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**OVERSIGHT OF
THE U.S. DEPARTMENT OF COMMERCE**

**HEARING
BEFORE THE
COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE
ONE HUNDRED TENTH CONGRESS
FIRST SESSION**

AUGUST 1, 2007

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

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OVERSIGHT OF THE U.S. DEPARTMENT OF COMMERCE

WEDNESDAY, AUGUST 1, 2007

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 2:35 p.m. in room SR-253, Russell Senate Office Building, Hon. Daniel K. Inouye, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. DANIEL K. INOUYE, U.S. SENATOR FROM HAWAII

The CHAIRMAN. Some time ago, Mr. Secretary, President Coolidge said that the “business of America is business.” The business of the Commerce Department is business, as well. And I consider that, from my service on this Committee, the business of that Department is not easy; it’s complex, its heavy-duty, and I’m certain that, in the 2 years you’ve been on the job, you know that the business of the Commerce Department is a demanding one. It includes conserving, managing the ocean, accuracy in standards and measurements, taking care of the census, providing economic opportunity, managing spectrum policy, and predicting the weather. It goes from one end to the other. It’s not like one item; you have everything. Your business is not only promoting commerce, but good stewardship of the resources that dictate our economic prosperity.

This Committee, as you know, has been very active on issues related to your Department. We have held more hearings than our predecessor committees—on travel, tourism, scientific integrity, climate change research, public safety communications, trade policies enforcement, viability of Earth-observing satellites, economic competitiveness, science policies, digital TV, and, most recently, Chinese imports. These hearings have highlighted your Department’s activities and missions that are working, and some that need our assistance. And I think many of them, just, as I indicated earlier, are starved for resources.

For example, we have read the Intergovernmental Panel on Climate Change’s conclusions that human activities are influencing our planet’s climate. Scientists agree, and have testified, that we cannot defer any longer, and the time to act is now. But your Department finds it difficult to address the fact that critical weather and climate sensors have been eliminated from the next-generation Polar-orbiting Operational Environmental Satellites. We’d like to help you on this.

On the brighter side, the trade deficit increased to only \$60 billion, which, incidentally, is the same level that you experienced when you appeared before us in January for your confirmation. During that hearing, every member of the Committee that day said the same thing, every member said, "I'm for fair trade, but we must enforce our trade laws." Our trade deficit is always static, but our concern today is safety in trade.

The Department's largest agency, NOAA, has a direct role to play when it comes to contaminated imports of seafood. In 2005, more than 84 percent of the total fish and shellfish consumed in the U.S. was imported, compared to 55 percent in 1995. And China is the second largest importer of seafood to the United States.

NOAA's seafood inspection program provides services beyond the mandatory hazard analysis and critical control points, including vessel and plant sanitation, product inspection, grading and certification, label review, lab analysis, and training. The seafood inspection of NOAA is so vital to America's ability to send exports abroad, such as the European Union, where they require FDA certification on all seafoods entering their market. In fact, NOAA's program is so successful that, in a January 2004 GAO report, it recommended that NOAA provide staff from its seafood inspection program to bolster the FDA's inspection capability.

Finally, I—along with 14 of my colleagues on this Committee—I think this is very important, that's over half of us—come from coastal states, so I can assure you that we think highly of NOAA and the importance of NOAA, and there'll be many questions about it. Many of us believe that NOAA's missions are critical to the well-being of our Nation, whether it's hurricane forecasting, drought forecasting, or fisheries management, or scientific research in human health and ocean.

Similarly, what has become a growing concern for us is the no-growth budget under which NOAA has been operating. While I can understand, the budget has been no-growth in just about every department, other than DOD, there is much focus on, and support for, promoting science and technology research in order to spur economic innovation, and the allure of the oceans attracts and inspires young people to study science. The America COMPETES Act, which you are familiar with, which we hope will pass before the August recess, calls for NOAA to be a full partner in the efforts to promote competitiveness. And I hope that you will take this direction to heart, and, if possible, improve the budget allocation for that agency.

I'd like to call upon Senator Boxer before I call upon you, Mr. Secretary.

Secretary GUTIERREZ. Thank you.
The CHAIRMAN. Senator Boxer?

**STATEMENT OF HON. BARBARA BOXER,
U.S. SENATOR FROM CALIFORNIA**

Senator BOXER. Thank you so very much, Mr. Chairman, for holding this hearing, and for your leadership.

As Chairman of the Environment and Public Works Committee, my remarks today will focus on NOAA and its work regarding global warming.

The Commerce Department is, as you pointed out, very important to us, and especially, for me, as Chair of that Committee, the work that you do to understand and predict changes in our planet's environment, and also the work you should do to conserve and manage our Nation's coastal and marine resources.

Mr. Chairman and Mr. Secretary, last Friday I flew to Greenland with nine other members of the U.S. Senate. It was a bipartisan delegation. We went to see with our own eyes what the impacts are of global warming on some of our highly vulnerable Arctic areas and people. What we learned on our visit was that the warming of the Earth is having an effect on the massive Greenland Ice Sheet, which holds 10 percent of the world's fresh water, and which could raise sea levels by 23 feet if it were to melt entirely. And to put that into context, my understanding is that in Katrina in some places there was a 20-foot rise. So, you just—see, just from Greenland, what this can mean.

We saw, up close and personal, the effect of warming on the ice sheet and the acceleration in melting that has happened in recent years. Much of what we saw, Mr. Secretary, was informed by images and readings taken from space by satellites. And I'm going to show you—you could see—this satellite image of Greenland, and some things are only visible from space—you could see how unbelievable this ice sheet is. And, if I might—Michael, bring it over—this is the piece that has broken off—that has calved off the main ice sheet. And this sheet that we saw—we flew over and we saw, with our own eyes, melting into the ocean—is 5 feet wide and 500 miles long. It was awesome. It was as close to God as I've ever come. And I think everyone on our trip shared that experience.

So, the image shows the Greenland Ice Sheet and this area that we flew over that has broken off of the main sheet.

We are at a crucial time in our history. Global warming is the greatest challenge, in my opinion, faced by mankind, and we're just beginning to understand the full effect it's having on our planet.

Satellites are essential to that task, so my first message to you, sir, is, please help us. Loss of satellites and sensing systems threaten to blind us—blind us—just at a time that we need the clearest vision.

One of the key points that was made by the IPCC, which was co-authored by NOAA scientist Susan Solomon, was that we can expect increased intensity of hurricanes from future global warming. Senator Inouye talked about that. Certainly his home is imperiled by hurricanes. And the NOAA satellites are absolutely essential in monitoring weather patterns and tracking dangerous hurricanes. If we lose this capacity, or even if this capacity is diminished, we might be able to use the European satellite, called ASCAT, but, as one scientist put it, that would be like a person who wears glasses taking them off. We should not unilaterally disarm and count on other countries to help us. So, we need to make sure we have sufficient satellite capacity to continue and improve on what we're already doing, to monitor weather patterns and global warming, and to track hurricanes, in particular.

So, you, sir, are on the front lines of fighting global warming. It's essential that you have all the tools that you need. I mentioned the funding for key satellites. It's essential that scientists be free from

political interference and allowed to present their research to the public, whatever their views, so that the true facts about global warming are known. I was deeply disturbed by reports from earlier this year that the Administration was interfering with the ability of NOAA and NASA scientists to present the results of their research to the public. To me, any kind of muzzling of people, who we pay—the taxpayers pay their money to find out what they think—any kind of muzzling, whether direct or indirect, is unacceptable, I believe, to all of us on this Committee, regardless of our political party. NOAA scientists are among the best in the world, and we need to make sure they have the right tools to monitor our planet, watch our weather, protect our oceans, and give us unbiased opinions.

So, with that, Mr. Chairman, I would yield back and thank you so much for this important hearing.

The CHAIRMAN. I thank you very much, Senator.
And now may I recognize the Vice Chairman, Senator Stevens.

**STATEMENT OF HON. TED STEVENS,
U.S. SENATOR FROM ALASKA**

Senator STEVENS. Well, thank you very much. Just a few comments, Mr. Chairman, and then I'll ask you to put my full statement in the record.

Mr. Secretary, I know you're very busy. I commend you and the Administration for your efforts to improve our American economy and its growth. The GDP growth is 2.9 percent annually since 2001. The unemployment rate is below the average of the past decades. And, with the budget set to be balanced by 2012, I think every American is going to benefit from your policies. So, I look forward to learning about the continued progress, and future activities of your Department.

I'd ask that my full statement be printed in the record.

The CHAIRMAN. Without objection, so ordered.

Senator STEVENS. Thank you.

[The prepared statement of Senator Stevens follows:]

PREPARED STATEMENT OF HON. TED STEVENS, U.S. SENATOR FROM ALASKA

Thank you, Mr. Chairman, for calling this hearing today. Thank you, Secretary Gutierrez, for making time in your busy schedule to come testify today. I commend you and the Administration for your efforts to improve the American economy and business. With GDP growth of 2.9 percent annually since 2001, an unemployment rate below the average of past decades, and with the budget set to be balanced by 2012, every American is benefiting because of your policies. I look forward to discovering what the Committee can do to maintain such a strong economy.

A strong economy begins with a strong education in sciences, mathematics, technology, and engineering. I am pleased to report that last night the conference report of the America COMPETES Act was signed. This measure was introduced last Congress and represents a major step to improve America's competitiveness through increased funding for basic research and education programs, which I hope will be quickly implemented.

In today's market many goods and services are sold over the Internet. This E-trade is especially beneficial for Alaskans who in many cases would not have access to the same variety of goods otherwise. The Internet also provides a means for Alaskans to sell their goods in the lower 48. In addition, access to the Internet provides educational and medical opportunities. To ensure Alaskans and all Americans can afford access to the Internet, I believe Congress should extend the Internet tax moratorium and prevent Federal, state, and local Internet taxes, which would only drive up the cost; and look forward to hearing your thoughts on this issue.

Our Nation's coastlines are important to the ecology and to the economy. Nearly half of the Nation's coastline and half of the Nation's fisheries landings are in Alaska. As such, I have particular interest in the tsunami warning system, hydrographic surveys, water and climate services, coastal zone management, and fisheries and marine mammal research run by NOAA. I applaud the work done to date and look forward to hearing about the status of the Department's conservation programs and work with the fishing and aquaculture industries.

Another important part of the Nation's economy is the travel and tourism sector contributing over 8 million employment opportunities and \$1.3 trillion in economic activity every year, which also has a significant impact in Alaska. Following September 11, this sector took a dramatic hit. To correct this problem the Committee has passed the Travel Promotion Act of 2007. This measure will promote the United States as a travel destination.

The CHAIRMAN. And now, Mr. Secretary?

**STATEMENT OF HON. CARLOS M. GUTIERREZ, SECRETARY,
U.S. DEPARTMENT OF COMMERCE**

Secretary GUTIERREZ. Thank you. Thank you, Chairman Inouye and Vice Chairman Stevens. Senator Boxer, it's a pleasure to be back in front of this Committee.

It's a pleasure to come before you today to talk about the Department of Commerce, an agency which I have proudly led for more than two and a half years. Above the doors of the Department of Commerce is President Thomas Jefferson's mandate to cultivate peace and commerce with all, a vision we continue to pursue today.

The roots of the Department are firmly grounded in promoting commerce and economic growth, and exercising stewardship over our oceans and waterways. Over the course of the past 6 years, our economy has faced a series of challenges, whether it be from a recession, to the attacks of 9/11. But our country's resiliency has shown through, and our economy has overcome enormous obstacles. Today I would like to briefly highlight a few of the Department's top priorities in protecting our environment and keeping our economy strong.

The Administration's pro-growth policies, of lower taxes, coupled with the hard work and ingenuity of American workers, has put our economy on solid footing. We have experienced sustained economic growth and enhanced job creation, resulting in increased revenues and a reduced deficit. The U.S. economy has experienced 23 consecutive quarters of growth, over which time growth has averaged 2.7 percent annually. Unemployment is at a low of four and a half percent, and payroll jobs have increased by more than 8 million since August of 2003. And, to your point, Mr. Chairman and Vice Chairman Stevens, that four and a half percent is below the average of the past—each of the past four decades. And, because of President Bush's tax cuts, the average American taxpayer will keep an additional \$2,200 of their hard-earned money this year.

We are strengthening our overall economic position by creating an export culture. Last year, we had a record of \$1.4 trillion in exports, and the growth rate of exports outpaced the growth of imports. And exports, year to date, are up by 10.8 percent over the same period in 2006. That's more than twice the rate of growth of imports. We are trading and engaging more, but, then again, so is everyone else, so we must keep focused on growth and the competitiveness of the U.S. economy.

Keeping our environment healthy helps keep America competitive. The scientific understanding gained through NOAA's renowned researchers, combined with the broader scope of this Department's mandate, have placed Commerce at the forefront of the President's efforts to tackle the long-term challenges and opportunities brought by climate change.

This Administration has demonstrated a clear commitment to the stewardship of our oceans—of our Nation's environment and oceans. This includes the President's Ocean Action Plan and the creation of the largest fully protected marine conservation area in the world. It also includes the introduction of aquaculture legislation, which we are pleased Chairman Inouye and Vice Chairman Stevens have introduced. And, while I know that some are nervous about the competition brought about by the growth of aquaculture, this is not a market opportunity in which the U.S. can afford to lose out. Further, exploring aquaculture is an example of how America can broaden and increase its overall competitiveness.

Innovation is another of our competitive advantages. Our highly skilled workforce, together with the pro-business environment that we have created, have kept us on the cutting edge of global innovation. However, to maintain that leadership position, we must not be complacent. Commerce is helping cultivate American innovation through the American Competitiveness Initiative, the basic research of NIST, and the protection of intellectual property of the Patent and Trademark Office. In fact, every bureau at our Department is focused on competitiveness.

An enormous contributor to America's innovative engine has been the explosion of wireless communications in recent decades. The transition to digital television broadcasts is an historic opportunity to reclaim and reassign valuable broadcast television spectrum to other important uses, including public safety and advanced wireless services.

Through the Census Bureau, the Commerce Department heightens our Nation's competitive position by providing an accurate, timely portrait of our people and the economy. I'm pleased to report the 2010 Census is on track. The goal of the Census Bureau, the Administration, and of this Congress, is to count every resident of the United States once, and only once, and in the right place. To do that, we have had the support of Congress over the decade to fund a re-engineered Census, and we need your support this year and throughout the funding cycle.

My comments today are just a snapshot of a much broader picture. My written testimony provides a more extensive review of what the men and women of the Commerce Department are doing every single day to ensure the growth, the prosperity, the competitiveness, and the long-term stability of our Nation's economy.

I thank you for the invitation to be here, and I look forward to working with you and continuing to keep this economy on track.

Thank you, Mr. Chairman.

[The prepared statement of Secretary Gutierrez follows:]

PREPARED STATEMENT OF HON. CARLOS M. GUTIERREZ, SECRETARY,
U.S. DEPARTMENT OF COMMERCE

Chairman Inouye, Vice Chairman Stevens, distinguished Members . . . it is my pleasure to come before you today to talk about the Department of Commerce, an agency which I have proudly led for more than two-and-a-half years.

Above the doors of the Department is President Thomas Jefferson's mandate to "Cultivate peace and commerce with all." This mission has been at the forefront of our Nation's consciousness since the earliest days of our democracy, even before the Department's founding, and is indeed the foundation for America's system of free enterprise.

More than a century after the Department's creation, we continue to pursue Jefferson's vision. The roots of the Department are firmly grounded in promoting commerce and economic growth, and exercising stewardship over our oceans and waterways.

Over the course of the past 6 years our economy has faced a series of challenges, from a recession to the attacks of 9/11. But America's resiliency has shown through and our economy has overcome seemingly insurmountable obstacles. We are now in a strong economic position and the values of democracy and open markets which have given us a position of global leadership have again carried us through.

Environment Stewardship while assisting Economic Development

Today I would like to start by discussing our role as stewards of our Nation's environment. Nearly 60 percent of the Department's budget (FY08) is dedicated to increasing knowledge and rational use of the natural environment. Through the *National Oceanic and Atmospheric Administration* (NOAA) the Department holds crucial responsibility for our Nation's oceans and waterways, our marine fisheries, our weather service, and a host of other resources aimed at utilizing our national geographic and geophysical attributes to strengthen our economy while protecting our valuable resources.

This Administration has demonstrated a clear commitment to our environment, dedicating unprecedented resources toward stewardship of our oceans and waterways.

