Climate panel: warming 'extremely likely' man-made

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Body

STOCKHOLM • Scientists now believe it's "extremely likely" that human activity is the dominant cause of global warming, a long-term trend that is clear despite a recent plateau in the temperatures, an international *climate* panel said Friday.

The Intergovernmental Panel on <u>Climate Change</u> used its strongest language yet in a report on the causes of <u>climate change</u>, prompting calls for global action to control emissions of CO2 and other greenhouse gases.

"If this isn't an alarm bell, then I don't know what one is. If ever there were an issue that demanded greater cooperation, partnership, and committed diplomacy, this is it," U.S. Secretary of State John Kerry said.

The IPCC, which has 195 member countries, adopted the report Friday after all-night talks at a meeting in Stockholm.

In its previous assessment, in 2007, the U.N.-sponsored panel said it was "very likely" that global warming was due to human activity, particularly the CO2 emissions resulting from the burning of coal, oil and gas.

The <u>change</u> means that scientists have moved from being 90 percent sure to 95 percent - about the same degree of certainty they have that smoking kills.

"At 90 percent it means there is a 10 percent probability that it's not entirely correct," said Chris Field, Carnegie Institution scientist who is a leader in the IPCC but wasn't involved in the report released Friday. "And now that's 5 percent. So it's a doubling of our confidence. That's actually a consequential *change* in our level of understanding."

One of the most controversial subjects in the report was how to deal with what appears to be a slowdown in warming if you look at temperature data for the past 15 years. *Climate* skeptics say this "hiatus" casts doubt on the scientific consensus on *climate change*, even though the past decade was the warmest on record.

Many governments had objections over how the issue was treated in earlier drafts and some had called for it to be deleted altogether.

In the end, the IPCC made only a brief mention of the issue in the summary for policy-makers, stressing that short-term records are sensitive to natural variability and don't in general reflect long-term trends.

"An old rule says that *climate*-relevant trends should not be calculated for periods less than around 30 years," said Thomas Stocker, co-chairman of the group that wrote the report.

Many scientists say the temperature data reflect random <u>climate</u> fluctuations and an unusually hot year, 1998, picked as a starting point for charting temperatures. Another leading hypothesis is that heat is settling temporarily in the oceans, but that wasn't included in the summary.

Stocker said there wasn't enough literature on "this emerging question."

The IPCC said the evidence of *climate change* has grown thanks to more and better observations, a clearer understanding of the *climate* system and improved models to analyze the impact of rising temperatures.

"Our assessment of the science finds that the atmosphere and ocean have warmed, the amount of snow and ice has diminished, the global mean sea level has risen and the concentrations of greenhouse gases have increased," said Qin Dahe, the other co-chairman of the working group.

The full 2,000-page report isn't going to be released until Monday, but the summary for policymakers with the key findings was published Friday. It contained few surprises as many of the findings had been leaked in advance.

As expected, the IPCC raised its projections of the rise in sea levels to 10-32 inches by the end of the century. The previous report predicted a rise of 7-23 inches.

But it did acknowledge that the <u>climate</u> may be less sensitive to CO2 emissions than was stated in 2007. Back then, the IPCC said that a doubling of CO2 concentrations in the atmosphere would likely result in 3.6-8.1 F degrees of warming. This time it restored the lower end of that range to what it was in previous reports, 2.7 F.

The IPCC assessments are important because they form the scientific basis of U.N. negotiations on a new <u>climate</u> deal. Governments are supposed to finish that agreement in 2015, but it's unclear whether they will commit to the emissions cuts that scientists say will be necessary to keep the temperature low enough to avoid the worst effects of *climate change*.

Using four scenarios with different emissions controls, the report projected that global average temperatures would rise by 0.5-8.6 F.

Only the lowest scenario, which was based on major cuts in CO2 emissions and is considered unlikely, came in below the limit that countries have set as their target in the *climate* talks to avoid the worst impacts of warming. That limit is a warming of 3.6 F compared with before the industrial revolution in the 18th century.

At this point, emissions keep rising mainly due to rapid growth in China and other emerging economies. But those nations say rich countries should take the lead on emissions cuts because they've pumped carbon into the atmosphere longer.

<u>Climate</u> activists said the report should spur governments to action.

"There are few surprises in this report, but the increase in the confidence around many observations just validates what we are seeing happening around us," said Samantha Smith, of the World Wildlife Fund.

