### EIRScience & Technology

# Ozone hole and greenhouse hoaxes exposed in Australia

Australian publisher Peter Sawyer lays bare the twin hoaxes: the hole in the ozone layer and the greenhouse effect. With an introduction by Katherine Notley.

This week we are extending our Science & Technology space to one of the few other publishers in the world who has the fighting spirit to expose the facts that there is no hole in the ozone layer caused by man's pollution, and no threat of "global warming" from the make-believe greenhouse effect. What makes Mr. Sawyer's approach different from many others—and therefore places him in a small, but much-maligned fraternity—is his approach to the subject. Peter Sawyer is not a scientist by profession, but a political journalist, and like a good journalist, once he discovered the flimsy rationalizing behind such a hoax as the ozone hole, he sought out the reasons why anybody would put so much effort into such a poor excuse for a big lie.

His two-part article, which we are reprinting slightly abridged, appeared in his monthly newspaper *Inside News*. Although the press run of *Inside News* is 25,000, a study conducted by Sawyer's opponents showed that his readership is 200,000. Australia's population is only 16 million. How thoroughly Sawyer's exposé material hits the mark is evident by the reaction it has received. He first broke into national prominence in 1987 when he published an eyewitness booklength account of fraud and abuse in the public welfare system, entitled *Dole Bludger*. Since then, he has become known as a leading figure in what Australians call the "Freedom Movement."

The most recent issue of *Inside News*, September/October 1989, became one of the few English-language publications in the world to cover the U.S.-Soviet collusion in claiming that Lyndon LaRouche was responsible for the murder of Swedish Prime Minister Olof Palme. In this article, titled "Soviets Murder Swedish Prime Minister," Sawyer states: "In an incredibly short period of time for a lumbering bureau-

cracy, the Soviets were able to put to air a 'simulated documentary,' starring a Soviet actor as a sinister LaRouche, plotting and overseeing the assassination. The American media machine quickly picked up on the sensationalism, and began running stories on this 'sinister, insidious, extremist' organization, and its 'mysterious leader,' Lyndon LaRouche. At the height of the media-inspired hysteria, LaRouche's headquarters were raided by U.S. government officials." The feature includes details of the attempt to kill LaRouche in prison, and a box "Do You Want to Help Lyndon LaRouche?"

As noted, Sawyer has joined that small fraternity of political journalists who can measure their effectiveness by the "freakout factor" of their enemies. On Sept. 29, 1988, a call went out in the National Parliament of Australia for the Freedom Movement to be investigated as an "extremist threat" in part, because of its opposition to the Australian government's abetting the lies about glasnost to cover up the Soviets' war plans. A Labor Member of Parliament denounced Sawyer's movement as being "the most sophisticated political structure in this country [that] has carefully and strategically infiltrated what could add to hundreds, if not thousands of organizations and associations . . . this festering, cancerous, and dangerous movement. The most insidious, sinister, and extremist threat coming from the most extremist force that this nation has ever seen or witnessed," and called for a national investigation. Sawyer then observes, "It was not until I recently started to investigate the LaRouche matter that I came across a stunning fact. Most of the stories branding LaRouche and his organization responsible for the Palme murder, carried very similarly worded phrases and words. . . . It was almost as if everybody, from Australia's

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politicians, to the feature writers of America's major papers, had been working from a sort of 'list' of key-words and phrases. . . ." There was no investigation.

Interestingly, the same method of operation is used with the ozone layer and greenhouse hoaxes. The hoaxes are intended to help impose austerity during the present economic collapse by shutting down industry and infrastructure, and by attacking and destroying science itself.

Last year, the National Geographic Society released in book form the results of a Gallup Poll of 10,000 individuals internationally, testing their knowledge of geography. The National Geographic Society considers it—quite correctly a mark of illiteracy that 56% of American respondents do not know the population of the United States, 32% cannot name any of the members of NATO, and 50% cannot name any members of the Warsaw Pact. But not to worry: "Most Americans (84%) are aware of concerns that fluorocarbons and other chemicals may be destroying the Earth's ozone layer. Among those that are aware, almost all (94%) realize that the impact of a depleted ozone layer would be felt all over the world. Nearly three in four (73%) of all respondents knew that 'wind patterns,' and not the ozone layer, ocean currents, or sun spots, spread the fallout from the nuclear accident at Chernobyl."

