agency

Mid-latitude storm tracks are projected to shift toward the poles, with increased intensity in some areas but reduced frequency. Tropical storms and hurricanes are likely to become more intense, produce stronger peak winds, and produce increased rainfall over some areas due to warming sea surface temperatures (which can energize these storms) (IPCC, 2007). The relationship between sea surface temperatures and the *frequency* of tropical storms is less clear. There is currently no scientific consensus on how future climate change is likely to affect the frequency of tropical storms in any part of the world where they occur. (WMO, 2006)

Effects of Climate Change

<http://www.epa.gov/climatechange/science/futureslc.html>

U.S. Environmental Protection Agency

Higher temperatures are expected to raise sea level by:

- expanding ocean water,
- melting mountain glaciers and small ice caps,
- causing portions of the coastal section of the Greenland and Antarctic ice sheets to melt or slide into the ocean.

Higher temperatures are also likely to increase the amount of snowfall over central Greenland and Antarctica. The higher snowfall is likely to offset part of the sea level rise from other factors because the additional snow is composed of water that would otherwise be in the ocean.

Considering all of these influences, the Intergovernmental Panel on Climate Change (IPCC) estimates that the global average sea level will rise by 7.2 to 23.6 inches (18-59 cm or 0.18-0.59m) by 2100 (see Figure 1) relative to 1980-1999 under a range of scenarios.

According to the IPCC, current model projections indicate substantial variability in future sea level rise between different locations. Some locations could experience sea level rise higher than the global average projection, while others could have a fall in sea level. The same factors that [currently](#) cause sea level to rise more rapidly along the Mid-Atlantic and Gulf Coasts, and less rapidly in parts of the Pacific Northwest, are likely to continue. Changes in winds, atmospheric pressure and ocean currents will also cause regional variations in sea level rise - but those variations cannot be reliably predicted.

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/health.html>

U.S. Environmental Protection Agency

Throughout the world, the prevalence of some diseases and other threats to human health depend largely on local climate. Extreme temperatures can lead directly to loss of life, while climate-related disturbances in ecological systems, such as changes in the range of infective parasites, can indirectly impact the incidence of serious infectious diseases. In addition, warm temperatures can increase air and water pollution, which in turn harm human health.

Human health is strongly affected by social, political, economic, environmental and technological factors, including urbanization, affluence, scientific developments, individual behavior and individual vulnerability (e.g., genetic makeup, nutritional status, emotional well-being, age, gender and economic status). The extent and nature of climate change impacts on human health vary by region, by relative vulnerability of population groups, by the extent and duration of exposure to climate change itself and by society's ability to adapt to or cope with the change.

The Intergovernmental Panel on Climate Change ([IPCC, 2007](#)) concluded:

Human beings are exposed to climate change through changing weather patterns (for example, more intense and frequent extreme events) and indirectly through changes in water, air, food quality and quantity, ecosystems, agriculture, and economy. At this early stage the effects are small but are projected to progressively increase in all countries and regions.

Given the complexity of factors that influence human health, assessing health impacts related to climate change poses a difficult challenge. Furthermore, climate change is expected to bring a few benefits to health, including fewer deaths due to exposure to cold. Nonetheless, the IPCC has concluded that, overall (globally), negative climate-related health impacts are expected to outweigh positive health impacts during this century ([IPCC, 2007](#)). At the same time, the quality of medical care and public health systems in the United States may lessen climate impacts on human health within the U.S.

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/health.html>

U.S. Environmental Protection Agency

Direct Temperature Effects

Climate change may directly affect human health through increases in average temperature. Such increases may lead to more extreme heat waves during the summer while producing less extreme cold spells during the winter. Rising average temperatures are predicted to increase the incidence of heat waves and hot extremes. In the United States, Chicago is projected to experience 25 percent more frequent heat waves and Los Angeles a four-to-eight-fold increase in heat wave days by the end of the century ([IPCC, 2007](#)). Particular segments of the population such as those with heart problems, asthma, the elderly, the very young and the homeless can be especially vulnerable to extreme heat.

Extreme Events

[Extreme weather events](#) can be destructive to human health and well-being. The extent to which climate change may affect the frequency and severity of these events, such as hurricanes and extreme heat and floods, is being investigated by the [U.S. Climate Change Science Program](#). An increase in the frequency of extreme events may result in more event-related deaths, injuries, infectious diseases, and stress-related disorders.

Climate-Sensitive Diseases

Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects. These "vector-borne" diseases include malaria, dengue fever, yellow fever, and encephalitis. Also, algal blooms could occur more frequently as temperatures warm — particularly in areas with polluted waters — in which case diseases (such as cholera) that tend to accompany algal blooms could become more frequent.

Higher temperatures, in combination with favorable rainfall patterns, could prolong disease transmission seasons in some locations where certain diseases already exist. In other locations, climate change will decrease transmission via reductions in rainfall or temperatures that are too high for transmission. For example, temperature and humidity levels must be sufficient for certain disease-carrying vectors, such as ticks that carry Lyme disease, to thrive. And climate change could push temperature and humidity levels either towards or away from optimum conditions for the survival rate of ticks.

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/health.html>

U.S. Environmental Protection Agency

Though average U.S. and global temperatures are expected to continue to rise, the [potential for an increase in the spread of diseases](#) will depend not only on climatic but also on non-climatic factors, primarily the effectiveness of the public health system ([WHO, 2003](#)).

The IPCC has noted that the global population at risk from vector-borne malaria will increase by between 220 million and 400 million in the next century. While most of the increase is predicted to occur in Africa, some increased risk is projected in Britain, Australia, India and Portugal ([IPCC, 2007](#)).

