PACON 2010

Arnd Bernaerts

Is the term ‚climate' is unspecific, and science should get better in this respect

Saturday, 5th June, Session 7B, room 110, 13 to 14>:30h,
Chair: Richard Hildreth

Pacific Congress on Marine Science & Technology (PACON) 22nd International Conference International Partnerships in Marine Science and Technology: A Vehicle for Improving Pacific Rim Relations and Resource Management	 **1 - 5 June , 2010** **University of Hawai`i at Hilo,** **Hilo, Hawai`i USA**
http://blog.hawaii.edu/pacon/conferences/2010-conferences/	

Introduction

While the debate on the climatic change issue has reached unprecedented global prominence over the recent years, the content is often a fierce clash of opinions rather than a fruitful discussion. One reason could be the use of insufficiently defined terms in climatology.

The key term ‘climate’ is used by lay persons, politics, and science alike, while the UN Framework Convention on Climate Change (1992) does not define the term at all. Instead the Convention defines ‘climate change’ and ‘climate system’, which does not necessarily mean that it makes the terminology more definite. This requires to look at the ordinary meaning as used since Ancient Greek and how science explains the terms nowadays, and whether it is done in a manner that avoids confusion, or misleading interpretation.

As science is supposed to define and use terms and definitions with care, the current situation may require that the major terms used in climatology are revised.

The overall issue – understanding our global commons

- Until one has experienced the sea around one,

One has no idea of world, and its relation to the world.

J.W. v. Goethe , Italian Voyage, 1787

- Everything come from water,

Everything is maintained through water.

Ocean; give us your enternal power.

J.W. v. Goethe (11749-1832) , Drama - Faust II

__Basic Terminology

WEATHER:

- **The state of the atmosphere, mainly with respect to its effects upon life and human activities. (AMS Glossary)**

CLIMATE:

- **Climate refers to the average, or typical, weather conditions observed over a long period of time for a given area. (Answer.com)**

CLIMATE CHANGE

- **Climate change is a long-term shift in the statistics of the weather (including its averages).(NOAA National Weather Service)**

CLIMATE SYSTEM

- **Climate system comprises the atmosphere, the hydrosphere, the cryosphere, the surface lithosphere and the biosphere. (World Meteorology Organisation)**

_ABOUT THE SUBJECT

- **Weather & Climate in the layman‘s sphere.**

  ____weather?

  ____klima – climate!

- How the issue became for me a matter of concern.

__A three fold polarity

__The word „climate“ as scientific as a scientific term.

__The UN Framework Convention on Climate Change (1992).

__The UN Convention on the Law of the Sea (1982)

Honolulu- 1994

The topic was already subject of a paper presented at:

The Law of the Sea Institute 28th Annual Conference – 1994 – Honolulu,

on:

„Ocean Governance: Strategies and Approaches for the 21" Century“

East-West Center at the University of Hawaii.

Honolulu, Hawaii, July 11-14, 1994

Title of paper:

LEGAL MEANS FOR UNDERSTANDING THE MARINE AND CLIMATIC CHANGE ISSUE

Text available at: www.whatisclimate.com

http://www.whatisclimate.com/legal-means-for-understanding-the-marine-and-climatic-change-issue.html

Excerpt I (p.158)*

Climate is a matter of water
(in the air, ice, soil, and ocean)
and its thermal efficiency and heat contribution.
The factors related to quantity, aggregate, and temperature of water is the most influential ones.
In every respect the sea governs the global natural commons.

***) Proceedings of the 28th The Law of the Sea Institute Conference, 1994, p.156-180**
Edited byThomas A. Mensah

Little has changed
Example: WMO

Concerning weather WMO offers only two explanation:

- Everyone is interested in the weather.
- At the simplest level the weather is what is happening to the atmosphere at any given time.

WMO offers on CLIMATE three options, namely:

___in a narrow sense Climate is usually defined as the "average weather",

· ____in a more rigorously way, Climate is the statistical description in terms of the mean and variability of relevant quantities over a period of time, and

_____in a broader sense, Climate is the status of the climate system which comprises the atmosphere, the hydrosphere, the cryosphere, the surface lithosphere, and the biosphere.