As the Soviets have emphasized, as part of their glasnost disinformation campaign, we in the free world must no longer see them through the lenses of an "enemy image." The new enemy is—us: "International economic security is inconceivable unless related not only to disarmament but also to the elimination of the threat to the world's environment," said Mikhail Gorbachov to the United Nations General Assembly on Dec. 7, 1988. "Time is running out. Much is being done in various countries. Here again I would just like to underscore most emphatically the prospects opening up in the process of disarmament—particularly, of course, nuclear disarmament—for environmental revival."

## Scam One: The 'holes' in the ozone layer

The surface of this planet is covered by dry bits, called "land," and wet bits, called "water." Where these two bodies meet is termed a "beach," which may be sandy, rocky, cliff-face, or any one of many other types. Where these "beaches" occur, there is, to a greater or lesser extent, a certain amount of wave activity called "surf." Imagine you are strolling along a beach somewhere, minding your own business, and enjoying the view, when, out of nowhere, comes a demented, hysterical character who wants to enlist your help in freeing the beach of board-riders, because they are "wearing down the surf." He goes on to earnestly explain that the thin line of "surf" is the only thing "holding back" the ocean, and if the board-riders wear it out enough, the "layer of surf" will

become so depleted that it can no longer "hold back" the ocean, and the ocean will flood over the land and destroy mankind. What would be your reaction to such a person? You'd quite possibly conclude, quite correctly, that such a person should be confined to the local "funny farm" as quickly as possible, wouldn't you?

And yet, this is exactly the kind of logic being used to support the "hole in the ozone layer" scam. And erstwhile intelligent people are running around with varying versions of this Chicken Little story that the "sky is falling," without ever making even the slightest attempt to find out what is really happening, and why. As with the "greenhouse effect," it is only necessary to understand a few very simple scientific facts, to totally debunk this "scam." First of all, what exactly is the "ozone layer," or "ozone mantle" as it is now being called, which supposedly "protects" us from all that unwanted ultraviolet light? Well, quite simply and bluntly, there isn't one!! Just as the "surf" is not a magical barrier to the ocean flooding the land, and is, in reality, simply an effect of where land and water meet, so too is the so-called "ozone layer" merely an area where an effect can be detected, not a cause. Let's start with a very basic chemistry lesson, which again can be confirmed with junior high school textbooks. First of all, existing on this planet Earth, and probably elsewhere, is an element called "oxygen." According to my dictionary, oxygen is an element, with the chemical symbol "O." Now, oxygen, for reasons I won't go into here, but which you can readily find out for yourself from the aforementioned junior high school chemistry book, rarely, if ever, exists as the single atom "O." Such a single atom of oxygen, or most other "elements," is called an "ion," and it is very difficult for most substances to exist freely in their "ionic" state. What normally happens is that two atoms of "O" combine, or "stick" together, and form the molecule "O2," of "oxygen" as you and I know it. This is the stuff you and I and all other living creatures breathe in and expel as "carbon dioxide," or CO<sub>2</sub> (one carbon atom, two oxygen atoms). In yet another of nature's wonderful balancing acts, green plants "breathe" in the CO<sub>2</sub>, extract the atom of carbon (C) as a "building block" in their cellular growth, and expel oxygen, or "O<sub>2</sub>." This is why it is so important that we stop destroying all the green stuff on the land by overclearing, and stop polluting up the oceans, and thereby killing all the little green plants known as "plankton."

