

LIFE OF THE LAND'S

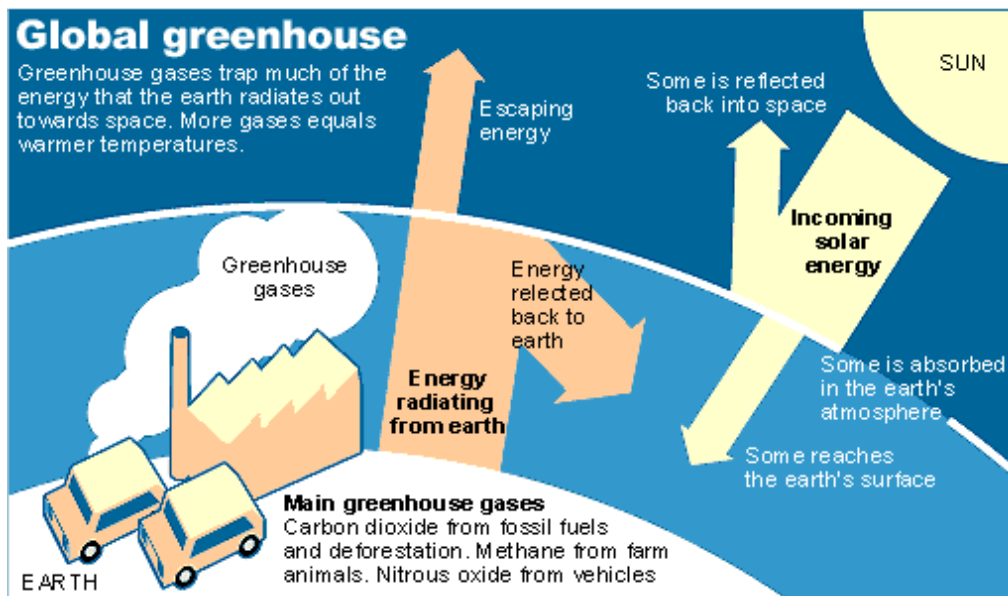
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Electricity News

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GLOBAL WARMING - A PRIMER



Solar input - A third of the sun's energy is reflected back into space after hitting Earth's upper atmosphere, but two thirds warms the planet and drives its weather engine.

The atmosphere - A delicate balance of gases gives Earth its livable temperature. Known as "greenhouse" gases because they trap heat inside the atmosphere, they send a portion of that heat back to Earth's surface. The gases include water vapor, carbon dioxide, methane and nitrous oxide.

The oceans - Covering two thirds of Earth, oceans are the key source of moisture in the air and they store heat efficiently, transporting it thousands of miles. The oceans and marine life also consume huge amounts of carbon dioxide.

The water cycle - Higher air temperatures can increase water evaporation and melting of ice. And while water vapor is the most potent greenhouse gas, clouds also affect evaporation, creating a cooling effect.

Clouds - They both cool Earth by reflecting solar energy and warm Earth by trapping heat being radiated up from the surface.

Ice and snow - The whiteness of ice and snow reflects heat out, cooling the planet. When ice melts into the sea, that drives heat from the ocean.

Land surface - Mountain ranges can block clouds, creating 'dry' shadows downwind. Sloping land allows more water runoff, leaving the land and air drier. A tropical forest will soak up carbon dioxide, but once cleared for cattle ranching, the same land becomes a source of methane, a greenhouse gas.

Human influences - Humans might be magnifying warming by adding to the greenhouse gases naturally present in the atmosphere. Fuel use is the chief cause of rising carbon dioxide levels. On the other hand, humans create temporary, localized cooling effects through the use of aerosols, such as smoke and sulfates from industry, which reflect sunlight away from Earth.

Excerpted from THE GUARDIAN

OUR AWESOME BOARD

Kapua Sproat	Fred Paul Benco
David Henkin	Art Mori
Malia Akutagawa	Anne Sturgis
Fred Madlener	Andy Tomlinson
Kim Ramos	Jessica Wooley

OUR DEDICATED ACTIVISTS

Henry Curtis, Executive Director
Kat Brady, Assistant Executive Director

OUR MISSION

The mission of Life of the Land is to preserve and protect the life of the land through sustainable land use and energy policies and to promote open government through research, education, advocacy, and litigation.