__weather/climate

About the weather	About the climate
Explanation of " weather" is available in great number, but widely identical with those given here: ___ Atmospheric condition at any given time or place. ___ Weather is a short-term phenomenon, describing atmosphere, ocean and land conditions hourly or daily. ___ Weather is not constant. It is dynamic and always changing. ___ Weather is the day-to-day state of the atmosphere, and its short-term (minutes to weeks) variation.	The term climate is frequently closely linked to weather, directly or by "statistical means", for example: ___ Climate is the weather in some location averaged over some long period of time. __ Climate is usually described in terms of the mean and variability of temperature, precipitation and wind over a period of time, ranging from months to millions of years (the classical period is 30 years) ___ Climate is defined as statistical weather information that describes the variation of weather at a given place for a specified interval.

AMS on weather

The American Meteorological Society makes the following distinction (AMS-Glossary, 2000):

____The “present weather” table consists of 100 possible conditions,

____with 10 possibilities for “past weather”,

____while “popularly weather” is thought of in terms of temperature, humidity, precipitation, cloudiness, visibility, and wind.

Climate change is a long-term shift in the statistics of the weather (including its averages).

Source: NOAA National Weather Service

Layman‘s talking – Scientific terminology – Legal definition.

The word “weather” is presumably one of the most used terms in every persons life for many thousands of years,

___Scientific work and research depend on the willingness to understand, and the ability for being understood.
___Science can be characterized as the possibility of making precise statements which are susceptible of some sort of check or proof.
___At any stage of scientific process the clarity of words, expression, terms, or definition matter.

Legal term and definition need to be clear, precise and correct.

Example 1: How IPCC explains the difference between:

WEATHER & CLIMATE

(From: WG1-FAQ-1.2)

_____While weather and climate are closely related,
_____there are important differences ;

Projecting changes in climate (i.e., long-term average weather) due to changes in atmospheric composition or other factors is a very different and much more manageable issue.

Example 2: How IPCC explains the difference between:

WEATHER & CLIMATE

(From: WG1-FAQ-1.2)

As an analogy,
while it is impossible to predict the age at which any particular man will die,
we can say with high confidence that the average age of death for men in industrialized countries is about 75.

NOTE: IPCC says that CLIMATE covers a time period ranging from months to thousands or millions of years.

QUESTION: Can CLIMATE die?

Scare-mongering – Intention or incompetence?

THE INDEPENDENT

By Ben Mitchell, Saturday, 15 May 2010

„Caterpillar plague on Isle of Wright was caused by climate change, says expert.“

The Canadian

Over 4.5 Billion people could die from Global Warming-related causes by 2012

Hydrate hypothesis illuminates growing climate change alarm

Compiled by John Stokes, Tuesday 18. May 2010

American Geographical Union 20. & 27 April 2010
___ by H.D. Adams et al.

___AGU-Statement 13 Dec.2010.

__“Climate-Induced Tree Mortality: Earth System Consequences”,
__AGU Position Statement: Geoengineering the Climate System”,

VILLANOVA UNIVERSITY

Public release date: 13-May-2010

Study documents widespread extinction of lizard populations due to climate change

SOURCE: http://www.numberwatch.co.uk/warmlist.htm , download 24 May 2010

A complete list of things caused by global warming (extract)

