

# Mal otra vez: 50 años de predicciones eco-apocalípticas fallidas

## De Malthus a Greta Thunberg: mitos y realidades de las profecías climáticas

La apocalíptica comparecencia de Greta Thunberg ante la ONU ha vuelto a poner de manifiesto el marcado tono alarmista del activismo climático escorado a la izquierda. En este sentido, podría decirse que la intervención de la joven sueca no supone ninguna novedad: las predicciones climáticas apocalípticas [llevan sucediéndose cientos de años](#) y han sido especialmente recurrentes [durante el último medio siglo](#).

Quizá la raíz de este pensamiento está en algunos escritos de Confucio (siglo VI AC) o Platón y Aristóteles (siglo IV AC), pero en clave moderna merece la pena empezar por Thomas Malthus, que desarrolla su obra entre la segunda mitad del siglo XVIII y la primera mitad del siglo XIX. Sus escritos mostraban un gran pesimismo sobre la capacidad de proveer a una población creciente de alimentos, ropa, vivienda o energía, especialmente porque Malthus creía que el deterioro medioambiental sería tan pronunciado que terminaría derivando en hambrunas varias.

En noviembre de 1967, el biólogo Paul Ehrlich anunció un colapso global que, según sus cálculos, ocurriría antes de 1975. Entre sus predicciones estaba un aumento exponencial de las hambrunas que no solo afectaría al mundo pobre, sino también a países ricos como Estados Unidos. Dos años después, Ehrlich insistía en que "el problema de fondo es que, si seguimos esperando a convencer a todo el mundo de que este problema es real, acabaremos muertos todos". La solución preferida de Ehrlich era la esterilización y el control de población a escala global. Pero el tiempo ha puesto de manifiesto la falsedad de estas premisas: la producción de alimentos se ha multiplicado y la población ha crecido exponencialmente, pero las hambrunas se han reducido y la tasa mundial de pobreza ha caído de manera muy pronunciada, hasta situarse por debajo del 10%.

En 1970, el científico James P. Lodge recibió una amplia cobertura mediática cuando afirmó que "la polución del aire puede acabar con el sol y causar una nueva del hielo a comienzos del siglo XXI". Otra figura clave fue la de S. I. Rasool, de la Universidad de Columbia, que también suscribía la tesis del enfriamiento y anunciaba para 2020 un desplome de la temperatura global de más de seis grados centígrados. Algo similar afirmaba la Universidad de Brown, que en 1972 envió un informe a la Casa Blanca para alertar de un colapso climático y socioeconómico inminente. También la revista TIEM alertaba de la llegada de una nueva edad de hielo, apoyándose en pensadores como George J. Kukla. Huelga decir que, lejos de haberse producido el enfriamiento que anticipaban estos científicos, hoy

se registran temperaturas ligeramente superiores a las de los años 70 (alrededor de 0,2 grados centígrados más, según los datos de la NASA).

Mientras la tesis del enfriamiento ganaba adeptos, Paul Ehrlich seguía siendo el alarmista climático de referencia y ese mismo año anunciaba que Estados Unidos tendría que racionar el consumo de agua y alimentos a lo largo de los años 70. En paralelo, el biólogo de Stanford anunciaba "la muerte de los océanos en menos de una década". Nada de esto sucedió en los años 80, de modo que el alarmismo climático fue girando a otros temas de debate.

Así, a mediados de los años 70 vemos que la preocupación del movimiento giró a la capa de ozono. El profesor T. M. Donahue, de la Universidad de Michigan, compareció ante el Congreso para afirmar que nada se podría hacer para prevenir el ensanchamiento del agujero de dicha capa, pero la evidencia presentada recientemente por la NASA muestra que dicha superficie se ha reducido progresivamente desde mediados de los años 90. De igual modo, en los años 80 ocurre algo parecido con la lluvia ácida, hasta el punto de que los gobiernos de Estados Unidos y Canadá se comprometieron a estudiar la incidencia de dicho fenómeno en los bosques de Norteamérica. Sin embargo, tras una década de estudio y una inversión pública de 540 millones de dólares, la élite científica estadounidense terminó comprobando que el alcance del problema era mucho más limitado de lo que se había afirmado.

Un científico de la NASA, James Hansen, tomó el testigo a finales de los años 80, anticipando una generalización de las sequías en Estados Unidos. Desde entonces, las precipitaciones se han comportado con normalidad y, de hecho, han experimentado un aumento del 30%, tomando de nuevo los promedios de épocas anteriores y dejando atrás la caída que se había observado de manera puntual en los años en que Hansen popularizó sus tesis apocalípticas. Algunos años después, Hansen alertó de un súbito aumento de las temperaturas extremadamente cálidas en suelo estadounidense, apuntando por ejemplo que Washington viviría 85 días al año con más de 32 grados centígrados, frente a los 35 días al año que arrojaba el promedio histórico. No obstante, la serie muestra una tendencia descendente, hasta el punto de que hoy se registran 25 días al año con estos niveles de temperatura.

Hussein Shibab declaró en 1988 que islas como las Maldivas terminarían sumergidas en 2020. Noel Brown, del Programa Medioambiental de la ONU, fue más allá en 1989 y sugirió que algo parecido podría ocurrir en Bangladesh o Egipto a comienzos del siglo XXI. Algo parecido defendió James Hansen, que volvió a la palestra para afirmar que parte de Nueva York estaría bajo el agua en 2010 o 2020.

El alarmismo climático no terminó ahí. En los años 90 siguieron produciéndose predicciones apocalípticas, mientras que en la primera década del siglo XXI se popularizaron las tesis de Al Gore, exvicepresidente de Estados Unidos que produjo el derretimiento de la capa de hielo del Polo Norte en 2018, previsión que luego revisó para anunciar que tal evento se produciría en 2014.

## **El discurso de Greta Thunberg**

Más recientemente, Greta Thunberg se ha convertido en el referente del alarmismo climático. Su comparecencia en la ONU es solo la gota que colma el vaso, puesto que la joven activista sueca lleva ya más de un año ausentándose del colegio y participando como invitada en foros, cumbres y parlamentos europeos. En su caso, la sombra de la sospecha gira en torno a los intereses que rodean su "campaña por el planeta", puesto que diversas investigaciones han puesto de manifiesto los [vínculos entre Thunberg y la industria "verde"](#).

En el caso de Thunberg, el grueso de su discurso consiste en erigirse en portavoz de la juventud mundial y lanzar diversos reproches a la población adulta, en general, y los líderes políticos, en particular. "No nos invitéis a vuestras cumbres a decirnos que somos un movimiento prometedor, porque eso no sirve de nada. Invitad a científicos, porque no queremos que nos escuchéis a nosotros, queremos que les escuchéis a ellos. No me importa que digáis que estáis intentando tomar medidas, porque lo cierto es que no estáis haciendo lo suficiente", declaró recientemente en una arenga pronunciada en una comisión del Senado de Estados Unidos.

Algo parecido ocurrió esta semana en su paso por la Cumbre de Acción Climática de la ONU. Esta vez, su discurso fue especialmente emocional y volvió a girar en torno al hecho de que, en su opinión, los científicos tienen todas las respuestas necesarias para resolver el cambio climático. Pero, además de culpar a los políticos de "robar" sus "sueños" y su "infancia" con "palabras vacías", Thunberg criticó que "ante una extinción masiva, seguimos hablando de dinero y contando cuentos de hadas sobre un crecimiento económico eterno. ¿Cómo os atrevéis?".

De modo que, más allá de los reproches a la clase política, el discurso de Thunberg empieza a revelar su creencia en la incompatibilidad crecimiento-sostenibilidad. Su condena al "dinero" y su referencia al "crecimiento económico eterno" como un "cuento de hadas" muestran que, en esencia, el pensamiento de la joven niña sueca gira en torno a la idea de que la economía de mercado como la conocemos no es compatible con la mejora medioambiental. Esto choca con la [evidencia disponible](#), que acredita una clara mejoría "verde" en las economías más liberales del Planeta.

Es más: aunque Thunberg ha centrado sus protestas en las economías de Occidente, lo cierto es que la evolución de las emisiones de CO2 y otros gases de efecto invernadero ha sido especialmente positiva en dicha región del mundo. En la Unión Europea, por ejemplo, las emisiones de CO2 han bajado un 30% con respecto a los datos que se registraban hace medio siglo... y todo en un contexto de crecimiento económico como el que demoniza Thunberg. (*Publicado en Libertad Digital*)

## **Myron Ebell, Steven J. Milloy**

Gracias a Tony Heller, quien primero recopiló muchos de estos clips de noticias y los publicó en [RealClimateScience](#) .

## RESUMEN

Los apocalípticos modernos han estado prediciendo desastres climáticos y ambientales desde la década de 1960. Siguen haciéndolo hoy.

Ninguna de las predicciones apocalípticas con fechas de vencimiento a partir de hoy se han hecho realidad.

Lo que sigue es una colección de predicciones notablemente salvajes de personas notables en el gobierno y la ciencia.