"O<sub>2</sub>," or two oxygen atoms "stuck together" if you like, is the "normal," or most prevalent form of oxygen in the atmosphere. But it is by no means the only one. If one applies various forms of energy to the "O<sub>2</sub>" molecule, it will break down to its ionic state and reform into another configuration, one where *three*, not two, atoms of oxygen "stick together" to form a new molecule. This new molecule is called "O<sub>3</sub>," or "ozone." Now, the "energy" required to perform this little trick can come from a variety of sources. An electrical discharge through the air will do it. Unlike "oxygen" (O<sub>2</sub>),

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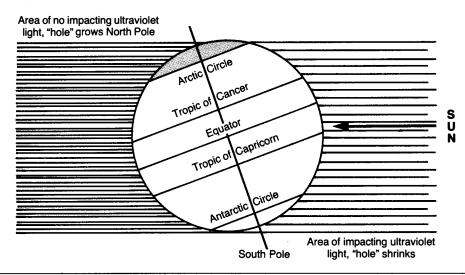
which is odorless, "ozone" has a distinct, pungent smell. Pick up your kid's electric train engine, or radio-controlled car, after it has been operating a while, and you will smell this odor. The electrical discharge where the bushes run on the motor turns a certain amount of "oxygen"  $(O_2)$ , into "ozone"  $(O_3)$ . Electrical storms, or at least the subsequent bolts of lightning, ionize a great deal of the surrounding air, and create a certain amount of "ozone."

By far and away the biggest "source" of energy for the conversion of "oxygen" (O<sub>2</sub>) into "ozone" (O<sub>3</sub>), however, comes from the Sun, in the form of ultraviolet light. What happens is a cycle something like this: You and I breathe in oxygen (O<sub>2</sub>), and breathe out CO<sub>2</sub>, carbon dioxide. Plants, on the other hand "breathe in" carbon dioxide, and expel oxygen (O2). This cycle is more or less endless. Oxygen (O<sub>2</sub>), however, is slightly lighter than the other elements which make up the "air" (nitrogen, carbon dioxide, and so on), and so a certain proportion of the molecules of oxygen O<sub>2</sub> drift upwards to the outer fringes of that blanket of gases that surround the planet, which we call our atmosphere. From the other direction, light from the Sun streams in. A certain amount of this light is absorbed or deflected by various elements, atoms, molecules, and particles of other matter. The bulk of this light from the Sun, however, continues its downward journey toward the planet's surface, until it encounters the oxygen (O<sub>2</sub>) molecules rising up from the surface. At the point where the sunlight reaches a sufficient concentration of O<sub>2</sub> molecules, a "reaction" takes place. A certain portion of the light from the Sun, that portion known as the "ultraviolet" section, strikes the rising O<sub>2</sub> molecules, and imdeparts its energy to the oxygen molecule it has struck. This has two effects. First, it greatly reduces the amount of ultraviolet light which would otherwise reach the Earth's surface, because the "ray," or unit, or "beam" of light loses energy and becomes light in the lower spectrums, the ones we call "colors." This is one of the causes of that spectacular light show called the "Southern," or "Northern" Lights. Second, it converts the "oxygen" molecules (O<sub>2</sub>), into "ozone" molecules (O<sub>3</sub>).

There is a portion of our atmosphere, from 10, to 50 kilometers up, which does not, however, get this name because it contains some magical, mysterious "layer" of matter known as "ozone" which exists, and has existed, from the beginning of time to "protect" us from ultraviolet light, and which is now under "dire threat" from various man-made products. It is called this name because this is the region where rising O<sub>2</sub> oxygen molecules are struck by incoming ultraviolet light, and convert to O<sub>3</sub> ozone molecules, and it therefore has a higher proportion of "O<sub>3</sub>" molecules to "O<sub>2</sub>" molecules. There will continue to be an "ozonosphere," or, as it is incorrectly termed, an "ozone layer," for as long as the planet's surface continues to manufacture oxygen to rise, and for as long as the Sun continues to emit light to encounter that rising oxygen. Just as there will always be "surf," for as long as there are places where "water" meets "land." The misnamed "ozone layer" will continue to simply be the end result of where two opposing forces and systems meet, until such time as one or the other of those forces or systems ceases to exists. Just as there will always be "surf," for as long as there is "land" and "water," there will be an "ozonosphere" as long as there is "oxygen" and sunlight. If either one of

FIGURE 2

Northern winter:
Sun directly overhead at Tropic of Capricorn



Source: Inside News.

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these packs up, we will have long since suffocated, or frozen to death, before we develop skin cancer. As I said, this is stuff you can check out for yourself with the simplest of reference books.