CLIMATE CHANGE - THE UNITED STATES MUST ACT RESPONSIBLY

On December 6, 2003, BBC News reported that the New Economics Foundation wants countries that refuse to cut their emissions of greenhouse gases to face trade sanctions. They say that the European Union (EU) should tax imports from these countries because they enjoy a competitive advantage as energy costs increase. New Economics Foundation spokesman Andrew Simms told BBC Radio 4's Today programme EU countries would be within their rights to "work out the cost of the free ride America is getting" and raise that amount. "There are very few signals the United States understands - they do understand economic signals," Mr. Simms added. "There is only a certain amount of time people can go around behaving like teenagers who don't have to care about anybody else," he told Today.

"We are about half a century away from being ecologically and economically bankrupt because of global warming"

Andrew Simms, New Economics Foundation

Carbon dioxide emissions



Source: The Hadley Centre

The editing eliminated references to many studies concluding that warming is at least partly caused by rising concentrations of smokestack and tail pipe emissions and could threaten health and ecosystems.

Among the deletions were conclusions about the likely human contribution to warming from a 2001 report on climate by the National Research Council that the White House had commissioned and that President Bush had endorsed in speeches that year. White House officials also deleted a reference to a 1999 study showing that global temperatures had risen sharply in the previous decade compared with the last 1,000 years. In its place, administration officials added a reference to a new study, partly financed by the American Petroleum Institute, questioning that conclusion.

In the end, E.P.A. staff members, after discussions with administration officials, said they decided to delete the entire discussion to avoid criticism that they were selectively filtering science to suit policy.

Three-fourths of voters surveyed want the U.S. government to require power plants and industry to cut emissions linked to global warming, and not rely on voluntary cuts endorsed by the White House, according to a poll released by an environmental group this week. The Zogby survey of 1,008 likely U.S. voters across the nation was commissioned by the Union of Concerned Scientists, an activist group that backs a Senate proposal for strict cuts in industrial emissions of carbon dioxide.

Some 76 percent of those surveyed said the U.S. government should set standards requiring power plants, oil refineries and other industries to cut greenhouse gas emissions. Another 16 percent said they supported a voluntary approach, while 8 percent said they were undecided.

The survey also showed 78 percent of respondents said they believe global warming is a serious problem now or will be in the future.

Euros concerned for US science

Scientists worried that politics is damaging science in the US-and the world (Read the rest at The Scientist.com)

<http://www.biomedcentral.com/news/20040309/02>

Did you know?

The entire U.S. demand for energy could be met by covering 8% of Nevada with photo-voltaic panels.



HAWAII LEGISLATURE CONFUSES RENEWABLE ENERGY WITH ENERGY EFFICIENCY

WHICH PICTURE DESCRIBES *YOUR* VISION
FOR CLEAN AND RENEWABLE ENERGY?



OR



A WIND FARM?

This session, SB 2474 [sessioncurrent/bills/sb2474 .htm](http://sessioncurrent/bills/sb2474.htm) was introduced in an effort to incentivize the utilities' move toward greater use of clean and renewable resources. This innovative measure sought to explore restructuring utility rates by tying their profits to their increased use of indigenous resources, i.e. the more clean and renewable resources they employed, the higher their profits would be.

There are many problems with this bill, but including heat generated from fossil fuels and energy efficiency in the newly 'expanded' definition of renewable energy is really egregious and shameful. Hawai'i has every resource known to man to be energy self-sufficient, why do we keep pandering to the energy monopoly? Auwe!

LOL sent an Open Letter to Legislators outlining our concerns with this measure. Here are some of them...

REAL RPS IS ABOUT GENERATION ... NOT CONSERVATION and EFFICIENCY!

Renewable Portfolio Standards (RPS) is a progressive energy policy which establishes benchmarks to gradually increase the percentage of renewable energy sold by utilities. Utilities could be required to increase their sales of electricity generated from renewable sources by 1% per year for 20 years. This sends a clear market signal to renewable energy producers and provides a ripe atmosphere for investment.