Acne, agricultural land increase, Afghan poppies destroyed, African holocaust, aged deaths, poppies more potent, Africa devastated, Africa in conflict, African aid threatened, African summer frost, aggressive weeds, Air France crash, air pressure changes, airport farewells virtual, airport malaria, Agulhas current, Alaskan towns slowly destroyed, Al Qaeda and Taliban Being Helped, allergy increase, allergy season longer, alligators in the Thames, Alps melting, Amazon a desert, American dream end, amphibians breeding earlier (or not), anaphylactic reactions to bee stings, ancient forests dramatically changed, animals head for the hills, animals shrink, Antarctic grass flourishes, Antarctic ice grows, Antarctic ice shrinks, Antarctic sea life at risk, anxiety treatment, algal blooms, archaeological sites threatened, Arctic bogs melt, Arctic in bloom, Arctic ice free, Arctic ice melt faster, Arctic lakes disappear, Arctic tundra lost, Arctic warming (not), a rose by any other name smells of nothing, asteroid strike risk, asthma, Atlantic less salty, Atlantic more salty, atmospheric circulation modified, attack of the killer jellyfish, avalanches reduced, avalanches increased, Baghdad snow, Bahrain under water, bananas grow, barbarisation, bats decline, beer and bread prices to soar, beer better, beer worse, beetle infestation, bet for $10,000, big melt faster, billion dollar research projects, billion homeless, billions face risk, billions of deaths, bird distributions change, bird loss accelerating, bird strikes, bird visitors drop, birds confused, birds decline (Wales), birds driven north, birds face longer migrations, birds return early, birds shrink(Aus), birds shrink (USA), bittern boom ends, blackbirds stop singing, blackbirds threatened, Black Hawk down, blizzards, blood contaminated, blue mussels return, borders redrawn, bluetongue, brain eating amoebae, brains shrink, bridge collapse (Minneapolis), Britain one big city, Britain Siberian, Britain's bananas, British monsoon, brothels struggle, brown Ireland, bubonic plague, Buddhist temple threatened, building collapse, building season extension, bushfires, butterflies move north, butterflies reeling, carbon crimes, camel deaths, cancer deaths in England, cannibalism, caterpillar biomass shift, cave paintings threatened, childhood insomnia, Cholera, circumcision in decline, cirrus disappearance, civil unrest, cloud increase, coast beauty spots lost, cockroach migration, cod go south, coffee threatened, coffee berry borer, coffee berry disease, cold climate creatures survive, cold spells (Australia), cold wave (India), cold weather (world), computer models, conferences, conflict, conflict with Russia, consumers foot the bill, coral bleaching, coral fish suffer, coral reefs dying, coral reefs grow, coral reefs shrink, coral reefs twilight, cost of trillions, cougar attacks, crabgrass menace, cradle of civilisation threatened, creatures move uphill, crime increase, crocodile sex, crops devastated, crumbling roads, buildings and sewage systems, curriculum change, cyclones (Australia), danger to kid's health, Dartford Warbler plague, deadly virus outbreaks, death rate increase (US), deaths to reach 6 million, Dengue hemorrhagic fever, depression, desert advance, desert retreat, destruction of the environment, dig sites threatened, disasters, diseases move north, dog disease, dozen deadly diseases - or not, drought, ducks and geese decline, dust bowl in the corn belt, earlier pollen season, Earth axis tilt, Earth biodiversity crisis, Earth dying, Earth even hotter, Earth light dimming, Earth lopsided, Earth melting, Earth morbid fever, Earth on fast track, Earth past point of no return, Earth slowing down, Earth spins faster, Earth to explode, earth upside down, earthquakes, earthquakes redux, El Niño intensification, end of the world as we know it, erosion, emerging infections, encephalitis, English villages lost, equality threatened, Europe simultaneously baking and freezing, eutrophication, evolution accelerating, expansion of university climate groups, **extinctions** (human, civilisation, koalas, logic, Inuit, smallest butterfly, cod, penguins, pikas, polar bears, possums, walrus, tigers, toads, turtles, plants, ladybirds, rhinoceros, salmon, trout, wild flowers, woodlice, a million species, half of all animal and plant species, mountain species, not polar bears, barrier reef, leaches, salamanders, tropical insects) experts muzzled, extreme changes to California, fading fall foliage, fainting, famine, farmers benefit, farmers go under, farm output boost, farming soil decline, fashion disaster, fever, figurehead sacked, fir cone bonanza, fires fanned in Nepal, fish bigger, fish catches drop, fish downsize, fish deaf, fish get lost, fish head north, fish shrinking, fish stocks at risk, fish stocks decline, five million illnesses, flesh eating disease, flies on Everest, flood patterns change, floods, floods of beaches and cities, flood of migrants, flood preparation for crisis, flora dispersed, Florida economic decline, flowers in peril, fog increase in San Francisco, fog decrease in San Francisco, food poisoning, food prices rise, food prices soar, food security threat (SA), football team migration, forest decline, forest expansion, foundations threatened, frog with extra heads, frosts, frostbite, frost damage increased, fungi fruitful, fungi invasion, games change, Garden of Eden wilts, geese decline in Hampshire, genetic changes, genetic diversity decline, gene pools slashed, geysers imperiled, giant icebergs (Australia), giant oysters invade, giant pythons invade, giant squid migrate, gingerbread houses collapse, glacial earthquakes, glacial retreat, glacier grows (California), glaciers on Snowden, glacier wrapped, global cooling, glowing clouds, golf course to drown, golf Masters wrecked, grain output drop (China), grain output stagnating (India), grandstanding, grasslands wetter, gravity shift, Great Barrier Reef 95% dead, Great Lakes drop, great tits cope, greening of the North, Grey whales lose weight, Gulf Stream failure, habitat loss, haggis threatened, Hantavirus pulmonary syndrome, harvest increase, harvest shrinkage, hay fever epidemic, health affected, health of children harmed, health risks, health risks (even more), heart disease, heart attacks and strokes (Australia), heat waves, hedgehogs bald, hibernation affected, hibernation ends too soon, hibernation ends too late, homeless 50 million, hornets, human development faces unprecedented reversal, human fertility reduced, human health risk, human race oblivion, hurricanes, hurricane reduction, hurricanes fewer, hurricanes more intense, hurricanes not, hydropower problems, hyperthermia deaths, ice