

THE KYOTO PROTOCOL: AN ASSAULT ON SCIENCE, ECONOMIC GROWTH, AND HUMAN FREEDOMS

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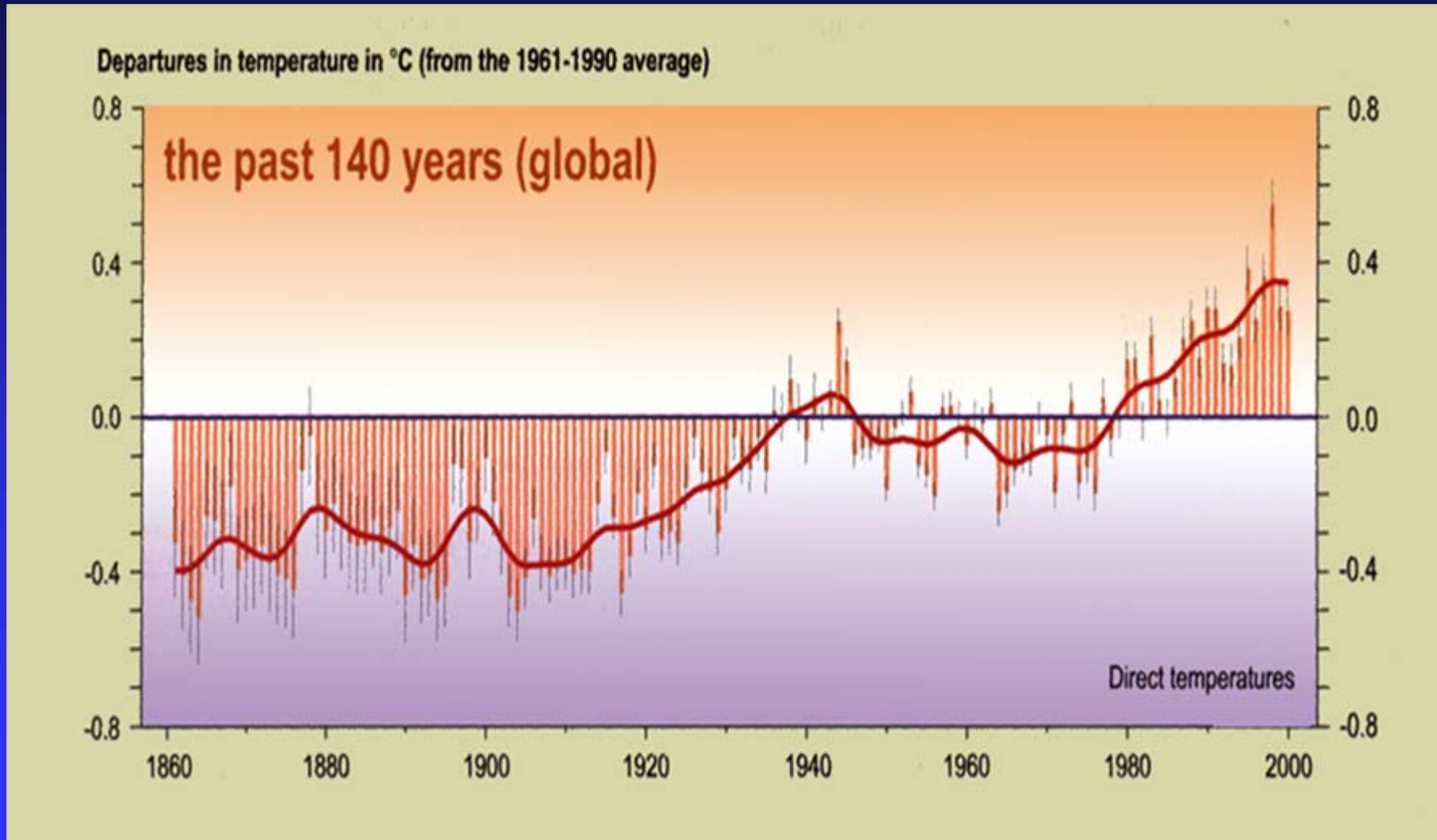
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Kyoto's scientific basis – or the lack thereof.

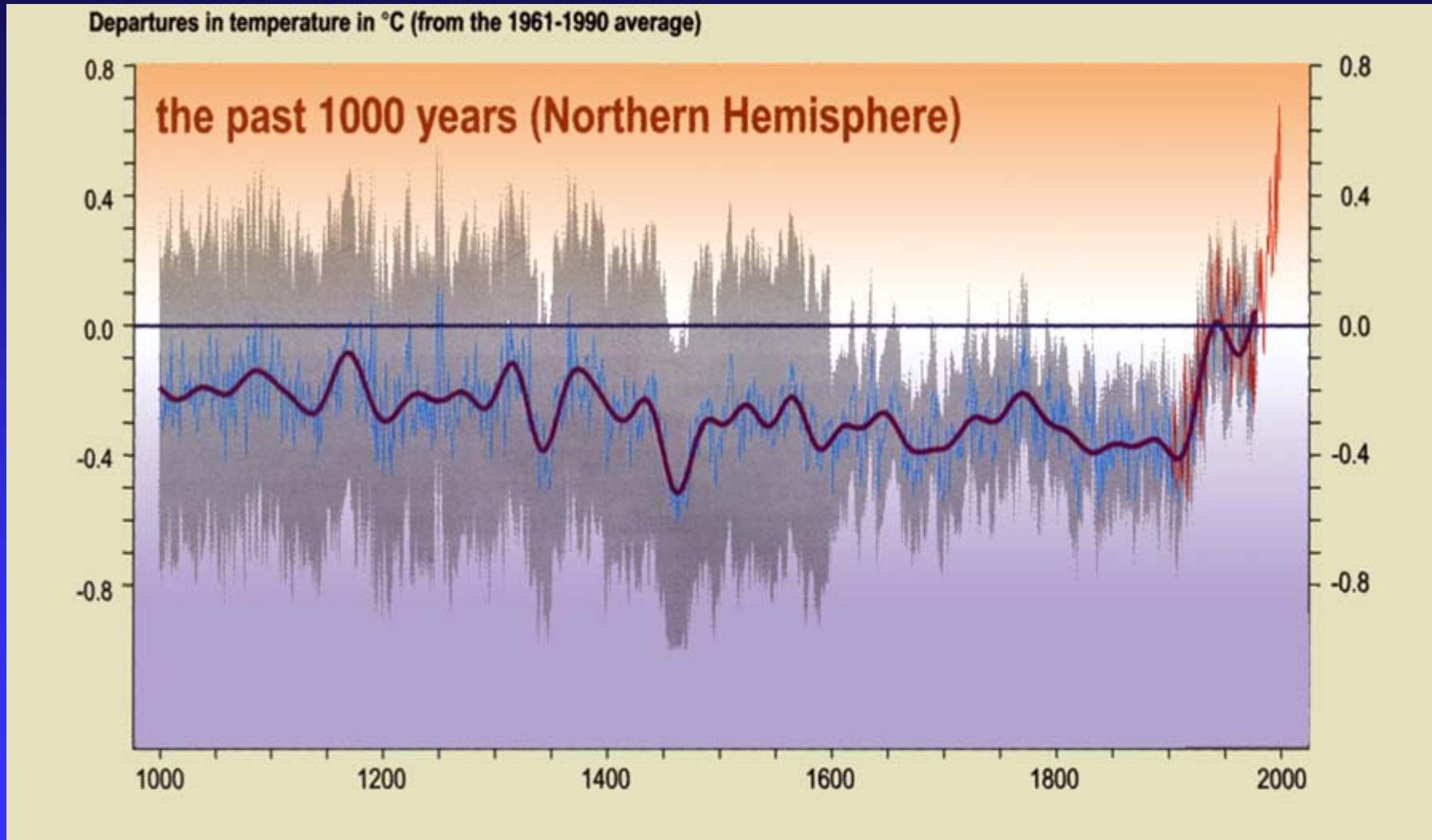


The Kyoto Protocol assumes that the 20th century's "global warming" is unique.
Global temperature anomalies, 1860-2002



It asserts that the 20th century has been the warmest in the last Millennium.

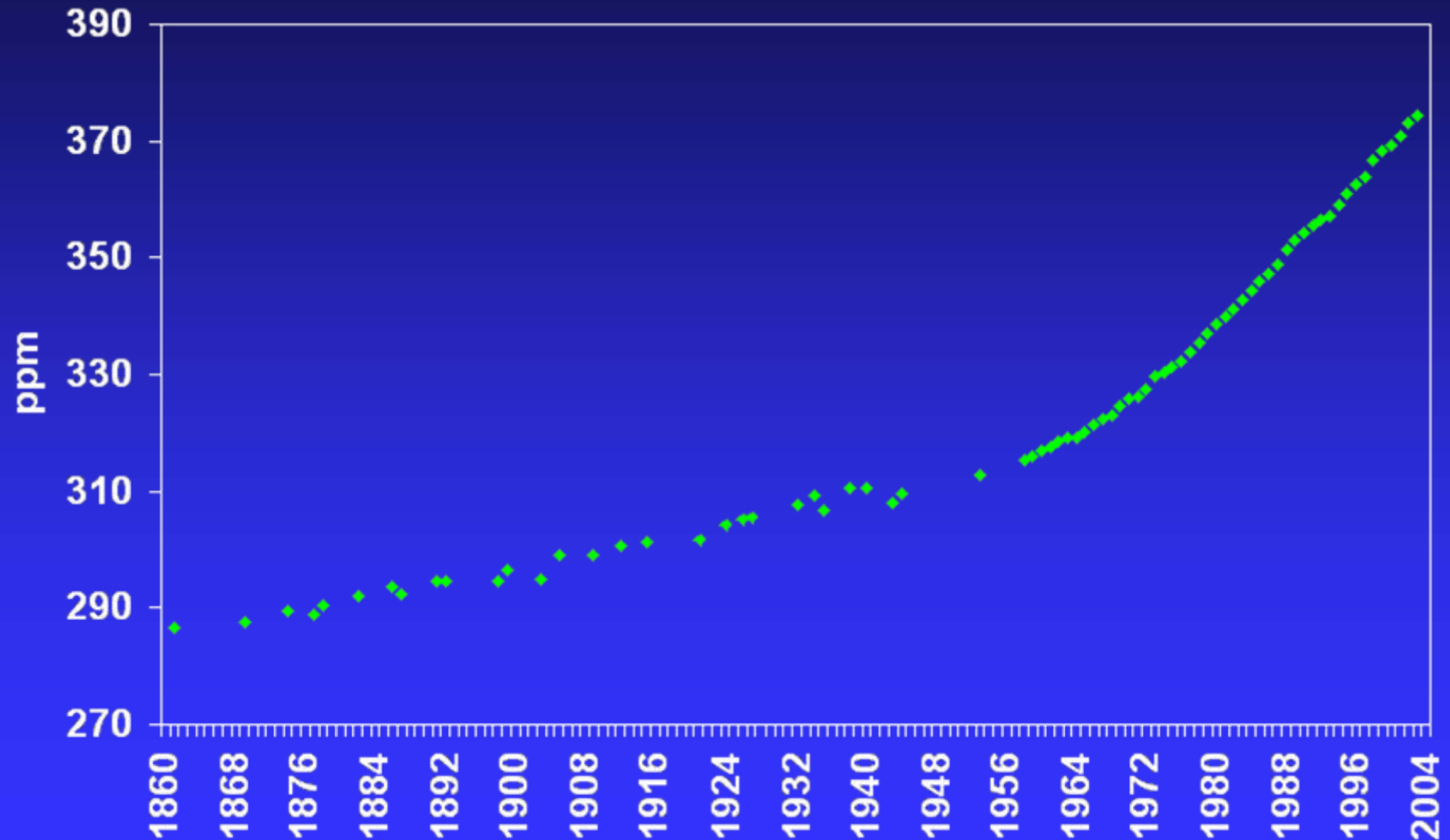
Northern Hemisphere temperature anomalies, 1000-2000



Source: *Climate Change 2001 Synthesis Report, IPCC, p.49.*

It asserts that the current global warming is explained by the increase in CO₂ concentration in the atmosphere...

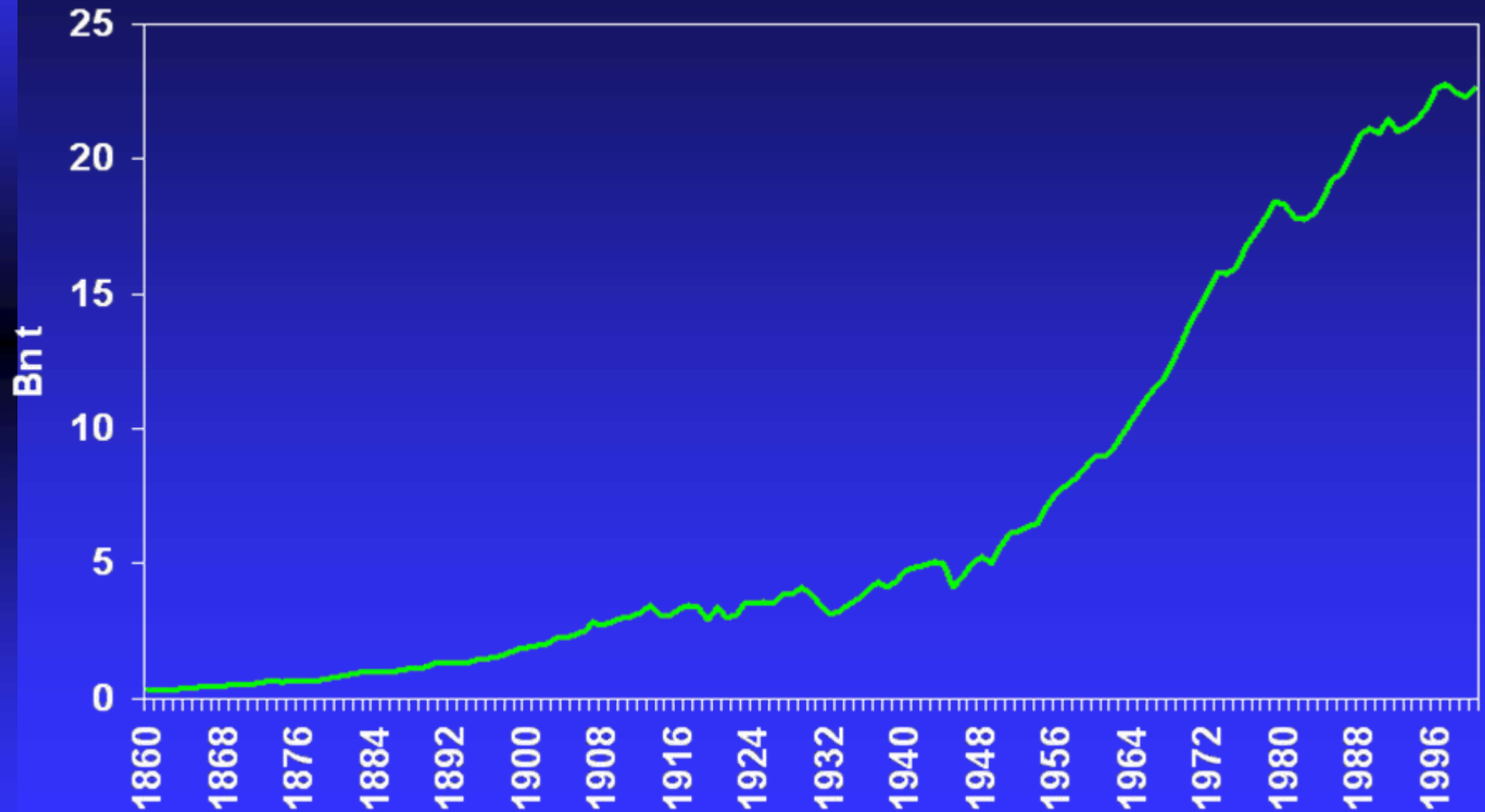
Global CO₂ concentration in the atmosphere, 1860-2003



Source: Carbon Dioxide Information Analysis Center, 2003.

...triggered by CO₂ emissions
from the anthropogenic burning of fossil fuels.

Global CO₂ emissions from the burning of fossil fuels, 1860-2000



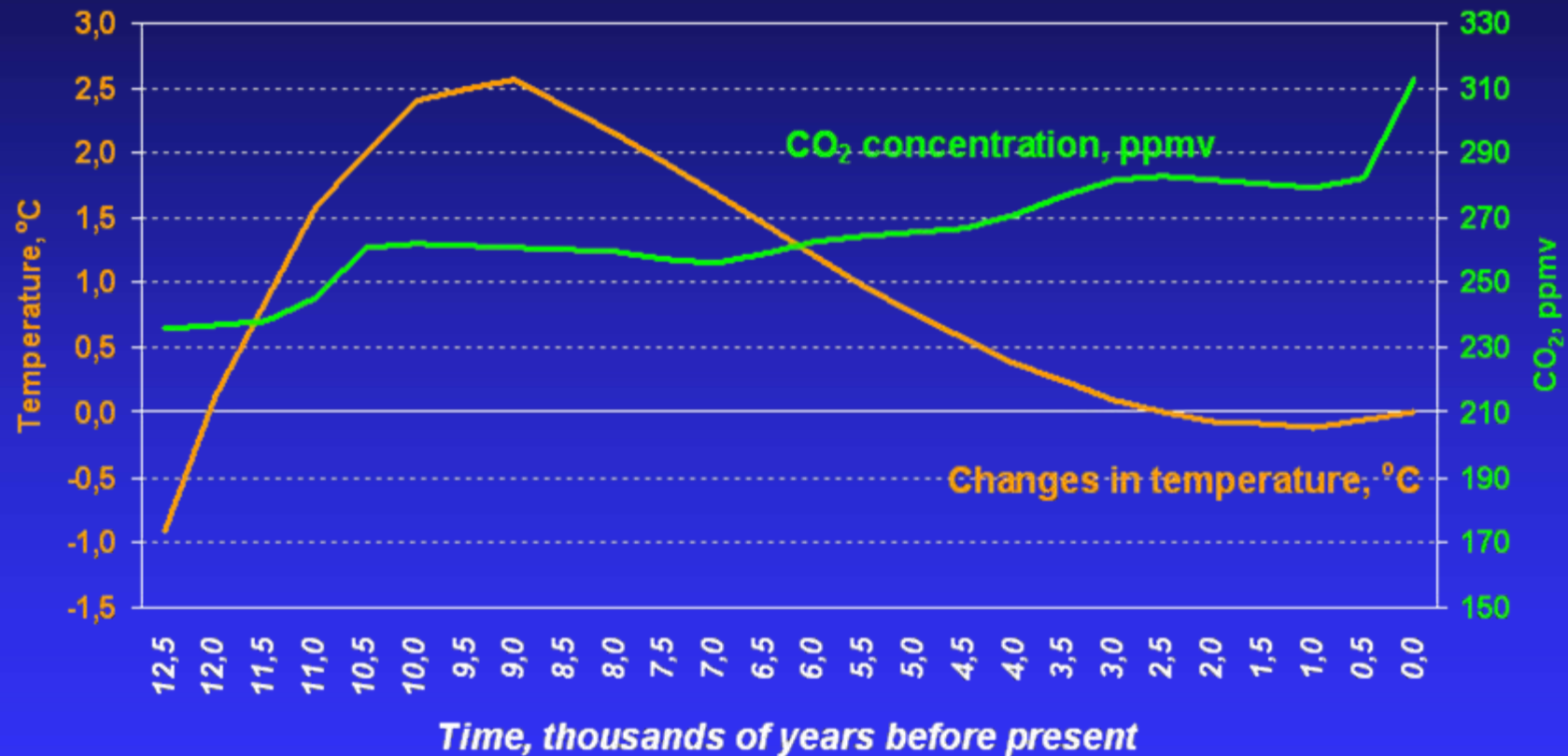
Source: Carbon Dioxide Information Analysis Center, 2003.