Tick-borne Lyme disease also may also expand its range in Canada. However, socioeconomic factors such as public health measures will play a large role in determining the existence or extent of such infections. Water-borne diseases may increase where warmer air and water temperatures combine with heavy runoff from agricultural and urban surfaces, but may be largely contained by standard water-treatment practices.

Air Quality

Climate change is expected to contribute to some air quality problems ([IPCC, 2007](#)). Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog ([ground-level ozone](#)) events and [particulate air pollution](#).

Ground-level ozone can damage lung tissue, and is especially harmful for those with asthma and other chronic lung diseases. Sunlight and high temperatures, combined with other pollutants such as nitrogen oxides and volatile organic compounds, can cause ground-level ozone to increase. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect is uncertain. For other pollutants, the effects of climate change and/or weather are less well studied and results vary by region ([IPCC, 2007](#)).

Another pollutant of concern is "[particulate matter](#)," also known as particle pollution or PM. Particulate matter is a complex mixture of extremely small particles and liquid droplets. When breathed in, these particles can reach the deepest regions of the lungs. Exposure to particle pollution is linked to a variety of significant health problems. Particle pollution also is the main cause of visibility impairment (haze) in the nation's cities and national parks. Climate change may indirectly affect the concentration of PM pollution in the air by affecting natural or "biogenic" sources of PM such as wildfires and dust from dry soils.

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/agriculture.html>

U.S. Environmental Protection Agency

Agriculture is highly sensitive to climate variability and weather extremes, such as droughts, floods and severe storms. The forces that shape our climate are also critical to farm productivity. Human activity has already changed atmospheric characteristics such as temperature, rainfall, levels of carbon dioxide (CO₂) and ground level ozone. The scientific community expects such trends to continue. While food production may benefit from a warmer climate, the increased potential for droughts, floods and heat waves will pose challenges for farmers. Additionally, the enduring changes in climate, water supply and soil moisture could make it less feasible to continue crop production in certain regions.

The Intergovernmental Panel on Climate Change ([IPCC, 2007](#)) concluded:

Recent studies indicate that increased frequency of heat stress, droughts and floods negatively affect crop yields and livestock beyond the impacts of mean climate change, creating the possibility for surprises, with impacts that are larger, and occurring earlier, than predicted using changes in mean variables alone. This is especially the case for subsistence sectors at low latitudes. Climate variability and change also modify the risks of fires, pest and pathogen outbreak, negatively affecting food, fiber and forestry.

Climate Factors

Several factors directly connect climate change and agricultural productivity:

- Average temperature increase
- Change in rainfall amount and patterns
- Rising atmospheric concentrations of CO₂
- Pollution levels such as tropospheric ozone
- Change in climatic variability and extreme events

Most agricultural impact studies have considered the effects of one or two aspects of climate change on a particular farming activity. Few, however, have considered the full set of anticipated shifts and their impact on agricultural production across the country.

Average temperature increase: An increase in average temperature can 1) lengthen the growing season in regions with a relatively cool spring and fall; 2) adversely affect crops in regions where summer heat already limits production; 3) increase soil evaporation rates, and 4) increase the chances of severe droughts.

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/forests.html>

U.S. Environmental Protection Agency

Climate Factors

In general, forests are sensitive to climatic variability and change. Climatic factors that influence forest health—temperature, rainfall, atmospheric levels of carbon dioxide (CO₂) and other greenhouse gases and extreme weather and fire events—are changing and are expected to continue changing due to human activities.

The following climate factors are likely to play an important role in determining future forest conditions:

- Air temperature
- Precipitation amount and seasonal distribution
- Atmospheric CO₂ concentrations
- Frequency and severity of wildfire events
- Climatic variability and the frequency and severity of extreme events
- Indirect effects on pollution levels such as tropospheric ozone

<http://www.epa.gov/climatechange/effects/eco.html>

U.S. Environmental Protection Agency

In various regions across the world, some high-altitude and high-latitude ecosystems have already been affected by changes in climate. The Intergovernmental Panel on Climate Change (IPCC) reviewed relevant published studies of biological systems and concluded that 20 percent to 30 percent of species assessed may be at risk of extinction from climate change impacts within this century if global mean temperatures exceed 2-3 °C (3.6-5.4 °F) relative to pre-industrial levels ([IPCC, 2007](#)).

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/coastal/index.html>

U.S. Environmental Protection Agency

Higher temperatures are expected to further raise sea level by expanding ocean water, melting mountain glaciers and small ice caps, and causing portions of Greenland and the Antarctic [ice sheets to melt](#). The International Panel on Climate Change (IPCC) estimates that the global average sea level will rise between 0.6 and 2 feet (0.18 to 0.59 meters) in the next century ([IPCC, 2007](#)).

Rising sea levels inundate wetlands and other low-lying lands, erode beaches, intensify flooding, and increase the salinity of rivers, bays, and groundwater tables. Some of these effects may be further compounded by other effects of a changing climate. Additionally, measures that people take to protect private property from rising sea level may have adverse effects on the environment and on public uses of beaches and waterways. Some property owners and state and local governments are already starting to take measures to prepare for the consequences of rising sea level.

Coastal wetland ecosystems, such as salt marshes and mangroves are particularly vulnerable to rising sea level because they are generally within a few feet of sea level ([IPCC, 2007](#)). [Wetlands](#) provide habitat for many species, play a key role in nutrient uptake, serve as the basis for many communities' economic livelihoods, provide recreational opportunities, and protect local areas from flooding.