age, ice sheet growth, ice sheet shrinkage, icebergs, illness and death, inclement weather, India drowning, infrastructure failure (Canada), indigestion, industry threatened, infectious diseases, inflation in China, insect explosion, insect invasion, insurance premium rises, Inuit displacement, Inuit poisoned, Inuit suing, invasion of alien worms, invasion of Antarctic aliens, invasion of Asian carp, invasion of cats, invasion of crabgrass, invasion of herons, invasion of jellyfish, invasion of king crabs, invasion of lampreys, invasion of midges, invasion of slugs, island disappears, islands sinking, Italy robbed of pasta, itchier poison ivy, Japan's cherry blossom threatened, jellyfish explosion, jet stream drifts north, jets fall from sky, Kew Gardens taxed, kidney stones, killer cornflakes, killing us, kitten boom, koalas under threat, krill decline, lake and stream productivity decline, lake empties, lake shrinking and growing, landslides, landslides of ice at 140 mph, large trees decline, lawsuits increase, lawsuit successful, lawyers' income increased (surprise surprise!), lawyers want more, legionnaires' surge, lives lost, lives saved, Loch Ness monster dead, locust plagues suppressed, low oxygen zones threaten sea life, lush growth in rain forests, Lyme disease, Malaria, malnutrition, mammoth dung melt, mango harvest fails, Maple production advanced, Maple syrup shortage, marine diseases, marine food chain decimated, Meaching (end of the world), Meat eating to stop, Mediterranean rises, megacryometeors, Melanoma, Melanoma decline, mental illness, methane emissions from plants, methane burps, methane runaway, melting permafrost, Middle Kingdom convulses, migration, migratory birds huge losses, microbes to decompose soil carbon more rapidly, minorities hit, monkeys at risk, monkeys on the move, Mont Blanc grows, monuments imperiled, moose dying, more bad air days, more research needed, mortality increased, mosquitoes adapting, mountain (Everest) shrinking, mountaineers fears, mountains break up, mountains green and flowering, mountains taller, mortality lower, murder rate increase, musk ox decline, Myanmar cyclone, narwhals at risk, National Parks damaged, National security implications, native wildlife overwhelmed, natural disasters quadruple, new islands, next ice age, NFL threatened, Nile delta damaged, noctilucent clouds, no effect in India, Northwest Passage opened, nuclear plants bloom, oaks dying, oaks move north, oblivion, ocean acidification, ocean acidification faster, ocean dead spots, ocean dead zones unleashed, ocean deserts expand, ocean salt extremes, ocean waves speed up, Olympic Games to end, opera house to be destroyed, outdoor hockey threatened, oxygen depletion zones, ozone repair slowed, ozone rise, penguin chicks frozen, penguin chicks smaller, penguins replaced by jellyfish, personal carbon rationing, pest outbreaks, pests increase, phenology shifts, pines decline, pirate population decrease, plankton blooms, plankton wiped out, plants lose protein, plants march north, plants move uphill, polar bears aggressive, polar bears cannibalistic, polar bears deaf, polar bears drowning, polar tours scrapped, popcorn rise, porpoise astray, profits collapse, psychiatric illness, puffin decline, pushes poor women into prostitution, rabid bats, radars taken out, railroad tracks deformed, rainfall increase, rape wave, refugees, reindeer endangered, reindeer larger, release of ancient frozen viruses, resorts disappear, rice threatened, rice yields crash, rift on Capitol Hill, rioting and nuclear war, river flow impacted, rivers raised, road accidents, roads wear out, robins rampant, rocky peaks crack apart, roof of the world a desert, rooftop bars, Ross river disease, ruins ruined, Russia under pressure, salinity reduction, salinity increase, Salmonella, salmon stronger, satellites accelerate, school closures, sea level rise, sea level rise faster, seals mating more, seismic activity, sewer bills rise, severe thunderstorms, sex change, sexual disfunction, sexual promiscuity, shark attacks, sharks booming, sharks moving north, sheep change colour, sheep shrink, shop closures, short-nosed dogs endangered, shrimp sex problems, shrinking ponds, shrinking sheep, shrinking shrine, Sidney Opera House wiped out, ski resorts threatened, slavery, slow death, smaller brains, smelt down, smog, snowfall decrease, snowfall increase, snowfall heavy, snow thicker, soaring food prices, societal collapse, soil change, songbirds change eating habits, sour grapes, space problem, spectacular orchids, spiders getting bigger, spiders invade Scotland, squid larger, squid population explosion, squid tamed, squirrels reproduce earlier, stingray invasion, storms wetter, stratospheric cooling, street crime to increase, subsidence, suicide, swordfish in the Baltic, Tabasco tragedy, taxes, tectonic plate movement, terrorists (India), thatched cottages at risk, threat to peace, ticks move northward (Sweden), tides rise, tigers eat people, tomatoes rot, tornado outbreak, tourism increase, toxic seaweed, trade barriers, trade winds weakened, traffic jams, transportation threatened, tree foliage increase (UK), tree growth slowed, tree growth faster, trees in trouble, trees less colourful, trees more colourful, trees lush, trees on Antarctica, treelines change, tropics expansion, tropopause raised, truffle shortage, truffles down, turtles crash, turtle feminised, turtles lay earlier, UFO sightings, UK coastal impact, UK Katrina, Vampire moths, Venice flooded, violin decline, volcanic eruptions, volcanoes awakened in Iceland, walrus pups orphaned, walrus stampede, wars over water, wars sparked, wars threaten billions, wasps, water bills double, water scarcity (20% of increase), water shortage to increase vegetarianism, wave of natural disasters, waves bigger, weather out of its mind, weather patterns awry, weather patterns last longer, Western aid cancelled out, West Nile fever, whale beachings, whales lose weight, whales move north, whales wiped out, wheat yields crushed in Australia, wildfires, wind shift, wind reduced, winds stronger, winds weaker, wine - Australian baked, wine - harm to Australian industry, wine industry damage (California), wine industry disaster (US), wine - more English, wine - England too hot, wine -German boon, wine - no more French , wine passé (Napa), wine - Scotland best, wine stronger, winters in Britain colder, winter in Britain dead, witchcraft executions, wolverine decline, wolves eat more moose, wolves eat less, workers laid off, World at war, World War 4, World bankruptcy, World-famous places threatened, World in crisis, World in flames, Yellow fever, zebra mussel threat, zoonotic diseases.