SB 2474 SD3 HD2 instead allows the utility to continue doing business-as-usual while claiming to be increasing their use of renewables. This sleight of hand is done by

H POWER?

redefining renewable energy to include non-renewables such as heat generated by burning fossil fuels and energy savings from employing efficient air conditioners, low flush toilets, and low-spray shower heads.

This bill makes energy saving devices, replacing dirty fossil fuel power plants with cleaner (but still polluting) fossil fuel plants, and energy conservation all desirable. While they are desirable, they are NOT renewable. A negative market signal is sent by SB 2474 SD3 HD2 since the bill would not require that a single renewable energy system be built in Hawaii in the next 20 years.

GOT OBJECTIVES (OR IS HECO GOING TO MAKE THEM UP AS WE GO ALONG)?

The bill requires the PUC to adopt Performance Based Ratemaking (that is, regulated rates based on performance objectives, not actual costs) without ever stating what these objectives might be. Who should decide the utilities, the PUC, or some other entity? How should the decision be made? Performance Based Ratemaking has no definition anywhere in HRS.

DO THE RIGHT THING OR PRESERVE THE UTILITY'S UNDEFINED PROFIT MARGINS?

The bill requires that "the public utilities commission shall: ... ensure that these profit margins do not decrease as a result of the implementation of the proposed ratemaking structure". The bill does not state whether these are net or gross profit margins, percentages or quantities, actual or PUC-authorized

margins, based on a single year or a rolling averages. Furthermore, the bill does not state how long these profit margins are guaranteed. If they last forever, then is it really Performance Based Ratemaking? The term 'Profit margins' has no definition anywhere in HRS.

GOT INDEPENDENT STUDIES?

The bill requires the University of Hawai'i's Natural Energy Institute (HNEI) to conduct independent studies. HNEI is in joint partnership with HECO and has active Memorandums of Understanding with the utility. The bill states that these studies will be reviewed by a panel of experts from entities such as the Electric Power Research Institute (EPRI), the electric industry's mouthpiece. HECO is a member of EPRI and their Senior Vice President, Karl Stahlkopf, is a former EPRI employee. This section seems to say that since the utility does not like the results of DBEDT Studies (Hawaii Energy Strategy 1995, 2000; RPS 2001), that HECO should have their partners and contractors write and review 'independent' studies which promote their desired outcomes! These studies will include energy facilities "impact on ... the economy, culture, community, environment, land and water," but no environmental, community, or Hawaiian individual or group will be involved in writing or reviewing the documents.

In short, this bill is HECO's fantasy. They can claim they are 'renewable' without using any clean and renewable resources to generate electricity. Here is the bogus definition of 'renewable energy' in the House version of this bill, which had NO PUBLIC HEARING because the public wasn't notified until **after** the hearing was over. Only HECO, the Consumer Advocate, and DBEDT were invited to testify. The definition of 'renewable energy' in SB 2474 SD3 HD2 is:

"Renewable energy" means electrical energy produced by wind, solar energy, hydropower, landfill gas, waste to energy, geothermal resources, ocean thermal energy conversion, wave energy, biomass, including municipal solid waste, biofuels, or fuels derived [entirely] from organic sources, hydrogen fuels derived [entirely] from renewable energy, or fuel cells where the fuel is derived [entirely] from renewable sources. Where biofuels, hydrogen, or fuel cell fuels are produced by a combination of renewable and nonrenewable means, the proportion attributable to the renewable means shall be credited as renewable energy. Where fossil and renewable fuels are co-fired in the same generating unit, the unit shall be considered to produce renewable electricity in direct proportion to the percentage of the total heat value represented by the heat value of the renewable fuels. "Renewable energy" also means electrical energy savings brought about by the use of solar and-heat pump water heating[-], seawater air conditioning district cooling systems, solar air conditioning and ice storage, quantifiable energy conservation measures, use of rejected heat from co-generation and combined heat and power systems excluding fossil-fueled qualifying facilities that sell electricity to electric utility companies, and central station power projects."

Here are two excerpts from speeches made by Members of the UK Parliament regarding the definition of 'renewables.'