As the sea rises, the outer boundary of these wetlands will erode, and new wetlands will form inland as previously dry areas are flooded by the higher water levels. The amount of newly created wetlands, however, could be much smaller than the lost area of wetlands - especially in developed areas protected with bulkheads, dikes, and other structures that keep new wetlands from forming inland. The IPCC suggests that by 2080, sea level rise could convert as much as 33 percent of the world's coastal wetlands to open water. ([IPCC, 2007](#)). Tidal wetlands are generally found between sea level and the highest tide over the monthly lunar cycle. As a result, areas with small tide ranges are the most vulnerable. An EPA Report to Congress estimated that a two foot rise in sea level could eliminate 17-43 percent of U.S. wetlands, with more than half the loss taking place in Louisiana ([EPA, 1989](#)).

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/coastal/index.html>

U.S. Environmental Protection Agency

Nationwide, about 5000 square miles of dry land are within two feet of high tide. Although the majority of this land is currently undeveloped, many coastal counties are growing rapidly. Land within a few feet above the tides could be inundated by rising sea level, unless additional dikes and bulkheads are constructed. [A two foot rise in sea level would eliminate approximately 10,000 square miles of land \(PDF\)](#) (26 pp., 267 KB, [About PDF](#)) including current wetlands and newly inundated dry land, an area equal to the combined size of Massachusetts and Delaware ([EPA, 1989](#)).

Some of the most economically important vulnerable areas are recreational resorts on the coastal barriers of the Atlantic and Gulf coasts. In many cases, the ocean-front block of these islands is 5 to 10 feet above high tide; but the bay sides are often less than two feet above high water and regularly flooded (see [USGS's 7.5-minute map series](#)). Erosion threatens the high ocean sides of these densely developed islands and is generally viewed as a more immediate problem than inundation of their low bay sides. Many ocean shores are currently eroding 1 to 4 feet per year ([FEMA, 2000](#)).

Storms and Flooding

Sea level rise also increases the vulnerability of coastal areas to flooding during storms for several reasons. First, a given storm surge from a hurricane or northeaster builds on top of a higher base of water. Considering only this effect, a [Report to Congress by FEMA \(1991\)](#) estimated that existing development in the U.S. Coastal Zone would experience a 36-58 percent increase in annual damages for a 1-foot rise in sea level, and a 102-200 percent increase for a 3-foot rise. Shore erosion also increases vulnerability to storms, by removing the beaches and dunes that would otherwise protect coastal property from storm waves ([FEMA 2000](#)). Sea level rise also increases coastal flooding from rainstorms, because low areas drain more slowly as sea level rises.

Other impacts of climate change may further enhance or mitigate coastal flooding. Flooding from rainstorms may become worse if higher temperatures lead to increasing rainfall intensity during severe storms. [An increase in the intensity of tropical storms](#) would increase flood and wind damages.

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/usregions.html>

U.S. Environmental Protection Agency

The following list, while not comprehensive, provides illustrative examples of some of the higher likelihood effects of climate change in different parts of the United States ([IPCC, 2007](#)):

In the Northeast:

- Northward shifts in the ranges of plant and animal species resulting from warmer temperatures
- Coastal erosion, loss of wetland habitat, increased risk from storm surges from sea level rise
- Reduced winter recreation (skiing); increased warm season activities
- Higher summer heat and increase in heat-related morbidity and mortality, especially in urban areas; reduced winter cold stress with associated decrease in cold-related mortality
- Increase vulnerability of infrastructure (e.g. roads and utilities) from extreme events such as coastal flooding

In the Southeast and Gulf Coast:

- Increased coastal erosion including loss of barrier islands and wetlands
- Intense coastal zone development places coastal floodplains at risk to flooding from sea level rise, storm surge, and extreme precipitation events
- Changing forest character as disturbances (e.g., fire and insect outbreaks) increase
- Higher summer heat; reduced winter cold stress

In the Midwest and Great Lakes:

- Lowered lake and river levels, resulting from warmer temperatures and increased evaporation, impact recreation and shipping
- Warming lake and river temperatures leading to reductions in many fish stocks
- Decrease in water quality leading to habitat loss and eutrophication
- Increased agricultural productivity in many regions resulting from increased carbon dioxide and warmer temperatures
- Higher summer heat and increase in heat-related morbidity and mortality, especially in urban areas; reduced winter cold stress with associated decrease in cold-related mortality

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/usregions.html>

U.S. Environmental Protection Agency

In the Great Plains:

- Agricultural productivity shifts northward as the potential for drought increases
- Intensified springtime flood and summertime drought cycles
- Higher summer heat; reduced winter cold stress

In the West:

- Changes in natural ecosystems resulting from higher temperatures and possibly intensified winter precipitation
- Earlier snowmelt and significant reductions in snowpack stressing some reservoir systems
- Decreased yields of crops that are already near climate thresholds such as California wine grapes
- Increased stress on groundwater systems leading to decreased recharge
- Higher summer heat; reduced winter cold stress
- Increased wildfire potential

Alaska:

- Forest disruption resulting from warming and increased pest outbreaks
- General increase in biological production from warming; but reduced sea ice and warming disrupts polar bears, marine mammals, and other wildlife
- Damage to infrastructure resulting from permafrost melting
- Retreating sea ice and earlier snowmelt alter native people's traditional life styles
- Opportunities for warm season activities increase

Effects of Climate Change

<http://www.epa.gov/climatechange/effects/extreme.html>

U.S. Environmental Protection Agency

Our current level of understanding, as summarized in the Intergovernmental Panel on Climate Change Fourth Assessment Report ([IPCC, 2007](#)), is as follows:

Since 1950, the number of heat waves has increased and widespread increases have occurred in the numbers of warm nights. The extent of regions affected by droughts has also increased as precipitation over land has marginally decreased while evaporation has increased due to warmer conditions. Generally, numbers of heavy daily precipitation events that lead to flooding have increased, but not everywhere. Tropical storm and hurricane frequencies vary considerably from year to year, but evidence suggests substantial increases in intensity and duration since the 1970s. In the extratropics, variations in tracks and intensity of storms reflect variations in major features of the atmospheric circulation, such as the North Atlantic Oscillation.