### Facts about the ozonosphere

Okay. What about the so-called "holes" in the "ozone layer"? Well, as we have seen, there is no such thing as a magical, mysterious "ozone layer," so there can't be any "holes" in it. There is however, a region called the "ozonosphere" which normally has a higher incidence of "O<sub>3</sub>" than "O<sub>2</sub>," simply and purely because it is a region where a segment of sunlight (ultraviolet light) strikes O<sub>2</sub> molecules, and converts them into O<sub>3</sub> molecules. Now, given the chemicalphysical explanation of the ozonosphere, as opposed to the "hysterical" version currently being peddled by the media, it becomes immensely easy to "predict" that there will be two "holes" in said ozonosphere at certain times of the year. As has been demonstrated, the so-called "ozone layer" requires, for its very existence, that oxygen (O<sub>2</sub>) molecules interact with incoming sunlight (ultraviolet light), in order to create "O<sub>3</sub>" molecules, which can then be measured and referred to as the magical "ozone mantle."

Now, there are two places on the face of the planet where, for a portion of the year, no ultraviolet light strikes rising  $O_2$  molecules, and therefore, where there can be no large formation of  $O_3$  molecules (ozone). I am referring, of course, to the Northern (Arctic) Circle in the Northern Hemisphere winter, and to the Southern (Antarctic) Circle in the Southern Hemisphere winter. The Earth, thankfully, is not positioned

exactly perpendicular to the rays of the Sun. If it was, the Sun would be overhead in the same place all the time, and the so-called tropical regions would just get hotter and hotter, until they became uninhabitable deserts, and the polar regions would just keep freezing. The bulk of the Earth's surface would either be too hot, or too cold, to live in, with only a thin region where the two extremities met, capable of supporting life as we know it.

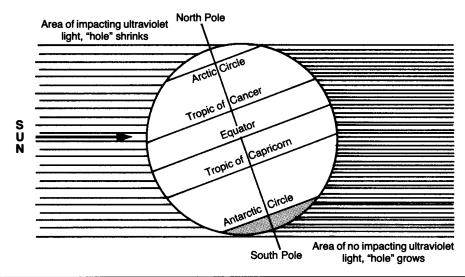
Fortunately, this is not the case; the Earth is, in fact, "tilted over" to one side with respect to the Sun, and it is this tilt that gives us our "seasons." In Figure 1, we have a representation of the Earth at what is known in the Northern Hemisphere as the "summer solstice," that is, when the Sun is directly "overhead" at the Tropic of Cancer. This is the height of the Northern Hemisphere summer. As can clearly be seen from the diagram, no sunlight is contacting the atmosphere above the Antarctic Circle, and therefore there simply cannot be any conversion of "O<sub>2</sub>" into "O<sub>3</sub>." Hence, there is a measureable "hole" in the amount of ozone in the ozonosphere at that time. As the Sun's "overhead" position gradually changes, and the Sun "moves" back across the Equator, the amount of sunlight reaching the Antarctic Circle gradually increases, thus giving rise to an increase in the incidence of ultraviolet light striking the atmosphere, thus causing the "hole" to "shrink."

In Figure 2 we have the exact opposite condition, the "summer solstice" for the Southern Hemisphere. This occurs on Dec. 22 each year, when the Sun is directly "overhead" at the Tropic of Capricorn. Again, it can readily be seen that now the Arctic Circle lies completely in the dark, and,

FIGURE 1

Southern winter:

Sun directly overhead at the Tropic of Cancer



Source: Inside News.

# French vulcanologist debunks ecologists

French vulcanologist Haroun Tazieff gave an interview to Agence France-Presse in Grenoble Oct. 9 where he denounced the "panic organized" by ecologists manipulated by the large chemical firms against chlorofluorocarbons (CFCs), which are used in aerosols, refrigerators, climate-control equipment, and in the manufacture of synthetic foam, which they charge "without any proof" destroy the ozone layer.

The researcher was responding to the work of a team of New Zealand scientists, according to which the hole in the ozone layer observed above the Antarctic was second only to the record in 1987.