Mr. Tom Brake (Carshalton and Wallington): "...I also hope that the draft EU directive will clarify whether energy from waste is renewable, or, if not, that the Minister will do so. The Government seems to believe that energy recovered through combined heat and power is renewable. I would argue that this is complete nonsense. **No internationally recognised definition of renewable energy deems energy from waste to be renewable.**"

www.parliament.the-stationery-office.co.uk/pa/cm199900/cmhansrd/vo000719/halltext/00719h01.htm

Lord McIntosh of Haringey: "The noble Lords, Lord Ezra and Lord Wollmer, criticised us for a narrow definition of "renewables." The definition must relate to the common use of the English language. I agree that it is paradoxical as regards coal-mine methane which, although it is not renewable, has a considerable future life. However, **combined heat and power is not of itself renewable.** It is energy-saving and that is an important part of meeting our Kyoto obligations, but it cannot be called 'renewable' unless in turn it comes from renewable sources."

www.parliament.the-stationery-office.co.uk/pa/ld199900/ldhansrd/pdvn/lds02/text/20328-05.htm

So, in their efforts to 'fix' Hawai'i's current *pseudo* Renewable Portfolio Standards (RPS) law, the 2004 Session of the Hawai'i State Legislature may just have found the cure that is actually *worse* than the disease! If this new definition of 'renewable energy' is accepted, you can be sure that moving HECO toward increased use of our indigenous resources (wind, sun, wave, biomass, and ocean thermal energy conversion) will be virtually impossible since we have it on good authority that the only 'renewable' they are interested in pursuing is combined heat and power (CHP) powered by diesel, oil, propane, gas, and other fossil fuels. Life of the Land supports CHP as a 'transition' technology, especially those units that are built to be retrofitted with fuel cells when they come on line because although they run on fossil fuels, they can be four times more efficient than centralized power.

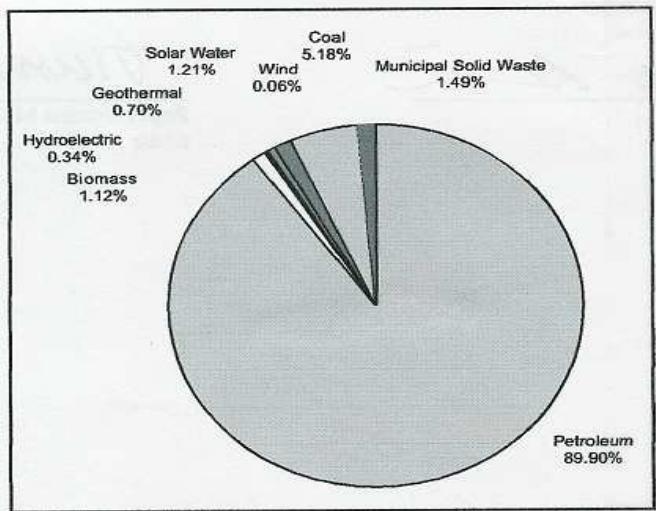
The fact that we continue to be almost completely dependent on outside forces -- primarily unstable fossil-fuel producing nations -- for one of our most basic needs should be a clarion call to our Legislature for action to secure Hawai'i's energy future. Sadly, SB 2474 SD3 HD2 appears to be their response.

What is scary is that private companies are writing public policy. At the federal level, Enron was writing national energy policy; locally HECO seems to be doing the same. Shouldn't our elected representatives be creating sound policy that will move Hawai'i to energy self-sufficiency instead of protecting the profits of a private company that just announced a stock split because they are making *huge* profits, far above those of their national counterparts?

THE CURRENT ENERGY REALITY IN HAWAII

"Energy -- its supply and use -- is the foundation of Hawaii's economy. ...In Hawaii, every barrel of oil saved translates to more dollars available to the local economy, in addition to the many environmental benefits.