Need to Act on Climate Change Now

http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

United Nations Human Development Report 2007/2008

Prudence and care about the future of our children and their children requires that we act now. This is a form of insurance against possibly very large losses. The fact that we do not know the probability of such losses or their likely exact timing is not an argument for not taking insurance. We know the danger exists. We know the damage caused by greenhouse gas emissions is irreversible for a long time. We know it is growing with every day of inaction. Even if we were living in a world where all people had the same standard of living and were impacted by climate change in the same way, we would still have to act. If the world were a single country, with its citizens all enjoying similar income levels and all exposed more or less to the same effects of climate change, the threat of global warming could still lead to substantial damage to human well-being and prosperity by the end of this century.

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

Tomorrow, it will be humanity as a whole that faces the risks that come with global warming. The rapid build-up of greenhouse gases in the Earth's atmosphere is fundamentally changing the climate forecast for future generations. We are edging towards 'tipping points'. These are unpredictable and non-linear events that could open the door to ecological catastrophes—accelerated collapse of the Earth's great ice sheets being a case in point—that will transform patterns of human settlement and undermine the viability of national economies. Our generation may not live to see the consequences. But our children and their grandchildren will have no alternative but to live with them. Aversion to poverty and inequality today, and to catastrophic risk in the future provides a strong rationale for urgent action.

Some commentators continue to cite uncertainty over future outcomes as grounds for a limited response to climate change. That starting point is flawed. There are indeed many unknowns: climate science deals in probability and risk, not in certainties. However, if we value the well-being of our children and grandchildren, even small risks of catastrophic events merit an insurance-based precautionary approach. And uncertainty cuts both ways: the risks could be greater than we currently understand.

Climate change demands urgent action now to address a threat to two constituencies with a weak political voice: the world's poor and future generations. It raises profoundly important questions about social justice, equity and human rights across countries and generations.

Need to Act on Climate Change Now

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

In the *Human Development Report 2007/2008* we address these questions. Our starting point is that the battle against climate change can—and must—be won. The world lacks neither the financial resources nor the technological capabilities to act. If we fail to prevent climate change it will be because we were unable to foster the political will to cooperate.

Such an outcome would represent not just a failure of political imagination and leadership, but a moral failure on a scale unparalleled in history. During the 20th Century failures of political leadership led to two world wars. Millions of people paid a high price for what were avoidable catastrophes. Dangerous climate change is the avoidable catastrophe of the 21st Century and beyond. Future generations will pass a harsh judgement on a generation that looked at the evidence on climate change, understood the consequences and then continued on a path that consigned millions of the world's most vulnerable people to poverty and exposed future generations to the risk of ecological disaster.

Confronted with a problem as daunting as climate change, resigned pessimism might seem a justified response. However, resigned pessimism is a luxury that the world's poor and future generations cannot afford—and there is an alternative. There is cause for optimism. Five years ago, the world was still engaged in debating whether or not climate change was taking place, and whether or not it was human-induced.

Environmental Protection Needed for Long Term

http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

United Nations Human Development Report 2007/2008

Several things can be said at the outset: First, non-marginal changes are needed, given the path the world is on. We need big changes and ambitious new policies. Second, there will be significant short term costs. We have to invest in limiting climate change. There will be large net benefits over time, but at the beginning, like with every investment, we must be willing to incur the costs. This will be a challenge for democratic governance: political systems will have to agree to pay the early costs to reap the long term gains. Leadership will require looking beyond electoral cycles.

We are not too pessimistic. In the fight against the much higher inflation rates of the distant past, democracies did come up with the institutions such as more autonomous central banks and policy pre-commitments that allowed much lower inflation to be achieved despite the short term temptations of resorting to the printing press. The same has to happen with climate and the environment: societies will have to pre-commit and forego short term gratification for longer-term well being.

Poor People are Most Affected by the Environment

<http://hdr.undp.org/en/media/hdr03-summary.pdf>

HUMAN DEVELOPMENT REPORT 2003

United Nations Millennium Development Goals: A compact among nations to end human poverty

Ensuring environmental sustainability (Goal 7) will require managing ecosystems so that they can provide services that sustain human livelihoods. It will also be an important part of reaching the other Goals

Soil degradation affects nearly 2 billion hectares, damaging the livelihoods of up to 1 billion people living on drylands. Around 70% of commercial fisheries are either fully or overexploited, and 1.7 billion people—a third of the developing world's population—live in countries facing water stress. There is an uneven geography of consumption, environmental damage and human impact.

Rich countries generate most of the world's environmental pollution and deplete many of its natural resources. Key examples include depletion of the world's fisheries and emissions of greenhouse gases that cause climate change, both of which are tied to unsustainable consumption patterns by rich people and countries. In rich countries per capita carbon dioxide emissions are 12.4 tonnes—while in middle-income countries they are 3.2 tonnes and in low-income countries, 1.0 tonne. Poor people are most vulnerable to environmental shocks and stresses such as the anticipated impacts of global climate change.

Reversing these negative trends is an end in itself. But it would also contribute to the other Goals because the health, incomes and opportunities of poor people are heavily influenced by the depletion of natural resources. Some 900 million poor people living in rural areas depend on natural products for much of their livelihoods. Up to a fifth of the disease burden in poor countries may be linked to environmental risk factors. Climate change could damage agricultural productivity in poor countries and increase the risks, exposing them to such shocks as floods.