"The hole in the ozone layer can only be observed in the South Pole during October, when summer arrives in this part of the globe, after six months of night," Haroun Tazieff explained. "Little by little, the hole fills up again and, at the end of the polar summer, it no longer exists." For the former French Secretary of State for Major Risks, "The ecologists' anti-CFCs theory is false: They claim that the great cold and the Sun's ultraviolet rays dissociate the CFCs and produce chlorine monoxide (ClO). This

molecule is chemically aggressive and captures the ozone molecules  $(O_3)$  which it dissociates into one molecule of oxygen  $(O_2)$  and one atom of oxygen (O). . . .

For him, this hole has existed "for all eternity," by reason of the absence of ultraviolet irradiation over six months of the year. It is seen over the South Pole, which is completely uninhabited, while 80% of the CFCs are maufactured and used in the Northern Hemisphere. "If the CFCs were causing damage to the ozone layer, it would be true directly overhead," Tazieff figured. CFCs were, for a long time, only produced by the large chemical companies of the wealthy countries, but now, any small enterprise can do it, and these small companies are becoming competitors with the big ones. If you make the CFC molecules illegal, and they are replaced by another molecule more difficult to produce, you will suppress competition by poor countries, and then, the big companies can divide up the market," he explained.

"This great fear of the year 2000, which would increase the number of cancers, is unfounded. We would do better to spend the billions of francs earmarked for replacing CFCs on something more useful," the vulcanologist concluded.

As *EIR* has reported, the giant Du Pont Company, controlled by Edgar Bronfman, enjoys a near monopoly of products which could replace CFCs.

surprise, surprise, there is a measureable "hole" there in the amount of  $O_3$  in the ozonosphere. After the Southern Hemisphere solstice, the Sun begins its journey northward again, and as we here in Australia slip into our autumn, the "hole" at the Antarctic Circle starts to "grow" again, and the one at the Arctic Circle starts to "shrink." This is a natural cycle which has existed, and will continue to exist, for as long as the Earth is tilted, the atmosphere contains  $O_2$  molecules, and ultraviolet light continues to come from the Sun to convert them to  $O_3$  molecules. There are no laws that puny men can pass to stop the awesome forces and cycles of Nature, as King Canute learned when he attempted to "order" the tides to turn back. "Laws" to attempt to prevent the natural cycle of "holes" in the ozonosphere, fall into the same category, and should be treated with equal contempt.

So where did all this nonsense about "holes" in the ozone layer come from, anyway? Well, back in 1985, the British Climatological Team in Antarctica discovered the first "hole." There was a relatively short bout of hysteria, as always, whipped up by a compliant media because the whole thing was in "somebody's" interest; all front-page hype and speculation about how half the world's population would be dead from skin cancer by the year 2000, and similar preposterous stuff. If you think back to late 1985-early 1986, you

should be able to remember it all. You should also be able to remember that it had all just died away by late 1986-early 1987, and you heard nothing more about "holes" in the ozone layer until quite recently. But do you know why? Well, I'll tell you. It all died away because by that time the British scientists at the South Pole had been studying the phenomenon long enough to realize that it was not some hideous, dire threat to mankind's future, but part of a natural, endless, repetitive cycle. This was actually reported in the papers, but naturally enough, not in screaming page-one headlines, but buried up on page 53 or so, somewhere between the comics and the obituaries.

What was also reported at the time was that the scientists, who now knew exactly what they were dealing with, were packing up in Antarctica, and moving camp to the Northern Polar regions to test their own predictions that there would be a similar "hole" there, at the opposite time of the year, thereby proving that the "holes" were not a new threat to the environment and to mankind, but part of a natural cycle. And that, of course, is exactly what they did, and that is exactly what they found. Of course, such a reassurance would not suit those who wish us to live our lives in a constant state of near panic, and therefore ever more prepared to hand over control of our lives to some form of "Big Brother" to save us

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from these imaginary "threats."