Is this “theory” convincing?



The variation in global temperature cannot be explained by the variation in CO₂ concentration in the atmosphere in the last 13 thousand years.

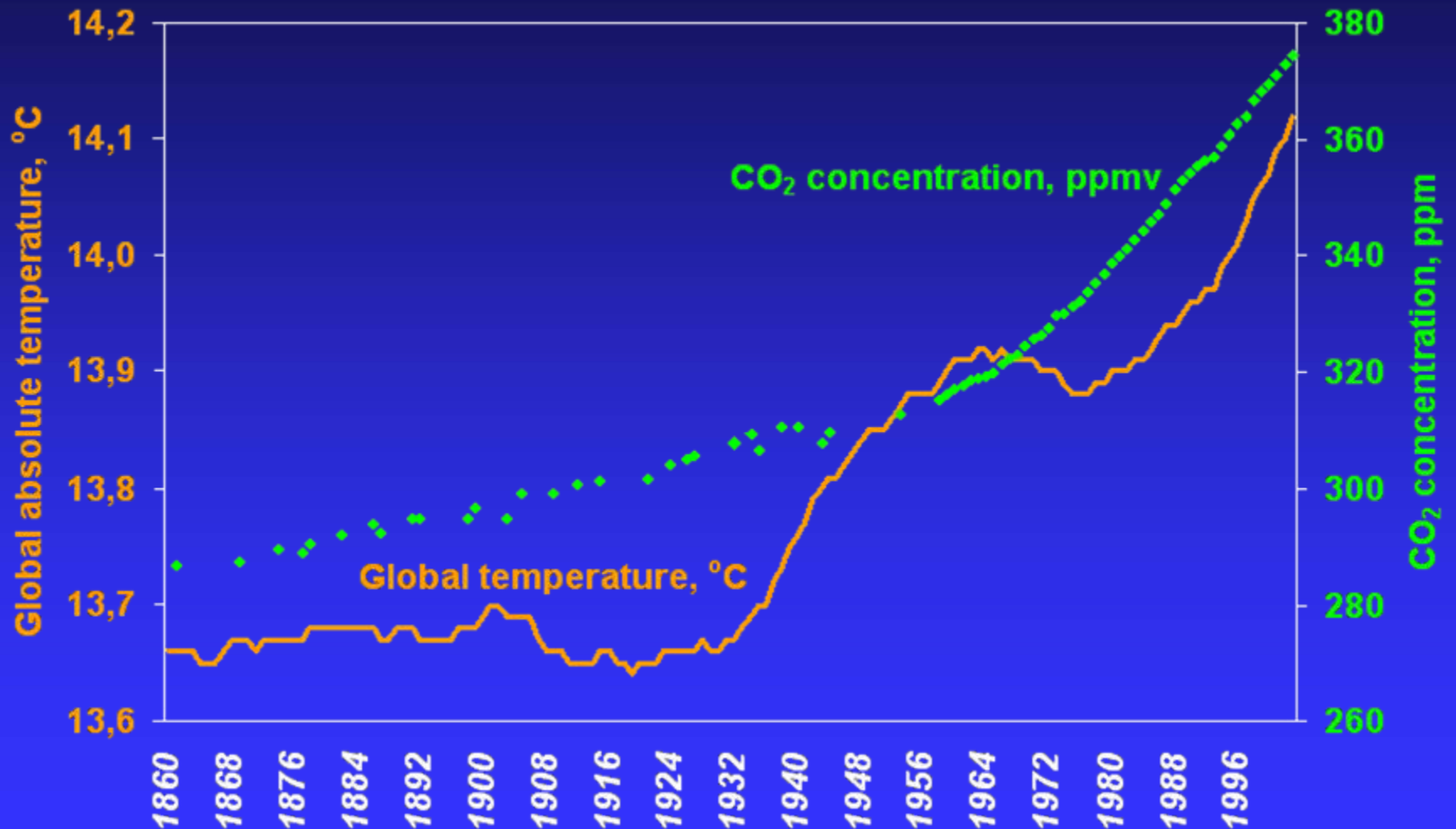
Changes in temperature and CO₂ concentration, last 13 000 years



Sources: Salamin A.N., Lipenkov V.Ya., Barkov N.I., Jouzel J., Petit J.R., Raynaud D. Ice-core age dating and palaeothermometer calibration based on isotope and temperature profiles from deep boreholes at Vostok Station (East Antarctica).- *Journal of Geophysical Research*, 1998, vol. 103, N D8, pp. 8963-8977; Petit J.R., Jouzel J., Raynaud D., Barkov N.I., Barnola J.M., Basile I., Bender M., Chappellaz J., Davis M., Delague G., Delmotte M., Kotlyakov V.M., Legrand M., Lipenkov V.Ya., Lorius C., Pepin L., Ritz C., Saltzman E., Stievenard M. Climate and atmospheric history of the past 420,000 years from the Vostok ice core, Antarctica. *Nature*, vol. 399, N 6735, 3 June 1999, pp. 429-436; Neftel, Friedli, Moore et al. Historical Carbon Dioxide Record from the Siple Station Ice Core (reported on-line by the Carbon Dioxide Information Analysis Center at <http://cdiac.esd.ornl.gov/ftp/trends/co2/siple2.013>). Bern, Switzerland, 1974.

The variation in global temperature cannot be explained by the variation in CO₂ concentration in the atmosphere in the last 140 years.

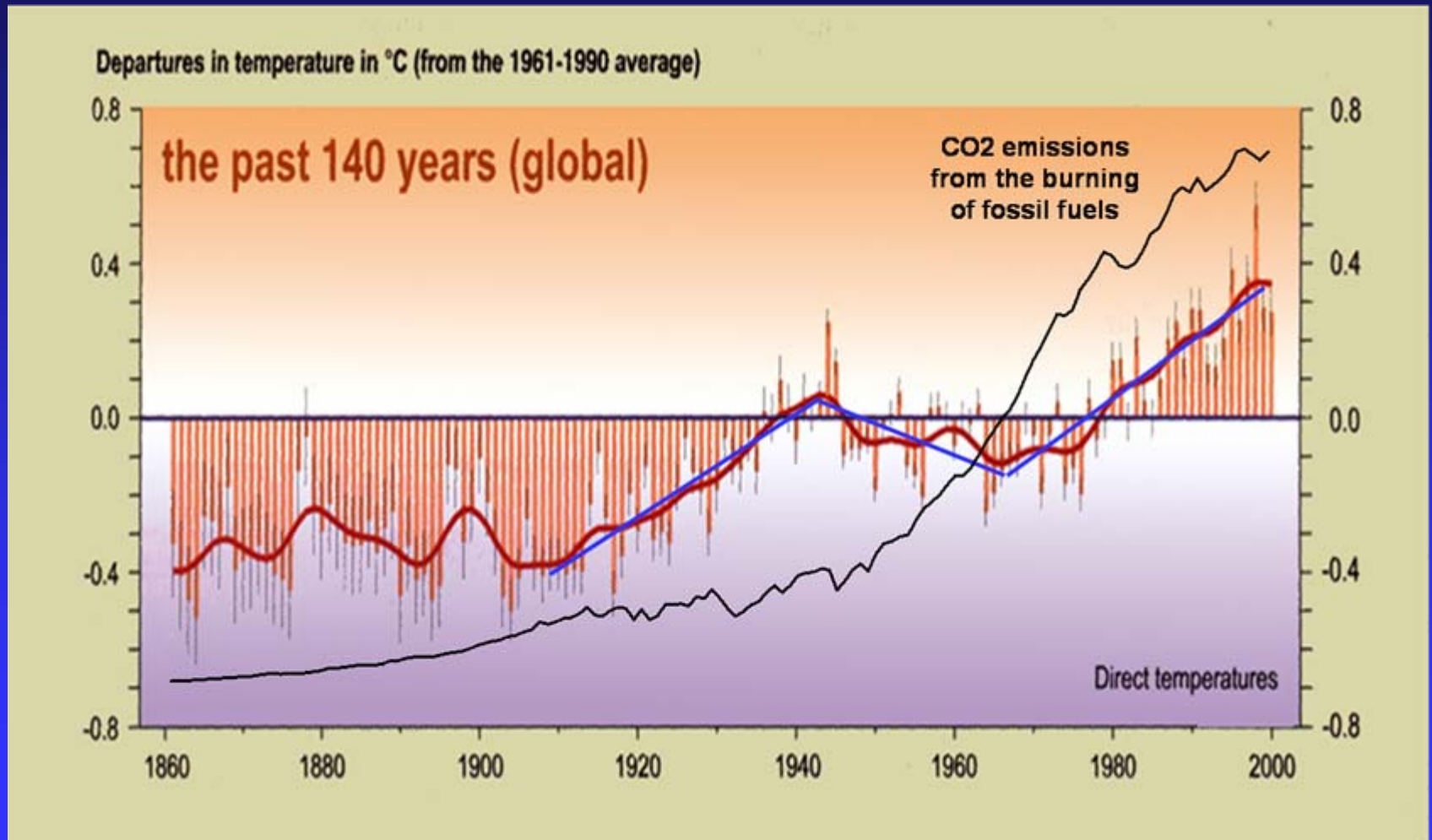
Changes in temperature and CO₂ concentration, last 140 years



Source: Carbon Dioxide Information Analysis Center, 2003.

The variation in global temperature cannot be explained by variation in CO₂ emissions of anthropogenic origin in the last 140 years.

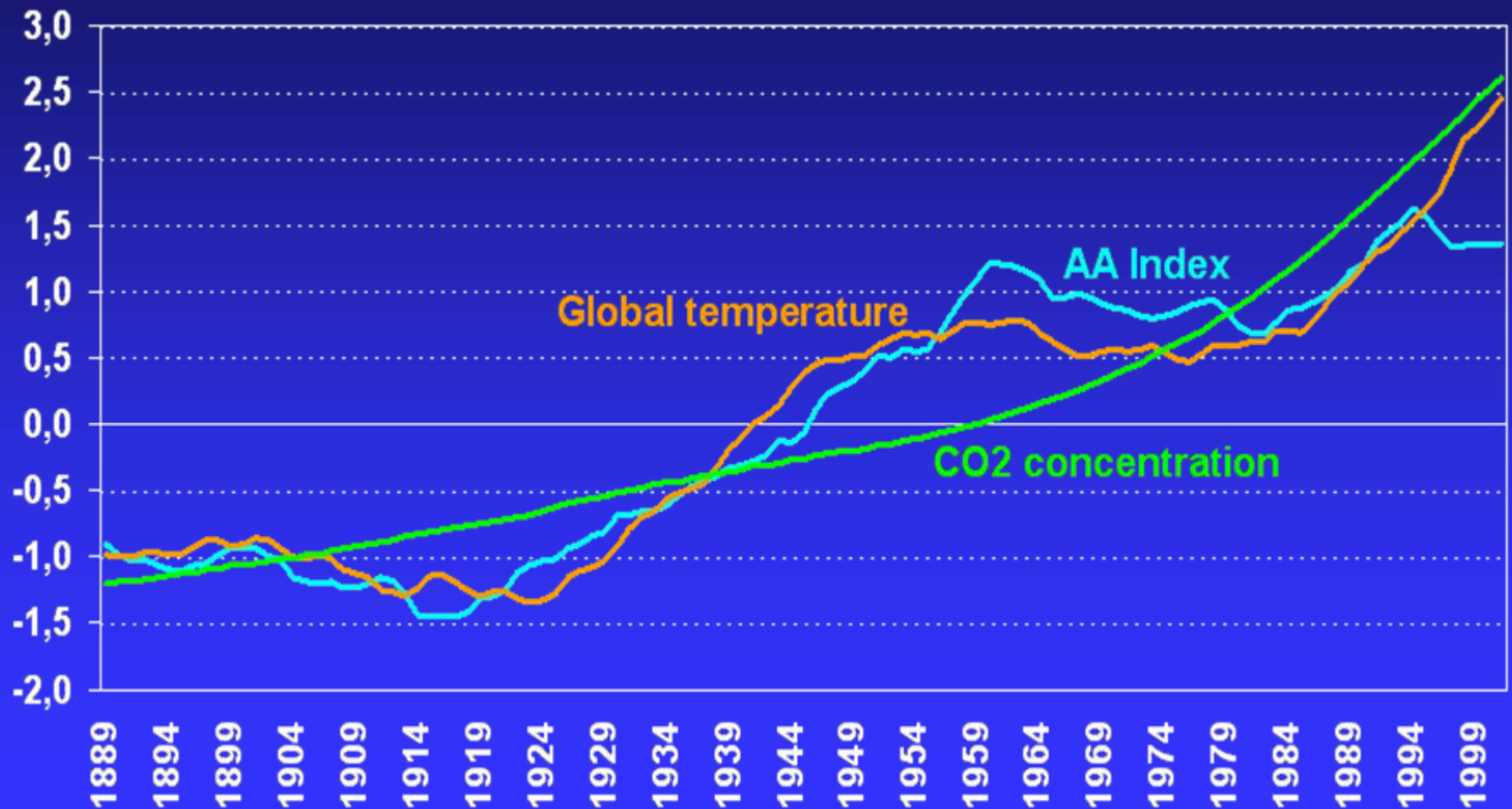
CO₂ emissions from the anthropogenic burning of fossil fuels, 1860-2000



Source: *Climate Change 2001 Synthesis Report, IPCC, p.49.*

Global temperature is better correlated with the Sun's geomagnetic activity than with CO₂ concentration in the atmosphere.

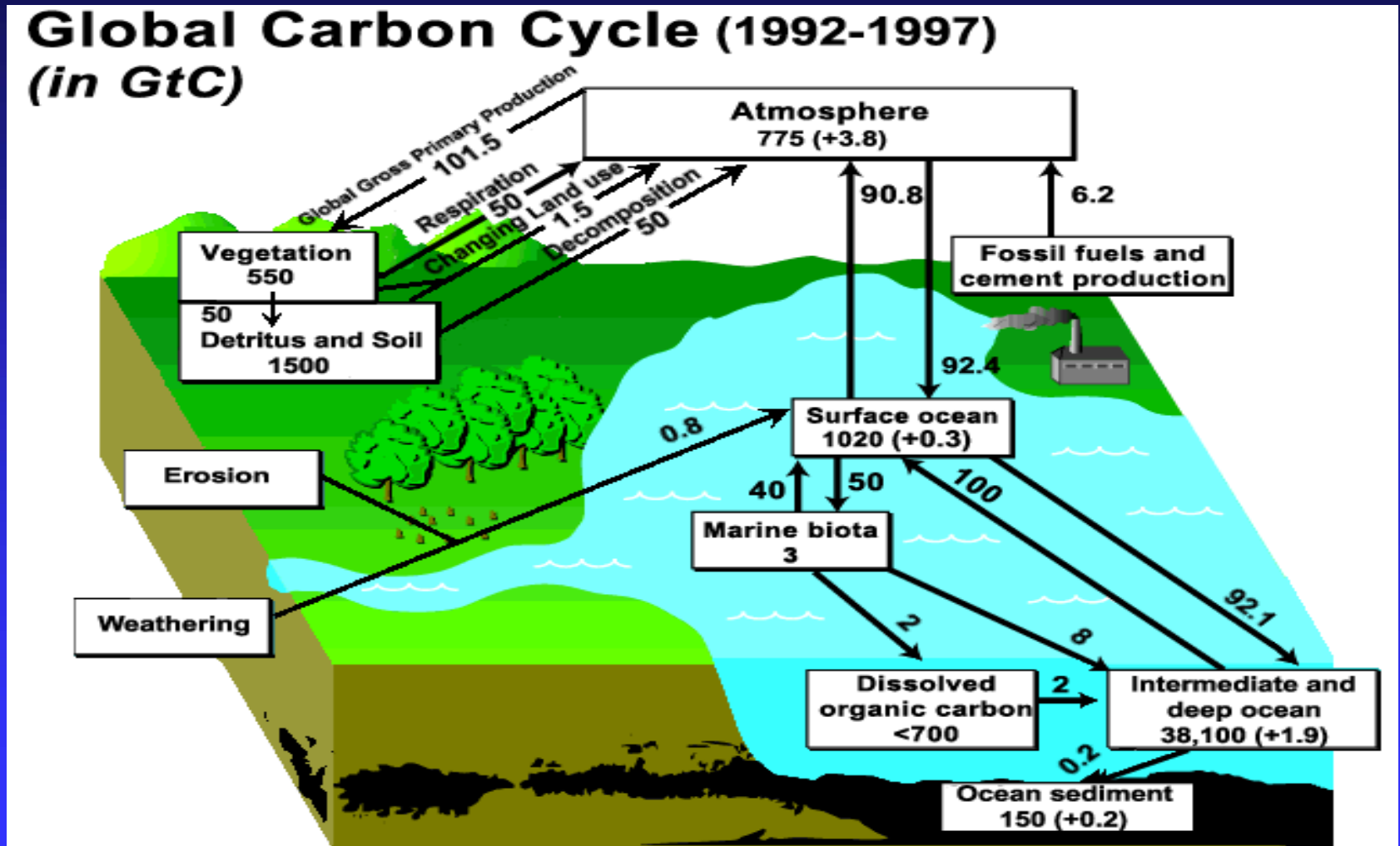
Standardized anomalies in CO₂ concentration, AA Index of geomagnetic activity and global temperature (22y_{ma}), 1889-2001



Source: Carbon Dioxide Information Analysis Center, 2003, WDC for STP, Moscow .

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This is perhaps not so surprising given that CO_2 of anthropogenic origin represents less than 1% of total CO_2 in the atmosphere.



Source: Carbon Dioxide Information Analysis Center.