The U.S. Ocean Action Plan, which President Bush announced in late 2004, has resulted in a number of significant accomplishments that have served to advance our understanding of oceans, coasts, and Great Lakes; enhance the use and conservation of our ocean, coastal and Great Lakes resources; manage coasts and their watersheds; support maritime transportation; and advance international ocean science and policy.

As part of that coordinated effort, we have established the Papahānaumokuākea Marine National Monument, the largest fully protected marine conservation area in the world; introduced the Coral Reef Conservation Amendments Act of 2007; worked with Congress to reauthorize the Magnuson-Stevens Act, which requires an end to overfishing by 2010; and worked with scientists, resource managers, and other interested parties across the country to prioritize ocean science efforts to ensure that future actions continue to be based on sound science.

Aquaculture is an innovative response to the projected global shortage of 40 million tons of seafood by 2030. Of the 4.9 billion pounds of seafood consumed in the United States in 2006, roughly 83 percent was imported. We need both a strong commercial fishing industry and a robust aquaculture industry to meet growing demands for a safe, reliable source of seafood, to reduce U.S. dependence on seafood imports, and to strengthen the economies of some of our coastal communities. We are pleased that Chairman Inouye and Vice Chairman Stevens introduced the National Offshore Aquaculture Act of 2007 to address this economic growth opportunity, and we look forward to working with the Committee and Congress to ensure passage.

Beyond the conservation and stewardship missions that NOAA carries out, the Department, through NOAA's *National Weather Service*, touches the daily lives of every American by providing up-to-the-minute weather information, which helps protect people and property through the dissemination of forecasts, observations and climate data.

Additionally, through NOAA, the Department serves the vast needs of our Nation's oceans and waterways—a vital part of our economic and transportation infrastructure. Earlier this year, we proposed the reauthorization of the Hydrographic Services Improvement Act, a bill to promote safe, efficient and environmentally sound maritime commerce in U.S. waters with accurate nautical charts and other navigational tools. This bill coincides with the 200th anniversary of the Coast Survey, another of President Thomas Jefferson's great gifts to this country. Waterborne

commerce contributes \$1 trillion to our Nation's GDP and supports more than 13 million jobs. We thank the Commerce Committee for passing this important legislation in July.

The scientific understanding gained through NOAA's renowned researchers, coupled with the broader scope of this Department's mandate, have placed Commerce at the forefront of this Administration's efforts to tackle the long-term challenges and opportunities brought by climate change. The Department plays a central role in measuring and understanding changes in our climate as well as crafting international and domestic policies that will help the American people and the global community mitigate and adapt to a changing planet. As President Bush said, "My Administration's climate change policy will be science-based, encourage research breakthroughs that lead to technological innovation, and take advantage of the power of markets. It will encourage global participation and will pursue actions that will help ensure continued economic growth and prosperity for our citizens and for citizens throughout the world."

In the 10 years since the Kyoto Protocol was negotiated, there has been a false premise among some that countries must be committed to Kyoto to be taken seriously in discussions on climate change. The President does not subscribe to this view, and instead has led with actions and results. This Administration has devoted \$37 billion to climate change research and technology since 2001 and has requested an additional \$7.4 billion for FY 2008.

The President recognizes technological advances, more than anything else, are needed to truly reduce our greenhouse gas emissions, which is why this Administration launched the Climate Change Technology Program, led by the Department of Energy and supported by Commerce. In his most recent State of the Union Address, the President set aggressive goals to reduce our dependence on gasoline by 20 percent over the next 10 years through a series of mandatory, voluntary and incentive-based programs. This Administration is also fully committed to deploying technologies domestically and internationally through programs such as FutureGen and the Asia-Pacific Partnership for Clean Development and Climate, where Commerce plays a leading role in promoting exports of clean technology. By implementing an aggressive yet practical strategy, we are on track to meet the President's goal to reduce greenhouse gas intensity 18 percent by 2012, while continuing to grow the American economy. Indeed, preliminary data from the Energy Information Administration show that in 2006 energy-related carbon dioxide emissions fell 1.3 percent while the economy grew 3.3 percent.

On May 31, 2007, the President called upon the world's major economies to work together to develop a post-2012 framework and identify a global goal on long-term greenhouse gas reductions. The United States will host the first of a series of meetings with other countries—including rapidly growing economies like India and China—to establish a new framework, which will recognize that economic growth, energy security and climate change must be addressed in an integrated way. Our progress toward a global emissions reduction goal will be underpinned by midterm national targets and programs that are tailored toward each participant's current and future energy needs and that will be subject to a robust review process. In addition, participants will work on sectoral approaches to energy intensive industries and concrete steps to promote the development and deployment of clean energy technologies. As part of his international initiative, the President also proposed strengthening climate-related initiatives at the U.N. that benefit all countries, including adaptation to climate change, deforestation and technology. Finally, the President's initiative addresses practical action necessary to advance the global development and deployment of clean energy technologies. This could include low-cost capital sources to finance investment in clean energy, mechanisms to share government-developed technology at low cost, or in some cases, no cost at all, and elimination of market barriers.

At Commerce, we play a role in all aspects of the policy solutions to climate change. NOAA plays a central role in measuring changes in our atmosphere and in our climate. We are extremely proud of our scientists, and their research and modeling formed the basis for much of the science encapsulated in the Intergovernmental Panel on Climate Change's Fourth Assessment, that has been released this year. Through a number of research programs, the agency is focused on providing decisionmakers with a clear understanding of the global climate system. At the direction of the President, NOAA is leading U.S. efforts to implement a truly global-observing system. Building off of the data provided by our observation systems, NOAA is focusing research to understand key climate processes, improving our modeling capabilities and developing and delivering climate information services. NOAA is working to improve our understanding of global climate change and develop tools to enable regional and local leaders to make effective planning decisions. These tools

could also one day be used to monitor and verify that claimed emissions reductions are also taking place.

The *International Trade Administration (ITA)* is leading U.S. Government efforts to spur the deployment of clean energy technologies and the *National Institute of Standards and Technology (NIST)* is leading efforts to create international standards for biofuels as well as for improving energy efficiency. Ultimately, the solutions to the challenges of climate change will rest with strong and vibrant economies that can make the investments necessary to transform our energy infrastructures.

A Strong and Vibrant U.S. Economy

This Administration's pro-growth policies of lower taxes and a less restrictive government, coupled with the hard work and ingenuity of American workers, has put our economy on solid footing. We have experienced sustained economic growth and enhanced job creation, resulting in increased revenues and a reduced deficit.

The U.S. economy has experienced 23 consecutive quarters of growth, over which time growth has averaged 2.7 percent annually. When adjusted for inflation, our economy is 17 percent larger than it was in 2001. Our unemployment rate is a low 4.5 percent, which is below the average of each of the 1960s, 1970s, 1980s and 1990s, and payroll jobs have increased by more than eight million since August 2003. And, because of President Bush's tax cuts, the average American taxpayer will keep an additional \$2,200 of their hard-earned money this year.

While we are weathering a correction in the market, we remain near historic levels of home ownership, with 75 million American families owning their own homes.

And, by asserting fiscal discipline and reigning in discretionary spending, the President's goal to balance the budget by 2012 is on track. An Office of Management and Budget (OMB) report issued in mid-July forecasts a \$43 billion decrease in the deficit this year. For 3 years in a row the Federal deficit has declined and OMB now projects that the budget deficit has fallen to 1.5 percent of GDP, well below the 40-year average of 2.4 percent of GDP. We have also held the growth of annual domestic spending close to 1 percent, which is well below the rate of inflation. And tax relief we have implemented since 2001 has allowed the American people to keep \$1.1 trillion of their hard-earned dollars, which they can determine how best to allocate.

One important way in which we are strengthening our overall economic position is by creating an export culture in our country. Last year, the growth rate of exports outpaced the growth rate of imports, 13 percent to 10 percent, with a record \$1.4 trillion in exports. And exports year-to-date are up by 10.8 percent over the same period in 2006 to \$644 billion—more than twice the rate of imports.

Increased exports to markets around the world benefit our country enormously by supporting higher paying jobs for our workers here in America and by boosting productivity, which drives our national prosperity. Free Trade Agreements (FTAs) also help our companies, farmers and manufacturers by leveling the playing field and helping them sell American goods and services to millions of consumers in new global markets.

Truly, America is embracing the global marketplace and taking advantage of the markets that this Administration has sought to open. Yet, while we are taking advantage of the opportunities of the global marketplace, we know we are not alone in those efforts. Nations around the world have awakened to the possibilities of international trade. And with the addition of three billion consumers in China, India and Russia, which have opened their previously shuttered economies, we have experienced a wave of new customers, new consumers, and new competitors.

Trade accounted for 17 percent of world GDP in 1986. Last year it accounted for 29 percent. We are trading and engaging more—but so is everyone else. That is why we must be focused on the growth and competitiveness of the U.S. economy.

Expanding the Global Marketplace and Boosting U.S. Exports

The Department of Commerce has a tremendous role to play in expanding the global marketplace and boosting U.S. exports. Our recently released National Export Strategy, produced by the ITA in conjunction with other trade agencies, details how the combination of declining trade barriers and advancing technologies has made exporting easier than ever.

Since President Bush took office, Free Trade Agreements (FTAs) with 11 countries have entered into force, bringing the total number of countries that we have FTAs with to 14. Exports to the countries with FTAs that entered into force between 2001 and 2006 grew faster than U.S. exports to the rest of the world. And while the FTA countries make up only 7.5 percent of the world's GDP (*excluding the USA*), more than 42 percent of all U.S. exports go to our FTA partners. Clearly, free trade agreements are directly linked to the expansion of our exports.

In Chile, two-way trade over the first 3 years of our free trade agreement rose by more than 150 percent, including 22 percent so far this year. And the FTA with our CAFTA-DR partners is already showing positive results, with exports up to the five countries up 16 percent last year.

These agreements serve to open markets for U.S. goods, support good jobs for Americans at home and abroad, and importantly, help export good governance, create stable markets and reduce poverty in emerging economies.

After more than 3 years of negotiations, Congress will consider FTAs with Peru, Colombia, Panama and South Korea. These agreements, if approved, would provide further access to 126 million consumers with a combined GDP of \$1.1 trillion. Each holds important geopolitical significance in strategic regions of the globe—here in our own region, the Western Hemisphere, and in the rapidly rising Pacific Rim.

In order to continue an aggressive agenda of opening foreign markets and leveling the playing field to boost U.S. exports, this President and future presidents must have Trade Promotion Authority, an essential tool to ensure our continued export success. Many of our trading partners, including Asia and the European Union, are acting bilaterally to engage with each other. The United States cannot afford to sit on the sidelines.

Renewed Trade Promotion Authority will help the United States continue to play a leadership role in multilateral and bilateral trade negotiations. A successful conclusion to the Doha Development Agenda will result in economic growth and development, especially in the world's poorer countries, by creating new trade flows and disciplining subsidies.

The Department, through ITA, also takes a direct approach to boosting U.S. exports by helping American companies succeed in the international marketplace.

We have conducted a number of successful trade missions bringing U.S. businesses face-to-face with potential customers, business partners and government officials. Last fall I led a business development mission to China, a vital and growing market for U.S. exports. And ITA led the largest-ever U.S. Government business development mission to India.

Earlier this year ITA also led a clean energy trade mission to India and China to promote U.S. export of technologies which will help address environmental concerns in those countries, while boosting U.S. exports. We also announced recently a trade mission to Vietnam which will take place this fall.

In addition to enhancing competitiveness through a successful export strategy, the Commerce Department has recently launched the "Invest in America Initiative" to encourage foreign firms to invest directly in the U.S. economy. U.S. subsidiaries of foreign companies employ more than five million American workers in jobs that pay 32 percent higher wages than the national average. And while we have historically been the world's most attractive destination for foreign direct investment (FDI), it again is another area of the economy in which we are facing stepped up competition and therefore must take on a more aggressive, proactive posture.

While promoting exports, the Department also advances U.S. national security and foreign policy objectives. Our *Bureau of Industry and Security (BIS)* accomplishes this work by implementing an effective export control and treaty compliance system, while promoting continued U.S. strategic technological leadership. BIS ensures that U.S. exports of certain sensitive items are kept away from dangerous countries, organizations and individuals in a manner that preserves the innovative and productive capacity of American industry. Importantly, we believe the Export Administration Act of 1979, which expired in 2001, must be renewed to ensure a streamlined and strengthened export control system, particularly in light of modern threats.

Ensuring a Level Playing Field for U.S. Workers and Industry

As global trade barriers come down and international economies become more integrated, it is critical that our companies compete on a level playing field.

We welcome the innovation and efficiencies that result when our companies and industries compete. However, we must insist that our trading partners play by the rules. When they have not, we have taken an aggressive stance in safeguarding our companies from unfair practices, while preserving the benefits of open, market-driven economics.

From day one, this Administration has demonstrated it will use every tool at its disposal to enforce our trade laws. We play by the rules and it is only fair to expect others to do the same. That is why, in March of this year, I announced the Commerce Department's preliminary decision to apply the U.S. anti-subsidy law to imports of glossy paper from China.

China is a rising economic power—our second largest trading partner—and represents a tremendous opportunity for U.S. businesses. But when we find unfair

trading practices, as we did with the glossy paper case, we will work to ensure an equitable, level playing field. These actions also serve to encourage important reforms in China, spurring its government to hasten change and keep pace with international standards and practices.

To that end, ITA has initiated more anti-dumping cases against China than any other Administration. The Administration has also filed five WTO cases. These actions show our continued commitment to create an environment of true competition for American manufacturers, workers and farmers.

The responsibility for change is in the hands of the Chinese. We have communicated that the safety of our food, medicines and other products from our trading partners is of paramount importance. This is a watershed moment for China. China must address U.S. safety concerns. It is in the interest of all parties for China to be part of the international trade community and be fair and open in its economic dealings.

One of this Administration's top priorities is to ensure that our trading partners fully comply with their trade agreements with us, and that our businesses, workers, and farmers get the full benefits of the agreements we negotiate on their behalf. The most timely and effective way to achieve compliance goals is often through prompt diplomatic efforts.

To that end, Commerce's Trade Agreements Compliance program draws on the joint expertise of all Commerce Department resources to help U.S. exporters, particularly small and medium-sized businesses that face foreign trade barriers. Beginning in FY 2001, we have initiated over 620 compliance cases and closed over 450.

A final way by which we help keep the playing field level for American companies and workers, is by ensuring the protection of their intellectual property (IP). IP industries represent 40 percent of U.S. economic growth and employ 18 million Americans in good, high-paying jobs. Intellectual property accounts for over one-third of the value of all publicly traded U.S. corporations, an amount equal to almost half of the U.S. GDP. In Fiscal Year 2006, the *U.S. Patent and Trademark Office (USPTO)*, a Commerce agency, granted 183,187 patents.

Protecting those patents is an economic and national security objective, which is why we have a coordinated effort which includes USPTO, the *National Intellectual Property Law Enforcement Coordination Council* and ITA. That effort is the *Strategy Targeting Organized Piracy (STOP!)* which holds the ambitious goal of ending trade in counterfeit goods. We have also placed Intellectual Property Rights attachés in strategic markets around the world such as India, China and Russia to promote intellectual property enforcement.

Innovative and creative people in this country and around the globe are producing new products, medicines, and art. As a result, our lives are safer, healthier, more productive and richer. We know that losses to our economy due to IP theft are enormous, harming workers, threatening consumers and striking at our most competitive industries. Through STOP! we are working to end this scourge, and we will continue working with our trading partners around the world to ensure that the protection of intellectual property is a vital part of our bilateral and multilateral relationships.

While we work to ensure a level playing field, we continue to acknowledge that isolationism won't protect people or protect jobs. Our strategy is to grow exports, not limit imports. Protectionism doesn't protect the economy or jobs. Only innovation, entrepreneurship, competition and investment will protect and grow jobs.

Providing the Data Needed to Keep our Economy Growing

Another important channel through which the Department of Commerce actively helps promote U.S. economic competitiveness is by providing an information infrastructure that supplies businesses, government entities and private citizens with the information they need to make informed decisions.

Through the *Economics and Statistics Administration (ESA)*, which is home to the *Bureau of Economic Analysis (BEA)* and the *Census Bureau*, the Commerce Department provides the information infrastructure for vital economic and demographic data ranging from retail sales and quarterly gross domestic product calculations to housing and population figures. The Commerce Department heightens our Nation's competitive position by providing an accurate, timely portrait of our people and the economy, thereby helping to support effective investment decision-making, maintain macro-economic stability and guide public policy decisions. Most importantly, I can report that the 2010 Census is on track. The Census Bureau has re-engineered this decennial count of U.S. residents using technology—like GPS and handheld computers—to make the enumeration ever-more accurate.