And so, rather than the papers correctly reporting that the British team had discovered a second hole above the Arctic Circle, a hole they had already predicted and had gone there specifically to confirm, thereby proving their theory that such phenomena were part of a natural cycle, the papers instead screamed out from their front pages, "Second Hole in Ozone Layer Discovered; Dire Double Threat to Mankind," and other similar hysterical drivel. And now, Maggie Thatcher, the head of government in Britain, the person who was ultimately responsible for the team that discovered the first "hole," and the person ultimately responsible for sending the team to the Arctic Circle to substantiate their theories, the person with access to all this information, and the person who should be leading the way in debunking this scam, is the person inviting scientists and leaders from all over the world, to formulate "policies," and "agreements," and if necessary, "world laws" to be administered by the United States, to tackle this new "threat." And there are still people trying to convince me she's one of the "good guys."

Now, don't get me wrong; I'm not in favor of any strange laboratory-created substances polluting the air I have to breathe, and I wholeheartedly endorse the current campaign to rid the atmosphere of chlorofluorocarbons (CFCs), the atoms being blamed for the so-called "holes" in the ozone layer. But just stop for a minute and think: If CFCs caused the so-called "holes," why are they only over the polar regions? Are the polar explorers and scientists using too much spray-on deodorant and fly-killer? Of course not. If CFCs had much to do at all with the so-called "holes," then the "holes" would be over New York, or Tokyo, or London, or at least somewhere relative to these places where it could be shown that the air currents were causing the CFCs to accumulate. But they are not. The "holes" only occur in two places; over the North and South Polar regions, exactly in accordance with natural forces which create the bulk of ozone, and exactly in accordance with the theories and predictions of the scientists who discovered them in the first place.

### Aerosol cans and jet planes

Think about something else for a moment. Imagine a can of fly spray. If you like, think about a whole supermarket shelf of cans of fly spray or even an entire supermarket full of nothing else but cans of fly-spray. Picture in your mind how much CFCs are involved, and will find their way into the atmosphere to somehow (never actually explained) "destroy" ozone (O<sub>3</sub>). Now picture in your mind a Boeing 747 jet, with its four massive engines. Now imagine that jet hurtling through the sky at hundreds of miles an hour, scooping literally tons of air into its jet engines, every minute or so. Now, what those jet engines are doing with that air, is extracting the available oxygen, tons and tons of the stuff, and using it to burn kerosene, thereby using up the oxygen and creating various carbonic gases. And where do these jets fly? Why,

predominantly in the ozonosphere.

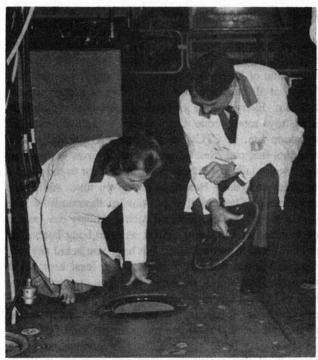
That's right: The "oxygen" these jets destroy by the ton every minute or so, is not the "O2" variety you and I breathe, it's the "O<sub>3</sub>" variety which supposedly exists as some kind of "protective mantle" and which we must now "save" at all costs, even at the sacrifice of democracy and freedom. Every time a jet takes off and flies somewhere, it destroys more ozone than you or I could even imagine, let alone use, as CFCs, in a lifetime. We're not talking amounts that can even be conceived in terms of fly-spray cans; we're talking volumes of ozone similar to the amount of water in Sydney Harbor at any given time. And that's one Boeing. Thousands, if not tens of thousands of such flights occur all over the world each and every day (except in Australia at Christmas, when, as everybody knows, all the airline staff go on strike). But have you heard anybody suggest that jet flight be banned, or at least kept below the ozonosphere? No, of course not. You are supposed to believe that all this massive consumption, millions of tons of O<sub>3</sub> (ozone) every day, is perfectly safe and poses no threat, but the next time you reach for the can of Mortein, you may just bring about the end of civilization as we know it. If you accept this, then you probably really do believe that the surf protects us from the ocean, and we should stop the board-riders from "wearing it away."

Now, I ask you, just who is kidding whom?

### Scam two: The greenhouse effect

The other current "scare" is based on the so-called "greenhouse effect." The scenario goes something like this; increases in the atmosphere of various gases, principally carbon dioxide, will cause an increase in the Earth's mean atmospheric temperature. This, in turn, will cause amongst other things, a melting of the ice caps, making the ocean levels rise, thereby causing terrible coastal flooding; it will also turn currently arable farmlands into deserts, because there will be less rain in most places (but more in others). Now, just for a moment, forget all the hysterical garbage you've been reading in the papers, most written by "journalists" who can't even spell anymore, let alone actually "research" a story, and let's have a look at the cold, hard facts.