Más que simplemente destacar las predicciones fallidas, esta colección muestra que los creadores de predicciones apocalípticas fallidas a menudo son individuos que tienen posiciones respetadas en el gobierno y la ciencia.

Si bien tales predicciones han sido y siguen siendo reportadas con entusiasmo por un medio ansioso por titulares sensacionales, los fracasos generalmente no se revisan.

### **1967: "Hambruna terrible para 1975".**

The Salt Lake Tribune (Salt Lake City, Utah) · 17 Nov 1967, Fri · Page 9

## 'Already Too Late'

# *Dire Famine Forecast by '75*

By George Getze  
Los Angeles Times Writer

LOS ANGELES — It is already too late for the world to avoid a long period of famine, a Stanford University biologist said Thursday.

Paul Ehrlich said the "time of famines" is upon us and will be at its worst and most disastrous by 1975.

He said the population of the United States is already too big, that birth control may have to be accomplished by making it involuntary and by putting sterilizing agents into staple foods and drinking water, and that the Roman Catholic Church should be pressured into going along with routine measures of population control.

Ehrlich said experts keep saying the world food supply will have to be tripled to feed the six or seven billion people they expect to be living in the year 2000.

"That may be possible theoretically but it is clear that it is totally impossible in practice," he said.

Ehrlich spoke at a science symposium at the University of Texas. The text of his speech was made available here.

Since, in Ehrlich's opinion, it is of no longer any use trying to avoid the coming world famines, the best thing to do now is to look past the "time of famines" and hope to have a second chance to control world population sometime in the future.

"At the moment it is shockingly apparent that the battle to feed humanity will end in a rout," Ehrlich said.

He said we have to hope that the world famines of the next 20 years will not lead to thermonuclear war and the extinction of the human species.

"We must assume man will get another chance, no matter how little he deserves one," he said.

Fuente: Salt Lake Tribune, 17 de noviembre de 1967.



1969: "Todos desaparecerán en una nube de vapor azul para 1989".

**THE NEW YORK TIMES**  
**SUNDAY, AUGUST 10, 1969**

# FOE OF POLLUTION SEES LACK OF TIME

**Asserts Environmental Ills  
Outrun Public Concern**

**By ROBERT REINHOLD**  
*Special to The New York Times*

**PALO ALTO, Calif., Aug. 5 —**  
"The trouble with almost all environmental problems," says Paul R. Ehrlich, the population biologist, "is that by the time we have enough evidence to convince people, you're dead."

While Dr. Ehrlich is gathering that evidence in his laboratory at Stanford University, he is wasting no time trying to convince people that drastic action is needed to head off what he foresees as a catastrophic explosion fueled by runaway population growth, a limited world food supply, and contamination of the planet by man.

"We must realize that unless we are extremely lucky, everybody will disappear in a cloud of blue steam in 20 years," the 37-year-old scientist said during a coffee break at his laboratory. "The situation is going to get continuously worse unless we change our behavior."

Fuente: New York Times, 10 de agosto de 1969.

**1970: edad de hielo en 2000**

The Boston Globe

Thursday, April 16, 1970

## Scientist predicts a new ice age by 21st century

Air pollution may obliterate the sun and cause a new ice age in the first third of the next century if population continues to grow and the earth's resources are consumed at the present rate, a pollution expert predicted yesterday.

James P. Lodge Jr. also warned that if the current rate of increase in electric power generation continues, the demands for cooling water will boil dry the entire flow of the rivers and streams of continental United States.

Looking into his "smoggy crystal ball," Lodge also warned that by the next century "the consumption of oxygen in combustion processes, world-wide, will surpass all of the processes which return oxygen to the atmosphere."

Lodge, a scientist at the national center for Atmospheric Research in Boulder, Colo., said the nation's states, with the exception of Alaska and Hawaii, "are already consuming more oxygen than their own green plants replace and that we are importing the balance from the neighboring oceans."

Lodge, speaking at the Institute of Environmental Sciences, at the Sheraton Boston, said three factors could prevent these disasters: population control, a less wasteful standard of living, and a major technological breakthrough in the way man consumes the earth's resources.

Fuente: Boston Globe, 16 de abril de 1970

1970: "América sujeta a racionamiento de agua en 1974 y racionamiento de alimentos en 1980".

**Redlands**  
**Daily Facts**

REDLANDS, CALIFORNIA, TUESDAY, **OCTOBER 6, 1970**

## **Dr. Ehrlich, outspoken ecologist, to speak**


"Giving aspirins to cancer victims" is what Dr. Paul R. Ehrlich thinks of current proposals for pollution control. No real action has been taken to save the environment, he maintains.

And it does need saving. Ehrlich predicts that:  
The oceans will be as dead as Lake Erie in less than a decade.

The DDT in our fatty tissues has reached levels high enough to cause brain damage and cirrhosis of the liver.

America will be subject to water rationing by 1974 and food rationing by 1980.

University of California Extension, Riverside and World Affairs Council of Inland Southern California will present the outspoken author of "The Population Bomb" and the hero of the ecology movement tomorrow at 8 p.m. He will speak in the gymnasium on the UCR campus.



**DR. PAUL EHRLICH**

Fuente: Redlands Daily Facts, 6 de octubre de 1970.



1971: 'Se acerca la nueva era de hielo'

**U.S. Scientist Sees New Ice Age Coming**  
By Victor Cohn Washington Post Staff Writer  
*The Washington Post, Times Herald (1959-1973); Jul 9, 1971;*  
pg. A4

# U. S. Scientist Sees New Ice Age Coming

By Victor Cohn  
Washington Post Staff Writer  
The world could be as little as 50 or 60 years away from a disastrous new ice age, a leading atmospheric scientist predicts.

Dr. S. I. Rasool of the National Aeronautics and Space Administration and Columbia University says that:

- "In the next 50 years," the fine dust man constantly puts into the atmosphere by fossil fuel-burning could screen out so much sunlight that the average temperature could drop by six degrees.

- If sustained over "several years" — "five to 10," he estimated—"such a temperature decrease could be sufficient to trigger an ice age!"

These conclusions—including the ominous exclamation point rare in scientific publication — are printed in this week's issue of the journal *Science* out today, signed by Rasool and co-worker Dr. S. H. Schneider.

They are also being presented by Schneider at an in-

ternational Study of Man's Impact on Climate now being held in Stockholm as a prelude to a world environmental conference there next June.

Dr. Gordon F. MacDonald, scientist-member of President Nixon's three-man Council on Environmental Quality, said in an interview that these conclusions point up "one of the serious problems" U.S. and other delegates must address next year.

He called Rasool "a first-rate atmospheric physicist" whose estimate that fuel dust could drop temperatures by six degrees "is consistent with estimates I and others have made."

Whether this could cause an ice age "within five or 50 years or even more," he said, "I wouldn't want to guess."

But he "agreed completely" with Rasool that is now urgent to start an international network to monitor atmospheric dust.

If his calculations prove correct, Rasool said, it may

be simply necessary for men to stop most fossil fuel-burning—use of coal, oil, natural gas and automobile gasoline—and switch in the main to nuclear energy, despite the atom's own disadvantages. Pollution controls alone, he said, cannot do the job. "I think you have to stop the source."

A new ice age would flood the world's coastal cities and further lower temperatures to build up new glaciers that could eventually cover huge areas.

Scientists have long debated whether man's activity is actually heating or cooling the earth, if either. A "1970 Study of Critical Environmental Problems" concluded that the Rasool-Schneider kind of prediction was impossible to make yet.

"The area of greatest uncertainty," that study concluded, is "our current lack of knowledge" of the optical properties of man-made dust "in scattering or absorbing radiation from the sun or the earth" fastest computers—*It overtook A the diff*

Fuente: Washington Post, 9 de julio de 1971

## 1972: nueva era de hielo para 2070



BROWN UNIVERSITY Providence, Rhode Island • 02912

DEPARTMENT OF GEOLOGICAL SCIENCES

(401) 863-2240

December 3, 1972

The President  
The White House  
Washington, D. C.

Dear Mr. President:

Aware of your deep concern with the future of the world, we feel obliged to inform you on the results of the scientific conference held here recently. The conference dealt with the past and future changes of climate and was attended by 42 top American and European investigators. We enclose the summary report published in *Science* and further publications are forthcoming in *Quaternary Research*.

The main conclusion of the meeting was that a global deterioration of climate, by order of magnitude larger than any hitherto experienced by civilized mankind, is a very real possibility and indeed may be due very soon. The cooling has natural cause and falls within the rank of processes which produced the last ice age. This is a surprising result based largely on recent studies of deep sea sediments.

Existing data still do not allow forecast of the precise timing of the predicted development, nor the assessment of the man's interference with the natural trends. It could not be excluded however that the cooling now under way in the Northern Hemisphere is the start of the expected shift. The present rate of the cooling seems fast enough to bring glacial temperatures in about a century, if continuing at the present pace.

The practical consequences which might be brought by such developments to existing social institutions are among others:

- 1) Substantially lowered food production due to the shorter growing seasons and changed rain distribution in the main grain producing belts of the world, with Eastern Europe and Central Asia to be first affected.
- 2) Increased frequency and amplitude of extreme weather anomalies such as those bringing floods, snowstorms, killing frosts etc.