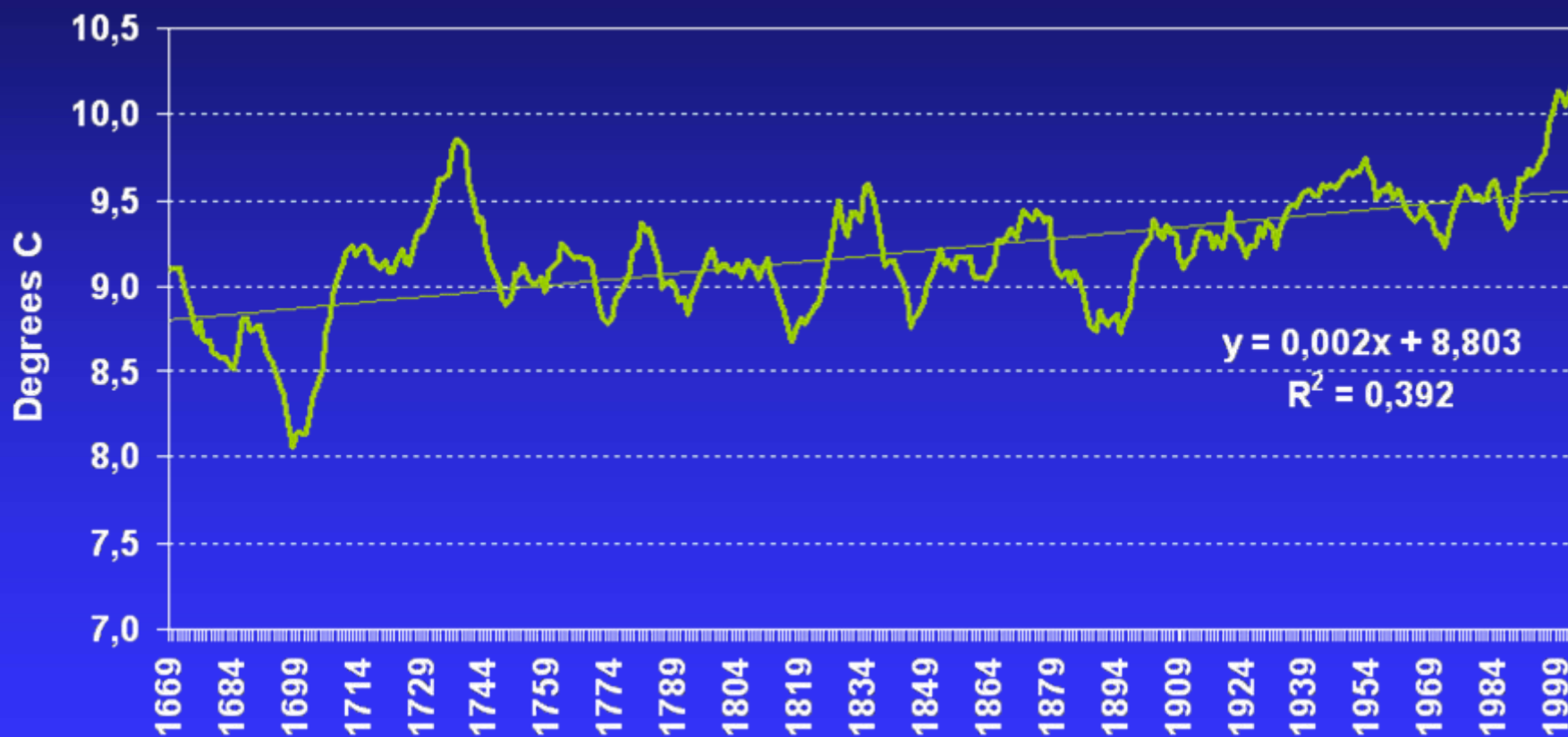
CONCLUSION 1:

The correlation between CO₂ concentration in the atmosphere and global temperature is *far from proven*.



The very concept of the current global warming critically depends on the time horizon chosen.
It appears reasonable only for relatively short-term periods (343 years).

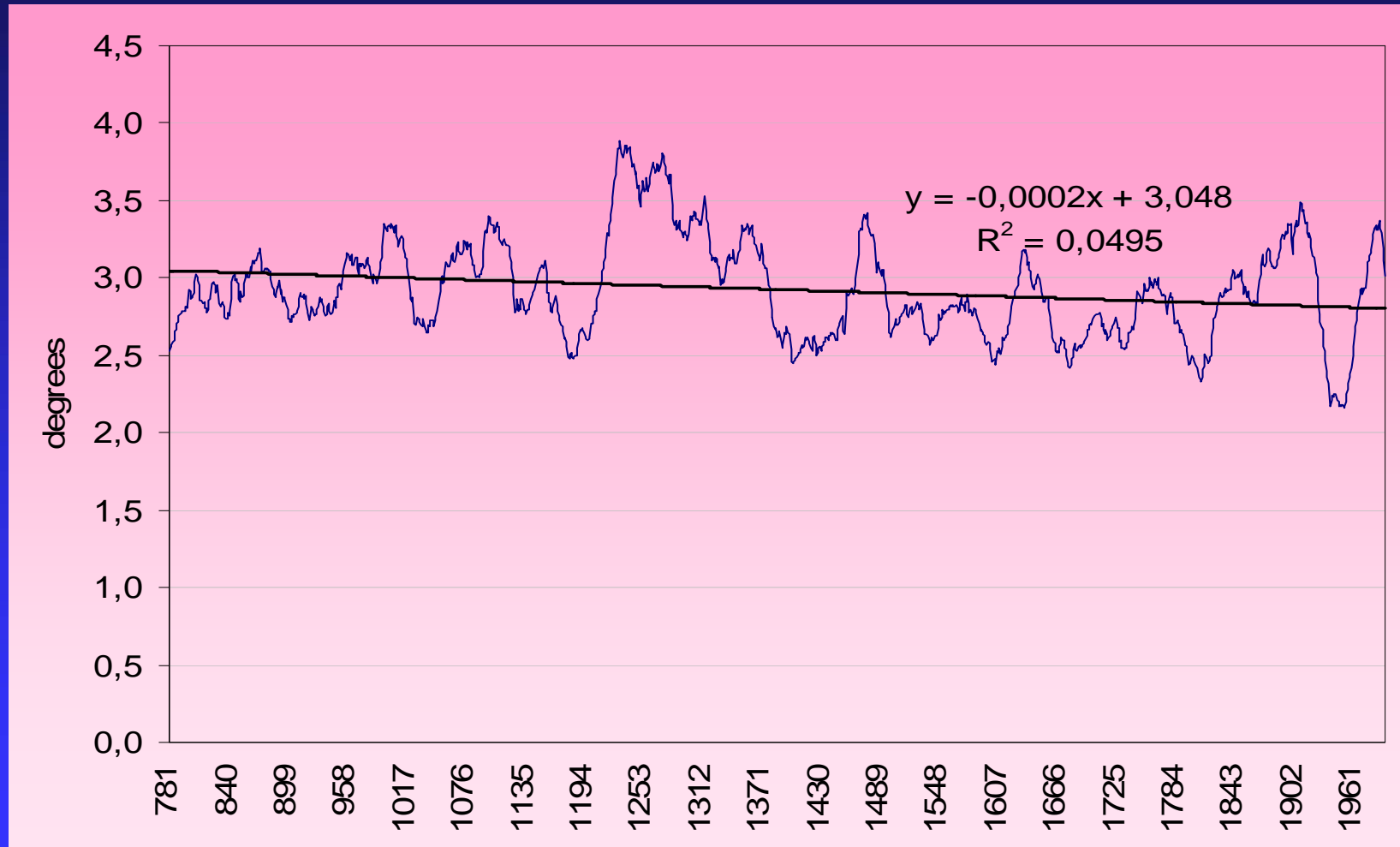
Absolute temperature (11 YMA), Central England, 1659-2002



Source: www.met-office.gov.uk.

The very concept of the current global warming appears unproven for longer-term periods (12 centuries).

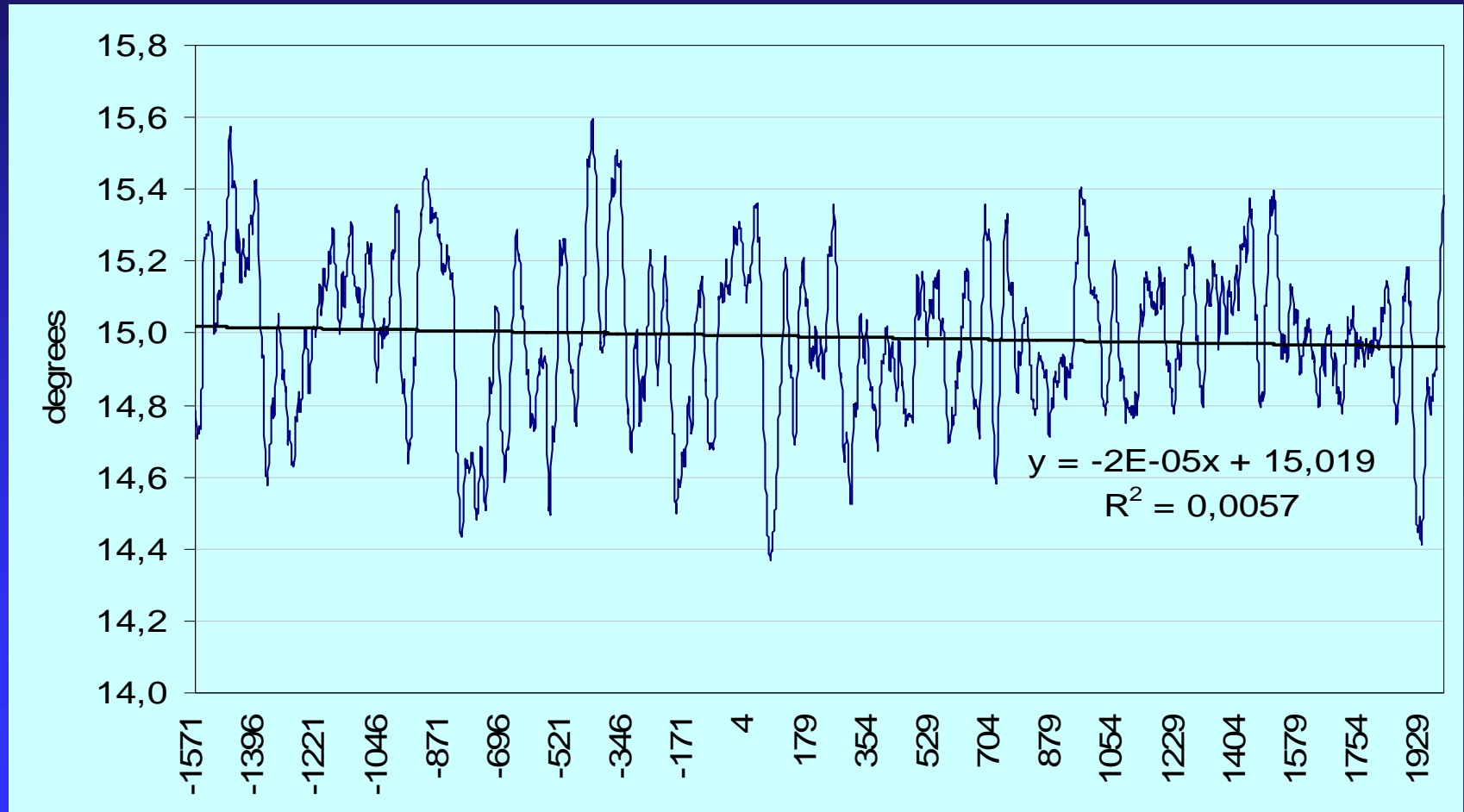
Absolute temperature (30 YMA), NE Canada (Baffin Island), 752-1992



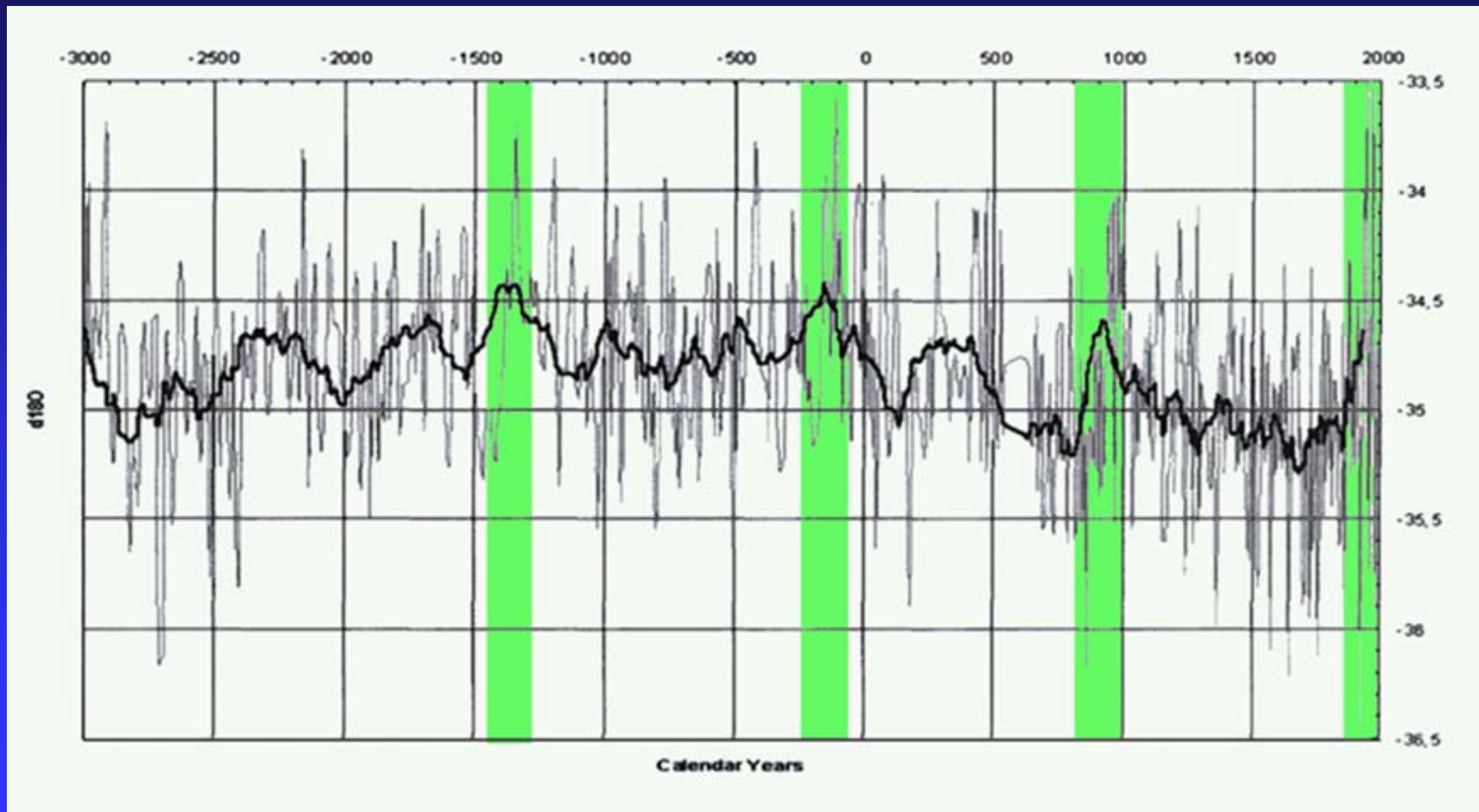
Source: World Data Center for Palaeoclimatology, Boulder, USA.

The very concept of the current global warming appears unproven for long-term periods (35 centuries).

Absolute temperature (30 YMA), Tasmania, 1571 BC - 1991 AD



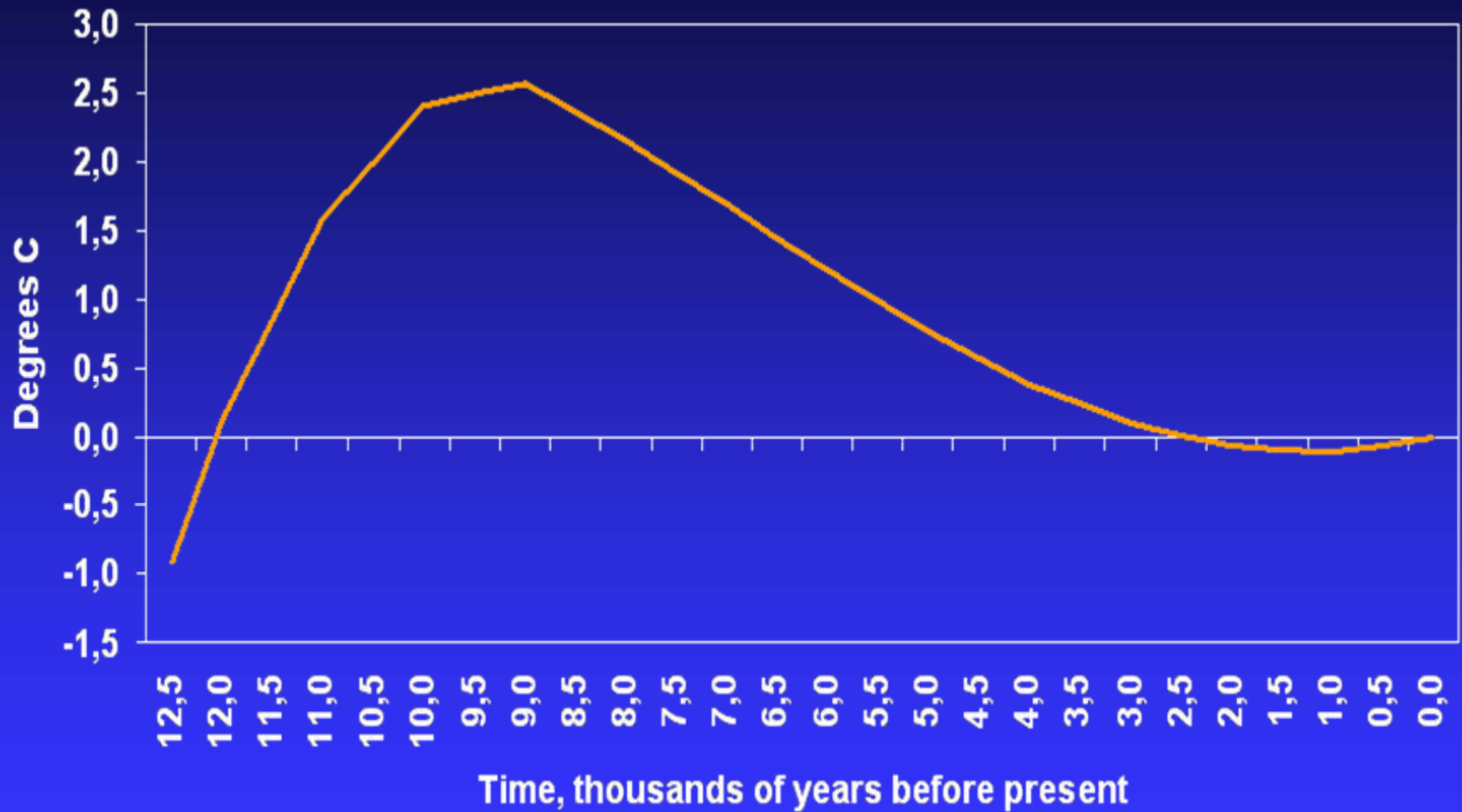
The current global warming is not unique, nor is it
the most pronounced in the history of civilization:
not in the last 5 thousand years,
Variation in polar temperature in the last 5000 years



Distribution of Oxygen $\delta^{18}\text{O}$ in the upper part of the kern from drill GISP2 (last 5000 years)

Source: Grootes, P.M., Stuiver, M., White, J.W.C., Johnsen, S.J., Jouzel J., Comparison of oxygen isotope records from the GISP and GRIP Greenland ice cores. *Nature* 366, 1993, pp. 552-554.