Graphic

A fuel refinery in foreground with Table Mountain in backdrop near the city of Cape Town, South Africa, Friday, Sept. 27, 2013. Scientists are more certain than ever that humans are causing the majority of *climate change* with significant impact for the planet, a key report has shown. The first part of the Intergovernmental Panel on *Climate Change*'s (IPCC) fifth assessment report shows that global warming is "unequivocal" and human influence on the *climate* is clear. (AP Photo/Schalk van Zuydam) Vehicles drive on a main highway with shipping containers in the background, in Cape Town, South Africa, Friday, Sept. 27, 2013. Scientists are more certain than ever that

humans are causing the majority of *climate change* - with significant impact for the planet, a key report has shown. The first part of the Intergovernmental Panel on Climate Change's (IPCC) fifth assessment report shows that global warming is "unequivocal" and human influence on the *climate* is clear. (AP Photo/Schalk van Zuydam) Rajendra Pachauri, the head of the U.N. Intergovernmental Panel on Climate Change (IPCC), left and co-chairman Thomas Stocker present the U.N. IPCC *climate* report, in Stockholm, Friday Sep. 27, 2013. Scientists can now say with extreme confidence that human activity is the dominant cause of the global warming observed since the 1950s, a new report by an international scientific group said Friday. Calling man-made warming "extremely likely," the Intergovernmental Panel on Climate Change used the strongest words yet on the issue as it adopted its assessment on the state of the climate system. (AP Photo/ TT News Agency, Bertil Enevag Ericson) SWEDEN OUT French Michel Jarraud, left, Secretary-General of World Meteorological Organization, WMO, and Rajendra Pachauri, the head of the U.N. Intergovernmental Panel on Climate Change (IPCC), during the presentation of the U.N. IPCC *climate* report, in Stockholm, Friday Sept. 27, 2013. Scientists can now say with extreme confidence that human activity is the dominant cause of the global warming observed since the 1950s, a new report by an international scientific group said Friday. Calling man-made warming "extremely likely," the Intergovernmental Panel on Climate Change used the strongest words yet on the issue as it adopted its assessment on the state of the *climate* system. (AP Photo/ TT News Agency, Bertil Enevag Ericson) SWEDEN OUT Rajendra Pachauri, the head of the U.N. Intergovernmental Panel on Climate Change (IPCC), during the presentation of the U.N. IPCC climate report, in Stockholm, Friday Sep. 27, 2013. Scientists can now say with extreme confidence that human activity is the dominant cause of the global warming observed since the 1950s, a new report by an international scientific group said Friday. Calling man-made warming "extremely likely," the Intergovernmental Panel on Climate <u>Change</u> used the strongest words yet on the issue as it adopted its assessment on the state of the <u>climate</u> system. (AP Photo/ TT News Agency, Bertil Enevag Ericson) SWEDEN OUT Children play in the foreground, near electrical poles and wires in a township, with Table Mountain in backdrop, near the city of Cape Town, South Africa, Friday, Sept. 27, 2013. Scientists are more certain than ever that humans are causing the majority of climate change - with significant impact for the planet, a key report has shown. The first part of the Intergovernmental Panel on Climate Change's (IPCC) fifth assessment report shows that global warming is "unequivocal" and human influence on the *climate* is clear. (AP Photo/Schalk van Zuydam) A view of electrical poles and wires at a suburb, with Table Mountain in backdrop, near the city of Cape Town, South Africa, Friday, Sept. 27, 2013. Scientists are more certain than ever that humans are causing the majority of climate change - with significant impact for the planet, a key report has shown. The first part of the Intergovernmental Panel on Climate Change's (IPCC) fifth assessment report shows that global warming is "unequivocal" and human influence on the *climate* is clear. (AP Photo/Schalk van Zuydam) Rajendra Pachauri, the head of the U.N. Intergovernmental Panel on *Climate Change* (IPCC), left, and Sweden's Environmental ministers Lena Ek, right, comment on the U.N. IPCC *climate* report, in Stockholm, Friday Sept. 27, 2013. Scientists can now say with extreme confidence that human activity is the dominant cause of the global warming observed since the 1950s, a new report by an international scientific group said Friday. Calling man-made warming "extremely likely," the Intergovernmental Panel on Climate Change used the strongest words yet on the issue as it adopted its assessment on the state of the *climate* system. ((AP Photo / TT / Jessica Gow) SWEDEN OUT

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