Mr. President

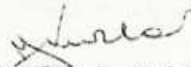
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December 3, 1972

With the efficient help of the world leaders, the research could be effectively organized and could possibly find the answers to the menace. We hope that your Administration will take decisive steps in this direction as it did with other serious international problems in the past. Meantime however it seems reasonable to prepare the agriculture and industry for possible alternatives and to form reserves.

It might also be useful for Administration to take into account that the Soviet Union, with large scientific teams monitoring the climate change in Arctic and Siberia, may already be considering these aspects in its international moves.

With best regards,

  
George J. Kukla  
Lamont-Doherty Geological Observatory

R. K. Matthews, Chairman  
Department of Geological Sciences

Fuente: NOAA, octubre de 2015



1974: 'La nueva edad de hielo viene rápido'

THE GUARDIAN Tuesday January 29 1974

# Space satellites show new Ice Age coming fast

By ANTHONY TUCKER, Science Correspondent

WORLDWIDE and rapid trends towards a mini Ice Age are emerging from the first long term analyses of satellite weather pictures.

Of potentially great importance to energy strategies and to agriculture, but barely observable yet in Britain because our weather is strongly buffered by the Atlantic, a preliminary analysis carried out at Columbia University, New York, by the European climatologists Doctors George and Helena Kukla indicates that snow and ice cover of the earth increased by 12 per cent during 1967-1972.

This appears to be in keeping with other long-term climatic changes, all of which suggest that after reaching a climax of warmth between 1935 and 1955, world average temperatures are now falling. But the rate of increase of snow and ice cover is much faster than would be expected from other trends.

The technique employed, which was first described in this country last year during a conference at the Climatic Research Unit at the University of East Anglia, depends on the averaging of information from standard and infra-red satellite weather pictures. In spite of

the newness of the technique the findings are important and it is a matter of some urgency that they should be re-examined by other groups.

It is particularly important to know whether the earth's reflectivity is changing, for this is one of the factors in which a change tends to be self-perpetuating until some new worldwide balance is reached. An increase of snow and ice cover coupled with a decrease in cloud, or even with no change in cloud cover, means that more of the incoming energy from the sun is reflected straight out again, thus further reducing temperatures.

The Columbia University findings suggest that at present the main changes are not in the general area of winter snow and ice coverage but in the continuation of coverage later and later into the spring. This appears to be true of both the northern and southern hemispheres.

In the highly complex dynamics of world weather patterns an interconnection of some kind between major events is inevitable, but often obscure. It could be, for example, that the extraordinary occurrence of a stationary low pressure area over Brisbane, with its attendant disas-

trous flooding, is a feature of the overall trend.

The Brisbane low pressure area appears to have started life as a normal Pacific cyclonic feature moving along a normal south-easterly curving track. But instead of recurving towards the southwest, it was blocked by an anticyclone to the south of Australia. It happens that blocking anticyclones play an important role in the characteristics of weather in the northern hemisphere and account for some adverse changes in our own climate. The trends appear to be cyclic, fairly long-term and extremely important. It is therefore surprising that, in Britain at least, support for scientific analysis of the history of climate is almost non-existent.

But Nottingham at least is fighting off the advancing ice age — grass is growing and seeds are sprouting there now.

The artificial spring has been created by the underground hot water pipes which now carry heat to thousands of homes in the city. As an experiment city officials scattered grass seeds on wasteland near the central library and grass is shooting up there and in other areas where the pipes are.

Fuente: The Guardian, 29 de enero de 1974.

## 1974: "¿Otra edad de hielo?"

# TIME ARCHIVE

1923 to the Present

Science

## Another Ice Age?

Monday, Jun 24, 1974

In Africa, drought continues for the sixth consecutive year, adding terribly to the toll of famine victims. During 1972 record rains in parts of the U.S., Pakistan and Japan caused some of the worst flooding in centuries. In Canada's wheat belt, a particularly chilly and rainy spring has delayed planting and may well bring a disappointingly small harvest. Rainy Britain, on the other hand, has suffered from uncharacteristic dry spells the past few springs. A series of unusually cold winters has gripped the American Far West, while New England and northern Europe have recently experienced the mildest winters within anyone's recollection.

As they review the bizarre and unpredictable weather pattern of the past several years, a growing number of scientists are beginning to suspect that many seemingly contradictory meteorological fluctuations are actually part of a global climatic upheaval. However widely the weather varies from place to place and time to time, when meteorologists take an average of temperatures around the globe they find that the atmosphere has been growing gradually cooler for the past three decades. The trend shows no indication of reversing. Climatological Cassandras are becoming increasingly apprehensive, for the weather aberrations they are studying may be the harbinger of another ice age.

Telltale signs are everywhere —from the unexpected persistence and thickness of pack ice in the waters around Iceland to the southward migration of a warmth-loving creature like the armadillo from the Midwest. Since the 1940s the mean global temperature has dropped about 2.7° F. Although that figure is at best an estimate, it is supported by other convincing data. When Climatologist George J. Kukla of Columbia University's Lamont-Doherty Geological Observatory and his wife Helena analyzed satellite weather data for the Northern Hemisphere, they found that the area of the ice and snow cover had suddenly increased by 12% in 1971 and the increase has persisted ever since. Areas of Baffin Island in the Canadian Arctic, for example, were once totally free of any snow in summer; now they are covered year round.

Fuente: TIME, 24 de junio de 1974.



1974: el agotamiento del ozono es un "gran peligro para la vida"

## 'Great Peril To Life'; Gas Pares Away Earth's Ozone

WASHINGTON (UPI). — A scientist told Congress Wednesday the earth appears to be "on the verge of a period of great peril to life on this globe" because of threats to the ozone layer from modern technology.

Professor T. M. Donahue of the University of Michigan testified at the opening of two days of hearings into the question of whether freon, the gas used in aerosol sprays and as a coolant in refrigerators and air conditioners, has been eating away at the ozone layer near the top of the earth's atmosphere.

The layer filters out most of the sun's ultraviolet rays and some scientists have suggested that a thinning of the layer will trigger huge increases in skin cancer among the earth's peoples.

Rep. Marvin L. Esch, R-Mich., said Wednesday it may be too late to head off an increase in skin cancer even if Congress acts right away to control freon gases being released into the atmosphere from aerosol sprays and other sources.

"We must immediately begin a comprehensive study so that steps can be taken to defuse this potential time bomb if a health hazard is proven," Esch said.

Donahue suggested that if a fleet of 500 supersonic transports have been built as was discussed a few years ago enough of the protective ozone layer would have been destroyed to "drive life on the globe back toward a state it had several hundred million years ago."

Donahue, who with other Michigan scientists recently raised the issue before the public, said he and fellow researchers are not even sure they have exhausted the inventory of possible horrors that

could result from ozone depletion.

It might even be, he said, that the effort to feed a growing population through grains is using up nitrous oxide and taking that substance away from the ozone layer as well.

"We appear to be on the verge of a period of great peril to life on this globe produced by the development of the very technology designed to make life more pleasant, tolerable and even possible for all of this humankind," he said.

"It is time to step back and take a very careful look at what we may be doing to ourselves and our planet."

The subcommittee has before it two bills calling for a study first and power later to ban freons.

Esch, in testimony prepared for the hearing, said a University of Michigan study widely quoted in news reports estimates that ozone destruction would not reach its peak until about 1990, even if all emissions were halted now.

"There are estimates," he added, "that this ozone destruction will result in an additional 8,000 cases of skin cancer by 1990 and at least one prediction that the incidence of skin cancer could be much higher."