The decennial census is the largest non-military mobilization the Federal Government conducts. It directly affects how many seats each state has in the House of

Representatives and how those district lines are drawn. An accurate census count is also vital in determining how over \$200 billion in Federal funds are allocated to local and state governments. The goal of the Census Bureau, the Administration, and of this Congress is to count every resident of the United States once, only once, and in the right place. To do that, we have had the support of Congress over the decade to fund a re-engineered census that uses improved technology and methodology to deliver a good count and enhanced data about the characteristics of our people. We need your support this year and throughout the funding cycle.

The President's Budget for 2008 continues the re-engineering and funds two critical components. The first I want to mention is the dress rehearsal next April. Already, Census is preparing for the dress rehearsal in Stockton, CA, and Fayetteville, NC, by checking household addresses and noting new construction. A census dress rehearsal is just like one on stage. This is the time to check the lighting and tweak a line or two. It is not the time to rewrite the plot. Given the scope and complexity of a decennial census, new operations cannot be added that are not tested in the dress rehearsal. I would note that we are getting good feedback from Stockton and Fayetteville about the handheld computers that will be used in 2010.

In addition, the President's Budget includes money to kick off the integrated decennial communications plan. It is critical to the census that we reach out to communities that are more difficult to count. Communities may be harder to enumerate because of language barriers, mistrust of government, or simply because people are busier and it is a challenge to find them at home. For these reasons, we need to educate the public about the importance of the census and enlist local leaders and neighbors to support our efforts. The integrated communications plan will do just that.

Encouraging and Enhancing Innovation and Competitiveness

Innovation is the engine that fuels our Nation's economy. The United States is home to the most highly skilled, creative and motivated workforce in the world. That human capital coupled with the pro-business environment we have cultivated, which encourages risk-taking and entrepreneurship, have kept us on the cutting edge of global innovation.

However, to maintain that leadership position we must not be complacent. That is why the President created the American Competitiveness Initiative (ACI), in which the Department of Commerce plays an important role. The ACI commits \$136 billion over 10 years to increase investment in R&D, strengthen education and encourage innovation. The sum total of these efforts will contribute to strengthening our ability to stay competitive.

NIST, which is part of Commerce, promotes basic research funded by the Federal Government, an essential component of the ACI. And while we encourage R&D at the governmental level, we also must promote the involvement of the private sector, which is why the ACI aims to make permanent the R&D tax credit.

Smart business and investment decisions are made with predictability and visibility into the future. By providing a long-term outlook for R&D, the Federal Government can help bring the private sector more actively into the business of basic science, sharpening our Nation's competitive edge.

To further support innovation, we continue working with this Committee as the NIST reauthorization legislation (H.R. 2272 and S. 761) makes its way through the conference process. Both of these bills recognize the importance of NIST's research to our Nation's global competitiveness, and authorize much-needed increases in the NIST core (laboratory and construction) funding accounts. We encourage Congress to authorize levels for the NIST core that meet the Administration's request.

In addition, while the bill does make changes to the Malcolm Baldrige National Quality Award program, the Administration requests that the Congress amend the Stevenson-Wydler Act to change the name of the award to the "Malcolm Baldrige Quality, Innovation and Performance Excellence Award" to better reflect the award's updated criteria and greater emphasis on innovation and performance excellence.

Another way in which Commerce is addressing America's economic competitiveness is by looking at how we measure innovation. Last fall, I announced the formation of the Measuring Innovation in the 21st Century Economy Committee. The Committee will help develop metrics that can correctly measure American ingenuity, which we know contributes to our advances in productivity and our high standard of living.

We are currently gathering the input of experts from the business, academic and policy arenas to help the Committee as it develops ideas for innovation metrics. I look forward to reporting back on the progress of their work and developing a better national understanding of the impact innovation has on our economy.

An enormous contributor to America's innovative engine has been the explosion of wireless communications in recent decades. Consequently, the demands on the use of the radio frequency spectrum are rapidly increasing at a rate that raises questions regarding the viability of this natural resource to sustain these ever growing demands and to provide additional services.

To address the need to better manage this resource, the *National Telecommunications and Information Administration (NTIA)* has launched the Commerce Spectrum Advisory Committee, which is part of the President's Spectrum Policy Initiative. The initiative was established by President Bush in June 2003 to develop a policy for the 21st century that meets the Nation's needs and spurs economic growth.

The transition to digital television broadcasts is a historic opportunity to reclaim and reassigned valuable broadcast television spectrum to other important uses, including public safety and advanced wireless services. The digital transition will have important benefits to the economy, public safety, and the Federal budget.

As part of our efforts to improve public safety through the digital transition, in July we announced a \$1 billion Public Safety Interoperable Communications Grant Program. These are one-time, targeted Federal grants with the purpose of helping state and local public safety agencies improve their ability to communicate with each other when responding to hazards.

An essential component of a pro-growth and pro-innovation agenda is permanently extending the moratorium on Internet access taxes. The Administration urges Congress to make permanent the current moratorium which expires in November.

Under the leadership of the NTIA, Commerce is well underway with the planning and preparation for the digital television transition which will help consumers continue to receive free, over-the-air television when full-power television stations cease analog broadcasting in 2009 as authorized by Congress.

Another essential aspect of U.S. competitiveness is immigration. We must acknowledge that the demographics are not on our side. We cannot grow our economy at 3 percent a year while our population in the prime working years will only grow 0.3 percent per year over the next 7 years. We will have to turn to immigration to help meet our economy's needs. The issue of immigration reform—at the high and low skilled ends—will not go away. It is a fundamental economic competitiveness issue and something we must address.

Innovation and competitiveness are also promoted by the Department's *Economic Development Administration (EDA)*. EDA invests in locally developed, regionally based economic development initiatives that achieve the highest return on the tax-payers' investment and directly contribute to regional and national economic growth. EDA places a strong emphasis on making investments that: (1) support innovation and competitiveness, (2) encourage entrepreneurship, and (3) support collaborative regional economic development approaches.

Minority-owned businesses represent a growing segment of the economic landscape. Commerce's *Minority Business Development Agency (MBDA)* and its nationwide network of business assistance centers promote competitiveness by providing technical and managerial assistance, and business consulting services designed to enhance the growth of the minority business community.

And while I am on the subject of MBDA, I would like to take a moment to specifically acknowledge the good work that agency has done in helping restore the Gulf Coast. Soon after Hurricane Katrina devastated the Gulf Coast, MBDA established five technical and managerial assistance business centers on behalf of Minority Business Enterprises (MBEs) in the Gulf region, (Louisiana, Mississippi and Alabama). MBDA also hosted a series of Gulf Coast Business-to-Business Linkage and Investment Forums designed to increase MBE capacity in the region by encouraging joint ventures and teaming arrangements between Gulf Coast 8(a) firms and MBDA clients from around the country. As a result, MBDA has provided consulting services and educational outreach activities to thousands of MBEs.

These are just a few of the many areas in which the Department of Commerce is actively working to encourage, enhance and support innovation to build our economy.

The Department of Commerce plays a critical role in the growth, competitiveness and long-term stability of our Nation's economy. And, as I said before this very Committee during my confirmation hearing in January 2005, I strongly support the Department's mission of "creating conditions for economic growth and opportunity by promoting innovation, entrepreneurship, competitiveness and environmental stewardship."

It is my privilege to be at the helm of a Department with so many vital roles to play. I look forward to continuing my role at the Department and working every day to keep America leading in the global economy.

The CHAIRMAN. I thank you very much, Mr. Secretary, and thank you for your service to our Nation.

May I call on the Vice Chairman.

Senator STEVENS. Thank you very much. I'm pleased to have your statement, Mr. Secretary.

I must start off on aquaculture. When we introduced the bill that you sent up from the Department and the Administration, Senator Inouye and I did so by request, and I've put in an amendment concerning aquaculture: finfish. I've since visited extensively with the scientists and the members of various coalitions in my state, and there's still great fear about the concept of aquaculture within our 200-mile limit and beyond. We have half the coastline of the United States, and we harvest more than 50 percent of all the fish that—domestically produced—that Americans consume. We think you ought to experiment with what we call the South 48, and see if there's any damage to those areas there, before the pristine area off our state is intruded upon. The majority of our sea coast is owned by the Federal Government.

The pollution capability in Alaska is very low. And yet, the pollution capability coming from finfish operations that were improperly managed could be extensive. So, I would urge you—before going on to any other questions—consider just exempting Alaska from that. I'm not sure about Hawaii, whether it wants to be exempted, too. But it doesn't have the commercial fisheries going on around their islands that we do. They have local fisheries, but I don't think they have the national and international fisheries we have.

We have the largest biomass of fish in the world now, pollock, and we have the greatest salmon run in the world today now, to Bristol Bay. And they're already at risk from some developments onshore. We would like to postpone further risk until we really know what is the impact of finfish aquaculture that's offshore. And I hope that you'll consider—I'm not asking you for a commitment, I'm just asking you to heed our request and take it into consideration as you make decisions.

Secretary GUTIERREZ. Yes, sir.

Senator STEVENS. If you have any comment, I'll be glad—

Secretary GUTIERREZ. Yes, Vice Chairman Stevens, we have received comments back from the Committee on our aquaculture proposal, and one of them, of course, is an opt-out for the states—and, very specifically, finfish in Alaska. And we are very well aware of that concern for you, and are very aware that this is important for you. So, I'm sure that, in the end, we can come up with something that will satisfy your concerns and will take into account the opt-out desires of Alaska.

Senator STEVENS. Thank you very much.

We're looking now at the next generation of satellites for the programs that are already in place, in terms of the Geostationary Earth Orbiting Satellite and the Polar-orbiting Operational Environmental Satellites. Can you tell us of any great changes in your plans? Or what are you going to do about those satellites? Both of them are getting a little bit old. And we, I think, ought to know

what the plan is for the future. Some of the sensors involved already on those satellites, I am told, have been downgraded or abandoned. Are you working on a plan for other satellites for a future of dealing with these satellites?

Secretary GUTIERREZ. We have begun the planning work on GOES-R, the new generation of the GOES, geostationary satellite. On NPOESS, which is the new generation for the POES satellite, the Polar-orbiting satellite, we have had to submit a Nunn-McCurdy request, because we did have an overrun, Mr. Chairman. And what we have done—and we believe that this is a good solution—we have had to reduce the number of sensors, but each sensor—my understanding—will be of a higher caliber. So, we believe that we are well equipped, that we are well armed. We have had to deal with some cost overruns. We've had the suppliers in, we've talked with them. I'm not used to anything over a 25 percent cost overrun. I used to have to go to the board for anything over 10 percent. This has been a significant overrun. But we do believe that, when we have the satellites up and running on time, that we will be fully equipped, as we are today, to detect any patterns—any weather patterns, any climate changes. We are well equipped to do the work we need to do, Mr. Vice Chairman.

Senator STEVENS. You don't expect that we'll have to consider putting up another satellite in the near term?

Secretary GUTIERREZ. Well, the current plan on the NPOESS goes out to, I believe, 2012. There was some discussion recently on QuikSCAT. We believe that QuikSCAT will be operational until 2011. So, at this point, we have our plans in place for the next generation. We believe those plans are adequate. And we will obviously have to adjust, if we need to, but we are well covered going out to about 2011.

Senator STEVENS. OK. Just a couple of other quick questions. There are others who want to ask questions.

We are looking now at the IUU fisheries, the International Unregulated Unreported fisheries. Just in this last trip home, I was told that there's every evidence that these vessels that are unregistered and, really, operating under flags of convenience—they're out there in the North Pacific, and have intercepted, now, immature salmon as they intermix on the high seas. And we, unfortunately, are dealing with a budget that's pretty tight, and with a paradigm now that Senators can't say, you know, another \$10 million is needed here or there, because of the earmark problem we're all dealing with. What are we going to do? Are you in a position where you can come into the budget now and ask for additions to the budget when we see a crisis like this? There is no question of what, there's a crisis in dealing with IUU vessels—illegal, unreported, unregulated. They're taking fish and taking literally—and collecting them when they're immature, and dumping them in foreign markets that treat them like sardines rather than salmon. Now, I can't add any more money now. Can you do anything?

Secretary GUTIERREZ. IUU Fishing, associated with stateless vessels operating on the high seas as well as vessels from distant-water fishing states exploiting the resources of coastal states with weak enforcement regimes, also occurs in fisheries managed by regional fishery management organizations. The issue is receiving

growing attention due to its impacts on target fish stocks, habitat, fish markets, bycatch, and competition with legal fishing.

The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 provides NOAA Fisheries with new authority to combat IUU fishing activities. NOAA Fisheries is developing rulemaking to implement these measures, which include procedures to identify and certify nations whose vessels are engaging in, or have been engaged in, IUU fishing activities.

NOAA Fisheries will continue to work with the Department of State and the U.S. Coast Guard to pursue a cooperative multilateral approach to combating IUU and will also use bilateral meetings as an opportunity to explore how the United States might work more closely with other countries on the issue of IUU fishing.

Senator STEVENS. Well, you may be right, but we think it's coming from other nations in the world who have these vessels and send them out to just find fish wherever they are. And they're using methods that are almost outlawed, like drift nets.

Secretary GUTIERREZ. Right.

Senator STEVENS. We hope that the Administration will join us and go to the U.N. and talk about IUU fisheries, talk about registering fishing boats, talk about registering any boat that's got fishing gear on it, and talking about requiring any boat, from any nation, that goes to shore and unloads fish, to record what they've caught, and where they caught it. Unless we do that, we're going to lose our migratory fish that we have done so much to protect—and I hope that you will join us on that.

Secretary GUTIERREZ. Yes, sir.

Senator STEVENS. I may submit some other questions. I've taken more than my time. I thank you very much.

The CHAIRMAN. Thank you.

Senator Boxer?

Senator BOXER. Thank you very much.

Mr. Secretary, you started off, you were saying about how great the economy is, the deficit, and so on. What's the deficit now?

Secretary GUTIERREZ. We measure the deficit as a percent of GDP.

Senator BOXER. No, no, but what is the deficit now?

Secretary GUTIERREZ. The deficit, in absolute dollars?

Senator BOXER. Yes, absolute dollars. Someone in the Commerce Department, I'm sure, knows what the deficit is.

Secretary GUTIERREZ. The—can I answer the way we think about—

Senator BOXER. No, no, no, no. What is the deficit?

Secretary GUTIERREZ. The deficit is 1.5 percent of GDP.

Senator BOXER. OK. Could my staff calculate what that is?

The CHAIRMAN. Sixty billion dollars.

Senator BOXER. Sorry?

The CHAIRMAN. Sixty billion dollars.

Senator BOXER. It's bigger than \$60 billion a year, isn't it? For the year. What is the deficit? I'm asking you to—I'll wait—I would ask that you figure it out.

Senator STEVENS. What period of time? You mean total deficit?

Secretary GUTIERREZ. We'll give—

Senator BOXER. I'm talking about the yearly deficit that we are running, based on the last completed year.

Secretary GUTIERREZ. Give me a moment.

Senator BOXER. What is the deficit?

Secretary GUTIERREZ. See, the—Senator Boxer, we measure it as a percent of GDP.

Senator BOXER. Can you just go to Google that, please? We'll just go—

Secretary GUTIERREZ. 205—

Senator BOXER.—and Google.

Secretary GUTIERREZ. 205 billion, if you want dollars.

Senator BOXER. Thank—\$205 billion.

Secretary GUTIERREZ. But I believe it's a trap, to look at dollars.

Senator BOXER. I totally get it.

Secretary GUTIERREZ. OK.

Senator BOXER. It's not my question.

Secretary GUTIERREZ. Right, \$205 billion.

Senator BOXER. So, the deficit is \$205 billion now. Now, when the Bush Administration took over, what was the deficit?

Secretary GUTIERREZ. The deficit climbed to about 4.1 percent of GDP.

Senator BOXER. No, no. What was the yearly deficit? Isn't it true there was a surplus of \$236 billion? I'm sorry, Budget Committee tells me \$128 billion—

Secretary GUTIERREZ. Right.

Senator BOXER.—surplus. OK. So, you now have a \$205 billion deficit. It was a \$128 billion surplus. So, I think, when you talk about this, you should put it in context. Do you know what the debt is now, and what the debt was when the—when you took over—when the Bush Administration took over? We don't need to beat a dead horse. Would you get me that information?