Poor People are Most Affected by the Environment

http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

United Nations Human Development Report 2007/2008

In reality, the world is a heterogeneous place: people have unequal incomes and wealth and climate change will affect regions very differently. This is, for us, the most compelling reason to act rapidly. Climate change is already starting to affect some of the poorest and most vulnerable communities around the world. A worldwide average 3 centigrade increase (compared to preindustrial temperatures) over the coming decades would result in a range of localized increases that could reach twice as high in some locations. The effect that increased droughts, extreme weather events, tropical storms and sea level rises will have on large parts of Africa, on many small island states and coastal zones will be inflicted in our lifetimes. In terms of aggregate world GDP, these short term effects may not be large. But for some of the world's poorest people, the consequences could be apocalyptic. In the long run climate change is a massive threat to human development and in some places it is already undermining the international community's efforts to reduce extreme poverty.

Violent conflicts, insufficient resources, lack of coordination and weak policies continue to slow down development progress, particularly in Africa. Nonetheless in many countries there have been real advances. For instance, VietNam has been able to halve poverty and achieve universal primary education way ahead of the 2015 target. Mozambique has also managed to significantly reduce poverty and increase school enrollment as well as improving the rates of child and maternal mortality.

This development progress is increasingly going to be hindered by climate change. So we must see the fight against poverty and the fight against the effects of climate change as interrelated efforts. They must reinforce each other and success must be achieved on both fronts jointly. Success will have to involve a great deal of adaptation, because climate change is still going to affect the poorest countries significantly even if serious efforts to reduce emissions start immediately.

For example, we can help countries improve existing infrastructure to enable people to cope with increased flooding and more frequent and severe extreme weather events. More weather resistant crops could also be developed. While we pursue adaptation we must start to reduce emissions and take other steps at mitigation so that the irreversible changes already underway are not further amplified over the next few decades. If mitigation does not start in earnest right now, the cost of adaptation twenty or thirty years from now will become prohibitive for the poorest countries.

Poor People are Most Affected by the Environment

http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

United Nations Human Development Report 2007/2008

Stabilizing greenhouse emissions to limit climate change is a worthwhile insurance strategy for the world as a whole, including the richest countries, and it is an essential part of our overall fight against poverty and for the Millennium Development Goals. This dual purpose of climate policies should make them a priority for leaders around the world. But having established the need for limiting future climate change and for helping the most vulnerable adapt to what is unavoidable, one has to move on and identify the nature of the policies that will help us get the results we seek.

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

How the world deals with climate change today will have a direct bearing on the human development prospects of a large section of humanity. Failure will consign the poorest 40 percent of the world's population—some 2.6 billion people—to a future of diminished opportunity. It will exacerbate deep inequalities within countries. And it will undermine efforts to build a more inclusive pattern of globalization, reinforcing the vast disparities between the 'haves' and the 'have nots'. In today's world, it is the poor who are bearing the brunt of climate change.

Future generations are not the only constituency that will have to cope with a problem they did not create. The world's poor will suffer the earliest and most damaging impacts. Rich nations and their citizens account for the overwhelming bulk of the greenhouse gases locked in the Earth's atmosphere. But, poor countries and their citizens will pay the highest price for climate change.

While the world's poor walk the Earth with a light carbon footprint they are bearing the brunt of unsustainable management of our ecological interdependence. In rich countries, coping with climate change to date has largely been a matter of adjusting thermostats, dealing with longer, hotter summers, and observing seasonal shifts. Cities like London and Los Angeles may face flooding risks as sea levels rise, but their inhabitants are protected by elaborate flood defence systems. By contrast, when global warming changes weather patterns in the Horn of Africa, it means that crops fail and people go hungry, or that women and young girls spend more hours collecting water. And, whatever the future risks facing cities in the rich world, today the real climate change vulnerabilities linked to storms and floods are to be found in rural communities in the great river deltas of the Ganges, the Mekong and the Nile, and in sprawling urban slums across the developing world.

Poor People are Most Affected by the Environment

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

High levels of poverty and low levels of human development limit the capacity of poor households to manage climate risks. With limited access to formal insurance, low incomes and meagre assets, poor households have to deal with climate-related shocks under highly constrained conditions. Strategies for coping with climate risks can reinforce deprivation. Producers in drought prone areas often forego production of crops that could raise income in order to minimize risk, preferring to produce crops with lower economic returns but resistant to drought. When climate disasters strike, the poor are often forced to sell productive assets, with attendant implications for recovery, in order to protect consumption. And when that is not enough households cope in other ways: for example, by cutting meals, reducing spending on health and taking children out of school. These are desperation measures that can create life-long cycles of disadvantage, locking vulnerable households into low human development traps.

Research carried out for this report underlines just how potent these traps can be. Using microlevel household data we examined some of the long-term impacts of climate-shocks in the lives of the poor. In Ethiopia and Kenya, two of the world's most drought-prone countries, children aged five or less are respectively 36 and 50 percent more likely to be malnourished if they were born during a drought. For Ethiopia, that translates into some 2 million additional malnourished children in 2005. In Niger, children aged two or less born in a drought year were 72 percent more likely to be stunted. And Indian women born during a flood in the 1970s were 19 percent less likely to have attended primary school.