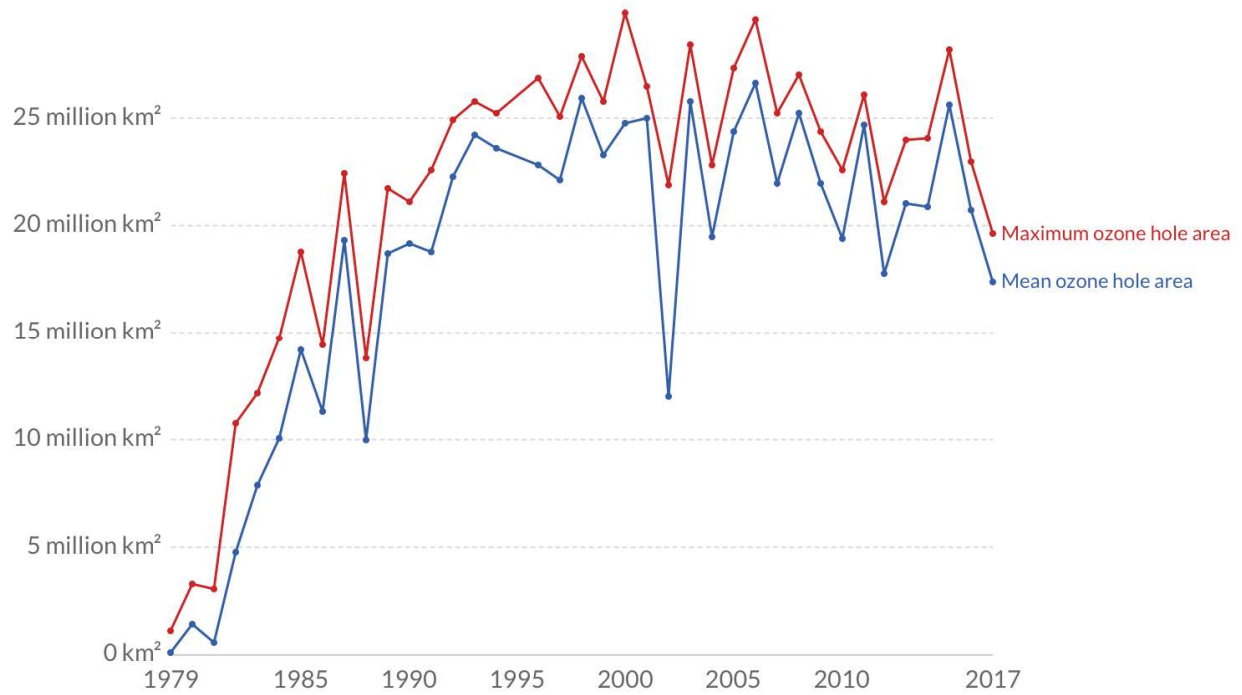
To delay a priority study of the question, Esch said, "could invite tragedy and suffering which, because of the unusual nature of this problem might not be fully upon us for 10 or 15 years."

"Yet we are told it may already be too late to prevent serious depletion of the ozone shield," he said. "In fact, we are faced with the unnerving prediction that ozone destruction will almost certainly result in an increased incidence of skin cancer — no matter what steps we take within the next 12 months."

Pero no se ha observado tal "gran peligro para la vida", ya que permanece el llamado "agujero de ozono":

## Antarctic ozone hole area

Annual maximum and mean Antarctic stratospheric ozone hole area, resultant from the emission of ozone-depleting substances.



Source: NASA Ozone Watch

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Fuentes: titular

Datos de la NASA | Grafico

1976: 'El enfriamiento'

The New York Times Book Review / July 18, 1976

## The Cooling

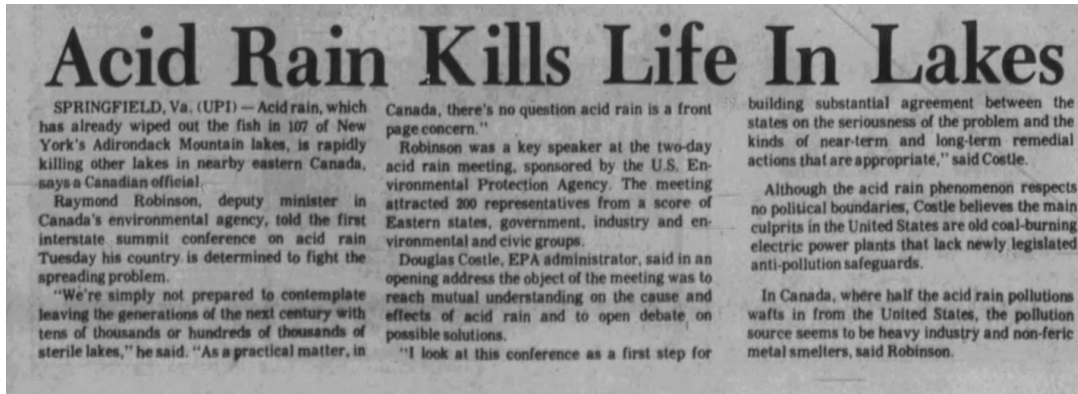
So writes Stephen Schneider, a young climatologist at the National Center for Atmospheric Research in Boulder, Colo., reflecting the consensus of the climatological community in his new book, "The Genesis Strategy." His warning, that present world food reserves are an insufficient hedge against future famines, has been heard among the scientific community for years—for example, it was a conclusion of a 1975 National Academy of Sciences report. But Schneider has decided to explain the entire problem, as responsibly and accurately as he can, to the general public, and thus has put together a useful and important book.

Schneider quotes University of Wisconsin climatologist Reid Bryson as saying that 1930-1960 "was the most abnormal period in a thousand years—abnormally mild." In fact, conditions of steady, warm weather in the northern hemisphere during that time favored bumper harvests in the United States, the Soviet Union, and the wheat belt of northern India and Pakistan. In 1974 Schneider and Bryson tried to explain to a White House policy-making group why conditions are likely to worsen. One of the most depressing anecdotes in the book is Schneider's description of the deaf ear their warnings received.

Fuente: New York Times Book Review, 18 de julio de 1976.



## 1980: "La lluvia ácida mata la vida en los lagos"



Noblesville Ledger (Noblesville, IN) 9 de abril de 1980

Pero 10 años después, el programa del gobierno de EE. UU. para estudiar la lluvia ácida concluyó:

## Acid rain no environmental crisis, study concludes

H. JOSEF HEBERT  
THE ASSOCIATED PRESS

WASHINGTON — A \$537 million, decade-long study ordered by Congress concluded today that acid rain should be "viewed as a long-term problem" requiring pollution controls but is not the environmental crisis some scientists have suggested.

The report by the National Acid Precitation Assessment Program was embraced both by those who support steep cuts in sulfur dioxide emissions and by critics of such cuts. The critics have long claimed that severe pollution controls, costing as much as \$5 billion a year, are an overreaction to the acid rain problem.

In its final draft report, the scientific group, known as NAPAP, reiterated that pollution-control measures are needed to return hundreds of lakes and streams — especially in the Northeast and the mid-Atlantic states — to healthy conditions.

The report also acknowledged that acid rain is affecting visibility across much of the East; causes damage to some forests, particularly red spruce at higher elevations; reduces soil nutrients; kills some aquatic life; erodes buildings and statues, and poses health problems to some humans exposed to acid aerosols.

James Mahoney, director of NAPA, outlined the draft report to a final meeting of the group and said its findings have "reduced the scientific uncertainties" about acid rain.

"Acid rain is correctly viewed as a long-term problem which should be resolved by permanent measures," he concluded, summarizing the findings.

Mahoney said that while the study supports many of the scientific views expressed over the years on acid rain it also rejected other, "more extreme views" such as those that consider it "a flat-out crisis" or those "who would say there's no problem at all."

NAPAP was established by Congress in 1980 to improve the understanding of acid rain. During its decade of work it spent \$537 million.

The report stopped short of endorsing specific control requirements, including the 10-million-ton cut in sulfur dioxide emissions required by legislation nearing approval in Congress.

The study said, however, that if annual sulfur dioxide emissions were cut by 10 million tons the damaging trends would be reversed. Such emission controls would lead to the "chemical recovery" of lakes in the Adirondacks, where the acid rain problem is said to be most severe, and protect lakes in the higher elevations of the mid-Atlantic states. It also would reduce other damages caused by acid rain and improve visibility.

But the pollution controls would not be cheap, with the expense increasing sharply as steeper emission reductions are put in place. An 8-million-ton reduction in sulfur dioxide

emissions would cost \$1.7 billion to \$2.7 billion a year, while cuts of 10 million tons would cost as much as \$4 billion a year, the study estimated.

The most severe pollution control requirements would have to be imposed on electric utilities, especially those burning high-sulfur coal in the Midwest, for the results to be effective, the study said.

The National Coal Association issued a statement urging that Congress ease its acid rain pollution controls in light of the NAPAP study. "The report provides strong evidence that there is time to implement more cost-effective ways in which to mitigate the limited environmental impacts of acid rain," said Richard Lawson, the association's president.

But Eileen Claussen, a senior director involved with air pollution issues at the EPA, said the NAPAP report "clearly establishes the link between (sulfur) emissions and environmental damage."

Associated Press, 6 de septiembre de 1990

## 1978: 'No End in Sight' a la tendencia de enfriamiento de 30 años

### International Team of Specialists Finds No End in Sight to 30-Year Cooling Trend in Northern Hemisphere

By WALTER SULLIVAN

An international team of specialists has concluded from eight indexes of climate that there is no end in sight to the cooling trend of the last 30 years, at least in the Northern Hemisphere.

In some, but not all cases, the data extend through last winter. They include sea surface temperatures in the north-central Pacific and north Atlantic, air temperatures at the surface and at various elevations as well as the extent of snow and ice cover at different seasons.

In almost all cases it has been found that the year-to-year variations in climate are far more marked than the long-term trend. The long-term trend often becomes evident only when data from a number of years are displayed.

The report, prepared by German, Japanese and American specialists, appears in the Dec. 15 issue of Nature, the British journal. The findings indicate that from 1950 to 1975 the cooling, per decade, of most climate indexes in the Northern Hemisphere was from 0.1 to 0.2 degrees

Celsius, roughly 0.2 to 0.4 degrees Fahrenheit.