Secretary GUTIERREZ. Yes. Sure.

Senator BOXER. The fact is, we've been going in the wrong direction. We're finally, now, wrapping our arms around this with PAYGO budgets and the like. But, I think, when you started off that way, it was a bit of a—

Secretary GUTIERREZ. Well—

Senator BOXER.—shock to me, because, you know, after all the hard work that we went through in this body, on both sides of the aisle, to get rid of the deficit—remember, there was a time we had to have a balanced budget amendment to the Constitution, and a lot of us said, "We don't need that, we just need to plain, straight-ahead, balance the budget." So, when you started off with that, you kind of lost me from the start on the macro picture. I used to be a stockbroker, and, you know, I dealt with numbers a lot, and there are very many ways you can play numbers, but my people back home want to know, do we have a deficit? Do we have a debt? And how come this all happened, when we were on the way to getting rid of the debt?

Let me ask you a question about the oceans, because a lot of us here revere them, as I know you do, and they're so important in my State; they're the essential beauty of the State, they're also the essential economic engine of the State, our coastline is. So, I want

to ask you if you've looked at the U.S. Commission on Ocean Policy and the Pew Ocean Commissions Report.

Secretary GUTIERREZ. Yes.

Senator BOXER. And my understanding is—and tell me if I'm right or wrong here—that you're not supporting their recommendations, in terms of how to structure NOAA. Am I wrong on that? Is there hope that we can do something with those Commissions?

Secretary GUTIERREZ. There were a number of recommendations. There were some that I—that we supported, some that we have some questions on. I'm not sure exactly which ones—

Senator BOXER. OK. Well, I think this would be good, if you would do this for me in the next week, if you would have your staff analyze their recommendations and which ones you support.

Because I'm working with Members of the Committee on both sides to put forward some comprehensive ocean legislation, the National Ocean Protection Act, and I would love to know if there are parts of that—those reports that you embrace; then we can at least—

Secretary GUTIERREZ. Sure.

Senator BOXER.—get together on some of those areas.

In terms of the climate—and I know Senator Stevens was getting at this with his questions on the satellites—could you tell us, overall, what level of funding we need over the next few years to maintain and develop our capacity so we're not blinded at the time we need to see most?

Secretary GUTIERREZ. Well, let me just say, we have invested about \$37 billion—I say “we,” throughout the Administration—on climate change, about \$13 billion on science. That takes us out to 2012. The President is currently leading the G8 to develop a new global plan, which will lay out what we need. But, of course, what we need will be determined, in great part, by the goals we set.

I will say this about climate change, Senator Boxer, that our climate change intensity—and I am not playing with numbers here, this is just the way we believe we should measure it, as a factor of GDP—has actually declined. We have outperformed Europe. The President set a goal to reduce climate—emissions intensity by 18 percent by 2012, and we are right on track to achieve that goal.

Senator BOXER. Well, sure, that's not a very good goal, 18 percent intensity. That's—intensity is not the way we're going to move in this Congress. But let me—because I know I'm taking too much time—I have one more question, if I might.

The GAO has disputed the Administration's figures that you've spent on global warming. So, I'd like to work with you—

Secretary GUTIERREZ. Sure.

Senator BOXER.—so you can provide us with a detailed breakdown of the figures that you've given us. I've heard some in the Administration say \$37 billion, and the GAO says it's just not transparent. So, if we could work together—and we'll work staff-to-staff. But I know you're proud of the work that NOAA scientist Susan Solomon has done. She chaired the IPCC Working Group that concluded global warming is unequivocal and a 90 percent certainty that humans are causing global warming. So, based on that report and the work of other NOAA scientists, do you have any doubt that the humans—that humans are causing the Earth to warm?

Secretary GUTIERREZ. I think there is general scientific consensus that climate change is, in part, caused by human activity.

Senator BOXER. "In part, caused," do you know what part?

Secretary GUTIERREZ. I don't think anyone can tell you—or maybe they can, but I can't tell you exactly what—

Senator BOXER. OK.

Secretary GUTIERREZ.—portion. But I think there is consensus that it is being caused by human activity.

Senator BOXER. OK, we'll put in the record the IPCC—which says that "most of the warming."

Secretary GUTIERREZ. Yes, but—

Senator BOXER. They've concluded that most of the warming—not part of the warming, but most of the warming—

Well, thank you very much, sir, and I'll look forward to working with you on some of these issues.

Secretary GUTIERREZ. Senator Boxer, may I make just one—

Senator BOXER. If the Chairman will allow—

Secretary GUTIERREZ.—comment?

Senator BOXER.—of course.

Secretary GUTIERREZ. Just one piece of data. That deficit that I mentioned, the 1.5—our average over the last 40 years is 2.1. So, I think there's a lot to be proud of when we think about our economy.

Thank you, Chairman.

Senator STEVENS. Mr. Chairman, I'd like to put in the record the findings of the International Arctic Research Center from Alaska concerning the contribution of humans and the change to what's—what we're seeing, in terms of warming.

The CHAIRMAN. It will be done.

[The information referred to follows:]

IS THE EARTH STILL RECOVERING FROM THE "LITTLE ICE AGE"?

A Possible Cause of Global Warming—an Updated Version

by Syun-Ichi Akasofu, Ph.D., Founding Director
of the International Arctic Research Center of the University of Alaska Fairbanks

There seems to be a roughly linear increase of the temperature of about $0.5^{\circ}\text{C}/100$ years ($\sim 1^{\circ}\text{F}/100$ years) from about 1800, or even much earlier, to the present. This value may be compared with what the IPCC scientists consider the manmade effect of $0.6\text{--}0.7^{\circ}\text{C}/100$ years. This linear warming trend is likely to be a natural change. One possible cause of the linear increase may be that the Earth is still recovering from the Little Ice Age. This trend should be subtracted from the temperature data during the last 100 years in estimating the manmade effect. Thus, there is a possibility that only a fraction of the present warming trend may be attributed to the greenhouse effect resulting from human activities. This conclusion is contrary to the IPCC (2007) Report (p. 10), which states that "most" of the present warming is due to the greenhouse effect. It is urgent that natural changes be correctly identified and removed accurately from the presently on-going changes in order to find the contribution of the greenhouse effect.

There are many documents that suggest that the period between 1500 and 1900 was relatively cool; the River Thames was frequently frozen in the later part of the 17th century (Lamb, 1982). Stories of the exploration of the Northwest Passage also hint that sea ice conditions in northern Canada in the latter part of the 1800s were much worse than conditions today; it is now possible to cruise the passage without much assistance by icebreakers. Although there is some doubt about the exact timing of the "Little Ice Age," it is possible to infer that the period between 1500 and 1900 was relatively cool in many parts of the world (cf. Lamb, 1982; Gribbin (ed.), 1978; Crowley and North, 1991; Burroughs, 2001; Serreze and Barry, 2005).

Climate change during the last 100 years or so has been intensely discussed over the last few decades. However, it is important to recognize that as far as the *basic* global warming data for this period are concerned, all we have is what is illustrated in the top of the diagram of Figure 1. The IPCC Reports state that the global average temperature increased about 0.6°C – 0.7°C (-1°F) during the last 100 years. Their interpretation may be illustrated in the middle graph of Figure 1, as both the temperature and the amount of CO₂ in the air have increased during the last 100 years or so. Further, it is well known that CO₂ causes the greenhouse effect, so that it is natural to *hypothesize* that CO₂ is one of the causes of the present warming trend. Nevertheless, it is not appropriate to tacitly assume that the 0.6°C – 0.7°C rise is mostly due to the manmade effect without carefully examining the contributions of natural changes.

Indeed, there is so far no definitive proof that “most” of the present warming is due to the greenhouse effect, as is stated in the recently published IPCC Report (2007). In fact, the relationship between air temperature and CO₂ is not simple. For example, the temperature had a cooling trend from 1940 to about 1975, in spite of the fact that atmospheric CO₂ began to increase rapidly in about 1940, as can be seen in Figures 1 and 2. It is not possible to determine the percentage contribution of the greenhouse effect that is a direct result of human activities, unless (and until) natural causes can be identified and subtracted from the present warming trend.

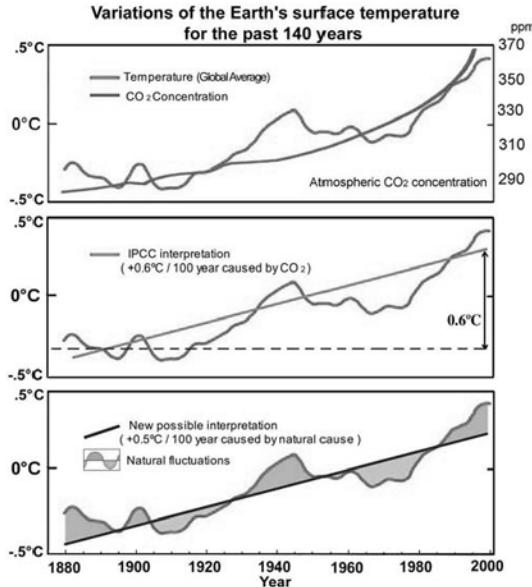


Figure 1: The top graph is the basic data on global warming; the middle graph is the IPCC’s interpretation that the 0.6°C (1°F) increase is caused by the greenhouse effect; the bottom graph is another interpretation, suggesting that a large fraction of the 0.6°C – 0.7°C rise is due to natural changes.

As another interpretation, in the bottom graph of Figure 1, it is assumed that there was an almost linear increase of natural temperature rise of $0.5^{\circ}\text{C}/100$ years, which is superposed by fluctuations, such as multi-decadal oscillations. The difference between the second and third diagrams is that the IPCC Report assumes that the warming trend is mostly due to human activities, while the latter assumes that a large fraction of the warming trend is due to natural causes. Actually, there are many other ways to interpret the temperature changes than what is shown in the bottom graph of Figure 1.

It is somewhat surprising that there has, so far, been no debate on such, and many other interpretation and possibilities. Indeed, it is doubtful that the IPCC conclusion of “most” is the consensus of 2,500 experts in climatology. The greenhouse effect is a hypothesis to be proven. At this stage in the development of modeling and simulation, however, one can test the hypothesis only qualitatively, not quantitatively by global climate models (GCMs), because they are adjusted or “tuned” to reproduce the 0.6°C – 0.7°C rise. This point will be discussed later.

Figure 2 shows both the global average temperature and the temperature from stations widely distributed along the coast of the Arctic Ocean (blue) during the last 100 years or so (Polyakov *et al.*, 2002). One can see that the magnitude of temperature changes is significantly larger in the Arctic. A similar result was shown in the ACIA Report (2004); see p. 23. In particular, fluctuations, including multi-decadal oscillations, are greatly “amplified” in the Arctic. There occurred two major fluctuations, one between 1920 and 1975, and one after 1975. The arctic data indicates that the two fluctuations in the global average data should not be ignored as minor fluctuations.

Indeed, it is crucial to investigate the nature of the temperature rise between 1920–1940 and the one after 1975. As the Figure 1 (top graph) and Figure 2 show, CO₂ in the atmosphere began to increase rapidly after 1940, when the temperature decreased from 1940 to 1975. Thus, the large fluctuation between 1920 and 1975 can be considered to be a natural change, until proven otherwise. Therefore, unless the difference between the two changes can be understood, it is not possible to say tacitly that the rise after 1975 is mostly caused by the greenhouse effect. There is nothing wrong to suspect that the rise after 1975 contains a significant natural component.

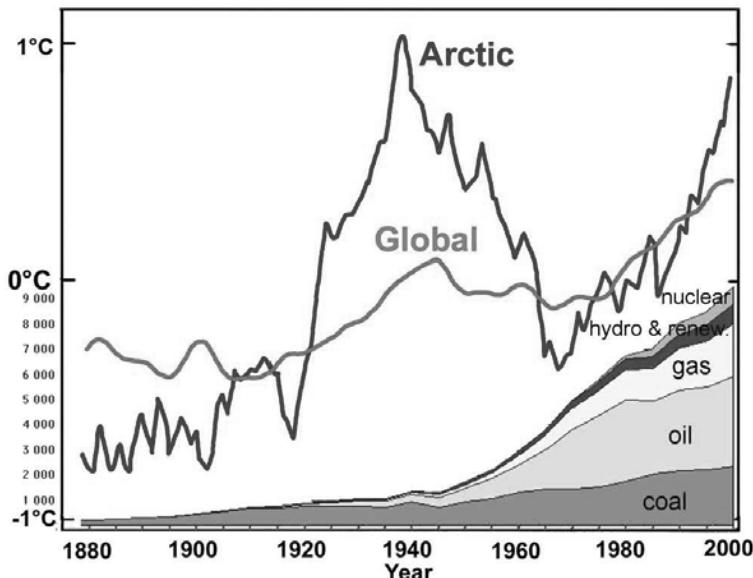


Figure 2: Red—global average change (IPCC Reports). Blue—data from stations along the coastline of the Arctic Ocean (Polyakov *et al.*, 2002). The figure shows also the amount of various sources of energy used during the last century; gas, oil, and coal all release CO₂.

In this note, we examine first the possibility of the case shown in the bottom graph of Figure 1 and then the nature of the fluctuations.

1. Linear Increase

The basis for drawing a linear line in the bottom graph in Figure 1 cannot be justified without additional data. Fortunately, Fritzsche *et al.*, (2006) obtained ice cores from Severnaya Zemlya, an island in the Arctic Ocean, and made the δ¹⁸O analysis. Their results are reproduced here as Figure 3a. It shows the δ¹⁸O data at the top. It is possible to observe that an almost linear change is evident from about 1800 to the present in the ice core record; the red linear line is added by the present author; large fluctuations are also indicated as “natural changes” also by the author, since it is unlikely that CO₂ caused any major temperature fluctuations before 1940.

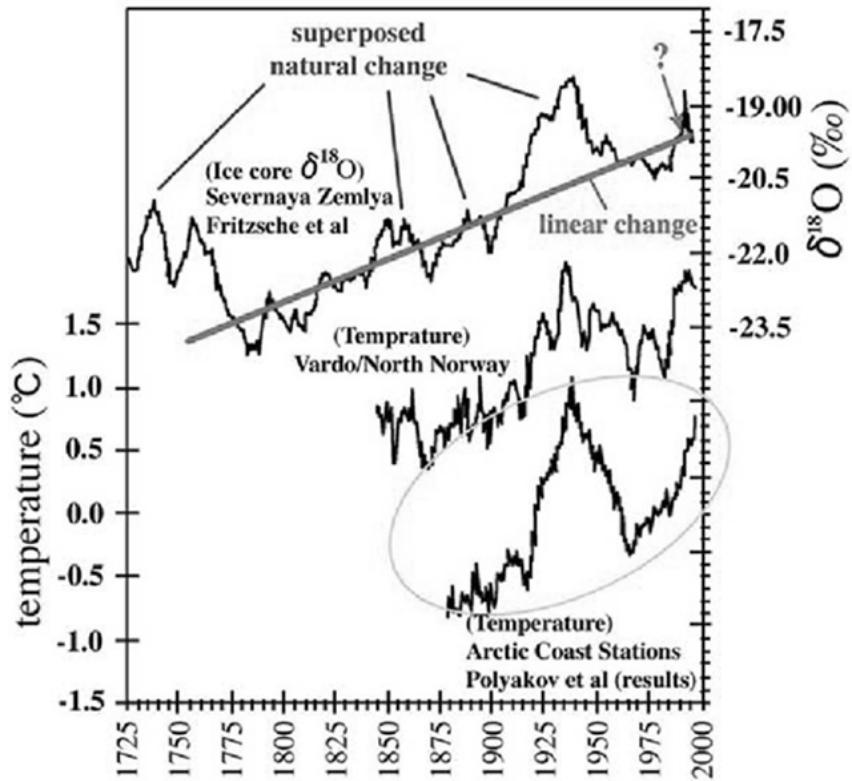


Figure 3a: Late Holocene ice core record from Akademii Nauk Ice Cap, Severnaya Zemlya, Russian Arctic, together with temperature records at Vardo, Norway, and along the arctic coast stations (Polyakov *et al.*, 2002), the last one is the same as the blue curve in Figure 2 (D. Fritzsche *et al.*, 2006).

Their figure shows also a thermometer record from Vardo in Northern Norway. The bottom graph is the same as the “Arctic” one of Figure 2. The credibility of the ice core record is supported by the similarity with the Norwegian temperature record and the data by Polyakov *et al.*, (2002), or vice versa.