The dead link collection

Africa hit hardest, Alaska reshaped, allergies increase, anxiety, Arctic tundra to burn, atmospheric defiance, bananas destroyed, beer shortage, blizzards, boredom, business opportunities, business risks, British gardens change, budget increases, cardiac arrest, cataracts, challenges and opportunities, cloud stripping, cold spells, cremation to end, damages equivalent to $200 billion, Darfur, dermatitis, desert life threatened, diarrhoea, disappearance of coastal cities, Dolomites collapse, drowning people, early marriages, early spring, Earth spinning out of control, Earth wobbling, **extinctions** (bats, pandas, pigmy possums, koalas, turtles, orang-utan, elephants, tigers, gorillas, whales, frogs, penguins,) fish catches rise, flames stoked, footpath erosion, glacial growth, global dimming, god melts, Gore omnipresence, harmful algae, hazardous waste sites breached, high court debates, HIV epidemic, human health improvement, ice shelf collapse, lightning related insurance claims, little response in the atmosphere, Lyme disease, marine dead zone, Maple production advanced, mental illness (Alberta), migration difficult (birds), mountains melting, mudslides, oceans noisier, oyster diseases, ozone loss, Pacific dead zone, plankton destabilised, plankton loss, plant viruses, polar bears cannibalistic, polar bears starve, psychosocial disturbances, rainfall reduction, riches, rivers dry up, rockfalls, skin cancer, snowfall reduction, squid aggressive giants, stick insects, stormwater drains stressed, teenage drinking, terrorism, tree beetle attacks, trees could return to Antarctic, tree growth increased, tsunamis, tundra plant life boost, uprooted - 6 million, walrus displaced, war, war between US and Canada, water stress, water supply unreliability, weeds, white Christmas dream ends.