First of all, it hasn't even been fully accepted by the mainstream scientific community, that levels of carbon dioxide are, in fact rising, or, if they have, that they are continuing to rise. There is a narrow band of statistical data that tends to suggest that this *may* be the case, but it has been collated over such a short period of time that it is impossible yet to accurately predict whether this is a "new" phenomenon, or part of a cycle. Even amongst supporters of the theory that there has been a significant increase, there is a sizable proportion who argue that the situation has already stabilized, and that there is no further increase to be



British Prime Minister Margaret Thatcher: Looking for the ozone hole?

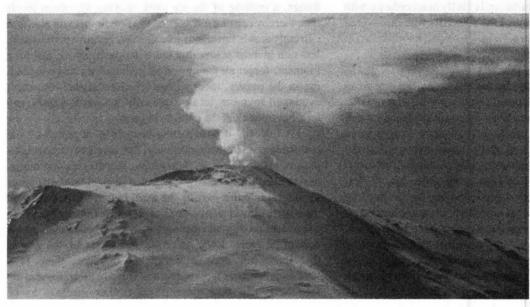
expected. And even then, there is widespread scientific speculation as to whether such an increase in carbon dioxide, has actually caused an increase in temperatures. There is no doubt that such "increases" have been recorded, at least in some places. But whether it is "global" or not, and regardless, whether increases in carbon dioxide have caused it or not, are still mere speculation. One highly respected scientist has already pointed out that these "high temperature" statistics have all been collected in, or near,

major cities, which not only have significantly higher levels of many gases like carbon dioxide, but are also veritable concrete and bitumen "jungles," which act as "heat-sinks," and will invariably produce higher temperature readings than the surrounding rural areas. While they may be bad news for people living in the very big cities, it is hardly indicative of what is happening globally.

For the moment, however, let us assume both factors needed to support the "greenhouse effect": that the level of carbon dioxide is increasing, and that this will cause the Earth's mean temperature to rise, as accepted facts, rather than speculation. Does it follow that sometime in the future we will see our coastal cities turned into new "Venices," and see the ocean "rise," or that our rural farmlands will become dust bowls? No, in fact, exactly the opposite would be true. . . .

To understand what would happen, if the Earth's temperature increased, for whatever reason, one must first of all understand a few simple, scientific facts. The first is that there is only a certain, relatively fixed amount of "water," on the planet. This water exists in four physical or geographical states. The bulk, of course exists in a liquid state as oceans and seas. It also exists in its liquid state as lakes, rivers, and ground water, most of which, at any given time, is involved in an inexorable trip back to the oceans. Another large amount exists as vapor in the form of clouds, and a certain amount is locked up as a solid, in the form of ice, principally at the polar caps. Now, changes in the Earth's mean temperature will change the proportion of water found in each of these states, but not the total amount.

The second fact to understand is that three of these forms are in a constant state of movement. The waters of the oceans are constantly evaporated into clouds. The clouds move over the land, where, under certain circumstances, it falls as rain.



Mt. Erebus, a volcano in Antarctica. Even if 10% of the Antarctic could somehow be induced to melt, it wouldn't even raise the height of the world's oceans two feet!

The rain becomes ground water of one form or another, which starts its journey back to the oceans, where the process starts all over again. So, at any given moment, there is a certain amount of water lying in the oceans, a certain amount evaporated, on its way to become rain, and a certain amount on the land for the farmers to use. Now, the real scientific fact to understand, is that if you raise air temperatures, you increase the rate of evaporation. If you doubt this, simply take two shallow beakers of tap water, put one in the refrigerator (not the freezer), and the other on the kitchen window sill. The one on the window sill will very quickly evaporate away; the one in the refrigerator will last significantly longer.