Helping the Environment can help the Impoverished

Poor People are Most Affected by the Environment

<http://hdr.undp.org/en/media/hdr03-summary.pdf>

HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

These are just a few examples of the interactions between the environmental Goal and the other Goals. Policies that promote environmental sustainability should stress the importance of involving local people in the solutions. They should also stress the importance of policy changes in rich countries. Among the policy priorities:

- *Improving institutions and governance.* Clearly define property and user rights, improve monitoring and compliance with environmental standards and involve communities in managing their environmental resources.
- *Addressing environmental protection and management* in each country's sector policies and other development strategies.
- *Improving the functioning of markets.* Remove subsidies, especially in rich countries, that damage the environment (such as subsidies for fossil fuels or large-scale commercial fishing fleets), and reflect environmental costs through pollution charges.
- *Strengthening international mechanisms.* Improve international management of global issues such as protecting international watersheds and reversing climate change, together with mechanisms to share these burdens equitably.
- *Investing in science and technology.* Invest more in renewable energy technologies and create an observatory to monitor the functioning and state of major ecosystems.
- *Conserving critical ecosystems.* Create protected areas with the involvement of local people. A new partnership is needed between rich and poor countries for these policies to take root and bear fruit. For a fair division of responsibilities, large countries need to contribute more to mitigating environmental degradation and apply more resources to reversing it. In this, as in the other Goals, there is an urgent need to rectify some glaring imbalances.

The Poor Depend on Healthy Ecosystems for Survival

http://www.unep.org/NewsCentre/24hours/posters_low_res/DRC_POV_ENV.pdf

THE UNITED NATIONS ENVIRONMENT PROGRAMME
POVERTY AND ENVIRONMENT

The world's poor depend on fertile soil, clean water and healthy ecosystems for their livelihoods. Their well-being is directly linked to the sustainable use of natural resources. In most countries, integrating the environmental concerns of poor and vulnerable groups into development planning and investment remains a major challenge.

Poor households Rely Heavily on Environmental Assets

<http://www.povertyenvironment.net/files/SustainingEnvironmentFightPoverty%20-%20PEP%20summary.pdf>

This publication is a joint product of staff from UNDP, UNEP, IIED, IUCN and WRI, prepared on behalf of the Poverty-Environment Partnership.

The health and well-being of all humans depends on clean water, clean air, fertile soils and other services provided by natural systems (see Box 1). However, environmental assets and the services they provide are especially important for people living in poverty. A majority of poor people in rural areas draw much of their livelihoods from forests, pastures, fisheries or farming. The importance of so-called environmental income from forest ecosystems is particularly well documented: studies show that nearly 1.1 billion people worldwide depend on forests for their livelihoods,¹ and that forest-related income provides a significant share of total household income in many global regions, with dependence on forests highest in Latin America, where this source makes up 35 percent of total income.² Other ecosystems provide similarly important benefits ; for example, coral reefs are a source of substantial income for poor households from fishing.

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Environmental assets make up a far larger share of national wealth in developing countries than in high-income countries. A World Bank study estimates that environmental wealth accounts for 26 percent of the total wealth of low-income countries, versus 13 percent of wealth in middle-income countries and only 2 percent of wealth in OECD countries⁶ (table 1). Because the nature of the assets held by the poor determines the strategies they can use to lift themselves out of poverty, the large share of natural resources in the wealth of developing countries, *and* in the asset base of poor households, argues for a strong role for environment in reducing poverty, fighting hunger and disease and improving well-being

Successful, sustainable poverty reduction requires expanding the asset base of the poor and increasing the efficiency with which these assets can generate income and well-being. However, the environmental assets that make up a disproportionately large share of the wealth of the poor are vulnerable to rapid depreciation, even more so than other kinds of assets, unless cared for and regenerated. With few assets, low-quality assets and lack of access to technology to make their assets more productive, poor households and communities may have incomes that are too low to generate re-investable surpluses for maintaining, much less expanding, their asset base. Insecure property and resource rights and other disincentives to wise management and use of resources also contribute to degradation of environmental assets.

Poor households Rely Heavily on Environmental Assets

<http://www.unpei.org/PDF/stakeholderengagement/Pov-Env-WhatthePoorSay.pdf>

Mary Ann Brocklesby, Emily Hinshelwood

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Poor people demonstrated that the environment was a crucial ‘card’ in the balance of livelihood management. Although just one element in a complex livelihood strategy, if environmental resources were threatened, damaged or withdrawn, it had substantial impact on poor people’s well-being. Some poverty-environment links were straightforward to dissect. However, more complex poverty-environment links were knitted into PPAs which showed how a change in access to environmental resources can trigger a series of livelihood problems. The way poor people were able to use, maintain and control their environmental resources and services influenced their well-being.

Across the breadth of PPAs, rural and urban poor people talked of living in increasingly fragile biophysical contexts. Natural hazards, changing climatic conditions and unpredictable seasons were common. Equally important though were references to pollution, deforestation, soil exhaustion, and other trends resulting from intervention. On the one hand, the impact of these environmental changes were felt in terms of decreasing access to natural resources making livelihood management more difficult. On the other hand, disasters such as flooding, fire, chemical pollution were characterised as situations that could suddenly push a person into extreme poverty.

The poor, in relying on natural resources more heavily, felt themselves to be more vulnerable to environmental change. Particularly stressed was the gradual loss of access to stable environmental contexts. This, it was apparent, made people increasingly vulnerable as livelihood tasks became more time-consuming, more dangerous, more costly and often requiring more inputs. As a consequence, poor people talked of having to take unfavorable decisions and greater risks in order to balance the range of livelihood tasks. Levels of poverty were characterised by ever increasing dependence on CPRs and a common concern was that despite poor people’s knowledge of seasonal conditions, their ability to prepare themselves for the consequences were limited by their poverty

Environmental Mismanagement is Hurting the Poor

<http://www.unpei.org/PDF/InvestingEnvironmentalWealthPovertyReduction.pdf>

Investing in environmental wealth for poverty reduction.

This publication is a joint product of staff from UNDP, UNEP, IIED, IUCN and WRI, prepared on behalf of the Poverty-Environment Partnership.