Total (dead and alive) 760

„weather“ beat „love lives“

Britons spend months discussing the weather

Reuters Fri May 14, 2010 7:20am EDT

____Weather-obsessed Britons will spend six months of their lives discussing rain, sun and all things related to the climate.

____The weather is indeed the favorite topic of conversation amongst Britons, beating sport, jobs, or their love lives.

____The subject is so popular that 58 percent of Britons will use the weather as an "ice-breaker" when striking up a conversation with a stranger or business acquaintance.

UNFCCC – Article 1 - Definition

ARTICLE 1:
DEFINITIONS
For the purposes of this Convention:
1. "Adverse effects of climate change" means changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare.

2. "Climate change" means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

3. "Climate system" means the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions.

4. "Emissions" means the release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time.
5. "Greenhouse gases" means those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation.
6. "Regional economic integration organization" means an organization constituted by sovereign States of a given region which has competence in respect of matters governed by this Convention or its protocols and has been duly authorized, in accordance with its internal procedures, to sign, ratify, accept, approve or accede to the instruments concerned.
7. "Reservoir" means a component or components of the climate system where a greenhouse gas or a precursor of a greenhouse gas is stored.
8. "Sink" means any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere.
9. "Source" means any process or activity which releases a greenhouse gas, an aerosol or a precursor of a greenhouse gas into the atmosphere.

„Climate Change“

___Neither Weather nor Climate is defined.

-----What constitutes a change???

"Climate change" means a change of climate.....

___is tautology and nonsense.

__IPCC on „climate change“

***Climate change* in IPCC usage refers to any change in climate over time, whether due to natural variability or as a result of human activity.**

NASA & AMS

___NASA: The term “climate change” is sometimes used to refer to all forms of climatic inconsistency, but because the Earth's climate is never static, the term is more properly used to imply a significant change from one climatic condition to another.
___AMS: Climate change – A systematic change in the long-term statistics of climate elements (such as Temperature, pressure, or wind) sustained over several decades or longer.

“natural climate variability”
___NASA: non
___AMS: Climate variability - The temporal variations of the atmosphere– ocean system around a mean state.
Typically, this term is used for timescales longer than those associated with synoptic weather events (i.e., months to millennia and longer). The term “natural climate variability” is further used to identify variations that are not attributable to or influenced by any activity related to humans.

„Climate System“

"Climate system" means the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions.

What is the difference to „natural system“?

or

“weather system” means the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions.

or

One can even try to define ‘life system’ in this way.

Missing aspects

None of these explanations reflect the fact that the atmosphere is ruled by physic-chemical processes, which make and control local and global weather and climate phenomena.

None of the mentioned explanations provides any indication of what all the talking about the weather means, for example by naming those matters that make weather, or those that depress weather feature:

1. Pro-Weather: humid air, low air pressure, ocean space; and
2. Anti-Weather: dry air, high air pressure, continental space.

Leonardo da Vinci (1452-1519):

“Water is the driver of nature”.

To what to focus on

Excerpt III – Conclusion- (p.179)*

The ultimate question on global environmental concern is the ability to distinguish between natural and anthropogenic causes affecting the natural commons.

Only the oceans can reveal to the keen observer whether we are faced with "global warming" or a return to the ice age and the extent of shifts between the opposite trends.

"Climate is the continuation of the oceans by other means"

Letter to the Editor, NATURE 1992, Climate Change, Vol. 360, p. 292.

*) **Proceedings of the 28th The Law of the Sea Institute Conference, p.156-180**
Edited byThomas A. Mensah

Summery

- **The scientific terminology on „climatic“ matters should:**
  - **not use layman‘s terms,**
  - **meet academic standards,**
  - **demonstrate that the physical processes, and their relevance are observed.**
- **The UNFCCC needs to be revised, at least :**
  - **the word ‚climate‘ only used if proper defined;**
  - **otherwise: renamed in accordance the aim (e.g. CO2).**
- **The terminology should reflect that the ocean is the major source on earth that makes weather & „climate“.**

Protect the ocean to minimise anthropogenic interference

The UN Conventions Convention on the Law of the Sea (1982) states in Article 192:

States have the obligation to protect and preserve the marine environment.

Had weather and climate been reasonably been defined the oceans would have been much more in focus to minimise human interference in atmospheric processes.

More material at:

http://www.whatisclimate.com/