Source: Energy Resources Coordinator's 2002 Annual Report

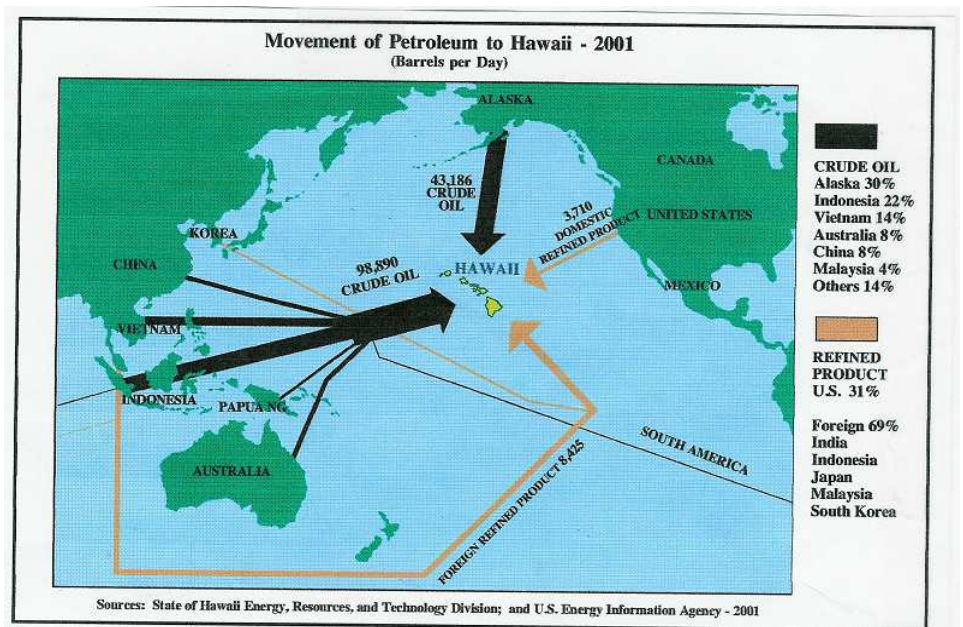


Hawaii relies on imported petroleum for over 89% of its primary energy (see Fig. 1).

Figure 1. State of Hawaii Energy Resources in Year 2001

Energy Resources Coordinator's 2002 Annual Report

All of this oil is imported, primarily from foreign nations, with a declining amount coming from Alaska (see Fig. 3).



Sources: State of Hawaii Energy, Resources, and Technology Division; and U.S. Energy Information Agency - 2001

Figure 3. Sources of Imported Petroleum

Energy Resources Coordinator's 2002 Annual Report

HAWAII ENERGY STRATEGY

The Department of Business, Economic Development and Tourism's (DBEDT) Hawaii Energy Strategy program was designed to increase understanding of Hawaii's energy situation and produce recommendations to achieve the statutory energy objectives outlined in Section 226-18(a) Hawaii Revised Statutes (HRS), as amended by Act 96, Session Laws of Hawaii, 1994:

- Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;
- Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased; and
- Greater energy security in the face of threats to Hawaii's energy supplies and systems.
<http://www.hawaii.gov/dbedt/ert/hes2000sum/hes2000sum.html>

GOT LEADERSHIP?

The HECO-funded Hawaii Energy Project commissioned a study to look at the regulatory and tax structures of utilities. Here is an excerpt from that report by authors Carl Freedman and Jim Lazar:

"...extensive implementation of renewable resources might cost more than conventional resources in today's economy but provide increased energy security, self-sufficiency and reduce greenhouse emissions. How is the PUC or any other agency to determine the proper balance between these conflicting objectives? Without some guidance from the statute regarding how the objectives should be prioritized, how can it be determined whether or not the PUC or other agencies are properly giving "due consideration" to all of the planning objectives? If it is the intent of the Legislature to obtain some more specific or extensive results regarding the implementation of renewable resources, self-sufficiency and energy sufficiency, it behooves the Legislature to make its intent more explicit and specific."

"Hawaii Energy Utility Regulation and Taxation" - A report for the Hawaii Energy Project - July 11, 2003 - by Carl Freedman and Jim Lazar

The Legislature's function is to create state policy that is in conformance with the Hawaii State Constitution and all State Plans. All these documents call for energy self-sufficiency and increased use of our indigenous resources for energy production. Why is this so difficult to understand?

Shell Oil has said that 50% of the energy produced in the year 2050 will be from renewable resources. Where will Hawaii be if we continue to stall taking real action to diversify our portfolio of energy alternatives?

Oil is currently \$38 a barrel, but HECO doesn't care, because they pass on these costs to ratepayers in our bills under the "Energy Adjustment Clause" so they surely don't feel our pain. What happens when the price is \$1,000 a barrel?

"We've embarked on the beginning of the last days of the age of oil. Embrace the future and recognize the growing demand for a wide range of fuels, or ignore reality and slowly-but surely-be left behind."