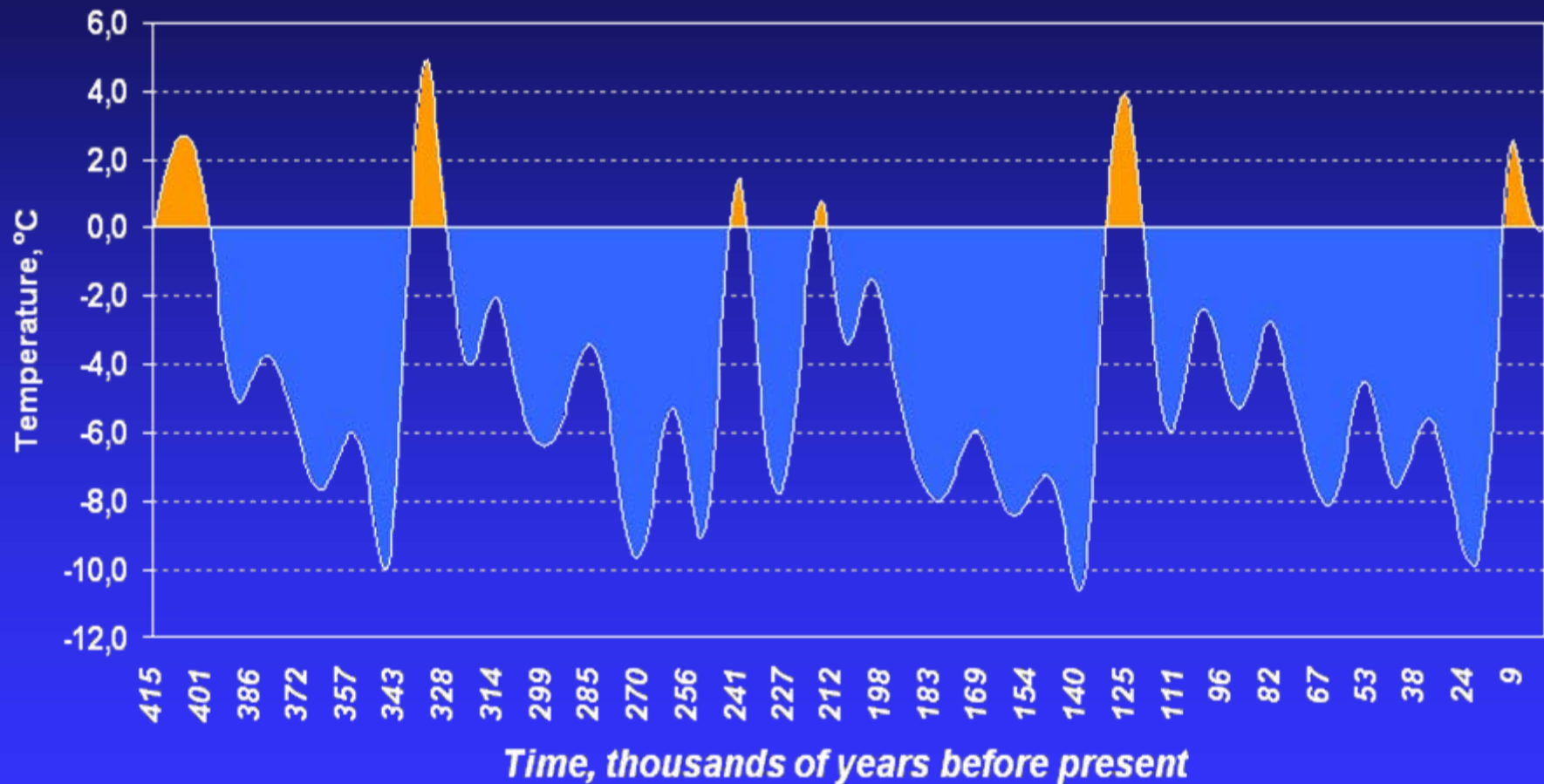
...not in the last 12 thousand years,
Temperature over last 12 500 years



Source: Salamatina A.N., Lipenkov V.Ya., Barkov N.I., Jouzel J., Petit J.R., Raynaud D. Ice-core age dating and palaeothermometer calibration based on isotope and temperature profiles from deep boreholes at Vostok Station (East Antarctica).- *Journal of Geophysical Research*, 1998, vol. 103, N D8, pp. 8963-8977. ©ИЭА

...and not in the last 415 thousand years of the Earth's history.

The long-term climatic cycles (M. Milankovitch cycles) over last 415 000 years



Source: Petit J.R., Jouzel J., Raynaud D., Barkov N.I., Barnola J.M., Basile I., Bender M., Chappellaz J., Davis M., Delague G., Delmotte M., Kotlyakov V.M., Legrand M., Lipenkov V.Ya., Lorius C., Pepin L., Ritz C., Saltzman E., Stievenard M. Climate and atmospheric history of the past 420,000 years from the Vostok ice core, Antarctica. *Nature*, vol. 399, N 6735, 3 June 1999, pp. 429-436.

CONCLUSION 2:

There is *no sign* that the warming of the planet in the 20th century was “unique.”



CONCLUSION 3:

Previous instances of global warming could not have been triggered by the anthropogenic burning of fossil fuels.

They are the result of *natural variability*.



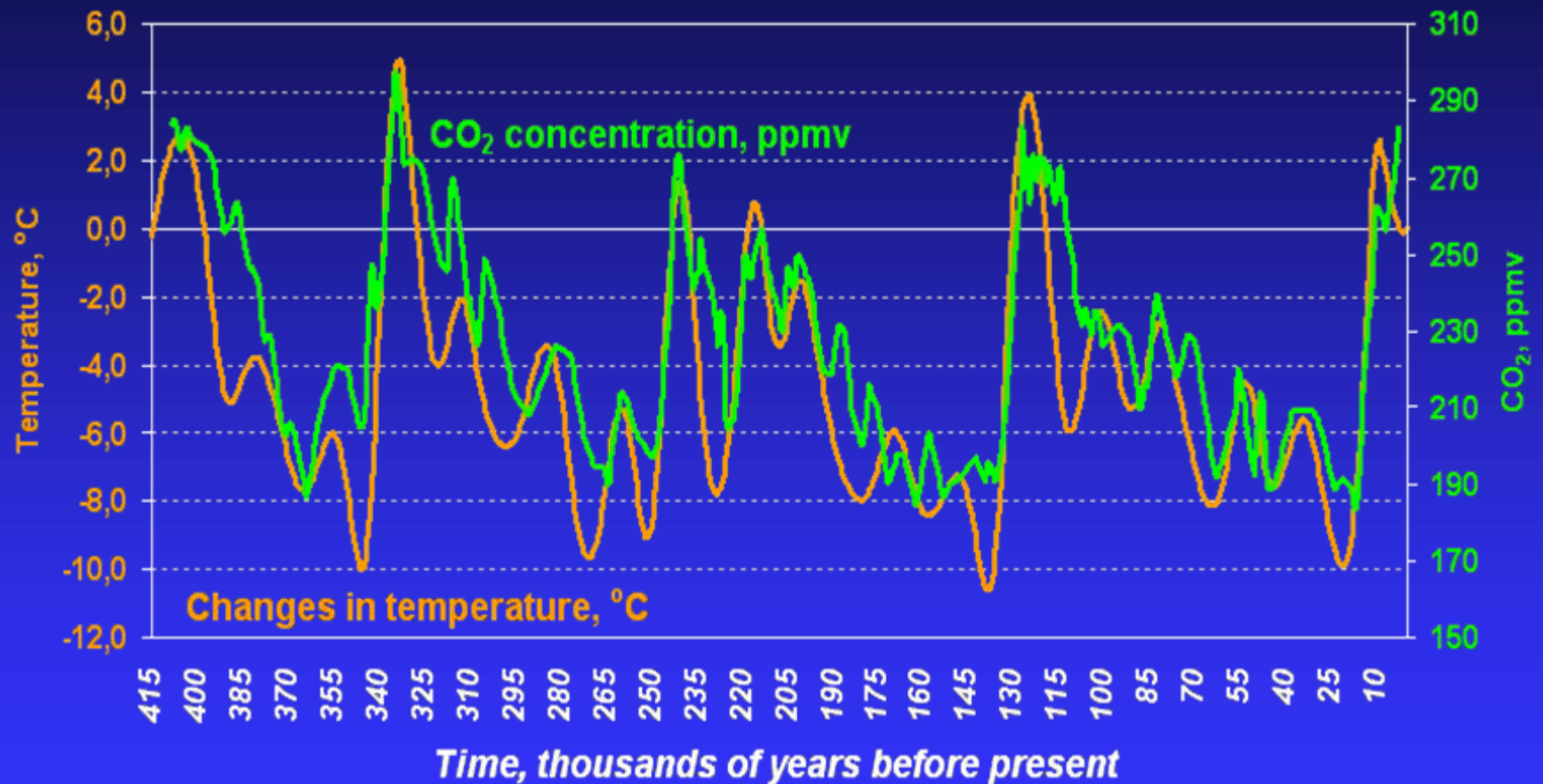
CONCLUSION 4:

Cases of global warming due to natural forces have been much *stronger* than the current one of allegedly of anthropogenic origin.

The anthropogenic impact on climate change through CO₂ emissions from the burning of fossil fuels – if any – is incomparably *weaker* than the impact of natural forces.



Historically, changes in temperature precede changes in CO₂ concentration, not vice versa.
 Changes in temperature and CO₂ concentration, last 415 000 years (D1-D4)



Sources: Salamatina A.N., Lipenkov V.Ya., Barkov N.I., Jouzel J., Petit J.R., Raynaud D. Ice-core age dating and palaeothermometer calibration based on isotope and temperature profiles from deep boreholes at Vostok Station (East Antarctica).- *Journal of Geophysical Research*, 1998, vol. 103, N D8, pp. 8963-8977; Petit J.R., Jouzel J., Raynaud D., Barkov N.I., Barnola J.M., Basile I., Bender M., Chappellaz J., Davis M., Delaguerre G., Delmotte M., Kotlyakov V.M., Legrand M., Lipenkov V.Ya., Lorius C., Pepin L., Ritz C., Saltzman E., Stievenard M. Climate and atmospheric history of the past 420,000 years from the Vostok ice core, Antarctica. *Nature*, vol. 399, N 6735, 3 June 1999, pp. 429-436.

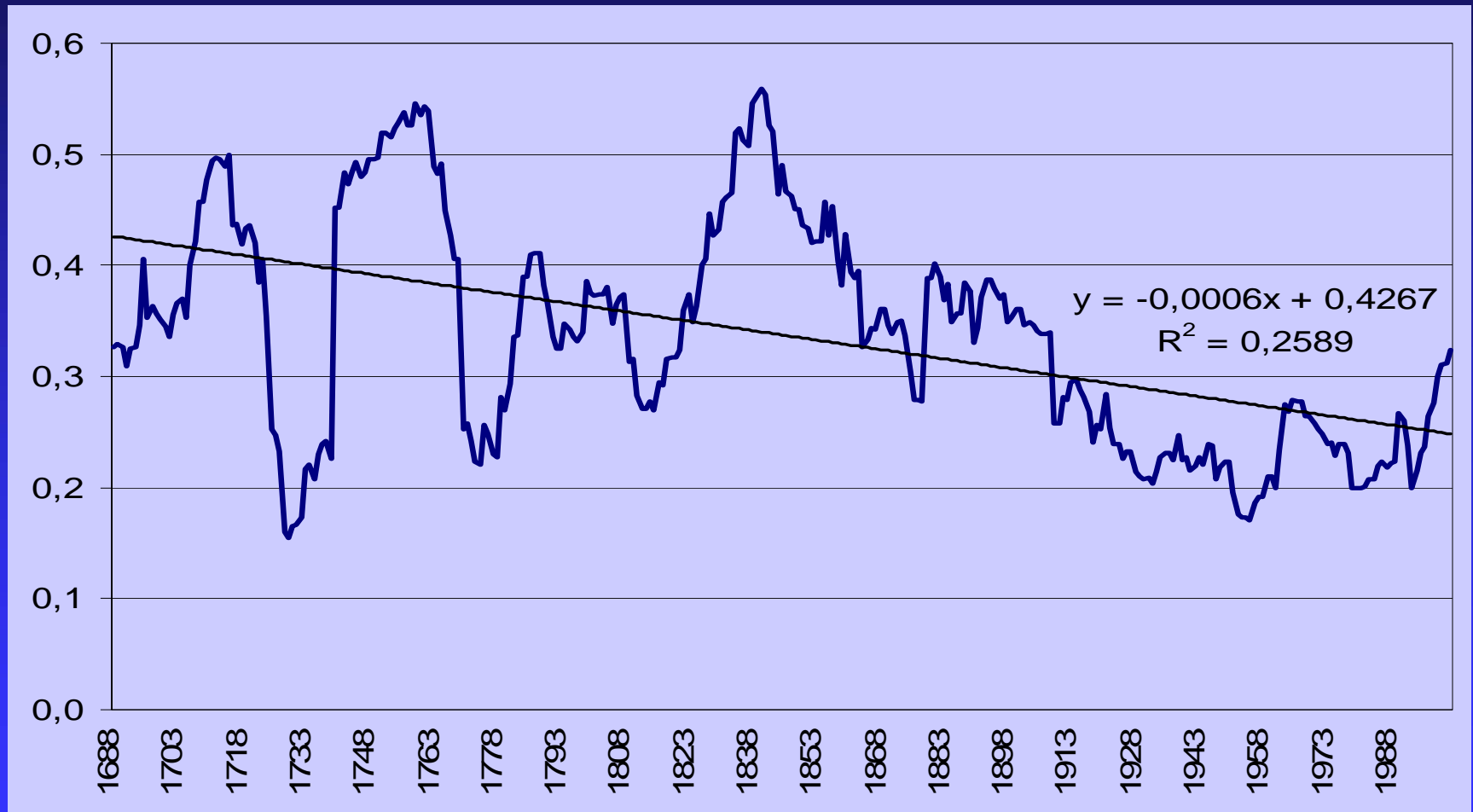
CONCLUSION 5:

The causality between CO₂ concentration in the atmosphere and global temperature – if any – is the *opposite* to what is asserted.



The asserted increase in the speed of the current warming appears unproven. It is neither unique, nor is it the most pronounced for the last 343 years.

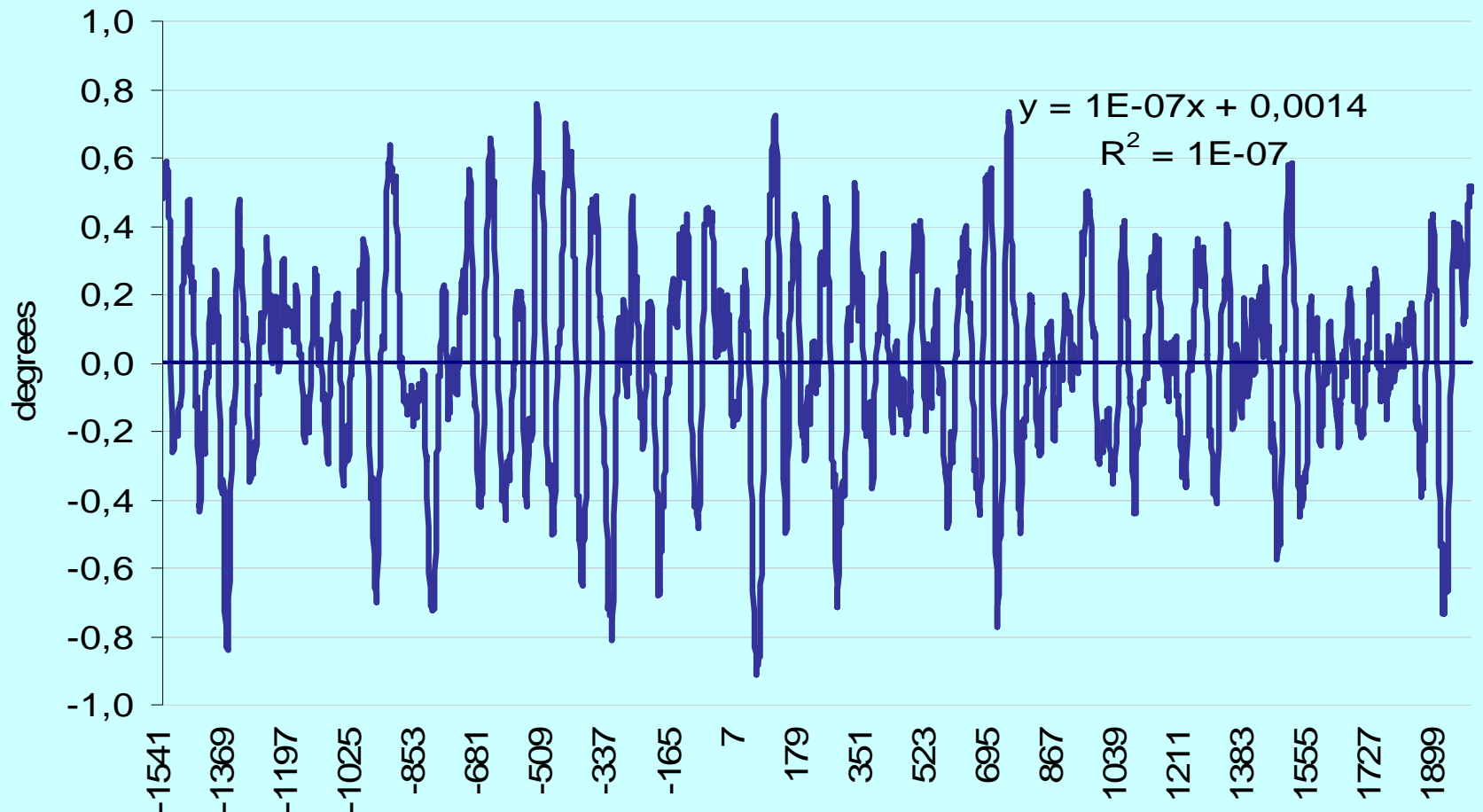
30 year-on-year change in temperature (30 YMA), Central England, 1659-2002



Source: www.met-office.gov.uk.