Figure 3b shows ice core data from Quelccaya, Peru, and Dunde, China, comparing them with decadal temperature departures in the Northern Hemisphere. One can infer a quasi-linear trend in both data, in addition to various fluctuating components.

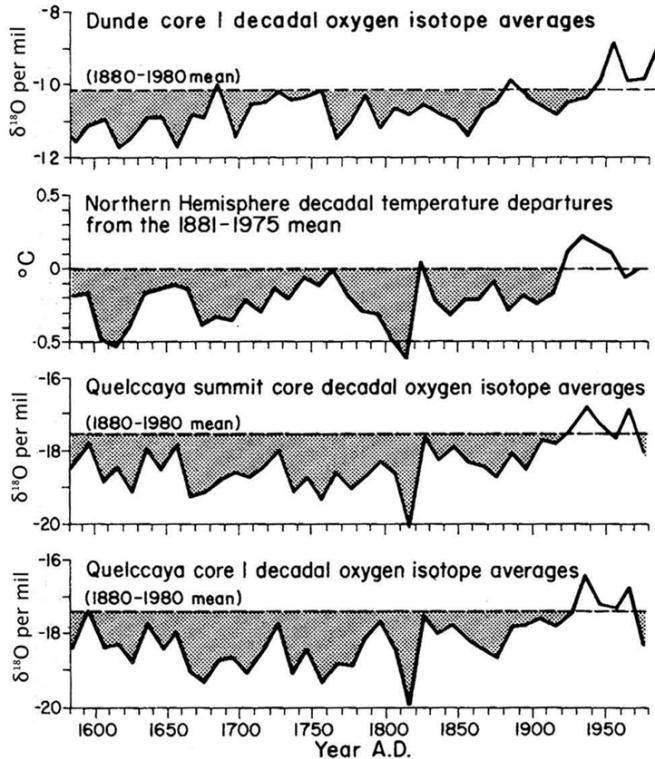


Figure 3b: Decadal temperature departures (from 1881–1975) in the Northern Hemisphere from 1580 A.D. to 1975 (second) compared with decadal average $\delta^{18}\text{O}$ values for both the Dunde, China, D-1 core (top) and Quelccaya, Peru, ice cores (third and fourth). The dashed line is the 1881–1980 A.D. mean for the $\delta^{18}\text{O}$ records (L.G. Thompson, 1992).

The ACIA Report (2004) took the *average* of 100-year records as the baseline (their figure on page 23), namely, a line parallel to the horizontal axis, with the average value as the zero (base) line. However, the above ice-core records show that such a practice is not appropriate. There is clearly a linear increase of temperature from about 1800 or much earlier. Similar linear trends can be inferred in the Norwegian data and the data by Polyakov *et al.*, (2002) in Figure 3a. There are several other supporting studies that suggest that there has been a linear change from about 1800 or earlier. For example, Figures 4, 5, 6, 7, and 8 suggest a roughly linear change of temperature from the earliest recordings by Burroughs (2001), Tarand and Nordli (2001), and van Egelen *et al.*, (2001). The trend lines and curves were drawn by the quoted authors, not by the present author.

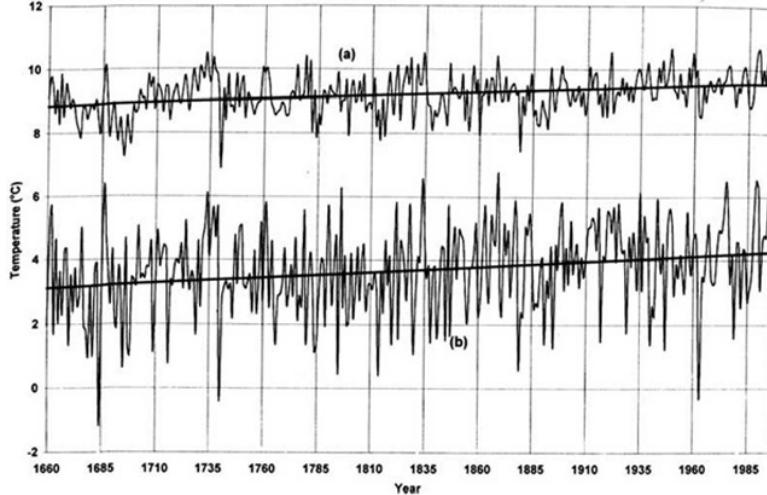


Figure 4: The linear trends for the temperature of central England over the period 1660–1996 for (a) the annual data, and (b) the winter months (December to February), show a marked warming. In both cases, this warming is significant, but although the temperature rise is greater in winter, this trend is less significant because the variance from year to year is correspondingly greater (L.D. Burroughs, 2001).

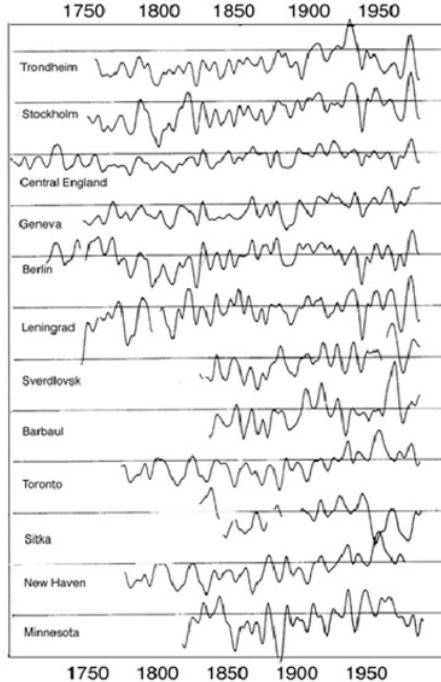


Figure 5: Temperature change at a number of stations in the world (P.D. Jones and R.S. Braley, 1992).

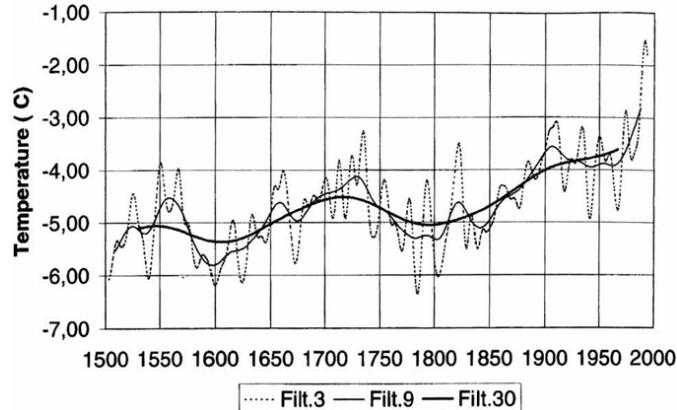


Figure 6: Winter temperature (December–March) at Tallinn since 1500, which are based on ice break-up dates in Tallinn port. The series is smoothed by Gaussian filters of 3, 9, and 30 years as standard deviations in the Gaussian distribution (A.N. Tarand and P.Ø. Nordli, 2001).

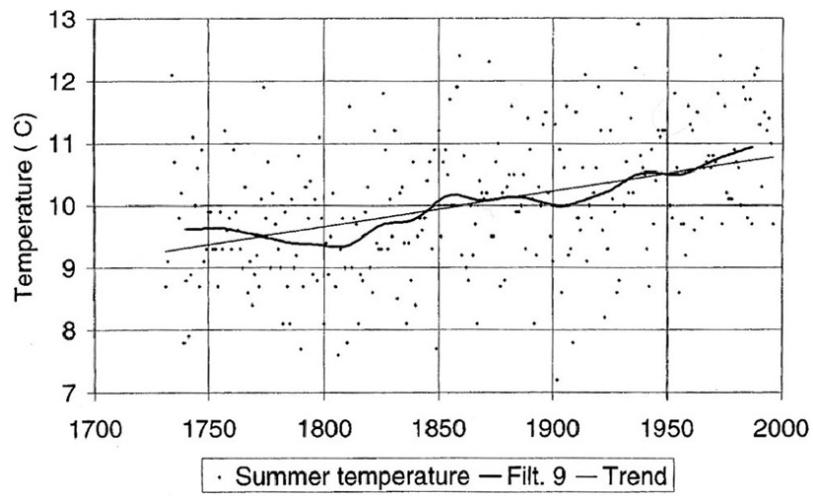


Figure 7: Summer temperature (April to July) for Tallinn, which is based on ice break-up and rye harvest data and of instrumental observations. To ease the study of variations on a timescale of approximately 30 hours, the observations are smoothed by a Gaussian filter with standard deviation of 9 years in its distribution (curve). A trend line for the whole period is also shown (A.N. Tarand and P.Ø. Nordli, 2001).

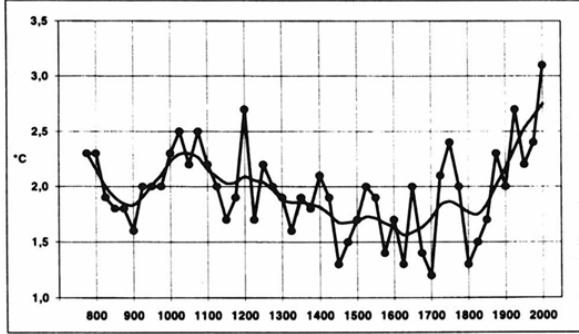


Figure 8: 25-year mean winter (DJF) temperature at De Bilt (A.F.V. van Engelen, J. Buisman and F. Ijnsen, 2001). This figure includes a longer period data than Figures 4, 5, and 6.

There is further supporting evidence of a continuous climate change from about 1800. Figure 9a shows that the southern edge of sea ice in the Norwegian Sea has been continuously retreating from about 1800 to the present. Further, there is a possibility that the present retreating is related to an intense inflow of warm North Atlantic water (Polyakov *et al.*, 2002); this phenomenon is known as the North Atlantic Oscillation (NAO), which is a natural phenomenon (Figure 9b). Further, Figures 10a and 10b show examples of glaciers in Alaska and New Zealand, respectively, which have been retreating from the time of the earliest records. There are a large number of similar records from the European Alps and elsewhere (Grove, 1988). Therefore, it can be assumed that many glaciers advanced during the Little Ice Age and have been retreating since then. Thus, the retreat is not something that began only in recent years.

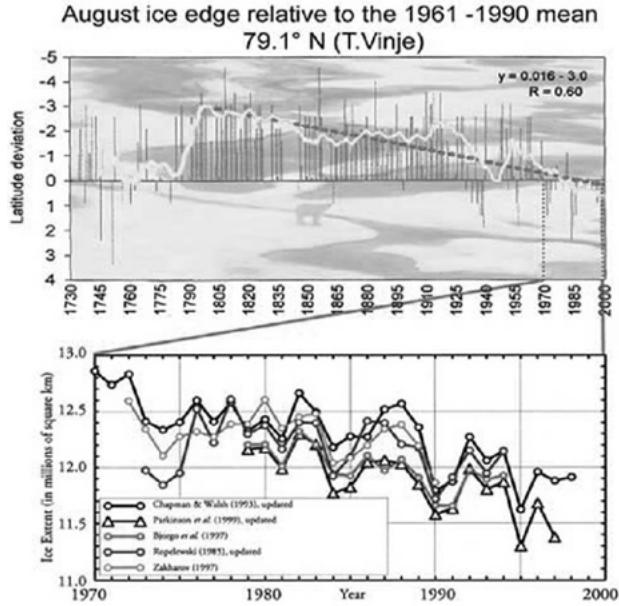


Figure 9a: Upper, retreat of sea ice in the Norwegian Sea (T. Vinje, 2001). Lower, satellite data corresponding to the period between 1970 and 1998 are shown.

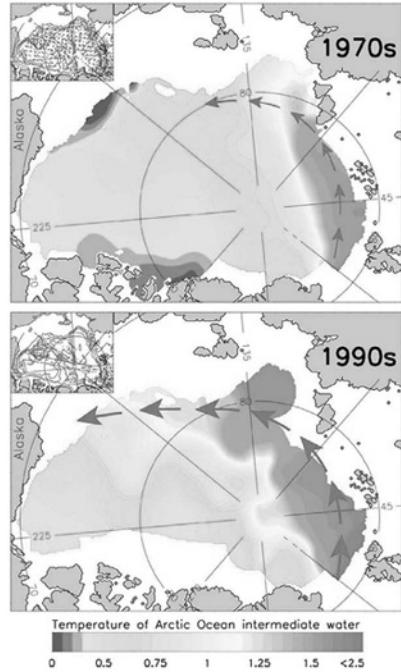


Figure 9b: Inflow of warm North Atlantic water into the Arctic Ocean (I. Polyakov, 2006).

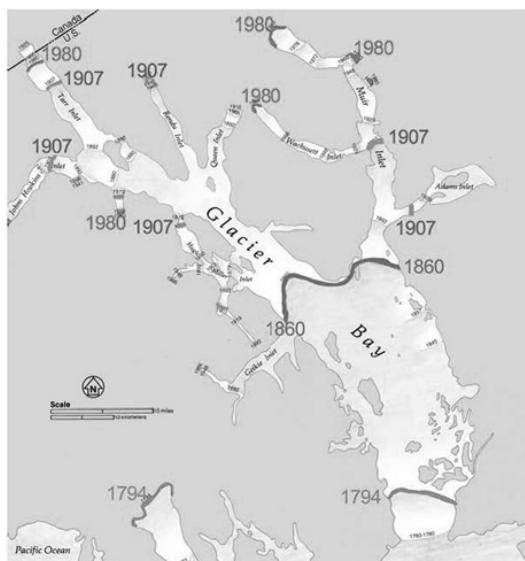


Figure 10a: Retreat of glaciers in Glacier Bay (Alaska Geographic, 1993).



Figure 10b: Retreat of the Franz Josef Glacier in New Zealand (J.M. Grove, 1988); the coloring is added by the present author for emphasis.

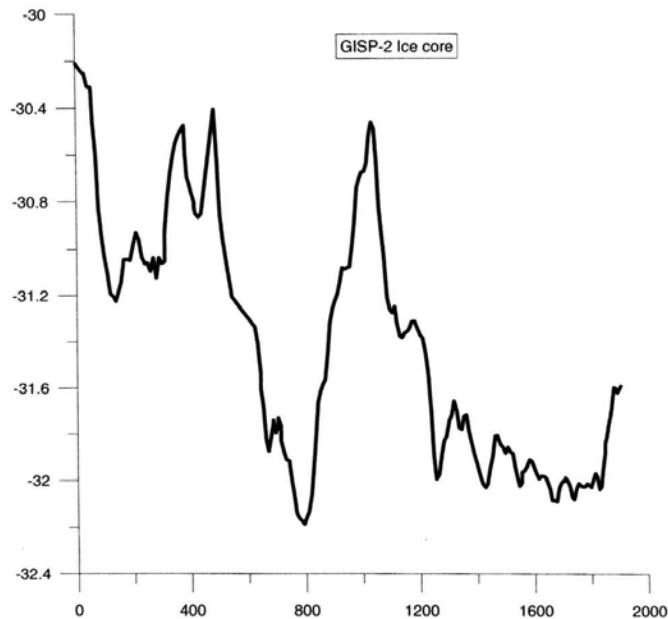


Figure 11: Ice core temperature at the GISP-2 site in Greenland (R.B. Alley, 2000).

The fact that an almost linear change has been progressing, without a distinct change of slope, from as early as 1800 or even earlier (about 1660, even before the Industrial Revolution), suggests that the linear change is a natural change. As shown at the top graph of Figure 1 and also Figure 2, a rapid increase of CO₂ began only after 1940.

As far as the gradient of the linear change is concerned, it can roughly be estimated to be about 0.5 °C/100 years based on Figures 3a, 3b, 4, 5, 6, and 7. It is very interesting to recognize that this gradient is almost comparable with the IPCC's

estimate of 0.6 °C–0.7 °C/100 years. Since the maximum decrease of temperature during the Little Ice Age is estimated to be about 0.5 °C (Wilson *et al.*, 2000)—1.5 °C (Crowley and North, 1991; Grove, 2005), it is worthwhile to speculate that the Earth is still recovering from it. Another possibility is that the Earth is experiencing a new warming trend of unknown causes. Yet, another possible additional cause may be changes in solar output (cf. Soon, 2005; Scafetta and West, 2006), which we did not investigate in this note.

Therefore, the linear change, which is likely to be a natural change, should be subtracted from the top graph of Figure 1 in order to identify and estimate the greenhouse effect.