Data from the Southern Hemisphere, particularly south of latitude 30 south, are so meager that reliable conclusions are not possible, the report says. The 30th parallel of south latitude passes through South Africa, Chile and southern Australia. The cooling trend seems to extend at least part way into the Southern Hemisphere but there have been indications of warming at high southern latitudes.

The various indexes were reported as follows:

•Average surface air temperatures recorded at 358 stations north of latitude 20 degrees south from 1951 to 1975 have been analyzed by Drs. R. Yamamoto and T. Iwashima of Kyoto University in Japan on regional and seasonal bases. A general cooling is evident with "an intensive cooling episode" from 1961 to 1964.

•Generally similar trends are evident in temperatures of the lower 18,000 feet of the atmosphere as charted by Dr. Horst Dronkers of the Weather Office in

Hannover, West Germany. For the period from 1940 to 1976, he has calculated, for 220 points in the Northern Hemisphere, the average temperature of the atmosphere from the separation between the pressure levels near the surface (at 1,000 millibars) and one high up (at 500 millibars). An increase in separation indicated expansion and hence warming. A decrease, for example, of 20 meters (66 feet) was taken to mean atmospheric shrinking, indicating a cooling in that case of 1 degree Celsius (almost 2 degrees Fahrenheit).

•Observations extending higher into the atmosphere confirmed the trend. The authors were Drs. J. K. Angell and J. Korshover of the National Oceanic and Atmospheric Administration Laboratories in Silver Spring, Md.

•North Pacific water temperatures compiled by the same agency's Marine Fisheries Service have been analyzed by Dr. Jerome Namias of the Scripps Institution of Oceanography at La Jolla, Calif. The original source was temperature readings of cooling water intake made

by ships at a rate of more than 20,000 a month. The data, plotted for 153 locations, show a gradual cooling broken by a sharp warming in 1967-68.

•A similar study based on data from weather ships in the North Atlantic has been done by Dr. Martin Rodewald, former head of the Oceanic Division of the German Weather Service. Since the seven American weather ships were withdrawn in 1973 only two have remained but observations of a cooling trend have continued.

•A gradual increase in area of the northern circumpolar vortex, the massive flow of frigid air around the Arctic, has been recorded by Drs. Angell and Korshover. In 1976 its southern extent was the greatest in 10 years and last winter it was 1 percent larger than in any previous winter observed.

•Snow and ice cover in the Northern Hemisphere have varied greatly but there has been a net increase according to a satellite photograph analysis by Dr. George J. Kukla of Columbia University's

Lamont-Doherty Geological Observatory. This has been most marked in the spring when so highly reflective a cover returns much solar energy into space at a time of intense solar radiation.

•Antarctic sea ice coverage, after increasing to 1972, has been shrinking. The observations come at a time when a warming trend could have been expected from the increase of carbon dioxide

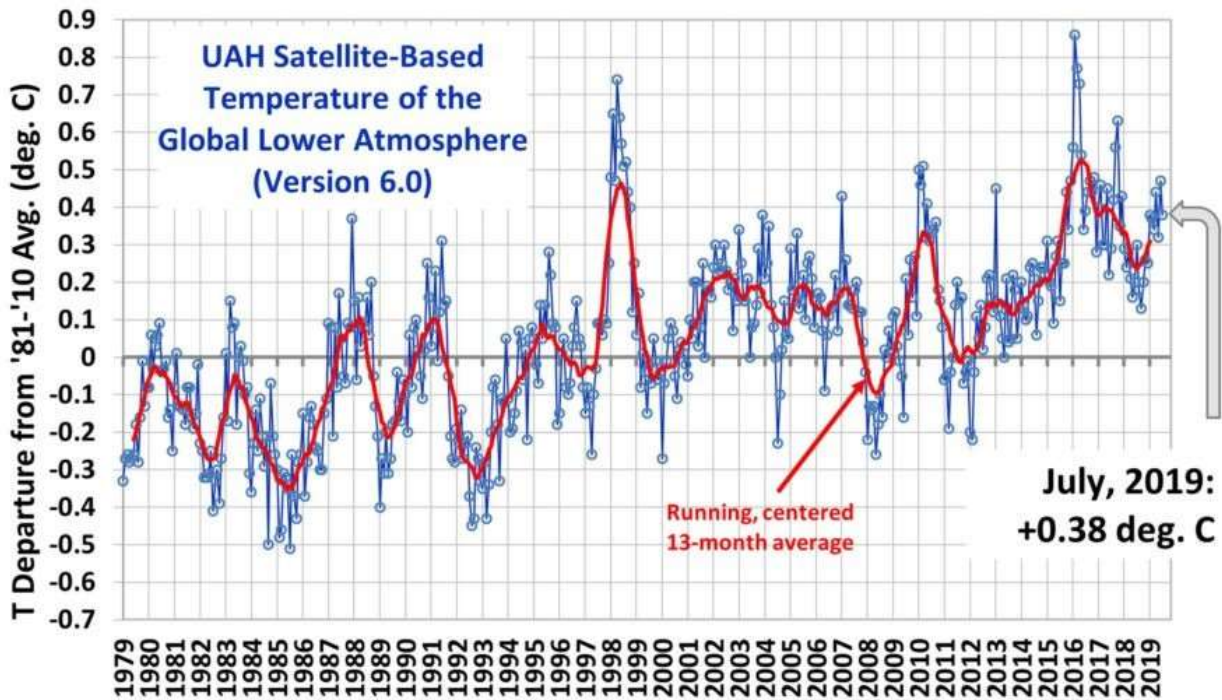
in the atmosphere due to extensive fuel burning. The gas inhibits the escape of solar heat from the earth. Dr. Kukla, in a telephone interview this week, said that the cause of the apparent cooling remained unknown and that no scientific attempt to predict whether the trend would continue was possible. Monitoring of the various indexes is continuing, he added.



Fuente: New York Times, 5 de enero de 1978



Pero según los datos satelitales de la NASA hay una ligera tendencia al calentamiento desde 1979.



Fuente: [DrRoySpencer.com](http://DrRoySpencer.com)

**1988: las previsiones de James Hansen aumentan la sequía regional en la década de 1990**

# The Miami News

Friday, June 24, 1988 HOME EDITION

**Jackson to give AZT to indigent AIDS patients**

MICHAEL LASALANDRA and PETE COLLINS  
Miami News Reporters

Jackson Memorial Hospital has decided to continue supplying free AZT — the only approved treatment for AIDS — to impoverished patients who were getting the drug for free under a federal program that recently ended.

Phil Plummer, administrator of the South Florida AIDS Network at Jackson, said yesterday no one who was getting the drug under the \$1.7 million program that ended June 8 will be cut off, even if they don't qualify for substitute assistance through

Please see AIDS, 4A

## More droughts likely, expert tells senators

'88 on way to be hottest ever as world temperatures up sharply

JEFF NESMITH  
Miami News/Cox Washington Bureau

WASHINGTON — The overall temperature of the Earth rose sharply this year, signaling the beginning of the "greenhouse effect" and significantly increasing the likelihood of droughts and heatwaves in the Southeast and Midwest, a NASA scientist told the Senate.

James Hansen, director of NASA's Goddard Institute for Space Studies in New York, said that without an abnormal cooling during the second half of the year, 1988 will be the warmest year since measurements began 130 years ago.

Hansen specifically refused to say the heat wave and drought currently gripping much of the country were caused by the greenhouse effect.

"However, there is evidence that the greenhouse effect increases the likelihood of such events," he said yesterday in testimony before the Senate Energy and Natural Resources Committee.

— James Hansen of NASA

"Our climate model simulations for the late 1980s and the 1990s indicate a tendency for an increase of heatwave drought situations in the Southeast and Midwest United States," he testified.

In an interview, Hansen said, "It is time to stop waffling so much and say the evidence is pretty strong that the greenhouse effect is here."

Hansen testified that after analyzing temperatures reported by more than 2,000 weather stations around the globe, he and a team of other Goddard scientists had concluded that the planet's average temperature rose by about .7 degree Fahrenheit (.4 degree Celsius) during the first five months of 1988.

The odds against such a sharp rise occurring as a result of a random climate fluctuation were 99-to-one, he said.

"The Earth is warmer in 1988 than at any time in the history of instrumental measurements," Hansen said.

Atmospheric scientists have been warning for several years that the Earth was approaching a period of overall warming because of the increase in atmospheric gases that tend to trap heat somewhat like the panes of a greenhouse.