The asserted increase in the speed of the current warming is neither unique, nor is it the most pronounced in the last 35 centuries.

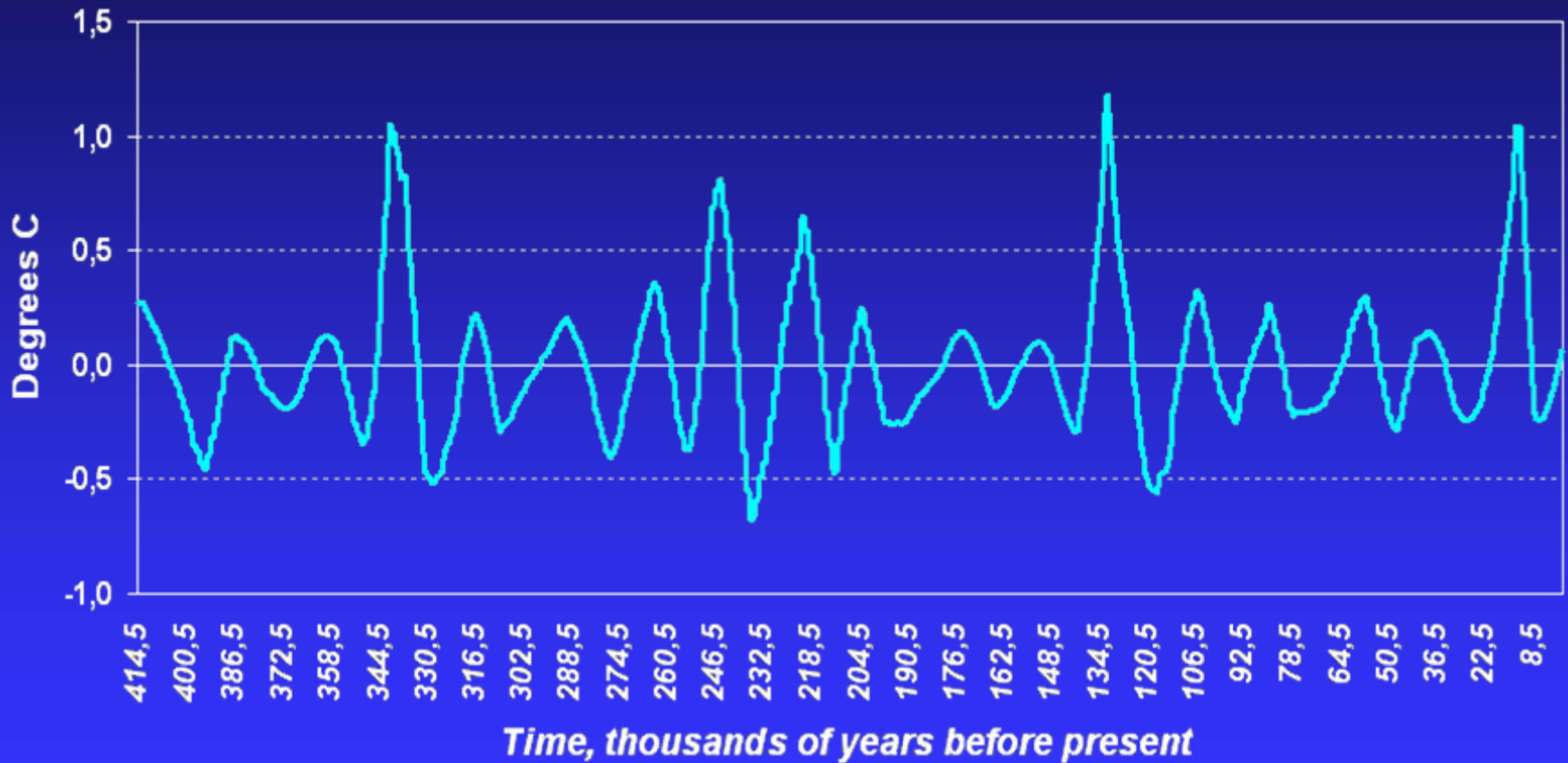
30 year-on-year changes in temperature, Tasmania, 1751 BC – 1991 AD



Source: World Data Center for Palaeoclimatology, Boulder, USA.

The asserted increase in the speed of the current warming is neither unique, nor is it the most pronounced in the last 415 thousand years.

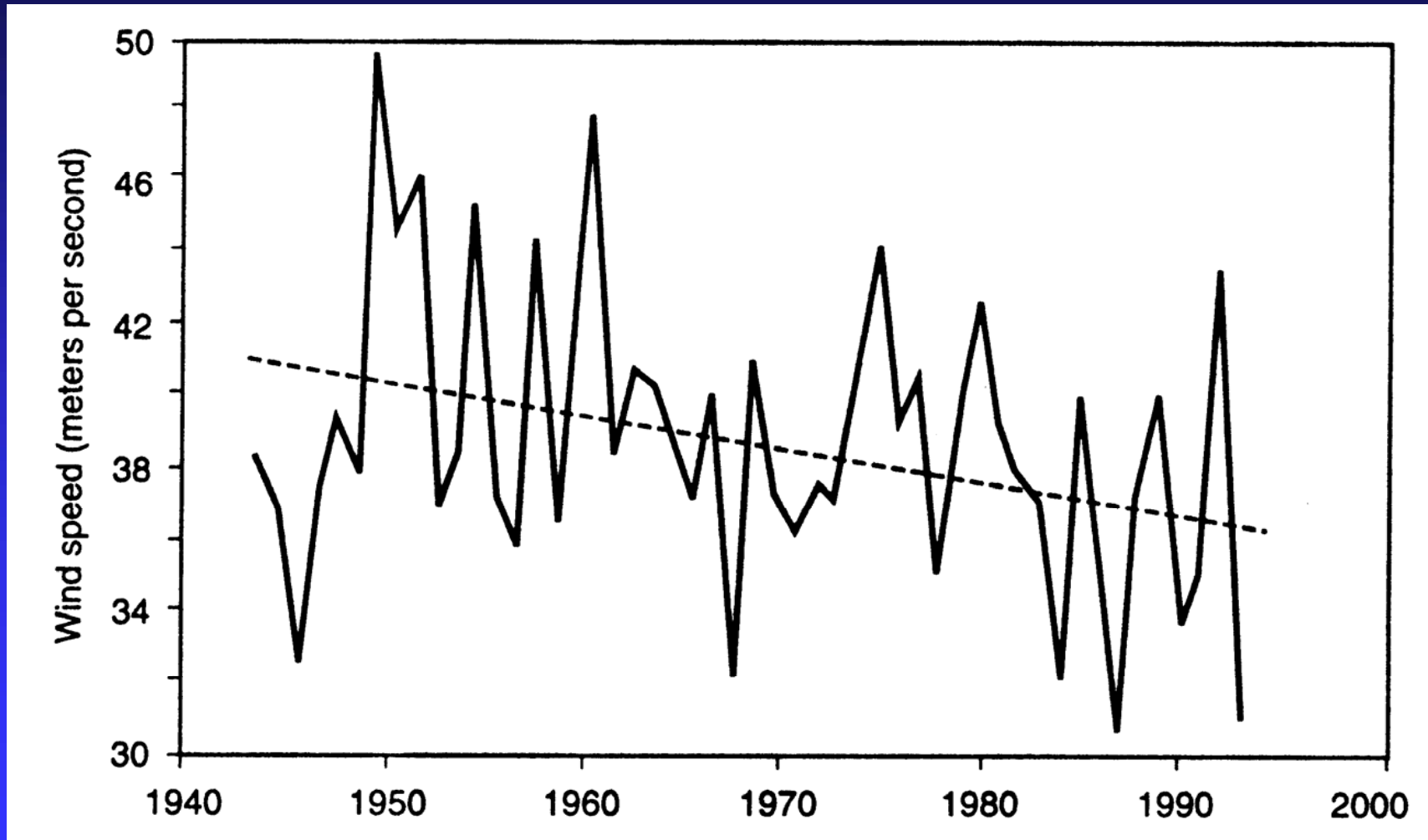
500 year-on-year changes in temperature over last 415 000 years, Vostok ice core



Source: Petit J.R., Jouzel J., Raynaud D., Barkov N.I., Barnola J.M., Basile I., Bender M., Chappellaz J., Davis M., Delague G., Delmotte M., Kotlyakov V.M., Legrand M., Lipenkov V.Ya., Lorius C., Pepin L., Ritz C., Saltzman E., Stievenard M. Climate and atmospheric history of the past 420,000 years from the Vostok ice core, Antarctica. *Nature*, vol. 399, N 6735, 3 June 1999, pp. 429-436.

The asserted increase in the strength of the extraordinary climatic events appears unproven.

Average annual maximum in wind speed in Atlantic hurricanes



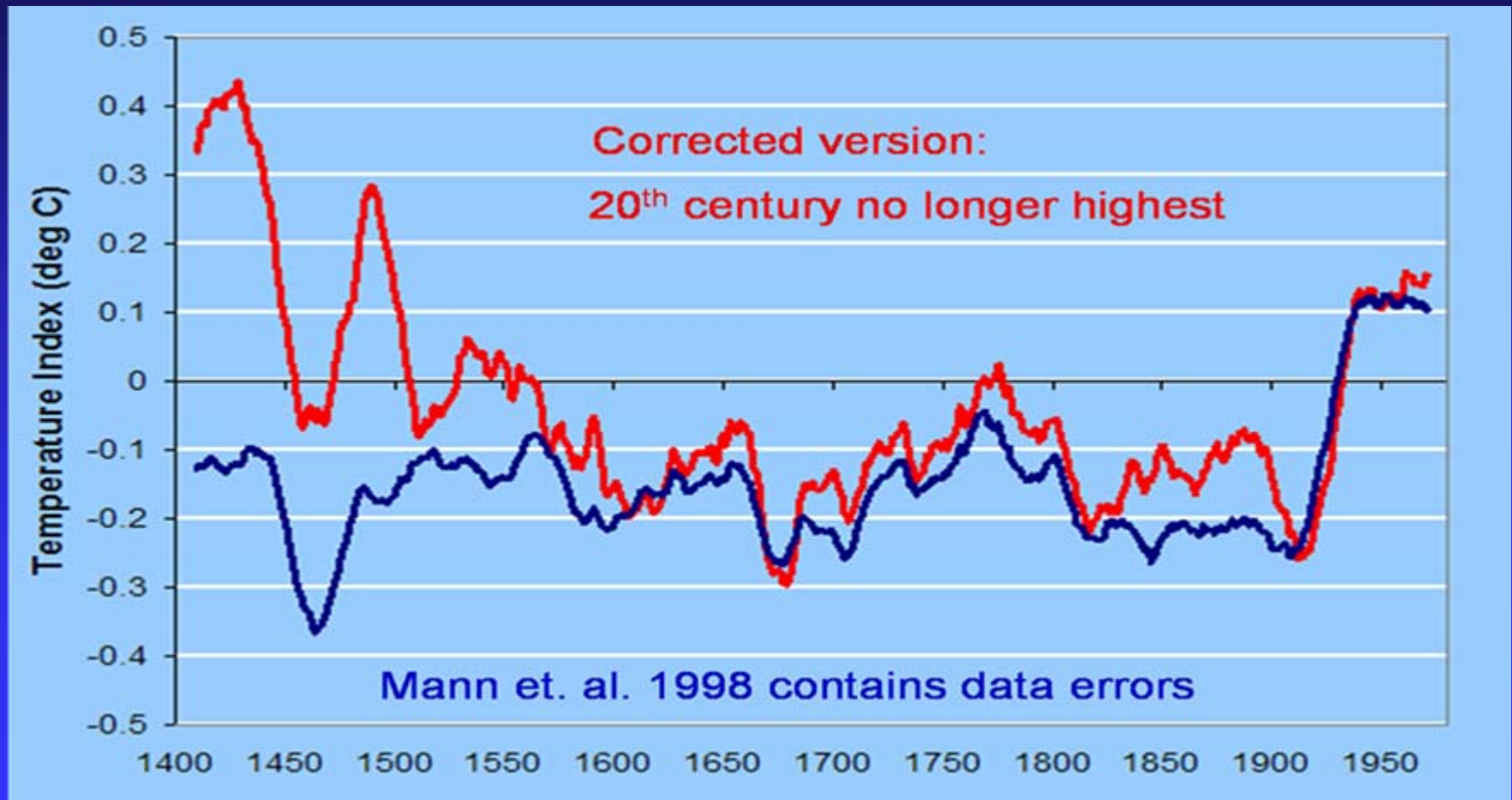
CONCLUSION 6:

The changes in the frequency, speed, and strength of extraordinary climatic events in recent years are the *opposite* of what is asserted.



IPCC-used version of global temperature index
seems to be distorted.

IPCC-used and corrected versions of global temperature anomalies
indices for Northern Hemisphere, 1400-1980



Source: S. McIntyre, R. McKittrick, *Corrections to the Mann et. al. (1998) Proxy Data Base and Northern Hemispheric Average Temperature Series*, *Energy & Environment*. Volume 14, Number 6, 2003.

CONCLUSION 7:

The “theory” of unique global warming in the 20th century is based on *poorly processed data*.



CONCLUSION 8:

The Kyoto Protocol is based on flawed science.

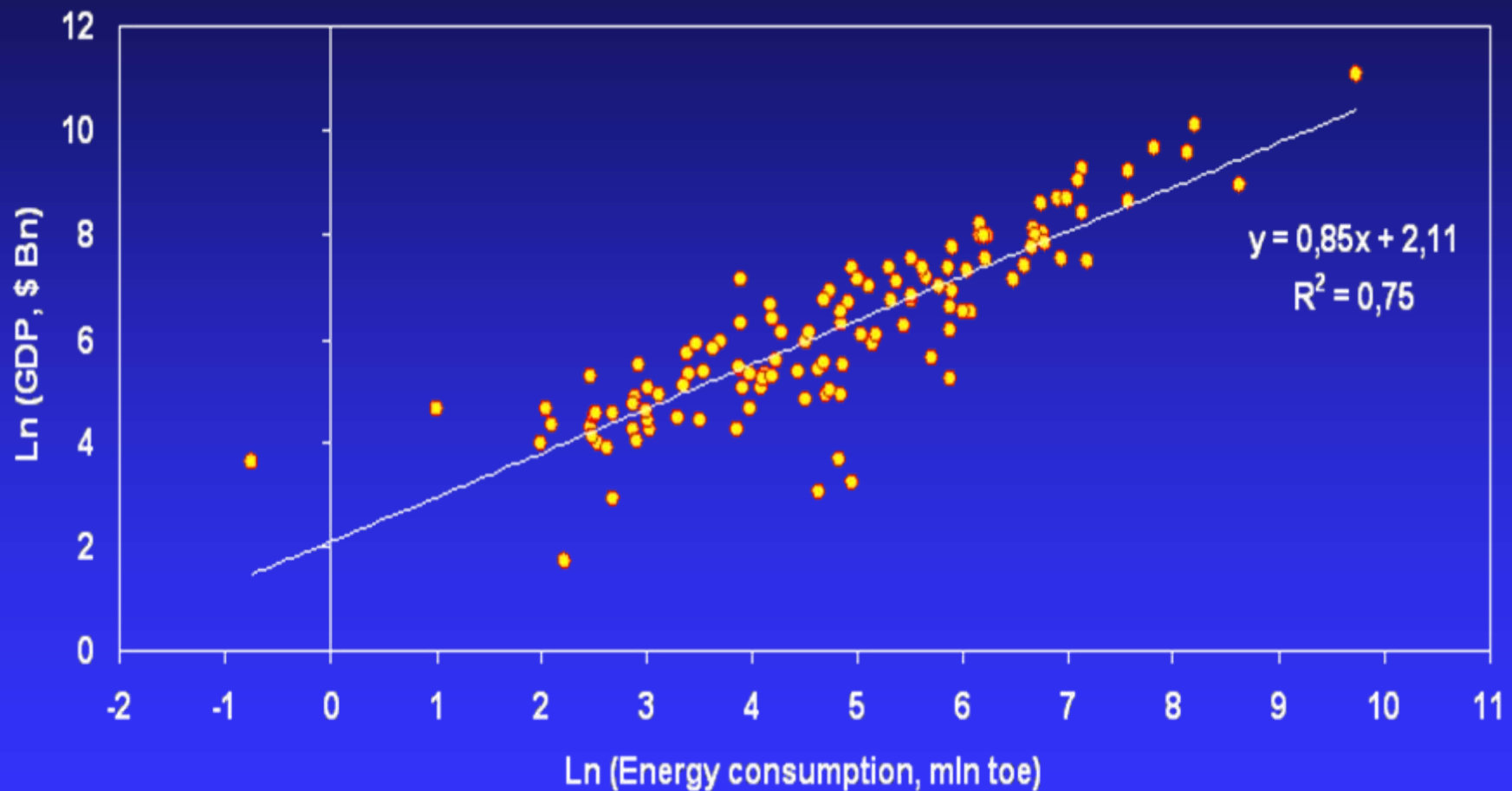


Kyoto's economic rationale – or the lack thereof.



Economic growth and energy consumption are strongly correlated.