As with other ecosystems, considerable effort is being made to estimate the economic benefits of coral reef protection. Estimates suggest that, already, some 27 percent of all corals have been destroyed. But the same story emerges – few of the available studies consider the returns to the activities that destroy the reefs. An exception is a comprehensive study for Indonesia.¹⁶¹ Table 6.9 shows the results. It suggests a considerable rate of return to conservation compared to current practices, which are degrading the reef. A study of coral reef improvement for Montego Bay, Jamaica, suggested that an “optimal” level of increased coral abundance would be some 13 percent compared to the current situation, environmental and tourist benefits being compared with the costs of sewage outfall control, waste aeration, and control of hotel and municipal waste.¹⁶²

Given the substantial size of potential conservation benefits, the question arises as to why reef-users do not cease their destructive activities and invest in the sustainable use of the reefs. The relevant factors are (a) many reefs are de facto open access resources, so that resource-rights regimes would first need to be established, (b) current users of the reef are not necessarily the same as the beneficiaries of reef conservation, e.g., coral mining would have to cease and alternative employment provided, and (c) attitudes to risk and discounting the future will also bias current users toward destructive activities – they will “mine” the reef rather than use it sustainably. Investing in conservation requires that net benefits from sustainable uses are first realized and then distributed so as to make current reef users no worse off with conservation than they were without it.

Just as potential benefit may not be realized for the reasons mentioned, so further preventable degradation of an existing valuable resource may also occur. A study of coral reefs in the Caribbean indicates that existing 101 revenues from the reefs are substantial. Sustainable harvest of coral-related fish is estimated at \$300 million p.a., tourism benefits (especially dive tourism) at \$2.1 billion, and shoreline protection at \$0.7 to \$2.2 billion. But the total benefit of \$3.1 to \$4.6 billion p.a. is threatened by reef degradation and losses totaling \$350 to \$870 million p.a. are estimated if current trends continue

Climate Change Will Harm Poverty Reduction Efforts

Africa News

February 4, 2009 Wednesday

Nigeria; **Climate** Change - Would Poor Countries Adapt?

Climate change has the potential to undermine poverty reduction efforts and could compromise the Millennium Development Goals such as the eradication of extreme poverty and hunger by 2015. The scale of action needed to tackle **climate** change is unprecedented and it involves two concurrent approaches. One is to tackle the causes of **climate** change, such as reducing greenhouse gas emissions. Another is the actions that minimise the consequences of actual and expected changes in the **climate**.

Environmental Protection can Help Poverty

<http://www.unpei.org/PDF/Attacking-Poverty-win-win-Eng.pdf>

The United Nations Development Program and European Commission

Attacking Poverty While Improving the Environment: Towards Win-Win Policy Options
The Brundtland Commission The link between poverty and the environment was underscored by the World Commission on Environment and Development (the Brundtland Commission). In her introduction to “Our Common Future”, Dr. Gro Harlem Brundtland wrote: “The ‘environment’ is where we live and ‘development’ is what we all do to improve our lot within that abode. The two are inseparable.” She asserted that “many critical survival issues are related to uneven development, poverty and population growth. The downward spiral of poverty and environmental degradation is a waste of opportunities and of resources. In particular, it is a waste of human resources.” The Brundtland Commission stressed the links between poverty, inequality, and environmental degradation in its analysis and recommendations. “Sustainability” should be the guiding principle for future development, the Commission urged, meaning development that meets the needs of the present without putting the future at risk.

Environmental Protection can Help Poverty

<http://www.unpei.org/PDF/Attacking-Poverty-win-win-Eng.pdf>

The United Nations Development Program and European Commission

Attacking Poverty While Improving the Environment: Towards Win-Win Policy Options

One persistent myth has been that poor countries need to deal first with eradicating or at least lessening poverty before they can begin protecting or enhancing the environment. Part of the logic behind this assumption is that the poor implicitly use a high discount-rate in valuing current over future production. This assumes that the poor are forced to use up rather than conserve natural resources. The logical sequel to this line of thought is to assume that either the poor must be kept away from natural resources to preserve the environment or that the environment must be sacrificed for the sake of stimulating the economy, as well as the presumed benefits that economic growth will hold for poor people. If poverty were the main cause of environmental degradation, and assuming some trickle-down of wealth takes place during economic growth, then we would expect to see a reduction in rates of environmental damage during rapid economic expansion and industrialization. Yet the opposite is often true, with some of the most extreme damage—for example, deforestation—taking place during economic boom periods. This is often at the expense of the rural poor, who lose access to land, or else experience a reduction in wage-earning opportunities as labor-saving machinery is utilized. This does not mean to say that economic growth is the problem; it is the way in which development takes place that is important. When properly structured, efforts to enhance the environment and reduce poverty can proceed simultaneously. The poor are, in fact, willing to invest considerable resources in the environment in the hope of future gain, if they have had a major role in designing the investment, and that their rights to enjoy the fruits of their investment are secure. Furthermore, the cases below illustrate that because of the high dependence of the poor on the environment for their livelihoods, failure to tackle both simultaneously threatens the very asset-base that the poor need either to survive or emerge from poverty. The question of the gestation period between the time that environmental enhancement efforts are started and the time the fruits can be enjoyed by the poor is a serious one. But it is not an insurmountable obstacle.

Environmental Protection Leads to Economic Benefit

http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

United Nations Human Development Report 2007/2008

We would like to add that while the transition to climate protecting energy and life styles will have short term cost, there may be economic benefits beyond what is achieved by stabilizing temperatures. These benefits are likely to be realized through Keynesian and Schumpeterian mechanisms with new incentives for massive investment stimulating overall demand and creative destruction leading to innovation and productivity jumps in a wide array of sectors.