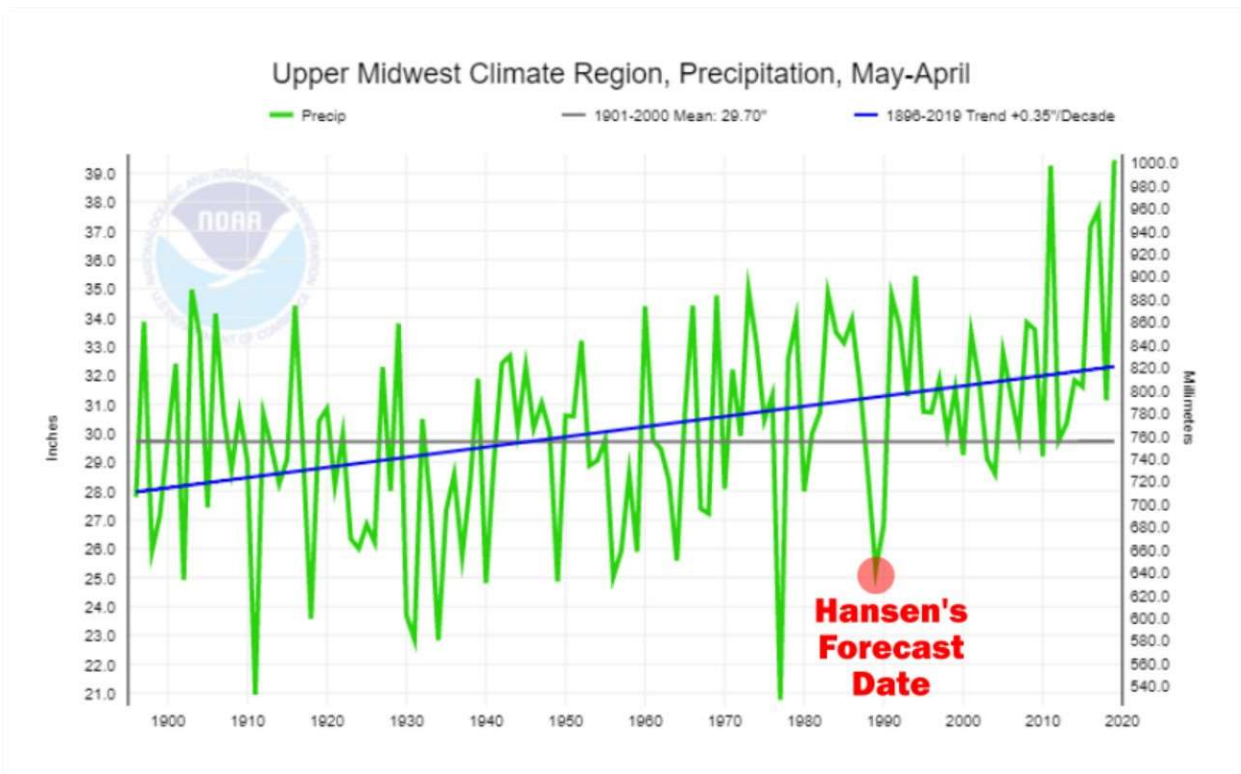
Gases emitted by modern civilization — notably carbon dioxide from the burning of fossil fuels but also methane, nitrous oxide and the chlorofluorocarbon gases that major nations agreed last year to

Please see DROUGHT, 4A

**Etcetera**

**Scientist discovers how**

Pero el último año realmente seco en el Medio Oeste fue 1988, y los últimos años han sido récord.



Fuente: [RealClimateScience.com](http://RealClimateScience.com)

**1988: días de Washington DC de más de 90 ° F a 35 a 85**

Today Lansing State Journal ■ Monday, Dec. 12, 1988

# Prepare for long, hot summers

By EDWARD STILES  
Gannett News Service

If you liked last summer's record temperatures, you're going to love the 1990s, says James Hansen, the NASA scientist who, during congressional hearings on the Midwestern drought, linked greenhouse warming to the heat wave.

Last summer was a preview of the average summer 10 years from now, and the hottest summers during the '90s will be even hotter and drier than the one we just struggled through, he says.

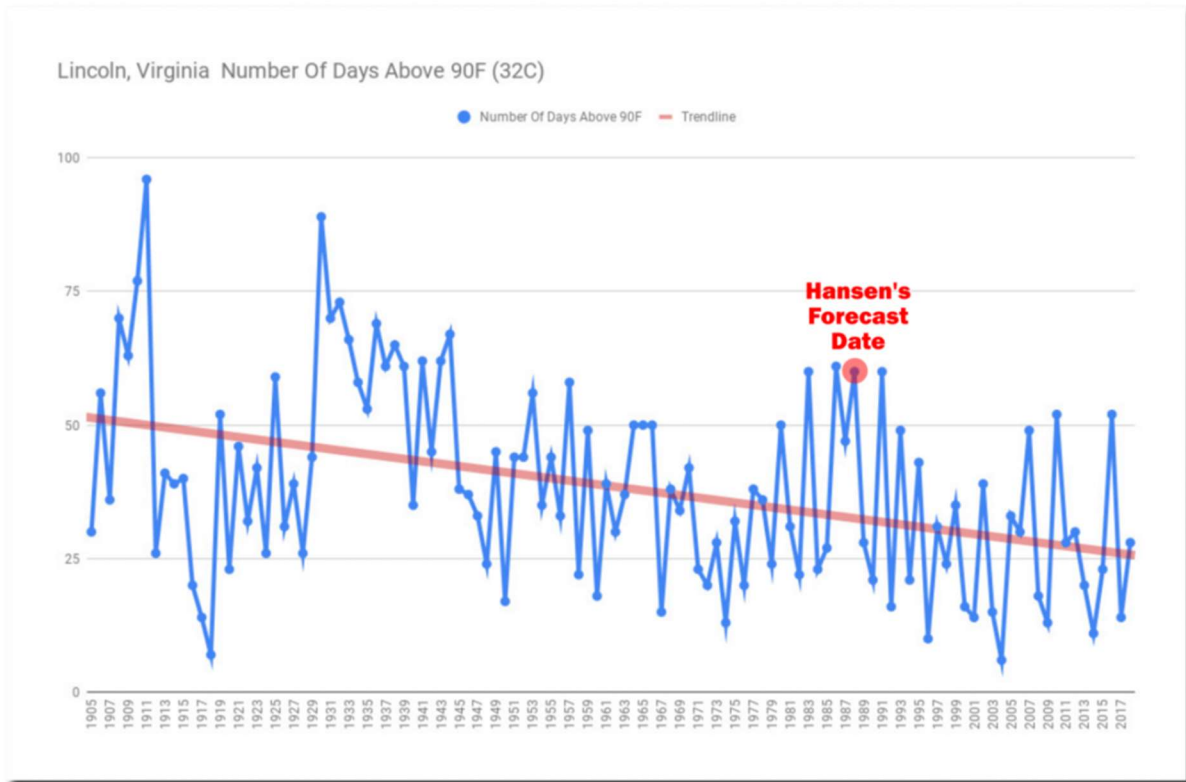
Although many scientists argue that the dry, hot summer of '88 was not caused by greenhouse warming, it's hard to find a climate expert who will claim that the greenhouse effect is not on its way.

When Hansen, head of the Goddard Institute for Space Studies, spoke recently to researchers at the University of Arizona Lunar and Planetary Laboratory, he ticked off several unpleasant changes in the weather most scientists agree probably will occur during the next 50 to 60 years:

- If we do nothing to cut down on pumping carbon dioxide into the atmosphere, temperatures in 2050 will be 6 to 7 degrees higher than they are today.
- Washington, D.C., for instance, would go from its current 35 days a year over 90 degrees to 85 days a year.
- The level of the ocean will rise anywhere from one to six feet.
- The frequency and severity of storms would increase. If the amount of carbon dioxide in the atmosphere doubles — the worst-case scenario between now and 2050 — the maximum strength of hurricanes may increase by 50 percent, Hansen says.

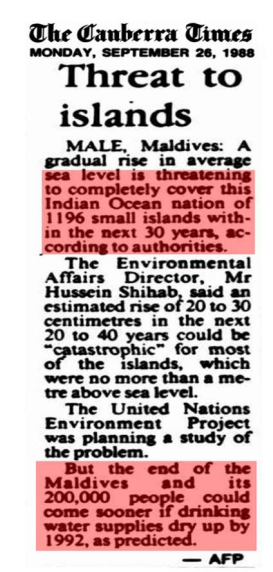
While a few degrees warmer or cooler may not seem like much, such a change can result in huge differences in climate. Hansen notes that during the last ice age the earth was only about 9 or 10 degrees cooler on average than it is now.

Pero el número de días calurosos en el área de DC alcanzó su punto máximo en 1911, y han estado disminuyendo desde entonces.



Fuente: RealClimateScience.com

### **1988: Maldivas completamente bajo el agua en 30 años**



Fuente: Agence France Press, 26 de septiembre de 1988.



## 1989: El aumento de los mares puede 'destruir' naciones en 2000

### Rising seas could obliterate nations: U.N. officials

UNITED NATIONS (AP) — A senior U.N. environmental official says entire nations could be wiped off the face of the Earth by rising sea levels if the global warming trend is not reversed by the year 2000.

Coastal flooding and crop failures would create an exodus of "eco-refugees," threatening political chaos, said Noel Brown, director of the New York office of the U.N. Environment Program, or UNEP.

He said governments have a 10-year window of opportunity to solve the greenhouse effect before it goes beyond human control.

As the warming melts polar icecaps, ocean levels will rise by up to three feet, enough to cover the Maldives and other flat island nations, Brown told The Associated Press in an interview on Wednesday.