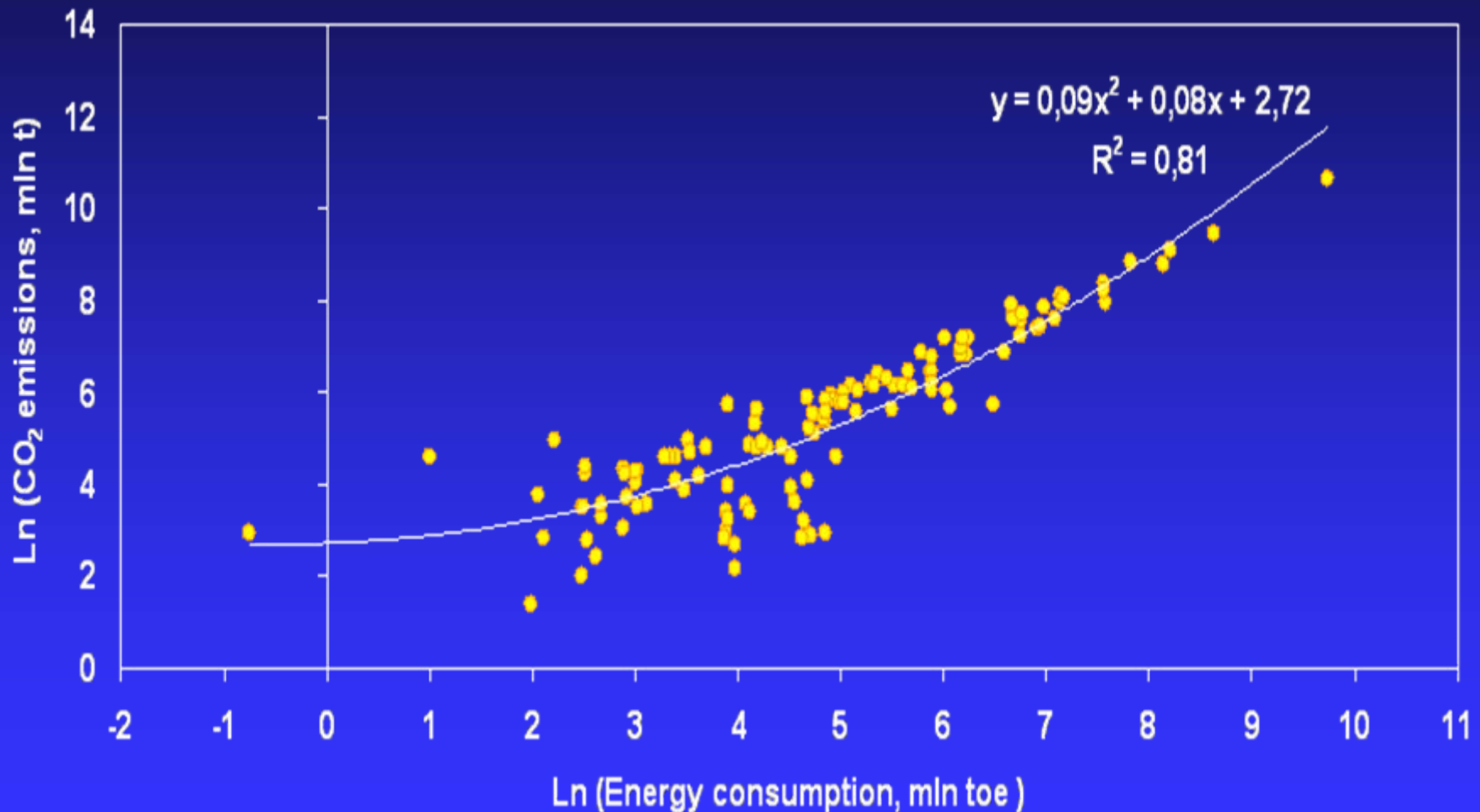
Energy consumption and GDP growth in 124 countries, 1992-1999



Source: World Resources Institute, IMF.

Energy consumption and CO₂ emissions are strongly correlated.

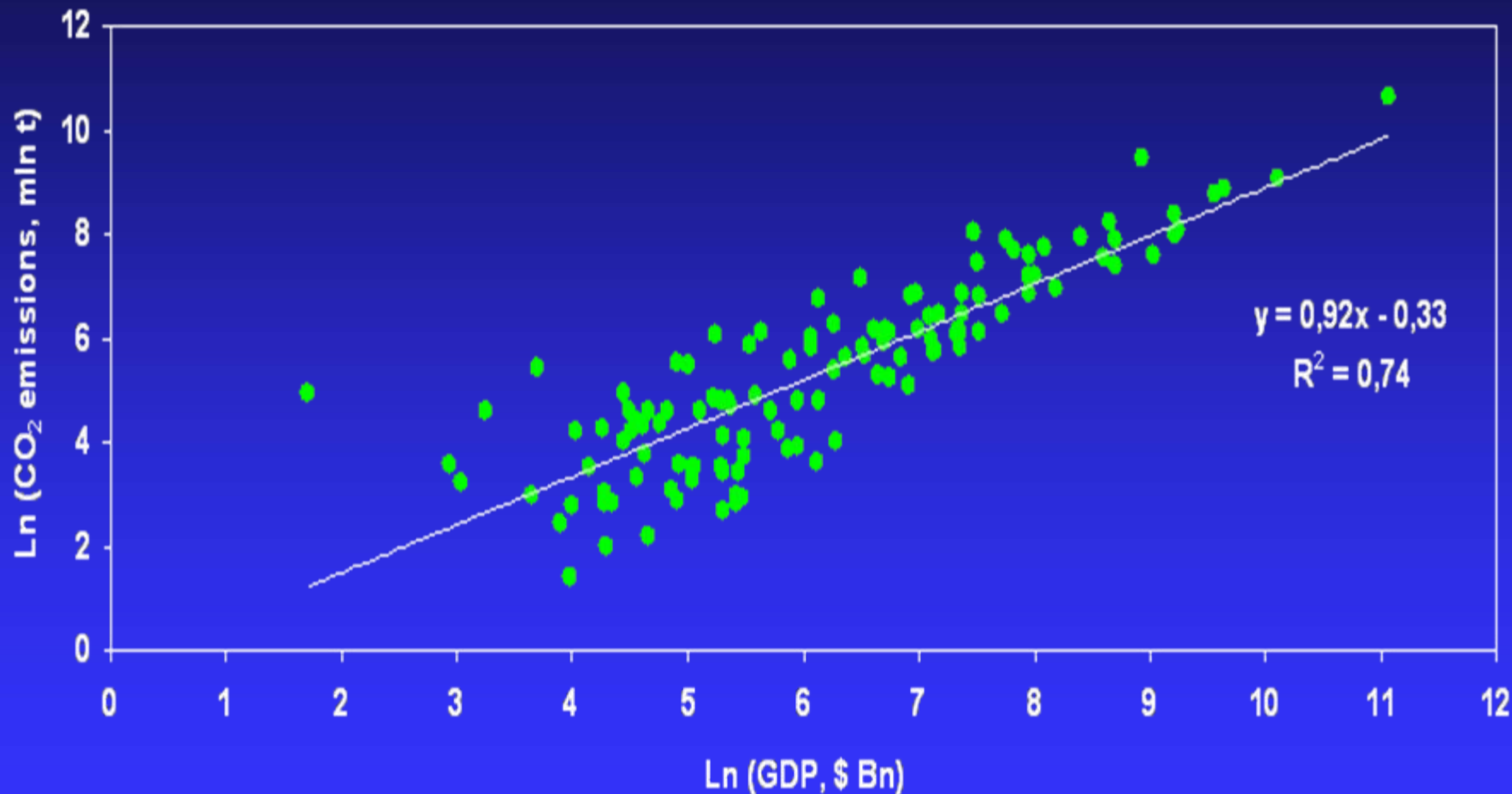
Energy consumption and CO₂ emissions in 124 countries, 1992-1999



Source: World Resources Institute, International Energy Agency.

Economic growth and CO₂ emissions are strongly correlated.

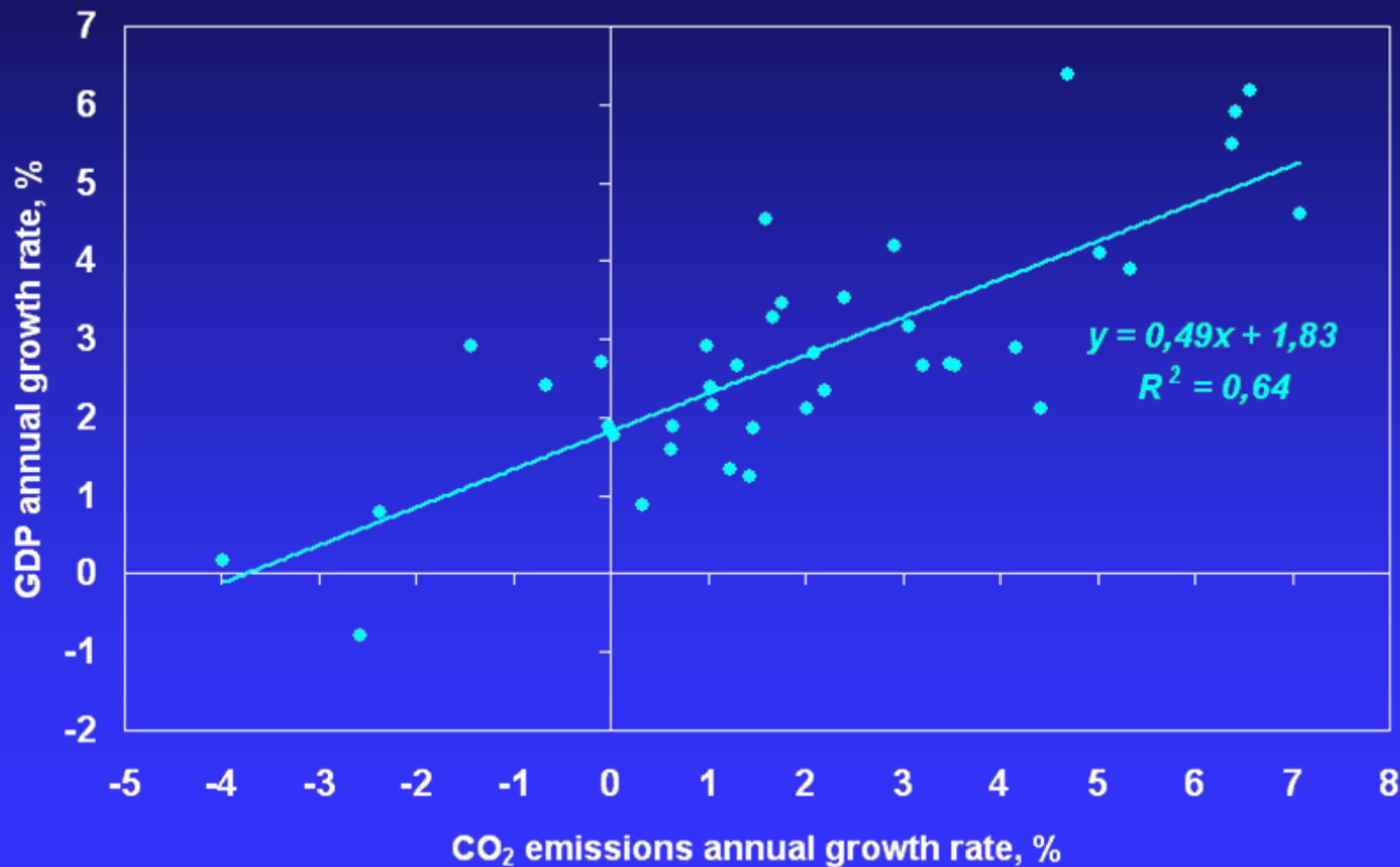
GDP growth and CO₂ emissions in 124 countries, 1992-1999



Source: International Energy Agency, IMF.

Limitations in carbon dioxide emissions are incompatible with GDP growth and wealth accumulation.

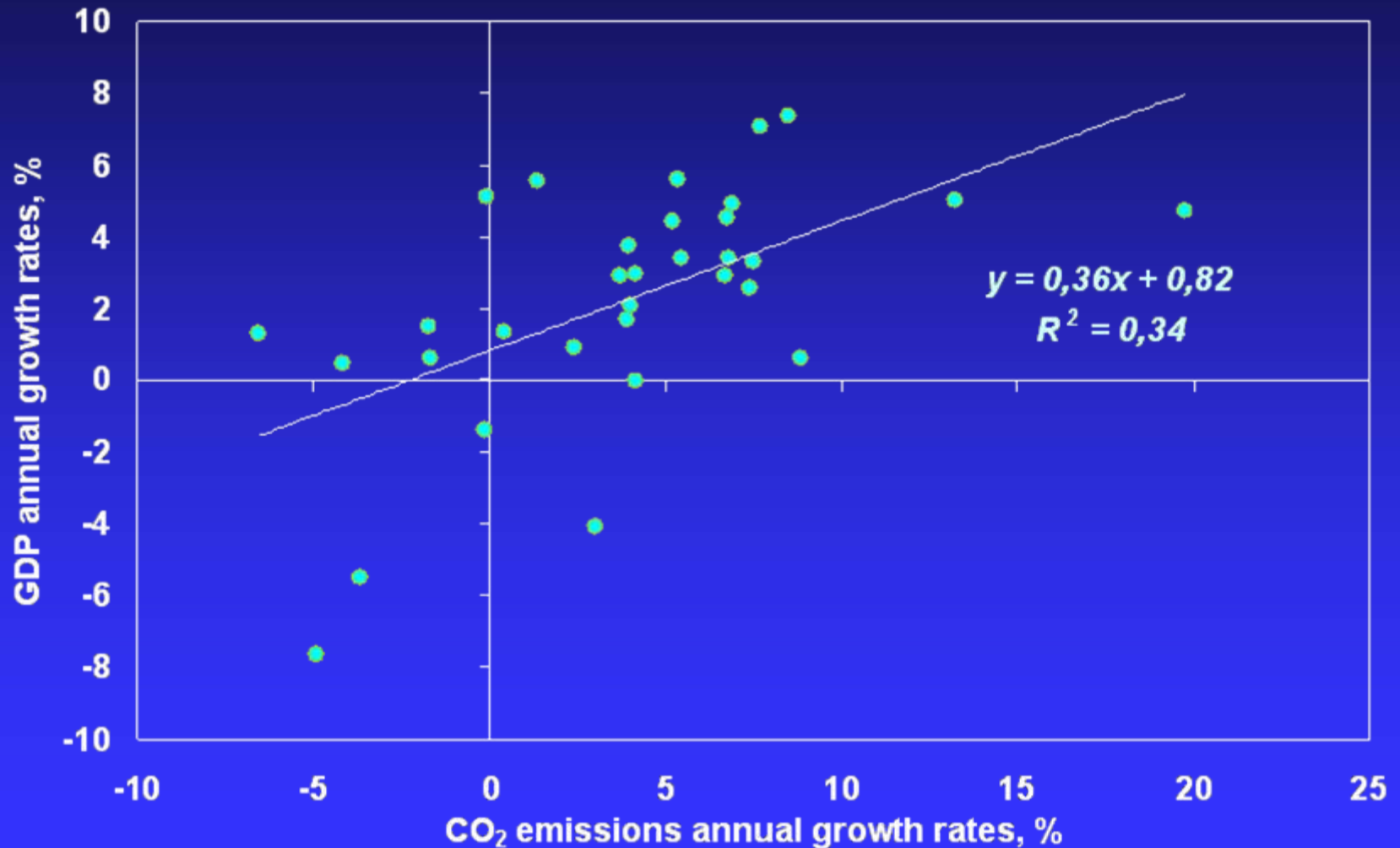
CO₂ emission and GDP growth in 39 *high-income* countries, 1991-2000



Source: International Energy Agency, IMF.

Limitations in carbon dioxide emissions are incompatible with GDP growth and poverty reduction.

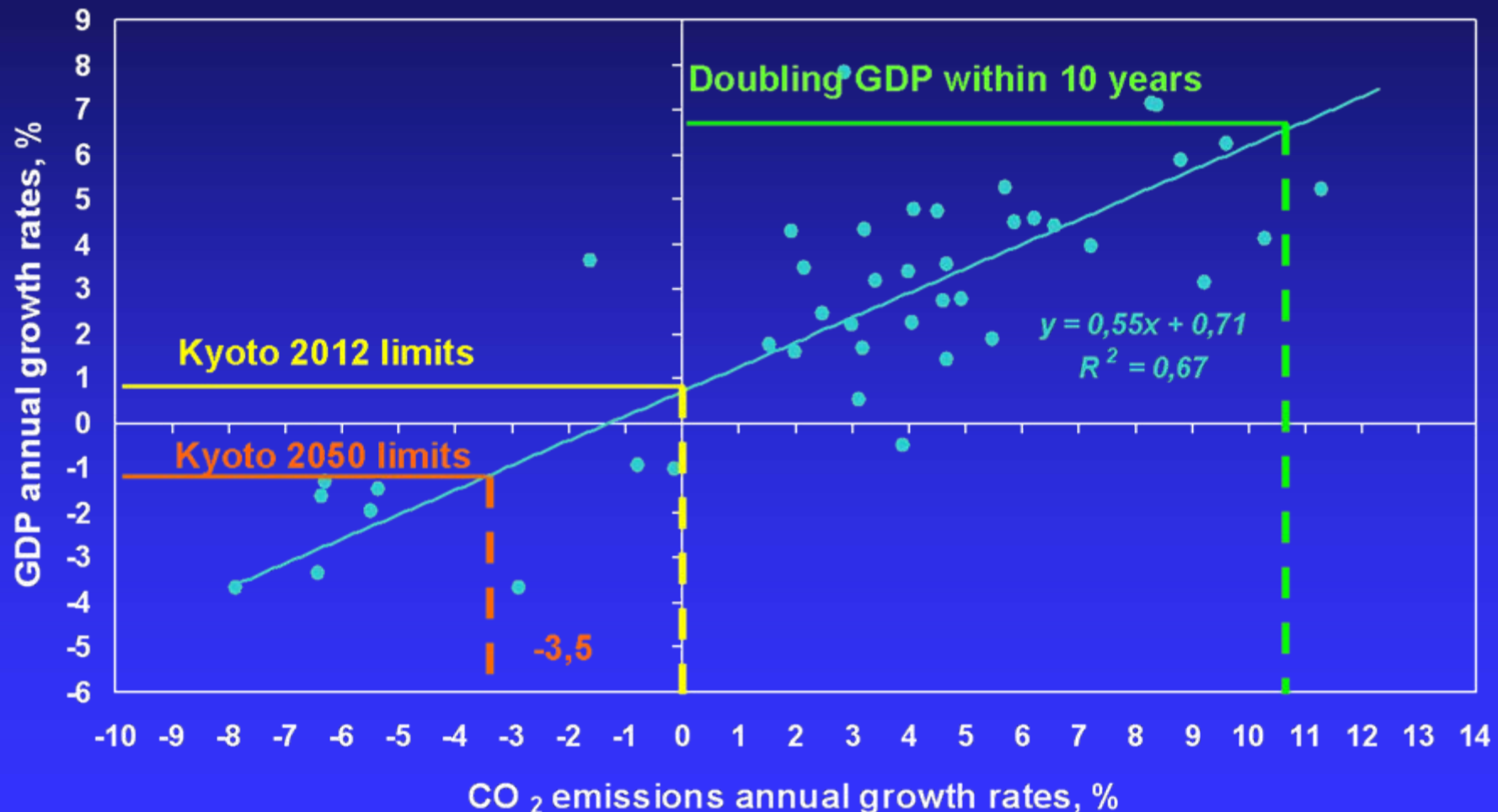
CO₂ emissions and GDP growth in 32 *low-income* countries, 1991-2000



Source: International Energy Agency, IMF.

Limitations in carbon dioxide emissions are incompatible with economic growth and social progress.

CO₂ emissions and GDP growth in 44 *middle-income* countries, 1991-2000



Source: Carbon Dioxide Information Analysis Center, IMF.