It is impossible to quantitatively predict how large these effects will be but taking them into account could lead to higher benefit-cost ratios for good climate policies. The design of good policies will have to be mindful of the danger of excessive reliance on bureaucratic controls. While government leadership is going to be essential in correcting the huge externality that is climate change, markets and prices will have to be put to work, so that private sector decisions can lead more naturally to optimal investment and production decisions.

Carbon and carbon equivalent gases have to be priced so that using them reflects their true social cost. This should be the essence of mitigation policy. The world has spent decades getting rid of quantity restrictions in many domains, not least foreign trade. This is not the time to come back to a system of massive quotas and bureaucratic controls because of climate change. Emission targets and energy efficiency targets have an important role to play but it is the price system that has to make it easier to achieve our goals. This will require a much deeper dialogue between economists and climate scientists as well as environmentalists than what we have seen so far.

The United Nations Needed to Help Climate Change

http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

United Nations Human Development Report 2007/2008

Countries will need to develop their own adaptation plans but the international community will need to assist them. Responding to that challenge and to the urgent request from leaders in developing countries, particularly in sub-Saharan Africa, UNEP and UNDP launched a partnership in Nairobi during the last climate convention in November 2006. The two agencies committed to provide assistance in reducing vulnerability and building the capacity of developing countries to more widely reap the benefits of the Clean Development Mechanism (CDM) in areas such as the development of cleaner and renewable energies, climate proofing and fuel-switching schemes. This partnership, that will enable the UN system to act promptly in response to the needs of governments trying to factor in climate change impacts into their investment decisions, constitutes a living proof of the United Nation's determination to 'deliver as One' on the climate change challenge.

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

The current state of international cooperation and multilateralism on climate change is not fit for the purpose. As a priority, the world needs a binding international agreement to cut greenhouse gas emissions across a long time horizon, but with stringent near-term and medium-term targets. The major developing countries have to be party to that agreement and make commitments to reduce emissions. However, those commitments will need to reflect their circumstances and capabilities, and the overarching need to sustain progress in poverty reduction. Any multilateral agreement without quantitative commitments from developing countries will lack credibility in terms of climate change mitigation. At the same time, no such agreement will emerge unless it incorporates provisions for finance and technology transfer from the rich nations that bear historic responsibility for climate change.

International cooperation must also address the pressing issue of climate change adaptation. Even with stringent mitigation, the world is already committed to sustained global warming for the first half of the 21st Century. Having created the problem, the world's richest countries cannot stand aside and watch the hopes and the aspirations of the world's poor be undermined by increased exposure to the risks and vulnerabilities that will come with climate change. Fighting climate change is a cross-generational exercise. For the current generation, the challenge is to keep open the window of opportunity by bending greenhouse gas emissions in a downward direction. The world has a historic opportunity to begin this task. In 2012, the current commitment period of the Kyoto Protocol expires.

The United Nations Needed to Help Climate Change

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

The successor agreement could set a new course, imposing stringent limits on future emissions and providing a framework for international collective action. Negotiations could be brought forward so that the quantitative targets are set by 2010, providing governments with goals for national carbon budgets. Carbon budgeting backed by radical energy policy reforms and government action to change incentive structures for consumers and investors is the foundation for effective climate change mitigation. There is no such thing as a last chance in human affairs. But the post-2012 Kyoto framework comes close.

Cost of Reducing Climate Change

http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf

United Nations Human Development Report Summary 2007/2008

Our stabilization target is stringent but affordable. Between now and 2030, the average annual cost would amount to 1.6 percent of GDP. This is not an insignificant investment. But it represents less than two-thirds of global military spending. The costs of inaction could be much higher. According to the Stern Review, they could reach 5–20 percent of world GDP, depending upon how costs are measured.

Aid not an Effective Method of Poverty Reduction

<http://docs.google.com/gview?a=v&q=cache:zRO846UnfcgJ:www.iblf.org/docs/BridgingtheGap.pdf+business+effective+poverty&hl=en&gl=us>

International Leaders Business Forum

In the question for sustainable development, eliminating poverty is the key challenge facing not only governments and civil society, but also business. Traditionally, business has played a crucial role in providing routes from poverty to prosperity, pursuing profit and in the process generating wealth, products and services, innovation and technical advances, jobs and tax revenues. Businesses of all sizes relate to the poor as consumers, staff, suppliers, and distributors, and in some cases as neighbors.

Tackling poverty can help businesses to build the local spending power, skilled workforce, and stable environment necessary for business development. However, the benefits are spread across the local economy and no individual company can capture all of them.

Within the second level, a growing body of evidence shows that companies that take account of the interest of their stakeholders, that respect human rights and environmental standards, and that give back to the community in the form of social investment are able to improve their financial performance.

Poverty is now on the agenda for business. Recognizing that businesses can make a difference through core business impacts, social investment, and public policy influence and capacity building, leading-edge companies are defining a new role for the private sector. Business offers skills, energy, investment, and technology that other sectors lack.

The UN does not have a Successful History

http://hdr.undp.org/en/media/hdr03_complete.pdf

HUMAN DEVELOPMENT REPORT 2003

Millennium Development Goals: A compact among nations to end human poverty

The global community, often led by the United Nations, has set many development goals since the first Development Decade of the 1960s—and has a history of many failures. For example, in the Alma Ata Declaration of 1977 the world committed to health care for all people by the end of the century. Yet in 2000 millions of poor people died of pandemic and other diseases, many readily preventable and treatable. Similarly, at the 1990 Summit on Children the world committed to universal primary education by 2000. But that target was also missed. And the failures should serve as reminders of past neglect to follow through on solemn global pledges.