Coastal regions will be inundated; one-sixth of Bangladesh could be flooded, displacing a fourth of its 90 million people. A fifth of Egypt's arable land in the Nile Delta would be flooded, cutting off its food

supply, according to a joint UNEP and U.S. Environmental Protection Agency study.

"Ecological refugees will become a major concern, and what's worse is you may find that people can move to drier ground, but the soils and the natural resources may not support life. Africa doesn't have to worry about land, but would you want to live in the Sahara?" he said.

UNEP estimates it would cost the United States at least \$100 billion to protect its east coast alone.

Shifting climate patterns would bring back 1930s Dust Bowl conditions to Canadian and U.S. wheatlands, while the Soviet Union could reap bumper crops if it adapts its agriculture in time, according to a study by UNEP and the International Institute for Applied Systems Analysis.

Excess carbon dioxide is pouring into the atmosphere because of humanity's use of fossil fuels and burning of rain forests, the study says. The atmosphere is retaining more heat than it radiates, much like a greenhouse.

The most conservative scientific estimate is that the Earth's temperature will rise 1 to 7 degrees in the next 30 years, said Brown.

The difference may seem slight, he said, but the planet is only 9 degrees warmer now than during the 8,000-year Ice Age that ended 10,000 years ago.

Brown said if the warming trend continues, "the question is will we be able to reverse the process in time? We say that within the next 10 years, given the present loads that the atmosphere has to bear, we have an opportunity to start the stabilizing process."

He said even the most conservative scientists "already tell us there's nothing we can do now to stop a ... change" of about 3 degrees.

"Anything beyond that, and we have to start thinking about the significant rise of the sea levels ... we can expect more ferocious storms, hurricanes, wind shear, dust erosion."

He said there is time to act, but there is

no time to waste.

UNEP is working toward forming a scientific plan of action by the end of 1990, and the adoption of a global climate treaty by 1992. In May, delegates from 103 nations met in Nairobi, Kenya — where UNEP is based — and decided to open negotiations on the treaty next year.

Nations will be asked to reduce the use of fossil fuels, cut the emission of carbon dioxide and other greenhouse gases such as methane and fluorocarbons, and preserve the rain forests.

"We have no clear idea about the ecological minimum of green space that the planet needs to function effectively. What we do know is that we are destroying the tropical rain forest at the rate of 50 acres a minute, about one football field per second," said Brown.

Each acre of rain forest can store 100 tons of carbon dioxide and reprocess it into oxygen.

Fuente: Associated Press, 30 de junio de 1989.

## 1989: West Side Highway: Nueva York bajo el agua en 2019



While doing research 12 or 13 years ago, I met Jim Hansen, the scientist who in 1988 predicted the greenhouse effect before Congress. I went over to the window with him and looked out on Broadway in New York City and said, "If what you're saying about the greenhouse effect is true, is anything going to look different down there in 20 years?" He looked for a while and was quiet and didn't say anything for a couple seconds. Then he said, "Well, there will be more traffic." I, of course, didn't think he heard the question right. Then he explained, "The West Side Highway [which runs along the Hudson River] will be under water. And there will be tape across the windows across the street because of high winds. And the same birds won't be there. The trees in the median strip will change." Then he said, "There will be more police cars." Why? "Well, you know what happens to crime when the heat goes up."

And so far, over the last 10 years, we've had 10 of the hottest years on record.

Didn't he also say that restaurants would have signs in their windows that read, "Water by request only."

Under the greenhouse effect, extreme weather increases. Depending on where you are in terms of the hydrological cycle, you get more of whatever you're prone to get. New York can get droughts, the droughts can get more severe and you'll have signs in restaurants saying "Water by request only."

When did he say this will happen?

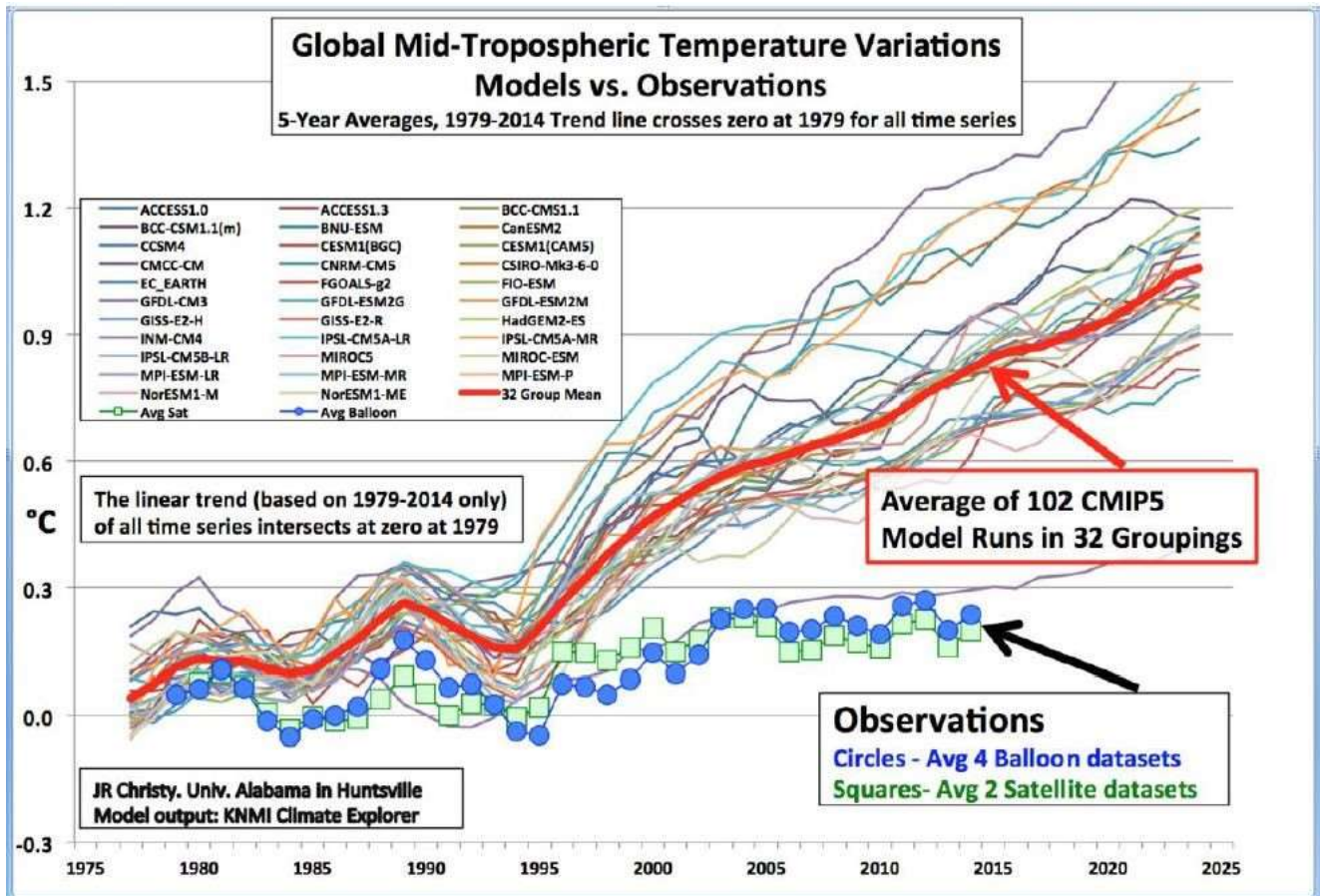
Within 20 or 30 years. And remember we had this conversation in 1988 or 1989.

Does he still believe these things?

Yes, he still believes everything. I talked to him a few months ago and he said he wouldn't change anything that he said then.

Fuente: Salon.com, 23 de octubre de 2001



**1995 al presente: fracaso del modelo climático**



Fuente: CEI.org

**2000: "Los niños no sabrán qué es la nieve".**

THE INDEPENDENT SATURDAY 12 SEPTEMBER 2015

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## Snowfalls are now just a thing of the past

BY CHARLES ONIANS | Monday 20 March 2000

Britain's winter ends tomorrow with further indications of a striking environmental change: snow is starting to disappear from our lives.

Sledges, snowmen, snowballs and the excitement of waking to find that the stuff has settled outside are all a rapidly diminishing part of Britain's culture, as warmer winters - which scientists are attributing to global climate change - produce not only fewer white Christmases, but fewer white Januaries and Februaries.

However, the warming is so far manifesting itself more in winters which are less cold than in much hotter summers. According to Dr David Viner, a senior research scientist at the climatic research unit (CRU) of the University of East Anglia, within a few years winter snowfall will become "a very rare and exciting event".

"Children just aren't going to know what snow is," he said.

Fuente: The Independent, 20 de marzo de 2000

### **2002: Hambruna en 10 años.**



Fuente: The Guardian, 23 de diciembre de 2002.



**2004: Gran Bretaña tendrá clima siberiano para 2020**



The Guardian US edition

Sat 21 Feb 2004 20.33 EST

## Now the Pentagon tells Bush: climate change will destroy us

- 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..