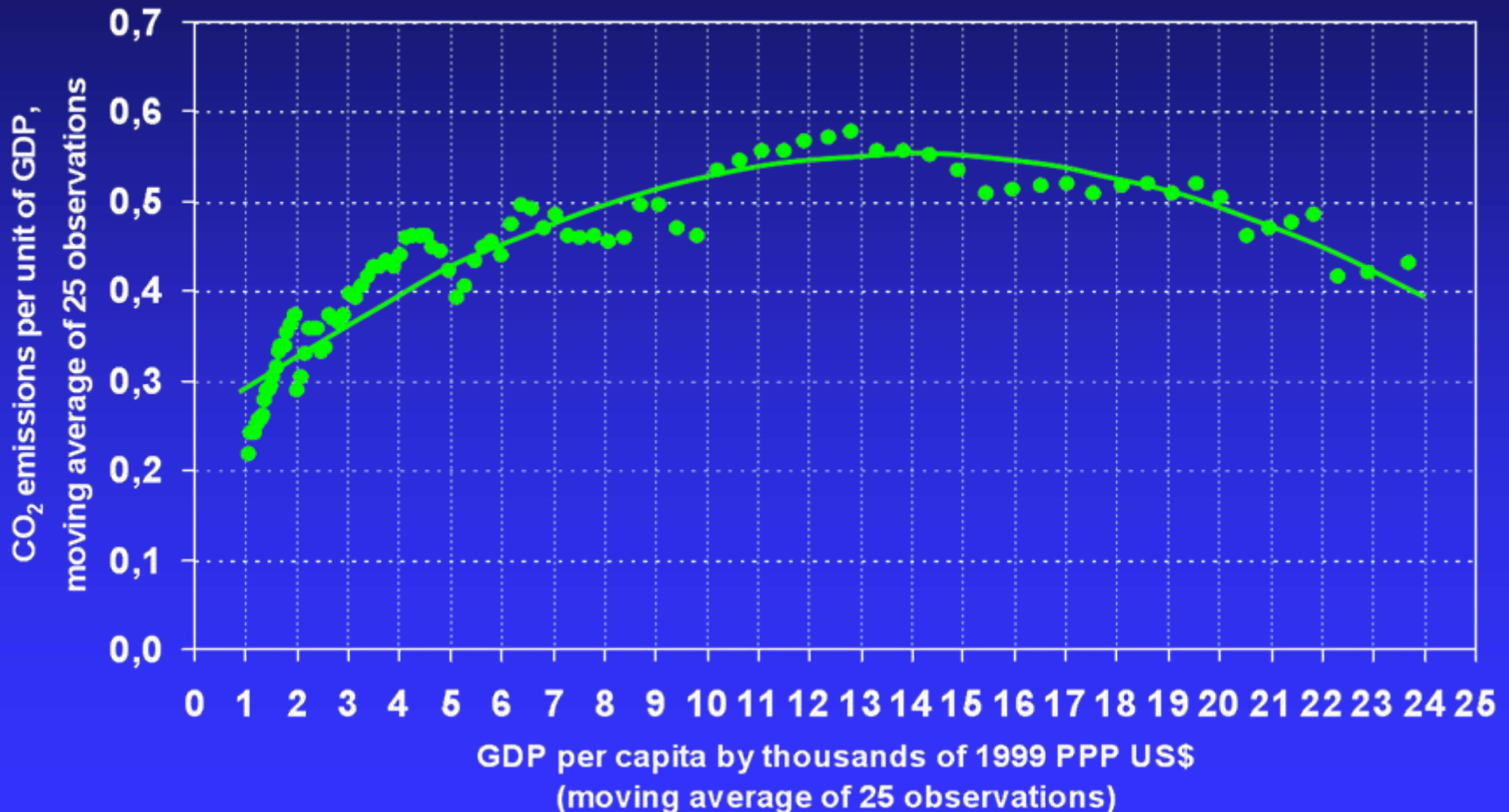
CONCLUSION 9:

The Kyoto Protocol is incompatible with economic growth and sustainable development.



Limitations in carbon dioxide emissions
are particularly discriminatory
against low- and middle-income economies.

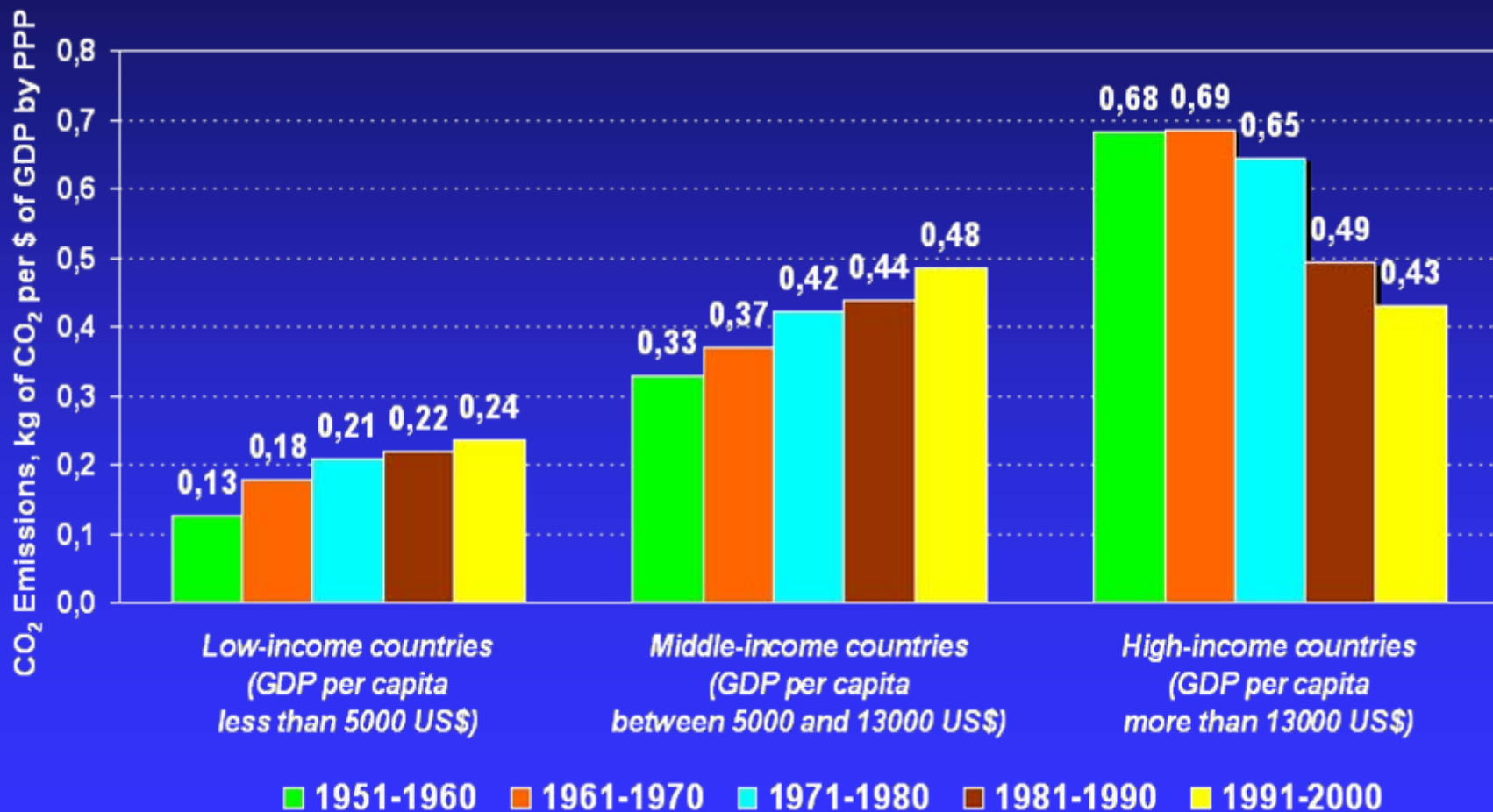
Kuznets curve. GDP per capita and CO₂ emissions per unit of GDP



Source: Carbon Dioxide Information Analysis Center, IMF.

Whereas high-income countries reduce their CO₂ intensity of GDP as they grow, low- and middle-income countries first increase CO₂ intensity of GDP as their GDP rises.

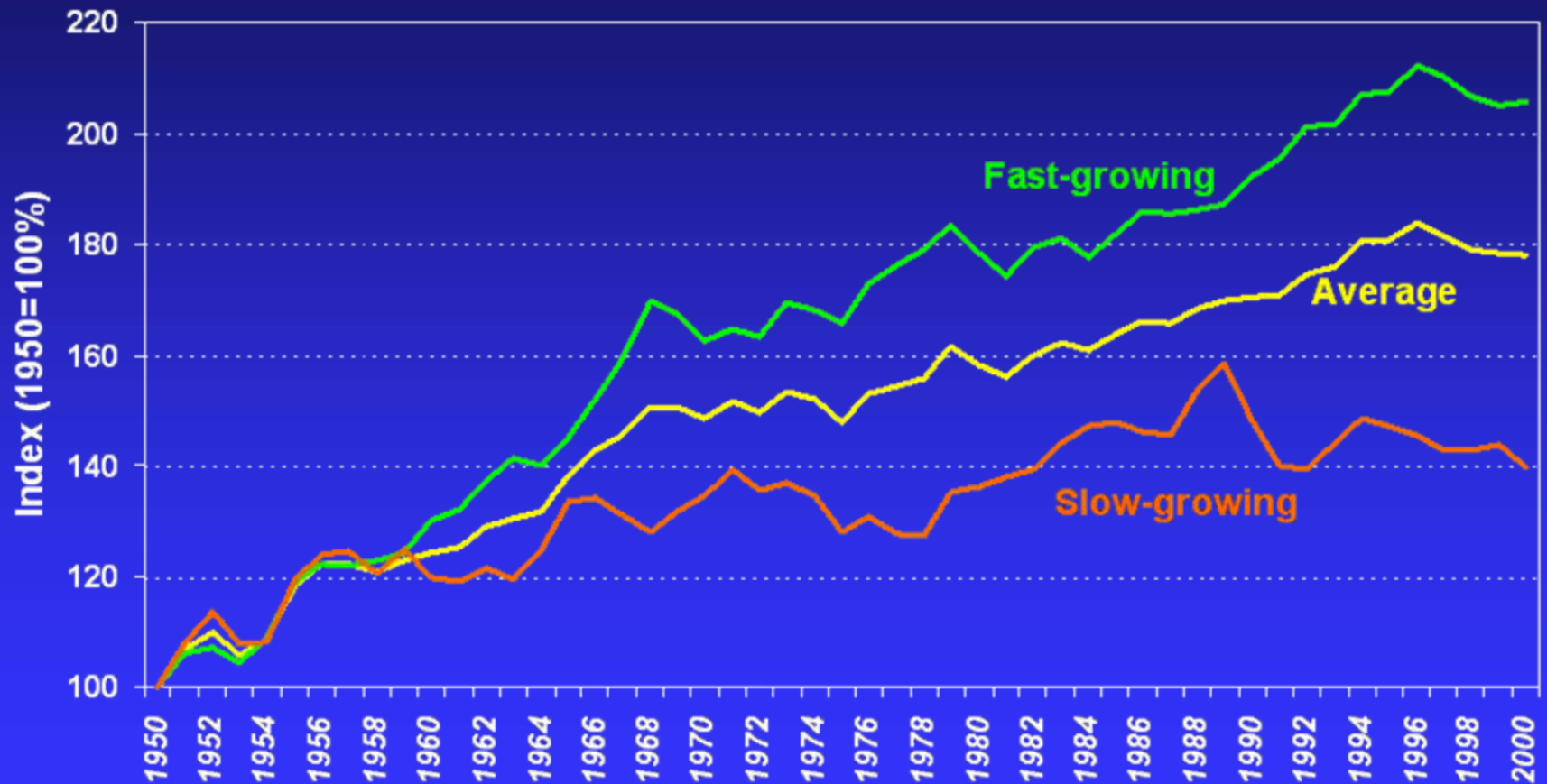
CO₂ emissions per unit of GDP in low-, middle- and high-income countries by decades, 1950-2000



Source: Carbon Dioxide Information Analysis Center, IMF.

Limitations in carbon dioxide emissions
are particularly discriminatory
against fast-growing economies.

CO₂ emissions per unit of GDP
in fast- and slow-growing middle-income countries (1950=100%)



Source: Carbon Dioxide Information Analysis Center, 2003.

CONCLUSION 10:

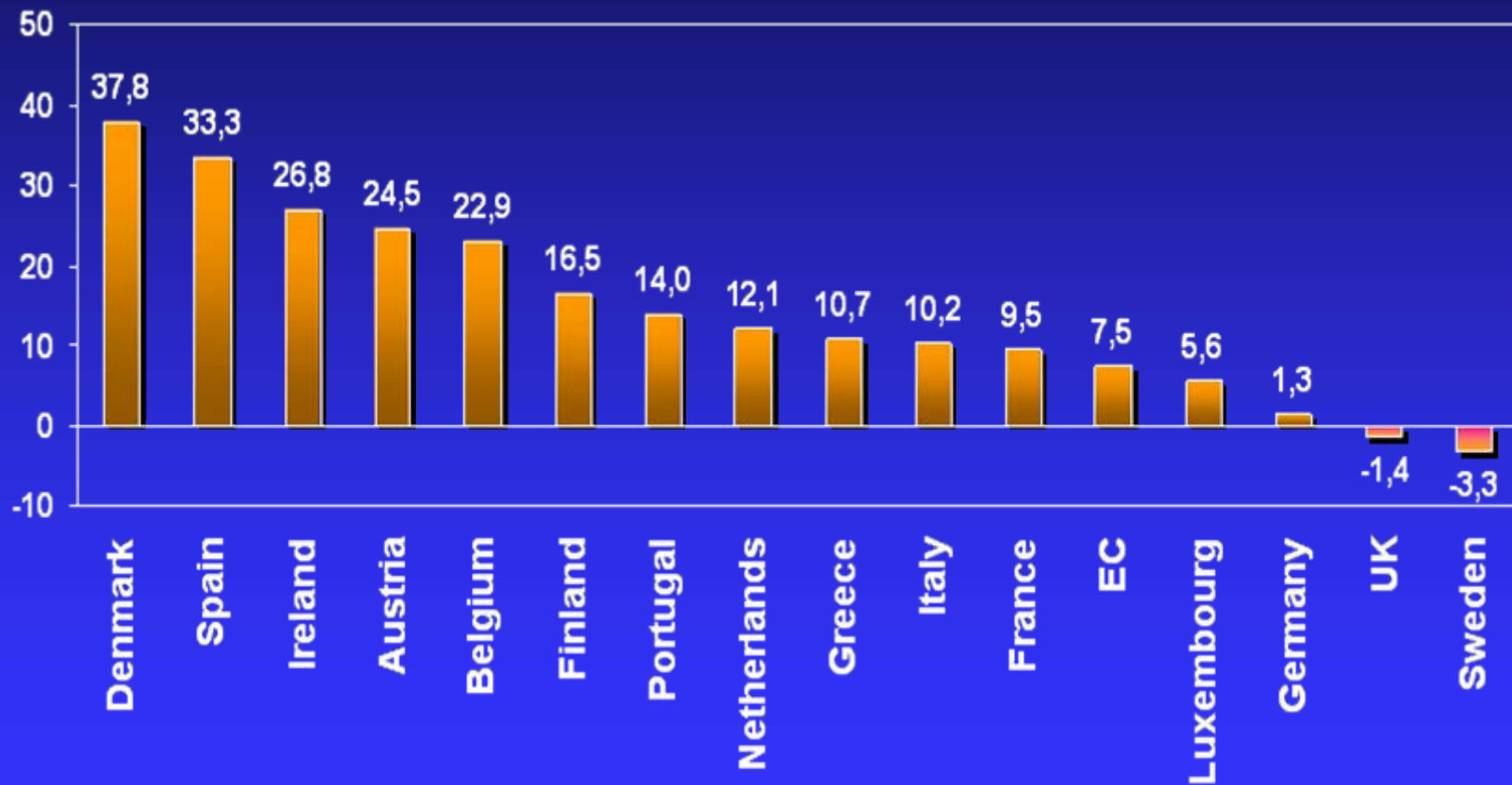
The Kyoto Protocol is particularly discriminatory against low- and middle-income economies.



The Kyoto Protocol is penalizing the best growth performers in the EU.

The projected gap in 2010 between the EU Member States' Kyoto commitments and their total projected emissions "under existing policies."

Gap of the Base (1990) year, %



Source: Commission of the European Communities, Report from the Commission under Council Decision 93/389/EEC as amended by Decision 99/296EC for a monitoring mechanism of Community greenhouse gas emissions. COM(2003) 735 final. Brussels, 28.11.2003, p. 12. ©ИЭА

Limitations in carbon dioxide emissions in developed economies are associated with slow GDP growth and slow progress in reduction of CO₂ intensity of GDP.



Source: International Energy Agency, IMF.

CONCLUSION 11:

The Kyoto Protocol penalizes fast-growing economies.



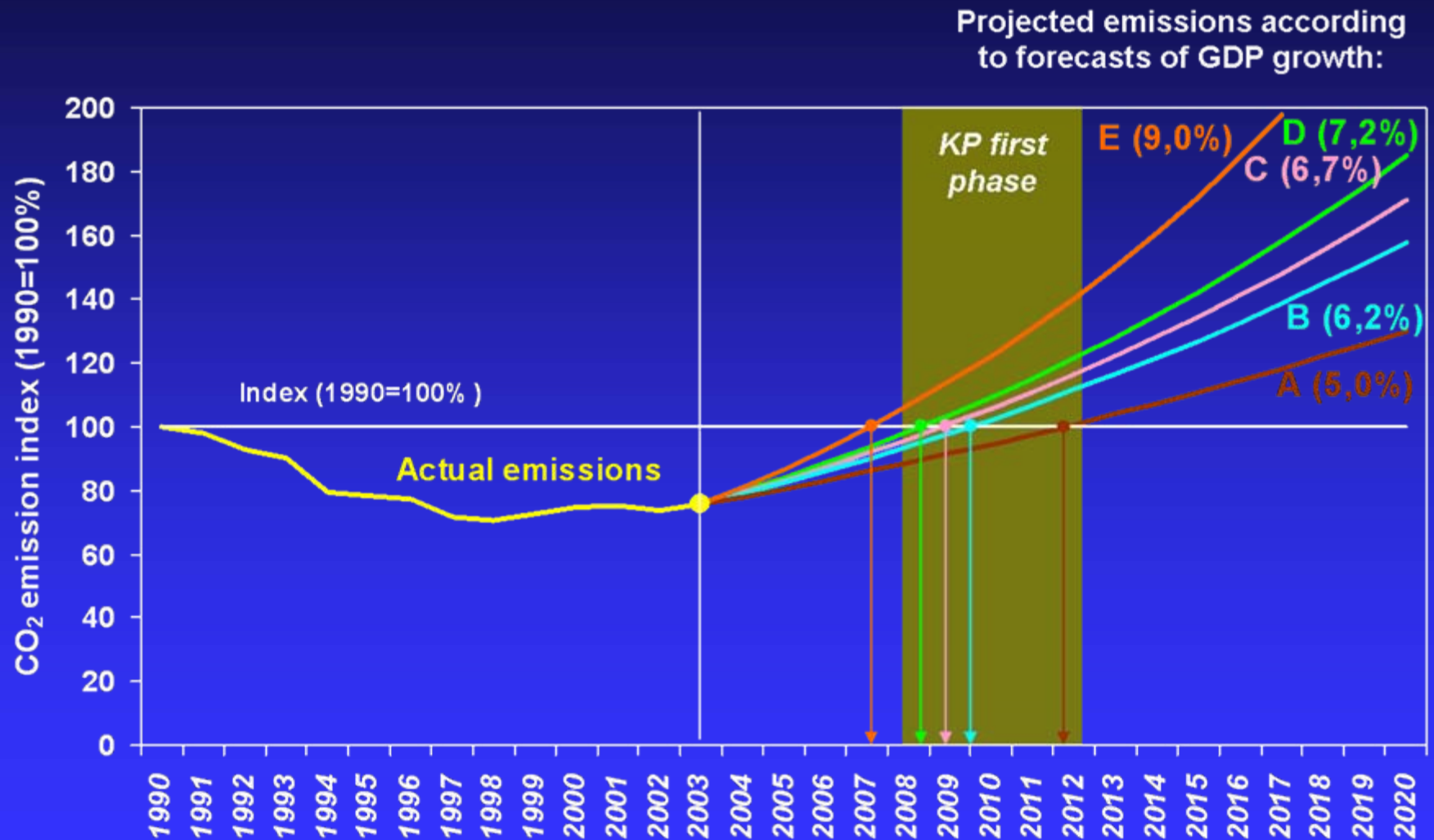
CONCLUSION 12:

The Kyoto Protocol is ineffective in achieving higher economic efficiency as measured by a reduction in CO₂ intensity of GDP.