Michael Bowlin, CEO, ARCO (now BP), Houston, Texas,
February 9, 1999

Let's hope that lack of political will won't leave Hawaii behind.



GOT SUPPORT FOR HAWAII'S MOST FEARLESS ADVOCATES?

LIFE OF THE LAND needs your support to continue advocating for a clean and renewable Hawaii. At this session of the Legislature, we have been the most constant environmental and community presence. We know that you are busy and can not always be available to testify or review and write comments on environmental impact statements to protect the health and safety of our communities, but aren't you glad that Life of the Land is bringing your voice and concerns to our decisionmakers? Our tireless advocates don't do this for money. They do this work for their love of the people and `aina. Your support is crucial to continue our work.

YES! I want to support LIFE OF THE LAND, Hawaii's own environmental and community action group, working to make Hawaii truly sustainable!

Name: _____

Address: _____

Phone/E-Mail: _____

Your Top Issues: _____

Send check to: Life of the Land * 76 North King Street *
Suite 203 * Honolulu, Hawaii 96817

Mahalo nui loa!

EVIDENCE OF GLOBAL WARMING

- 160,000 people die every year from side-effects of global warming ranging from malaria to malnutrition and the numbers could almost double by 2020, said a group of scientists at the World Health Organisation (WHO) and the London School of Hygiene and Tropical Medicine
- More ice melted from the surface of the Greenland Ice Sheet this year than ever before recorded, report scientists from the University of Colorado. The same team found that the extent of Arctic sea ice reached the lowest level in the satellite record in 2002, offering further evidence that climate change is already altering the Arctic.

Three of Australia's World Heritage Areas are showing signs of significant damage due to low levels of climate change - Kakadu National Park, the Wet Tropics of Queensland, and the Great Barrier Reef according to a report released today by Climate Action Network Australia.

Another World Heritage Area, the Blue Mountains, will be affected by higher levels of climate change, says the report "Warnings from the Bush," authored by Anna Reynolds. Mount Kosciuszko, Australia's highest mountain, will lose its alpine environment due to global warming, she predicts.

Global sea levels could rise eight inches by the end of this century, more than the rise predicted last year by the Intergovernmental Panel on Climate Change. Melting glaciers and collapsing Antarctic ice sheets, such as the 58 square mile iceberg that calved from the Matushevich Glacier Tongue earlier this month, foreshadow the problems to come.

The projected sea level rise is due to a revised estimate of the ice melt from glaciers, said geological sciences emeritus professor Mark Meier of the University of Colorado. Meier presented the findings last weekend at the annual meeting of the American Association for the Advancement of Science (AAAS) in Boston.

Now the Pentagon tells Bush: Climate change will destroy us

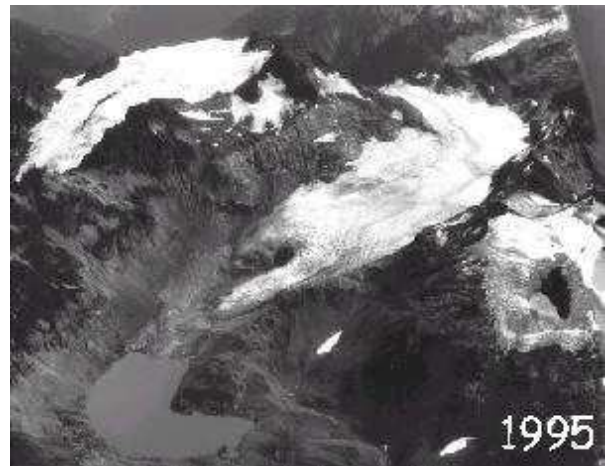
<http://observer.guardian.co.uk/international/story/0,6903,1153513,00.html> The Observer - Sunday, February 22, 2004

- Secret report warns of rioting and nuclear war
- Britain will be 'Siberian' in less than 20 years
- Threat to the world is greater than terrorism

Climate change over the next 20 years could result in a global catastrophe costing millions of lives in wars and natural disasters. 'Siberian' climate by 2020. Nuclear conflict, mega-droughts, famine and widespread rioting will erupt across the world. 'Disruption and conflict will be endemic features of life,' concludes the Pentagon analysis. 'Once again, warfare would define human life.'