However, it is not intended here to make an accurate estimate of the gradient of the linear change. It is beyond the scope of this note. It is a task of climatologists. There is a great uncertainty in obtaining early data corresponding to the accuracy of the top graph of Figure 1 in terms of the geographic distribution of the stations, seasons, etc. Here, I emphasize only that a significant part of the 0.6 °C–0.7 °C increase during the last 100 years includes natural changes, contrary to the statement by the IPCC Report (2007), so that natural changes must be subtracted before estimating manmade effects.

At this point, we encounter one of the fundamental problems in climatology and also meteorology. Is there any definitive evidence to conclude that the Little Ice Age ended by 1900? Permafrost that formed during the Little Ice Age still exists around Fairbanks, although it is thawing (Romanovsky, 2006). More fundamentally, how can we determine the “normal” or “standard” temperature from which deviations (warming or cooling) are considered to be abnormal? At this time, there is no reference level to conclude that the Little Ice Age was over by about 1900. The problem is that the “normal” and “standard” depend on the chosen period and the length of the period. Figure 11 shows the ice core temperature at the GISP–2 site in Greenland (Allen, 2000). One can recognize at least that the Earth experienced a cool period during the last few hundred years. Furthermore, there were large fluctuations of temperature in the past, which are obviously natural changes, so that there is a possibility that the Earth is experiencing a new warming trend after recovering from the Little Ice Age.

Further, the IPCC Report (2007) states that the present high temperature is “unusual” except for about 130,000 years ago (p. 10). However, if we examine the temperatures during all the other interglacial periods (240,000, 330,000, 400,000 years ago), each interglacial period was warmer than the present one. Thus, it could be said that the present interglacial period was abnormally a cool one. In fact, even during the present interglacial period, the temperature was a little warmer than the present one for a few thousand years at its beginning (cf. Wilson *et al.*, 2000). It seems that there are unjustifiable efforts on the part of IPCC to stress that the present warming is very unusual.

2. How Linear is the Linear Change?

It is reasonable to expect that the linear change is only a rough first approximation. An accurate examination is expected to show deviations from the linear trend, if the greenhouse effect is significant, namely an upward deviation from the linear change after 1940. As mentioned earlier, this is a task of climatologists. This may be hard to examine because the linear change is superposed by large fluctuations.

In this respect, it is interesting to note a recent study of sea level changes (Holgate, 2007); it is shown in Figure 12. Although the data covers only the period after 1907, it is sufficient to examine any indication of accelerated increase of sea level after 1940. The sea level change should reflect the expected changes associated with the thermal expansion of seawater and glacier melting changes during the last half century that were warned in the IPCC Reports. Figure 12 shows that there is no clear indication of an accelerated increase of sea level after 1940, even if some individual glaciers in the world show accelerated receding. In fact, comparing the slope between 1907–1960 and 1960–2000, there is even slightly less increase in the latter period. During the period of his study, Holgate (2007) noted that the rate of sea level rise was about 1.7 mm/year.

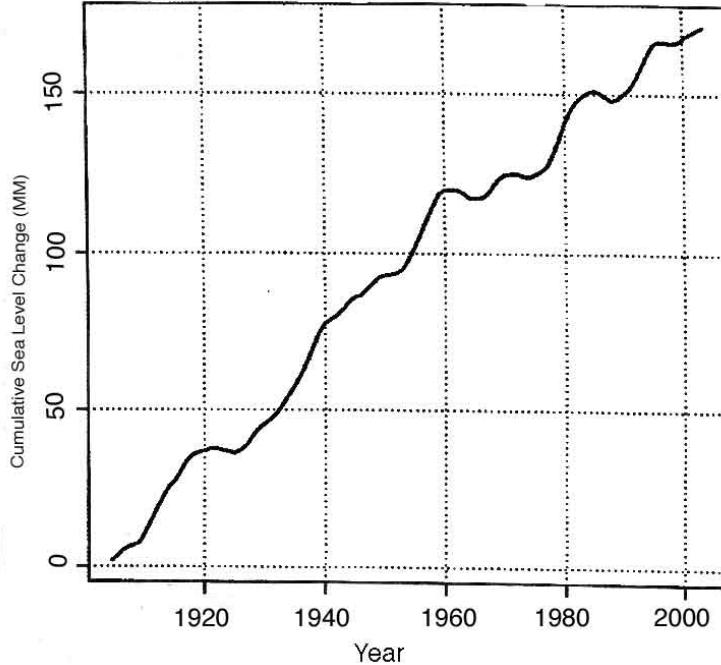


Figure 12: The mean sea level record from the nine tide gauges over the period 1904–2003 based on the decadal trend values for 1907–1999. The sea level curve here is the integral of the rates (Holgate, 2007).

3. Fluctuations

As shown in Figure 2, two prominent fluctuations occurred during the last 100 years. The first one was a temperature rise from 1920 to 1940 and the subsequent decrease from 1940 to about 1975 (Figures 1 and 2). The second one is the present rise after 1975. As stated earlier, it is crucial to examine if both rises are due to the same, similar, or entirely different causes. Until some study can provide convincing results on this problem, we should not claim that the rise after 1975 is mostly due to the greenhouse effect as the IPCC Report did.

It is interesting to note from the original paper from Jones (1988, 1994) that the first temperature change from 1920 to 1975 occurred only in the Northern Hemisphere. Further, it occurred in high latitudes above 50° in latitude (Serreze and Francis, 2006). The present rise after 1975 is also confined to the Northern Hemisphere, and is not apparent in the Southern Hemisphere; there may be a problem due to the lack of stations in the Southern Hemisphere, but the Antarctic shows a cooling trend during 1986–2005 (Figure 13).

Thus, it is not accurate to claim that the two changes are a truly *global* phenomenon, even if *averaging* the data from both hemispheres can provide Figure 1. Since the greenhouse effect is supposed to be global, the two prominent changes (1920–40 and after 1975) may be considered to be regional changes. Thus, there is a possibility that both increases are natural changes, unless it can be shown definitely that such regional changes are caused by the greenhouse effect. Further, the two changes are not obvious in the Southern Hemisphere (Jones, 1988). If this would indeed be the case, it may not be very difficult, after all, to remove the two prominent fluctuations from the changes during the last 100 years. Using data from stations below 50° latitude, fluctuations above and below the linear change can also be regarded as natural changes, as a *very rough* first approximation. One important question is how much of the rise after 1975 is “contaminated” by natural changes.

It is important to note that the present global warming after 1975 is not uniform over the Earth. Although a single number, namely +0.6 °C–0.7 °C/100 years, is used in discussing global warming, the geographic distribution of “warming” is quite complex. The upper part of Figure 13 shows the “warming” pattern during the last half

of the last century, from about 1950 to about 2000 (Hansen *et al.*, 2005). One can see that the most prominent change occurred in Siberia, Alaska, and Canada, namely in the continental arctic. There is no doubt that such a prominent change contributed to the global average change in Figures 1 and 2. In the continental arctic, the warming rate was several times more than the global average of $0.6\text{ }^{\circ}\text{C}/100\text{ years}$ ($0.6\text{ }^{\circ}\text{C}/2=0.3\text{ }^{\circ}\text{C}/50\text{ years}$). It may be also noted that cooling was in progress in Greenland over the same time period.

It is of great interest to ask if GCMs can reproduce this geographic distribution of the observed changes shown in the upper part of Figure 13, since they “can” reproduce the $0.6\text{--}0.7\text{ }^{\circ}\text{C}/100\text{ years}$ rise. Thus, we asked the IPCC arctic group (consisting of 14 sub-groups headed by V. Kattsov) to “hindcast” geographic distribution of the temperature change during the last half of the last century. To “hindcast” means to ask whether a model can produce results that match the known observations of the past; if a model can do this at least qualitatively, we can be much more confident that the model is reliable for predicting future conditions. Their results are compiled by Bill Chapman, of the University of Illinois, and are shown in the right side of Figure 14a. The left side of the figure is taken from the ACIA Report (2004), which shows a similar trend as that of the upper part of Figure 13, namely the prominent warming in the continental arctic and cooling in Greenland. This comparison was undertaken in an attempt to reduce differences between them, because both are expected to be similar, but imperfect.

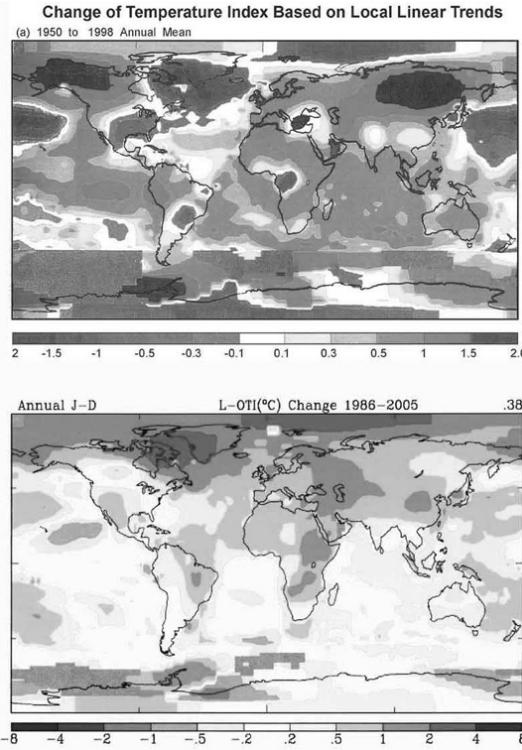


Figure 13: Upper—the geographic distribution of temperature change between 1950 and 1998 (Hansen *et al.*, 2005). Lower—the geographic distribution of temperature change between 1986 and 2005 (Hansen, 2006).

We were surprised at the difference between the two diagrams in Figure 14a. If both were reasonably accurate, they should look alike. Ideally, the pattern of change modeled by the GCMs should be identical or very similar to the pattern seen in the measured data. We assumed that the present GCMs would reproduce the observed pattern with at least reasonable fidelity. However, we found that there was no resemblance at all, even qualitatively.

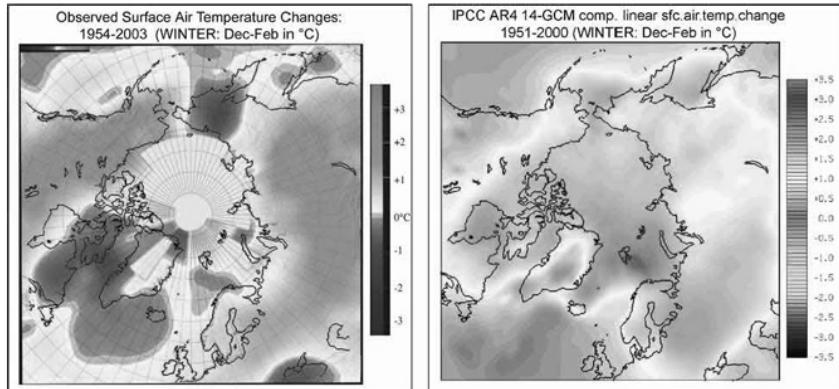


Figure 14a: Comparison of the observed distribution of temperature changes (ACIA, 2004) and the simulation (hindcasting) by the IPCC arctic group (Chapman 2005).

Our first reaction to this surprising result was that GCMs are still not advanced enough for hindcasting. However, this possibility is inconceivable, because the increase of CO₂ measured in the past is correctly used in the hindcasting, and everything we know is included in the computation. The IPCC arctic group's result is the best result based on our present knowledge. In fact, they can reproduce the 0.6 °C–0.7 °C increase during the last hundred years. If the greenhouse effect caused the warming, it should be reproducible to some extent by these models, even if the reproduction is not perfect.

It took a week or so before we began to realize another possibility of this discrepancy: If 14 GCMs cannot reproduce prominent warming in the continental arctic, perhaps much of this warming is not caused by the greenhouse effect at all. That is to say, because it is not caused by the greenhouse effect, the warming of the continental arctic cannot be reproduced at least qualitatively by our GCMs. How do we examine that possibility?

If the prominent warming in the continental arctic (Figure 13, upper, and Figure 14a, left) is due to the greenhouse effect, the prominent trend should continue after 2000. That is, we should observe an amplification of continental arctic warming in this century that will be even greater than the amplification that was observed during the last half of the last century, because the amount of CO₂ continues to increase at an exponential rate. Thus, we examined the warming trend during just the last 20 years or so, provided by Hansen (2006). To our surprise, the prominent continental arctic warming almost disappeared in those results; the Arctic warmed at a rate about like that of the rest of the world, while Greenland showed a strong warming (the lower part of Figure 13), instead of cooling during the last half of the last century. Actually, in Fairbanks, the temperature shows a cooling trend between 1977 and 2001, as can be seen in Figure 14b (Hartman and Wendler, 2005). Therefore, our conclusion at the present time is that much of the prominent continental arctic warming and cooling in Greenland during the last half of the last century is due to natural changes, perhaps to multi-decadal oscillations like Arctic Oscillation, the Pacific Decadal Oscillation, and the El Niño. This trend is shown schematically in the bottom graph of Figure 1 as positive and negative fluctuations. If this would indeed be the case, the IPCC Report is incorrect again in stating that the warming after 1975 is particularly caused by the greenhouse effect. If the fluctuation are only of positive changes, the linear slope in the third graph may be about 0.4 °C/100 years. Again, this is a task of climatologists to clarify.

In this connection, it might be added that permafrost temperatures have stopped rising during the last several years (Richter-Menge *et al.*, 2006); see Figure 15. The amount of CH₄ has ceased to increase from about 2000. It is puzzling why they do not show an accelerated increase if their increase before 2000 was due to the greenhouse effect; they may be temporal fluctuations.

4. Summary

From the data provided in the earlier sections, it is quite obvious that the temperature change during the last 100 years or so includes significant natural changes, both the linear change and fluctuations. It is very puzzling that the IPCC Reports states that it is mostly due to the greenhouse effect. Further, unfortunately,

computers are already incorrectly “taught” or “tuned” that the 0.6°C – $0.7^{\circ}\text{C}/100$ years rise during the last hundred years is caused by the greenhouse effect, so that their results cannot be used as proof of the greenhouse effect and thus cannot predict accurately the degree of future warming.

It is suggested here that the linear change may be due to the fact that the Earth is slowly recovering from the Little Ice Age or in the period of a new warming.

Regardless of the cause of the Little Ice Age, it is urgent that natural changes should be correctly identified and removed accurately from the present on-going changes in order to find the contribution of the greenhouse effect. Only then will an accurate prediction of future temperature changes become possible.

One lesson here is that it is not possible to study climate change without long-term data. This is understandable from the fact that it is not possible to draw the linear line in the bottom graph of Figure 1 without the data shown in Figures 3a, 3b, 4, 5, 6, 7, and 8.

It is very easy to discredit the results of the traditional climate change studies (Figures 4, 5, 6, 7, and 8) in terms of accuracy. However, this is what climatologists must face. In some sense, *inaccurate data (compared with modern data) during the last few hundred years are more important than accurate satellite data after 1970 in our study of global warming*. Unfortunately, at this time, many studies are focused only on climate change after 1975, because satellite data have become so readily available. A study of climate change based on satellite data is a sort of “instant” climatology. It is puzzling why the causes of the rise between 1930 and 1940 have not been studied. Chylek *et al.*, (2006) reported that present changes of the Greenland ice sheet is less than what was observed during the 1920–1940 period.

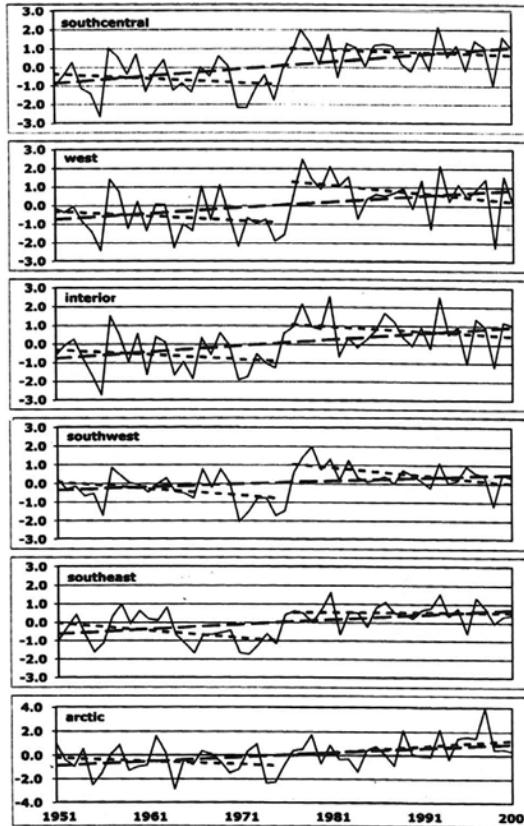


Figure 14b shows the transition from the declining period (1940–1975) to the rising period after 1975. The transition is a step-function-like change, unlike the Greenland effect. Further, after a step-function-like increase, the trend appears to be negative, which is inconsistent with what Figure 13 shows (B. Hartmann and G. Wendler, 2005).