So what does this mean in terms of the "greenhouse effect"? Simply, that if the Earth's temperature increases, it would rain more, not less. Marginal farmland would become more abundant, temperate climates would become subtropical, and so on. There would be far more fresh water in the rivers and lakes, for irrigation, and, if you think about it, the ocean levels would drop (discounting for a moment, the "melting ice caps" which we will come to). Conversely, if the temperature were to decrease, there would be less evaporation, and therefore less rain, and therefore less agriculture. This is substantiated historically, as well as scientifically, in that almost every major drought and famine in mankind's history has been accompanied by severe winters, not summers. Historically, it is the cold which destroys agriculture, not a rise in temperatures, principally for the reasons cited above. (Incidentally, we all know it rains a lot in the tropics, but do you know which is the driest—least precipitation—continent on the planet? Antarctica!!!)

So, all things being equal, a slight rise in temperature would lead to a boom in world agriculture, not the desert wastelands scenario we are currently being fed. But is such a situation likely, even if temperatures are going up at the moment? As we have seen, if mean temperature goes up, evaporation goes up. That means a great increase in cloud cover. Now, ask yourself, is it hotter on a sunny day or a cloudy day? You already know the answer. If the temperature were to go up, for whatever reason, there would be a corresponding increase in cloud cover. This, in turn, would cause a corresponding decrease in mean temperature. Within certain very confined parameters, the overall "system" is self-regulating, and will remain so as long as we don't replace too much green with concrete, stop polluting the oceans with oil that interrupts the evaporation process, and refrain from blowing ourselves and the planet to oblivion. Whoever designed the place, howsoever you conceive Him, certainly knew what He was doing.

Ahh, you say. That's all very well. Okay, the crops won't fail, but what about when the ice caps start to melt, and the oceans rise, and flood all of us living by the coast? Well, as I have said above, I doubt that such rises are sustainable over any period of time, and the polar regions are well capable of bearing significant temperature rises for

limited periods. The Arctic regions of Alaska, for instance, enjoy temperatures of around 20-25° in the "month of the midnight Sun" each year. This is comparable to a pleasant spring day. But even if the "greenhouse" scenario were true, and sustainable, and the ice caps melted, would that mean the ocean levels would rise sufficiently to "flood us out." Again, no. Let's look at the two ice caps separately, as they are very different.

#### What happens at the poles?

First, the Northern ice cap, better known as Arctica. Contrary to what many people believe, there is no "land" under the Arctic ice cap, it consists entirely of frozen water, ice, "floating" on liquid water. Water is a strange substance, in that instead of getting denser and denser as it turns from a liquid to a solid, below 4°C, which is just above freezing, it begins to expand. Once it is "frozen" (becomes a solid), it is actually 10% less dense than in its liquid form, and occupies 10% more space. This is why ice cubes float, and bottles of beer explode in the freezer. Taken in isolation, if the Northern ice cap melted totally, coupled to the increase in evaporation that would be associated with a "greenhouse effect," the levels of the oceans would drop. Of course, these things can't be taken in isolation, and this "drop" would, in fact, be almost exactly offset by the corresponding melting of all the ice currently existing in the form of glaciers and snow. (The Northern ice cap, plus all the glaciers and snow on all the continents, together only account for 10% of the Earth's frozen water. The other 90% is on Antarctica.)

Now let's turn to the Southern ice cap, Antarctica. Unlike Arctica, Antactica is a continent; the ice there is sitting out of the water "up" on land. If it all melted, it would affect water levels, and quite significantly. But how likely is this? The average temperature at Antarctica is  $-50^{\circ}$ , with temperatures as low as -88°, being recorded. Even the most ardent supporters of the "greenhouse effect" only claim sustained mean rises of 2-4°. That would mean Antarctica would enjoy an average of -46°. Not much ice melts at -46°. Even if by some extraordinary convolution of all the known laws of physics, a full 10% of the Antarctic could be induced to melt, at an average temperature of -46°, the end result wouldn't even raise the average height of the world's oceans two feet!!! And if, by some as yet undiscovered means such a feat could be induced to happen, the subsequent changes to the weight distribution on the Earth's surface would probably mean a total realignment of our rotational axis, with consequent volcanoes, earthquakes, and possibly even whole continents sinking. Somehow, under those circumstances, I doubt that we would be worrying too much about an extra two feet of water where the beach at Surfer's Paradise used to be.

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