In this 1958 photo, the South Cascade Glacier in Washington state fills the valley it has carved (Two photos courtesy U.S. Geological Survey)



By 1995, the South Cascade Glacier had retreated far up the valley, leaving a new lake at the valley's base

New data from colleagues at the University of Alaska show that huge glaciers on the West Coast of Alaska and northern Canada are melting rapidly, said Meier. The melting of these large glaciers has contributed about 0.14 millimeters (0.0055 inches) per year in sea rise over the long term, jumping to more than 0.32 millimeters (0.0126 inches) per year during the last decade.

The IPCC, which estimated global ice wastage of only 0.3 millimeters (0.012 inches) per year, probably underestimated the contribution of glacier disintegration to sea level rise because little data on the large, maritime glaciers in Alaska was available, said Meier. But this region is the largest contributor to sea level rise, he said.

"The sensitivity of glacier melt to temperature rise depends largely on precipitation, which in some glaciated areas like southern coastal Alaska has been greatly under measured," said Meier.

Want More Info?

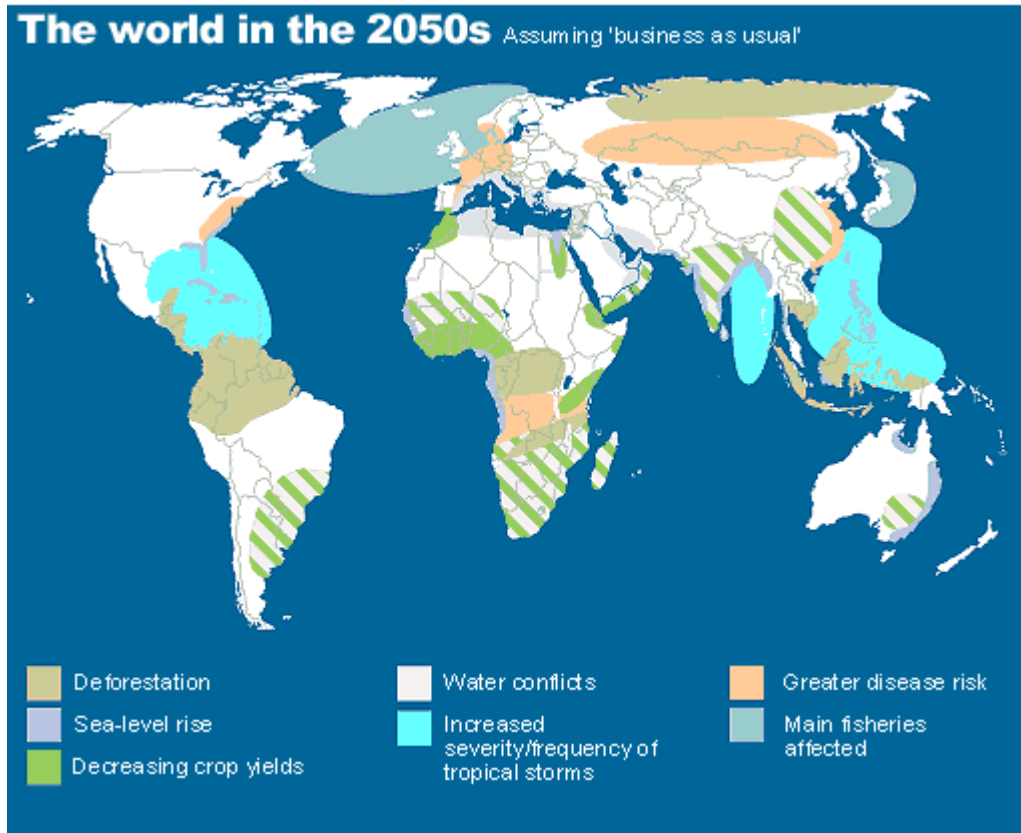
Global Warming Info Ctr.-Nat'l Ctr. for Public Policy Research

<http://www.nationalcenter.org/Kyoto.html>

National Oceanic and Atmospheric Administration

<http://lwf.ncdc.noaa.gov/oa/climate/globalwarming.html>

IF WE DO NOTHING....



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