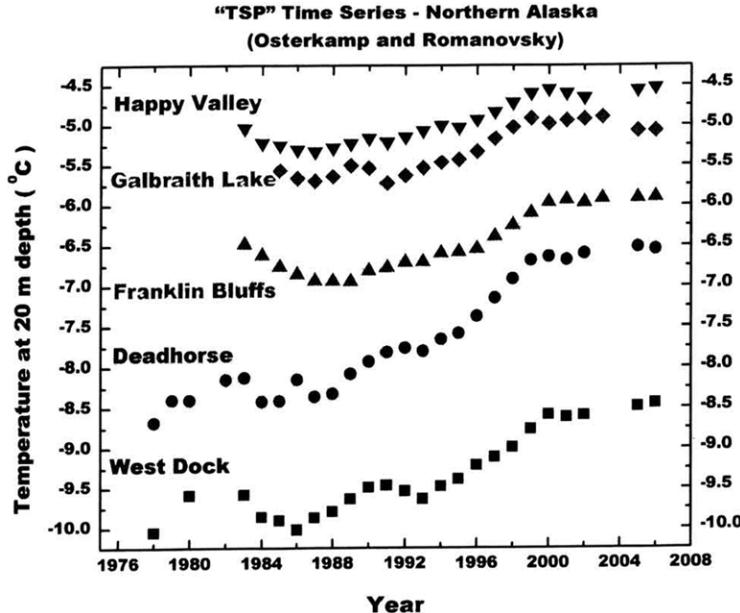


Figure 15: Permafrost temperature variations in Northern Alaska from 1976 to 2006. Note that the increasing temperature from about 1988 stopped in about 2000 (Richter-Menge *et al.*, 2006).

5. Conclusion

I would like to emphasize:

- (i) Natural components are important and significant, so that they should not be ignored;
- (ii) Two natural changes are identified in this note: a linear increase of about $+0.5^{\circ}\text{C}/100$ years and fluctuations superposed on the linear change;
- (iii) It is insufficient to study climate change based on data from the last 100 years;
- (iv) It is difficult to conclude about causes of the rise after 1975 until we can understand the rise from 1920 to 1940;
- (v) Because of these deficiencies, the present GCM models cannot prove that the present warming (0.6°C – $0.7^{\circ}\text{C}/100$ years) is caused by the greenhouse effect; and thus,
- (vi) Future prediction of warming by GCMs is uncertain.

If most of the present rise is caused by the recovery from the Little Ice Age (a natural component) and if the recovery rate does not change during the next 100 years, the rise expected from the year 2000 to 2100 would be 0.5°C . Multi-decadal changes would be either positive or negative in 2100. This rough estimate is based on the recovery rate of $0.5^{\circ}\text{C}/100$ years during the last few hundred years. It should be noted that the greenhouse effect shown by GCMs should be carefully re-evaluated, if the present rise (0.6°C – $0.7^{\circ}\text{C}/100$ years) is mostly due to natural components, such as those I suggest.

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The CHAIRMAN. Senator Klobuchar? She's not here? OK.
Senator McCaskill?

**STATEMENT OF HON. CLAIRE McCASKILL,
U.S. SENATOR FROM MISSOURI**

Senator McCASKILL. Thank you, Mr. Chairman.

I'm concerned about the fact that you don't have an IG. Have you sent a letter to the President requesting that an IG be appointed immediately?

Secretary GUTIERREZ. We have—yes, we have started that process. We're going through that process. I have met a couple of candidates, yes. Yes. I am very concerned, as well.

Senator MCCASKILL. Are you aware that the Deputy IG that is there, there are allegations that he was also involved in the retaliation that was—that became such a controversy? In fact, really, your IG department has been a source of a management problem, I would assume, for you, for some period of time now.

Secretary GUTIERREZ. I'm aware of the problems in the IG office, and we are paying very close attention, because of the politics and the tension and the human interaction that takes place in a place like that, where you have those sort of problems. So, yes, this is a big priority for us.

Senator MCCASKILL. Well, I would appreciate being in the loop on the progress that you're making there. I think it's essential that you have a full-time IG onboard as quickly as possible. And I know—I'm just reviewing some of the reports that have been made—that you have to realize the importance of that, in terms of you being able to do your job effectively.

I also would ask that you would consider—I have legislation that would mandate this, but this ought to be something we—shouldn't have to mandate—that you would put—the IG's link on your home page. I think any citizen who goes to an agency of the Federal Government ought to be able to immediately find the reports that have been done—that are expensive to do, take a lot of man hours to do—they ought to be easily accessible to the public. And I would appreciate your consideration of putting the IG's link on your home page.

As we talk about the IG, and looking at some of the IG reports that Mr. Frazier did, and understanding that he left under a cloud, but some of his work remains, I'm curious about one that caught my eye. And I know this is like, kind of, majoring in the minors, but it's one of those things where perception is very important. In 2002, he had a finding about the inability of the Commerce Department to monitor first-class plane travel. Do you have the ability to communicate with all of your employees by e-mail?

Secretary GUTIERREZ. Yes.

Senator MCCASKILL. Would you mind, in the next week, putting out an e-mail that no one in Commerce should be taking a first-class plane flight unless the limited exceptions under the Federal travel regulations are observed? Because there was a finding, back in 2002, that there were a lot of premium air flights taking place, and that there—and there's all this "rah, rah, rah," around about, "Well, these forms weren't there, and these forms weren't there." I mean, this is pretty simple.

Secretary GUTIERREZ. No, I—

Senator MCCASKILL. You know, Government should not be paying for first-class plane tickets for people who work for the Government, except under limited circumstances—

Secretary GUTIERREZ. I believe—

Senator MCCASKILL.—where there's not a coach-class flight available, where it's more than 14 hours, or where there's a disability. This is not rocket science. And you've got a lot of stuff you've got to manage that is close to rocket science.

Secretary GUTIERREZ. I've—

Senator MCCASKILL. This, to me, seems pretty simple and straightforward.

Secretary GUTIERREZ. I—

Senator MCCASKILL. Would you mind doing that—

Secretary GUTIERREZ. I will—

Senator MCCASKILL.—putting out an e-mail from—

Secretary GUTIERREZ.—do that, and I will see if we've had any problems recently.

Senator MCCASKILL. Well, it's in the report, from March 2007—management challenges for the Department, that, in 2002, they found that the guidelines weren't being followed, and they went back to check, and it's no better. So, this is a good example of—well, I shouldn't say "it's no better," but the problem still exists. They did a sample of 74 travel, and found out there was only three that it was documented that it was under appropriate circumstances that first-class travel was taken.

I mean, I know it may be shooting fish in a barrel, but, to me, it's—

Secretary GUTIERREZ. No, I agree. I agree.

Senator MCCASKILL.—it's something that the people don't "get," and, frankly, I don't "get." And if you would fix that simple problem, I would greatly appreciate it.

Secretary GUTIERREZ. I think it's a fair point, and I can tell you, I have forgotten what it's like to travel first class, so if somebody else is traveling first class, I'd like to know about it.

Senator MCCASKILL. I think they are. Thank you, Mr. Secretary.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Klobuchar?

STATEMENT OF HON. AMY KLOBUCHAR, U.S. SENATOR FROM MINNESOTA

Senator KLOBUCHAR. Thank you, Mr. Chairman.

Mr. Secretary, I would—I wanted to go through some of these issues that we've been talking about in our hearings. We've had some great hearings in the Commerce Committee over the last few months, and one of them you've touched on, which is competitiveness. And we had a number of the Nobel Prize winners from the United States here, and they talked about their concerns about innovation and about research. And they talked about how we had these great laboratories that used to be supported by AT&T and General Electric, IBM, and that these laboratories really no longer exist, and the funding has been so depleted that we really don't have the research powerhouses that we once had, and, at the same

time, we're competing on the world stage with other countries that are putting more money into their research. Do you believe that the government-supported laboratories we have now, like the National Institute of Standards and Technology laboratories, can serve as a replacement? And do you think we need to do more?

Secretary GUTIERREZ. Well, that's a great question, I appreciate that. Under the President's American Competitiveness Initiative, we have requested \$136 billion over 10 years for research, primarily in the Department of Energy, NIST, and the National Science Foundation.

I believe we have a system that works, and the system is not just the U.S. Government system, because we do about a third of all R&D in the country. What we tend to do is mostly research, and the private sector does the development. I think what makes our system so effective is that the research that the Government does works very much hand-in-hand with the development that the private sector does, and some of the research and development that takes place in universities. So, I think it's a very good system, but, as you know, the world is getting more competitive—we need to ensure that our system is always getting better.

Senator KLOBUCHAR. All right. And—I'd refer you to the testimony we had from those Nobel Prize winners, just because they were concerned, and not only about the research, but also about the education levels. Of course, we've just passed the America COMPETES Act, and are—

Secretary GUTIERREZ. Right.

Senator KLOBUCHAR.—trying to focus more on math and science. But I think it's something, when you look at the number of degrees coming out of other countries, that we should be watching out for.

And then, along that—the issue of research. And I know that Senator Boxer brought up the climate change issue. And this happened before my time in the Senate, but I was always very concerned—I know I had been asked about it, talking about the issue—it was back in—I think it was around the spring of 2006, when some of the NOAA scientists described repeated instances in which the Administration had played down the threat of climate change in their documents and news releases. Can you comment on these concerns? And have you talked to these scientists? Just because we're entering—the rest of the year, here, where I think we're going to be passing—and I hope we're going to be passing—some significant climate change legislation, and I've been concerned about those scientists being muzzled, and wondered what the follow up is from, what I have here, the April 6, 2006, *Washington Post* article, where employees had talked about being chastised for speaking on policy questions, removal of references to global warming from reports, and other things.

Secretary GUTIERREZ. We have a—if I may, Senator, we have a policy that allows scientists to communicate research—scientific research. We encourage them to use the help of a public affairs expert, but it is not required. Where we do require public affairs oversight is when it's a policy question—not a scientific question, but a policy question. If there is a disagreement on that, the scientist has the ability to appeal. So, we have a pretty progressive policy.

There have been instances where we're putting together a packet of information, and there is a disagreement as to what should go into the packet of information. But that should not be taken as a sign that we are preventing the scientists from communicating. They have the ability, the right, to go out and communicate scientific research as often as they want, and we're very proud of the fact that that's the way we operate. That is a new policy, because it hadn't been updated since the 1980s. But that's the policy today in the—

Senator KLOBUCHAR. So, a new policy went into place after this came out in—

Secretary GUTIERREZ. We—yes, we reviewed the policy. And we realized that our policy needed to be updated.

Senator KLOBUCHAR. OK.

Secretary GUTIERREZ. Yes.

Senator KLOBUCHAR. On a very different topic, and something we just discussed last week—this will be my last questions here—the concern that I have with this—the digital TV transition. And what we learned at this hearing was that in Great Britain 80 percent of the consumers know that their DTV transition is going to be phased in between 2008 and 2012, but in this country, all these polls, despite some efforts and, I think, some very minimal funding, the knowledge of this is much lower. And I have hundreds of thousands of families in Minnesota, as Senator McCaskill has in Missouri, who are suddenly going to find out that their over-the-air analog TVs aren't working. And I think Senator Cantwell described it as a train wreck waiting to happen. And I'd like to know what lessons we can learn from what they're doing right in Great Britain, and what we're doing wrong, and how we're going to fix this.

Secretary GUTIERREZ. Senator, this is one of those plans where, if it's not managed correctly, it can have problems, but it is the type of project that should be, and can be, managed adequately. We have a date of February 17, 2009, for the actual transition. So, we work back from that. We actually have flow charts that work back from that. When are the coupons supposed to arrive? When are consumers supposed to know that this is going to happen? How much money do we need to spend? Where do we need to—

Senator KLOBUCHAR. But isn't it just, like—

Secretary GUTIERREZ.—spend it?

Senator KLOBUCHAR.—\$5 million that has been—

Secretary GUTIERREZ. Well—

Senator KLOBUCHAR.—set aside?

Secretary GUTIERREZ.—we have—we have a \$5 million budget for public education, but we also have commitments from networks, from private-sector companies, from retailers, from manufacturers who will benefit from this. So, the amount of air time and media presence will be a lot more than \$5 million. But we can lay out the full plan for you—when the coupons drop, when they expire, when people are supposed to know—because this can be managed well, and it should be managed well.

Senator KLOBUCHAR. OK. Well, I appreciate that, but I just wanted you to know there were a number of Senators on this Committee that are concerned that that be managed well—

Secretary GUTIERREZ. Yes.

Senator KLOBUCHAR.—and that we don't have consumers that suddenly have no TV, and maybe aren't the ones that can afford to buy a new one.

Secretary GUTIERREZ. Thank you.

Senator KLOBUCHAR. Thank you.

The CHAIRMAN. Senator Smith?

**STATEMENT OF HON. GORDON H. SMITH,
U.S. SENATOR FROM OREGON**

Senator SMITH. Thank you, Mr. Chairman.

And, Mr. Secretary, thank you for being here. I want to, for the record, note what a terrific job you did in your Department in responding to the crisis of fishermen along the Oregon coast. You had the right people there to help. You've helped us to come up with the resources to see them through. You were willing to declare a fishing disaster, which triggered those funds. And I know my last trip down to the south coast, there were many expressions of appreciation for your Department and specific personnel, and I want the public to know that you were there, and you made a difference in a way that is helping to preserve very vulnerable jobs in an essential industry in this country. And I certainly appreciate it.

Mr. Secretary, as we speak of the whole Klamath Basin, that, certainly, these fishermen were a part of it, the status of fisheries in the Klamath Basin continues to be a concern, not just last year, but there are intermingled interests between fishermen, farmers and Indian tribes. And there is a revised model to predict returning adult salmon to the Klamath River Basin. I'm wondering, is it proving to be accurate? Is it an accurate tool for salmon managers, or does it need any further revision?

Secretary GUTIERREZ. I'll have to get up to speed on the actual method. My understanding is that the numbers look a lot better, that there is improvement. If you'd like, we can go back and double check and make sure that the methodology is right.

Senator SMITH. I think that's important. You know, so often in the media this is depicted as fishermen versus farmers versus Native Americans. All of these groups recognize a community of interest. And I think we've learned an awful lot about how to manage the water flows and what a—sometimes what helps the suckerfish hurts the salmon.

Secretary GUTIERREZ. Right.

Senator SMITH. And it is more the timing of releases of water. But I just want to state, for the record, that, as people pick over past decisions, it is my view that whenever any government policy cuts off, 100 percent, Native Americans, fishermen, or farmers, that policy, by its nature is extreme and wrong. It is our obligation to try to mesh these interests, sometimes in conflict, but they need to be made simpatico so that each can survive with a limited resource.

Recently, a court ruling overturned the biological opinion for threatened coho salmon in the Klamath River. There are a lot of coho salmon in the Klamath River, and that's why there was an effort not to list them. I'm wondering, How does NOAA fisheries intend to proceed with reconsultation, as it relates to coho, to meet the Federal court injunction—overturning?

Secretary GUTIERREZ. Senator, I will have to get back to you—
Senator SMITH. OK.

Secretary GUTIERREZ.—on that specific point.

Senator SMITH. I appreciate that. The thing I'm interested in is whether the reconsultation will be completed before the start of the 2008 irrigation system—season, rather—because it affects a lot of folks who I care deeply about.

Sea lion predation in the Columbia River is also a huge concern, if you're interested in salmon recovery. Sea lions in the Columbia River killed over 4 percent of this year's spring salmon run. This is the highest number ever, since we've started counting sea lion predation. The states of Oregon, Washington, and Idaho have filed for authority to use more effective means of controlling problem sea lions. And I wonder if you're satisfied with the current tools, or do you think these states have a right to say we've got to do something more if we're serious about saving salmon?

Secretary GUTIERREZ. I think the whole goal of—on one hand, ending overfishing, complementing that with a sound aquaculture plan, and then, on top of that, doing anything we can to ensure that we're maximizing other ways in which we're dealing with losing our fish population, we can always improve. And if we're losing more salmon because of that, that's something we should be focused on.