A secret report, suppressed by US defence chiefs and obtained by The Observer, warns that major European cities will be sunk beneath rising seas as Britain is plunged into a 'Siberian' climate by 2020. Nuclear conflict, mega-droughts, famine and widespread rioting will erupt across the world.

Fuente: The Guardian, 21 de febrero de 2004.

**2008: el Ártico estará libre de hielo para 2018**

The Argus-Press • Owosso, Michigan • Tues., June 24, 2008

**By SETH BORENSTEIN**

AP Science Writer

## **NASA scientist: 'We're toast'**

"We see a tipping point occurring right before our eyes," Hansen told the AP before the luncheon. "The Arctic is the first tipping point and it's occurring exactly the way we said it would."

Hansen, echoing work by other scientists, said that in five to 10 years, the Arctic will be free of sea ice in the summer.

Longtime global warming skeptic Sen. James Inhofe, R-Okla., citing a recent poll, said in a statement, "Hansen, (former Vice President) Gore and the media have been trumpeting man-made climate doom since the 1980s. But Americans are not buying it."

But Rep. Ed Markey, D-Mass., committee chairman, said, "Dr. Hansen was right. Twenty years later, we recognize him as a climate prophet."

Fuente: Associated Press, 24 de junio de 2008.

## 2008: Al Gore advierte sobre el Ártico sin hielo para 2013

### Ten years ago, @AlGore predicted the North polar ice cap would be gone. Inconveniently, it's still there

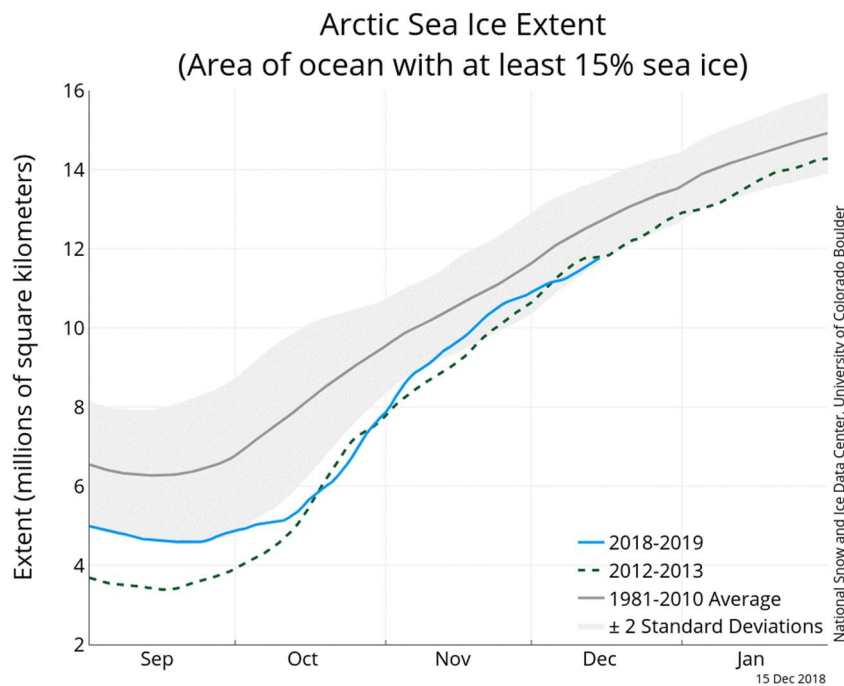
Anthony Watts / December 16, 2018

On December 14, 2008, former presidential candidate Al Gore predicted the North Polar Ice Cap would be completely ice free in five years. As [reported on WUWT](#), Gore made the prediction to a German TV audience at the COP15 Climate Conference:



Al warned them that “the entire North ‘polarized’ cap will disappear in 5 years.”

Pero ... sigue ahí:



Fuente: [WattsUpWithThat.com](http://WattsUpWithThat.com), 16 de diciembre de 2018



**2009: el príncipe Carlos dice que solo tenemos 8 años para salvar el planeta**

Environment > Green Living

## Just 96 months to save world, says Prince Charles

The price of capitalism and consumerism is just too high, he tells industrialists

Robert Verkaik | Thursday 9 July 2009 00:00 |



GETTY IMAGES

Fuente: The Independent, 9 de julio de 2009

**2009: el primer ministro del Reino Unido dice que solo tenemos 50 días para "salvar al planeta de la catástrofe"**



Voices > Commentators

***Gordon Brown: We have fewer than fifty days to save our planet from catastrophe***

Tuesday 20 October 2009 00:00 |

Fuente: The Independent: 20 de octubre de 2009

**2009: Ártico sin hielo para 2014**

Dec 14, 2009

**Gore: Polar ice cap may disappear by summer 2014**

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By Douglas Stanglin, USA TODAY

Updated 2009-12-14 4:36 PM

New computer modeling suggests the Arctic Ocean may be nearly ice-free in summer as early as 2014, Al Gore said today at the U.N. climate conference in Copenhagen.

The former vice president



CAPTION

By Attila Kisbenedek, AFP/Getty Images

Fuente: USA Today, 14 de diciembre de 2009

## 2013: Ártico sin hielo para 2015

Earth insight  
Environment

Nafeez Ahmed

Wed 24 Jul 2013 10.54 EDT



1,162 461

### Ice-free Arctic in two years heralds methane catastrophe - scientist

Professor Peter Wadhams, co-author of new Nature paper on costs of Arctic warming, explains the danger of inaction



▲ Leading Arctic expert Prof Wadhams warns that a summer ice free Arctic in 2 years could trigger dangerous methane release. Photograph: Jenny E Ross/Corbis

A new paper in the journal Nature argues that the release of a 50 Gigatonne (Gt) methane pulse from thawing Arctic permafrost could destabilise the climate system and trigger costs as high as the value of the entire world's GDP. The East Siberian Arctic Shelf's (ESAS) reservoir of methane gas hydrates could be released slowly over 50 years or "catastrophically fast" in a matter of decades - if not even one decade - the researchers said.

Fuente: The Guardian, 24 de julio de 2013.

Documento: <https://www.nature.com/articles/s41467-017-02550-9> (acceso abierto)

### La disociación de hidratos de gas de Svalbard inducida por el rebote isostático en lugar del calentamiento global

#### Resumen

La filtración de metano desde las laderas continentales superiores de Svalbard occidental se ha atribuido previamente a la disociación de hidratos de gas inducida por el calentamiento antropogénico de las aguas del fondo. Aquí mostramos que los núcleos de sedimentos perforados en Prins Karls Foreland contienen agua dulce de hidratos de disociación. Sin







embargo, nuestro modelo indica que la renovación del agua de poro observada comenzó alrededor de 8 ka BP cuando la tasa de elevación isostática superó el aumento del nivel del mar eustático. La consiguiente bajada local y disminución de la presión hidrostática forzó la disociación de los hidratos de gas y los agotamientos de cloruro disuelto, de acuerdo con nuestro análisis geoquímico. Por lo tanto, proponemos que la disociación de hidratos se desencadenó por el rebote isostático postglacial en lugar del calentamiento antropogénico. Además,

### **2013: Ártico sin hielo para 2016**

**Earth insight**  
Environment


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**Nafeez Ahmed**  
Mon 9 Dec 2013 08:39 EST

   1,710  436

## US Navy predicts summer ice free Arctic by 2016

**Is conventional modelling out of pace with speed and abruptness of global warming?**



▲ Greenpeace icebreaking ship, Arctic Sunrise, among broken floes of Arctic sea ice, photographed from the air. This image was taken in the Fram Strait, in the month that the sea ice coverage receded to the second lowest extent since records began. Photograph: Nick Cobbing

An ongoing US Department of Energy-backed research project led by a US Navy scientist predicts that the Arctic could lose its summer sea ice cover as early as 2016 - 84 years ahead of conventional model projections.

The project, based out of the [US Naval Postgraduate School's](#) Department of Oceanography, uses complex modelling techniques that make its projections more accurate than others.

Fuente: The Guardian, 9 de diciembre de 2013.

**2014: solo quedan 500 días antes del 'caos climático'**

## French Foreign Minister: '500 Days to Avoid Climate Chaos'

by Jeryl Bier | May 14, 2014 06:29 AM

Secretary of State John Kerry welcomed French foreign minister Laurent Fabius to the State Department in Washington on Tuesday to discuss a range of issues, from Iran to Syria to climate change. Or, in the [words](#) of the foreign minister, "climate chaos." Kerry and Fabius made a joint appearance before their meeting, and the foreign minister warned that only 500 days remained to avoid "climate chaos"[emphasis added]:

Pero...

## Planet Still Standing 500 Days After French Foreign Minister Warned of 'Climate Chaos'

by Jeryl Bier | September 29, 2015 07:08 AM

In May 2014, French foreign minister Laurent Fabius [declared](#) during a joint appearance with Secretary of State John Kerry that "we have 500 days to avoid climate chaos." Late last week, time ran out. Fabius's original remarks were as follows:

Fuentes: [Washington Examiner](#)

En fin...