Senator SMITH. Well, Mr. Secretary, I would just hope you would give serious consideration to the requests of these three northwest States who are much encumbered by the management efforts, currently, which are, I think, doing inadequately, to deal with the issue of sea lions. I don't know if you've ever witnessed it personally, but when these runs return, you see hundreds of sea lions literally chewing the center out of a salmon and throwing it up. And it's not a few, it's in the thousands of salmon that are being killed in front of your eyes. And yet, we don't run the hydroelectric dams, we don't allow a whole lot of other human activities, but we allow this sea lion population to grow unmitigated, at least sufficiently. And so, it is very discouraging to local folks, and I hope we have some other tools in place before next year's salmon run, because we're at cross-purposes with our own interests here. And the numbers of sea lions are out of balance, in terms of our desire to save salmon. And it is truly something that needs our attention if we're serious about what we say, and that is, we want to save salmon runs.

I've previously raised concerns about the import monitoring program on textile and apparel from Vietnam. Currently, most of the products subject to the monitoring are not produced here in the United States. I'm wondering, What steps has the Department taken to identify which products are, in fact, produced domestically? And when will the Department end the unnecessary uncertainty created by the monitoring and reduce the scope of monitoring to match domestic production?

Secretary GUTIERREZ. As you know, we put the monitoring system in place as a result of a request from industry. We have not yet had to trigger any duties or quotas, because of the monitoring system. I believe it's working quite well. The Vietnamese, as you

know, were very disappointed. And this was not something that we had bargained on, but—

Senator SMITH. Yes.

Secretary GUTIERREZ.—in the end, we said we have to do this for our industry. So, I think we're all pleased with the way the system is working. At one point, we thought it was getting to the stage where we'd have to trigger it. We're giving it another couple of weeks. But as we look at this I hear these numbers, probably on a biweekly basis, so we're very much on top of this.

Senator SMITH. Well, I appreciate that, and I hope you'll stay on top of it, because I know you're trying to do a balancing act here. On the one hand, you have American manufacturers who want to stop things from Vietnam from coming in; on the other hand, you have American brands—Nike, Columbia Sportswear, Adidas, you can go on and on and on—who are American companies, as well, and who want to be able to engage in American commerce, and they're pitted against one another. And the uncertainty sometimes, with the monitoring system, creates—

Secretary GUTIERREZ. Yes.

Senator SMITH.—difficulty in commerce.

Secretary GUTIERREZ. Yes. And what we've tried to do, Senator, is make the rules clear, so that the numbers drive the decision. But we will be all over it. Thank you.

Senator SMITH. Mr. Chairman, do I have any more time to ask one other question on broadcast spectrum?

As you may be aware, many of my Committee colleagues and I sent a letter to OMB, urging that it help expedite the process of relocating incumbent government users off the spectrum, awarded in the AWS auction, by issuing a statutorily-required report to Congress. I'm pleased to say that the report was issued and the funds have been transmitted. Unfortunately, not much has happened since then, that I can determine. And, while I applaud the NTIA for working with agencies as they prepare to relocate, I'm concerned that agencies are at risk of missing their relocation deadlines.

In the meantime, this spectrum is not being put to its best use, to deploy wireless broadband to residents in metropolitan and rural areas, especially in Oregon. There are 120 AWS licensees who spent nearly \$14 billion to use spectrum that government agencies now occupy. What can be done to expedite this?

Secretary GUTIERREZ. Senator, we're aware of your concern about the time that it's taken to transfer the spectrum. And this is from the 2006 auction. We are doing everything we can to speed up the process, because we know every day that goes by is return that isn't taking place. So, we're aware of your concern, and we are doing everything we can to speed it up so that we can get that spectrum transferred and get people using it for their business purposes or whatever other purposes they need it.

Senator SMITH. Great. And, finally, many of my constituents are very interested in the ongoing procurement of new fishery vessels—survey vessels. And I understand a fourth vessel is destined for the West Coast, where it will support critical research on West Coast marine resources and ecosystems. I would note that the majority of the groundfish resources requiring research are in Oregon,

Washington, and northern California. Can you—maybe not now, but can you provide me with an update on where we are in that procurement process of this vessel? And do you have a projected schedule for delivery of the fourth vessel? And have you begun looking at potential sites to homeport this fourth vessel?

Secretary GUTIERREZ. Senator, I'll be glad to get you the full schedule and update and the—sort of, the timetable for when we'll have that.

Senator SMITH. Thank you, Mr. Chairman.

I—just a humorous question. At your confirmation hearing, I predicted you would, at the end of this term, know more about fish than cornflakes. I wonder if that's true.

Secretary GUTIERREZ. It's getting close. It's getting very close.

[Laughter.]

Secretary GUTIERREZ. I never had the thought of having farm-raised cornflakes, so I'm actually maybe a step ahead of this now.

Senator SMITH. There you go.

Secretary GUTIERREZ. Thank you, Senator.

Senator SMITH. Thank you.

The CHAIRMAN. Thank you very much.

I must confess my ignorance of sea lions ravaging salmon runs.

Senator SMITH. It—

The CHAIRMAN. What tools are now being employed?

Senator SMITH. Well, they don't want to kill them, and that's what I am indicating here. And they just harass them, basically. They try to drive them off. It is dubious—in its effect. These populations of sea lions, because of the Sea Lion Protection Act, which I'm certainly sympathetic to it, I don't like to see any animal killed—but the truth of the matter is, we're spending billions of dollars to save salmon, and this Act stands juxtaposed to another species. And so, we're at cross-purposes with our own policies. And so, we don't want to kill sea lions, and the vision is, when you see in the Arctic when people would go up and club a sea lion, that little pup. And they want their skins, but they don't stay little pups, they turn into enormous mammals, and they eat tons of salmon on a daily basis. That's their preferred food. And they know when they're coming back up the river. And they, in the thousands, will gather there eat these fish that have survived 4 years in the ocean, at population numbers far beyond what nature ever designed for them in previous times, before they had this other protection. And so, we have two statutes at cross-purposes. And I'm simply making the point that this has ramifications all up and down a basin in the Pacific Northwest, where, on the one hand, you have this policy; on the other hand, you have that policy. But, in combination, these policies do untold damage to the generation of hydroelectric power. People are concerned about global warming. The same people that are concerned about global warming want to tear out hydroelectric dams. It makes no sense.

It has a tremendous impact on farmers, to irrigate; has a tremendous impact on fishermen who have made their livings for generations as salmon fishermen; and yet, we have these two statutes which are utterly in conflict, and I'm afraid, Mr. Secretary, a harassment policy does little to nothing that you can measure, in terms of the impact on saving salmon. And I just think we've got

to decide what we want. The problem when you go to regulate nature is—it's like a grabbing a balloon, you'll grab it here, and you'll blow it up out there. We've blown out a huge problem as it relates to sea lion populations when it comes to saving Pacific salmon. It's a problem. And we need more tools. I don't want to kill them, but I don't want them in the mouth of the Columbia, beyond what nature intended them to be.

The CHAIRMAN. I just learned that we have jurisdiction over sea lions now.

Mr. Secretary, I will be submitting most of my questions, but there are some that are rather urgent.

You know the digital transition comes up February 17, 2009. We had a hearing 2 weeks ago, at which time it was disclosed that, as one of the Senators indicated, 80 percent of United Kingdom citizens know about their transition program, and ours was about 10 percent. I just hope that at the time, 18 months from now, we won't have irate citizens calling in to us, because they're going to call me, not you. And so, I hope your program will be ready for that.

Secretary GUTIERREZ. Yes, sir. We have 18 months to put it together, and we have not started the awareness program yet for people to know that this transition will take place.

The CHAIRMAN. When will the program begin?

Secretary GUTIERREZ. I believe our first wave of communications start toward the end of this year.

The CHAIRMAN. About 6 months ago, we began seeing, on CNN and other TV programs, about contaminated pet food. Then it was followed by contaminated toothpaste, food. Forty percent of dumplings coming in, filled with cardboard, et cetera, et cetera. Two weeks ago, an interagency group was formed, and you were appointed to that agency to oversee the protection of consumers. What can we expect from this agency?

Secretary GUTIERREZ. Well, the President has given the working group 60 days to come back with recommendations. I believe, Mr. Chairman, that we have probably the safest food supply in the world, and the challenge is to keep it that way. And we know that, with the global environment changing, and we're importing more, and everyone is selling more to everyone, we have to step it up to ensure that we continue to have the safest food supply in the world.

Clearly, the Chinese government understands that this is probably the single biggest threat to their economy that they have, because they can't afford for the "Made in China" brand to be diminished from food quality problems. So, we'll be developing procedures here in the U.S., recommendations for our own procedures. And that would include FDA, USDA, NOAA. But, for the Chinese, for them to really solve this problem—and I found this out in my old career—quality and safety have to be manufactured in. If you expect to inspect them in, it's probably a little bit too late. So, we will continue to do our inspection, we will continue to ensure that what comes through here—that we have the right procedures. But the message we're sending to them is, they've got to get their act together inside; if not, they're going to lose a lot of worldwide business.

So, this is a top priority. Within 60 days, we should have a report to the President. And, in that report, we'll make recommendations for our own internal processes and recommendations for what we should do to audit plants in China, and audit processes in China, and any new processes that we would recommend for our companies to have in China.

The CHAIRMAN. The problem is a huge one, when you consider that about 90 percent of all toys—

Secretary GUTIERREZ. Right.

The CHAIRMAN.—that people buy here come from outside, about 80 percent of the fish products are imported, and much coming from China.

Then we have this other problem of piracy and counterfeiting, and your agency plays a very important role in this. And, as you know, we lose billions of dollars in this area. Is anything being done now?

Secretary GUTIERREZ. Just to give you a sense of the numbers, our seizures at the border were up about 21 percent, 2006 versus 2005, and it continues to be from China. So, about 81 percent of what we seize—and I—I've actually been to the warehouse, and it's everything from watches to ties to running shoes. You name it, it's counterfeit. So, the focus clearly is on China.

We have done a couple of things with the Chinese government to improve that. One is, we do have law enforcement cooperation, so that our law enforcement people are working with the Chinese government law enforcement people. And that has been positive, because we're sharing information, and we're trying to get at these factories. They have also agreed to embed software in any new PCs, because one of the big problems we have in China is just counterfeit software. So, now any personal computer bought in China should have an embedded software. And what we're hearing from our manufacturers, that they're—that is being reflected in their sales. They've also put in place 50 different offices throughout the country to monitor this. We have more people at our embassy.

But, having said that, this is—you know, this is probably the single biggest problem we face down the road—81 percent of what we seize, from China; 10 percent of the world's medicines, we believe, are counterfeit. So, this is a priority today. I think the interagency process is working well, but we have to recognize that this is going to be a priority for the foreseeable future. And this is a huge threat to our brands, because our economy is based on brands and copyrights and patents. We do believe that, as China innovates more, and as they have more of a stake in intellectual property, that they'll realize what a priority this is.

In the meantime, we continue to do the law enforcement work. Every time we meet with foreign officials—and, very specifically, Chinese officials—the number-one item is IPR. So, this is a top, top priority, because this is big for our economy. This can hurt our economy. And we've got to stop it before it becomes part of the normal course of doing business.

The CHAIRMAN. Obviously, the budget level that has been allocated to your Department is too meager. And this Committee would like to assist you in getting better resources, because most of the problems that we see today, outside of the war, center around the

activities of your Department. And I think something has to be done about providing you with better resources.

Thank you very much, Mr. Secretary, and I will be submitting questions for your consideration in response.

Secretary GUTIERREZ. Always a pleasure, Mr. Chairman. Thank you very much. Thank you, Senator.

The CHAIRMAN. Thank you.

And the hearing is adjourned.

[Whereupon, at 3:47 p.m., the hearing was adjourned.]

A P P E N D I X

PREPARED STATEMENT OF HON. OLYMPIA J. SNOWE, U.S. SENATOR FROM MAINE

Mr. Chairman, an inscription in the façade of the Commerce Department's headquarters bears the following words of nineteenth century historian and statesman George Bancroft: "Commerce defies every wind, outrides every tempest and invades every zone." It is to ensure that the department is appropriately assisting—rather than presumptively steering—U.S. businesses to navigate through increasingly treacherous economic waters that we conduct this oversight hearing. I'd therefore like to thank you and the Vice Chairman for calling this critical session, and welcome Secretary Gutierrez and thank him for his time and testimony.

Mr. Secretary, on January 12, you and I stood in the Oval Office as the President signed into law the Magnuson-Stevens Fishery Conservation and Management Re-authorization Act of 2006. The Act contains numerous provisions that will improve management of our Nation's fisheries, leading to greater economic stability for fishermen and increased sustainability for our fish stocks. But in order for these provisions to live up to their potential, they must be properly implemented. In particular, I am concerned that the National Marine Fisheries Service may not be interpreting a new provision on annual catch limits in a manner consistent with the underlying language of National Standard One requiring fishery management plans to achieve the optimum yield on a continuing basis. Failure to adhere to this standard or National Standard Eight, requiring plans to minimize socio-economic impact, will further devastate New England's already ravaged groundfish industry, and I urge you to direct NMFS to act accordingly.

In my home state of Maine, fisheries are vital to our economy, and as we grow new businesses, one of the industries we look to is aquaculture. Currently, nearly 150 aquaculture facilities in Maine's state waters grow Atlantic salmon, oysters, mussels, and other commercially valuable seafood worth more than \$80 million annually. I agree with the administration's position that we must create a regulatory framework to permit responsible, environmentally sensitive aquaculture development beyond the three-mile boundary of state waters. The world's remaining wild fish stocks cannot meet the growing demand for seafood. If the choice is importing aquacultured seafood from foreign countries like China which allow environmentally degrading practices and poor regulatory oversight of antibiotics and additives, versus developing safe, environmentally neutral aquaculture facilities here at home, the decision is clear.

Finally, we must act now to re-establish our Nation's network of environmental and weather monitoring satellites. The next generation of satellites is capable of providing forecasting information that will not only improve our Nation's weather and climate forecasting, but also accrue societal benefits in agriculture, energy, and the mitigation of climate change. Unfortunately, as the Administration has shifted NASA's attention toward manned missions to Mars and beyond, the investment in monitoring developments here on our home planet has suffered. It is inappropriate to direct so much of our focus and resources toward understanding other worlds when we still have so much to learn about the one that sustains us. In a 2007 report, the National Research Council of the National Academies stated that, "the United States' extraordinary foundation of global observations is at great risk" if present trends continue. Secretary Gutierrez, I look forward to hearing how you intend to mitigate that risk.

I would also like to examine the role the Department of Commerce, through its International Trade Administration, has played in seeking closer trade ties to a growing number of nations throughout the world. In its march to lower our tariffs on imported goods, the department must be sure it is not selling our domestic businesses and their works short or—worse still—out.

2006 saw a record U.S. trade deficit of \$764 billion with the rest of the world. This includes bilateral imbalances with each of China, the European Union and Japan. These are the latest figures demonstrating a steady slide of U.S. producers' market share in both the domestic and global markets.

One of the most troubling consequence of the decline of America's production base is the dramatic reduction in the number of manufacturing jobs in recent years. Since 2000, America has lost approximately 3 million, or 17 percent, of its manufacturing jobs. Maine has lost over 21,000 jobs in that period, representing over 26 percent of our manufacturing workforce! Nearly nine thousand of those loses were due to unfair competition from China, which turns a blind eye to its producers' rampant theft of intellectual property, exploitation of labor, degradation of the environment and noncompliance with basic health and safety standards.

In a further outrageous irony, U.S. service professionals—which form the bulk of our workforce and were supposed to benefit from free trade—are now having their jobs outsourced to countries like India. It is estimated that 3.3 million white collar jobs will be offshore by 2015.

That is why it is critical to review the department's programs to assist U.S. businesses in light of these disturbing trends. The International Trade Administration has both the mandate and the obligation to assess the impact of trade liberalization on U.S. industries, as well as to secure the access of U.S. businesses to foreign markets. As we approach a potentially contentious debate over the reauthorization of "Fast-Track" Trade Promotion Authority, the Congress must ensure that the department, like other Executive Branch agencies, is fulfilling its role to the benefit of American workers, rather than mechanically toeing the free trade line.

Because only when the Department is acting in the interests of U.S. businesses and the Americans they employ—not on behalf of a particular ideology—can it truly serve as the beacon which adorns its official seal, guiding our economy toward security and prosperity.