Russia's **CO₂** emission will exceed the 1990 level in 2007-2012.

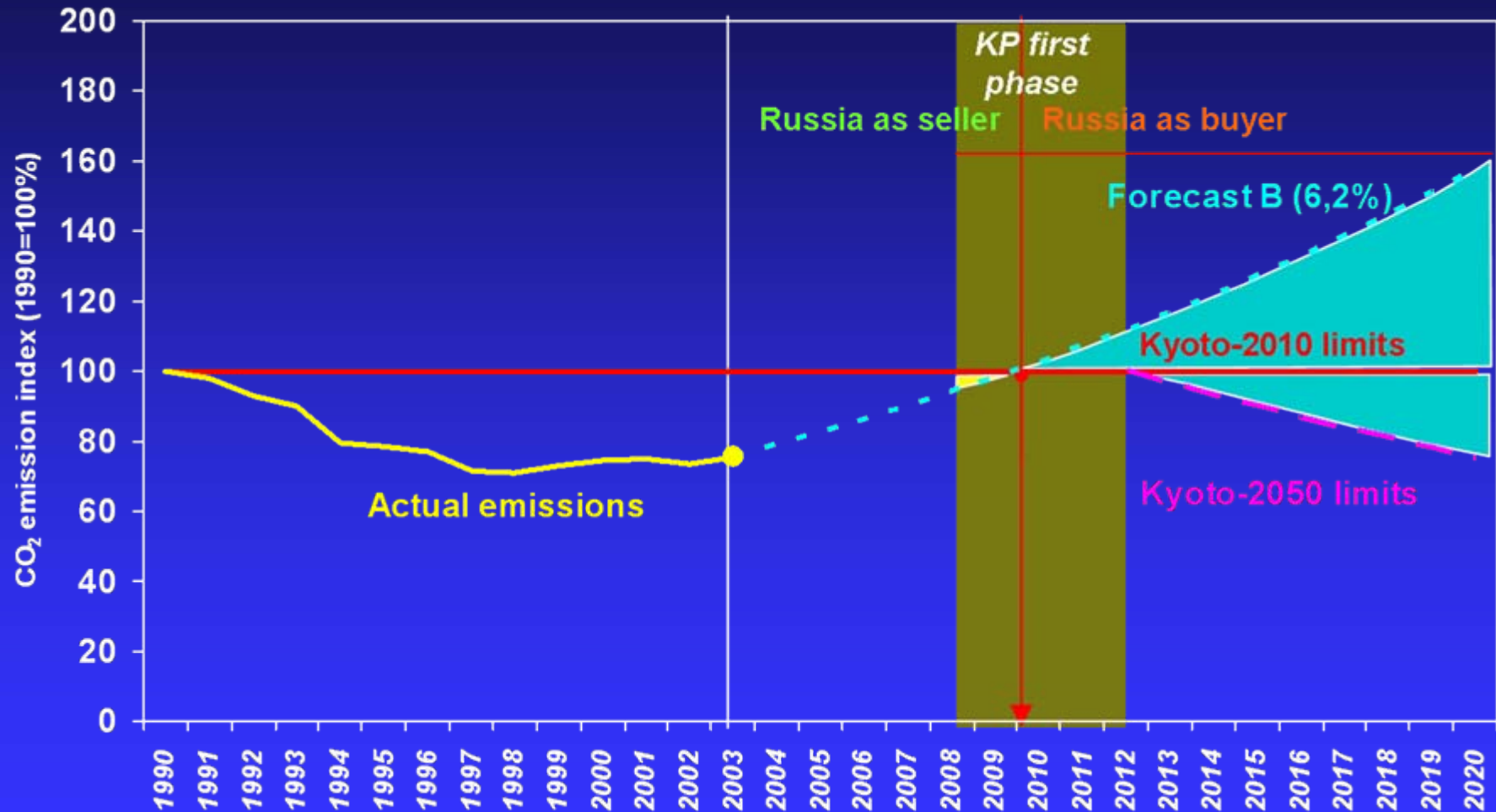
CO₂ emissions (1990=100%): actual in 1990-2003 and forecasts for 2004-2020



Russia's Kyoto Cross.

Under the Kyoto Protocol, after 2010 Russia will be a buyer, not a seller of CO₂ quotas.

Russia's actual CO₂ and forecasted emissions, and Kyoto limits for Russia (1st and next phase)



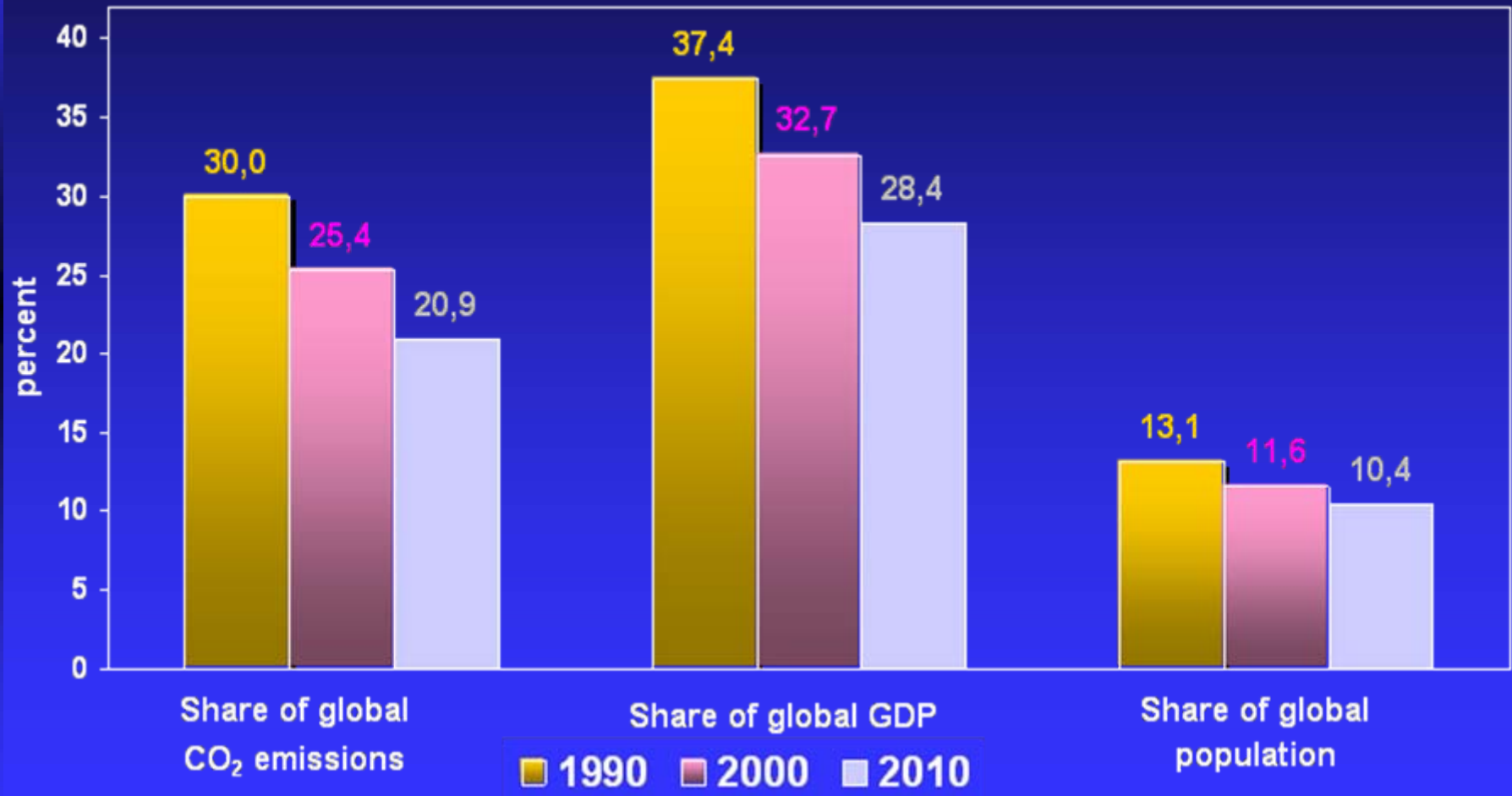
CONCLUSION 13:

The Kyoto Protocol is harmful for economic growth in Russia.



The Kyoto Protocol is supported by a minority of countries. The world majority (178 countries out of 210, or 85%) did not adopt Kyoto Protocol limits on CO₂ emissions.

Share of the UNFCCC Annex B countries in the world aggregates



Source: Carbon Dioxide Information Analysis Center, IMF.

CONCLUSION 14:

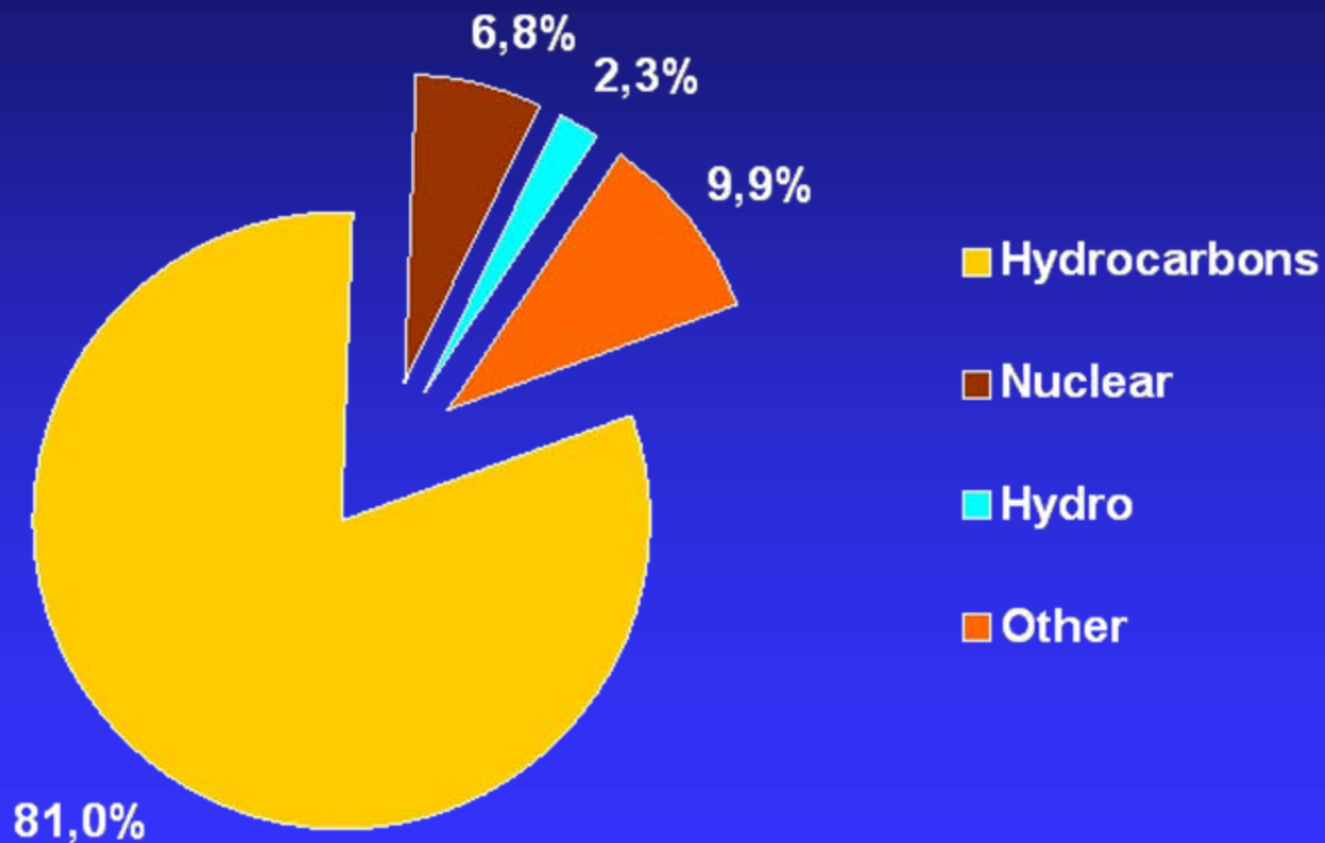
The Kyoto Protocol is *not* universal.

It is supported by the world's minority.



It's impossible to switch away from hydrocarbons to another energy base in a short period of time.

World energy consumption by source of origin, 2000



Source: World Resources Institute.

CONCLUSION 15:

The Kyoto Protocol is based
on technological illusions.



CONCLUSION 16:

From an economic point of view,
the Kyoto system of mandatory restrictions
and penalties is an Orwellian nightmare.

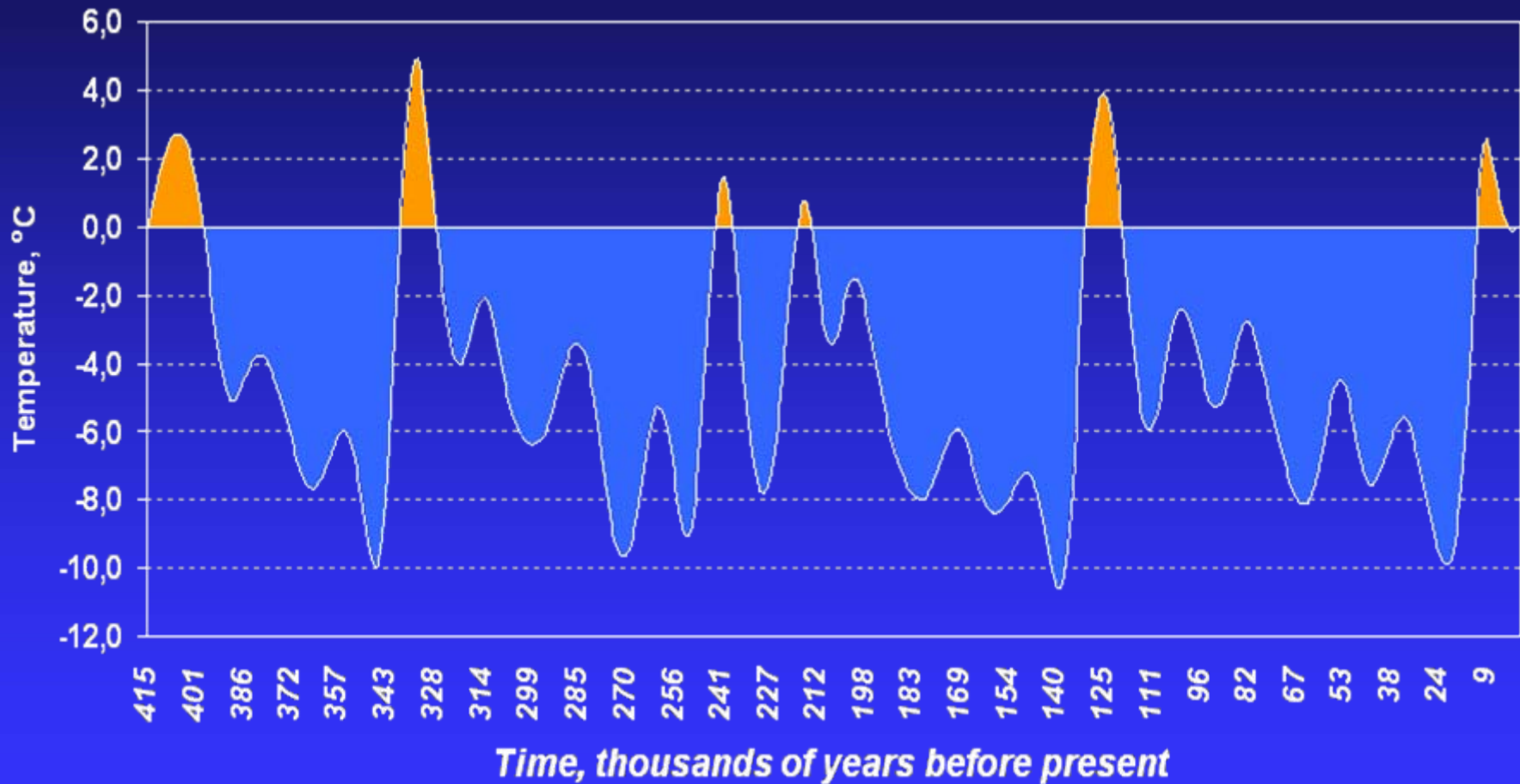


Kyoto's rationale
for human civilization –
or the lack thereof.



Civilization emerged only during
the last 12,000 year-long global warming
which followed 107,000 year-long ice age.

Temperature variability over last 415 000 years.



Source: Petit J.R., Jouzel J., Raynaud D., Barkov N.I., Barnola J.M., Basile I., Bender M., Chappellaz J., Davis M., Delague G., Delmotte M., Kotlyakov V.M., Legrand M., Lipenkov V.Ya., Lorius C., Pepin L., Ritz C., Saltzman E., Stievenard M. Climate and atmospheric history of the past 420,000 years from the Vostok ice core, Antarctica. *Nature*, vol. 399, N 6735, 3 June 1999, pp. 429-436.

Global temperature was *above* its current level for only 58 thousand years out of the last 415 thousand years (for 14% of this period).

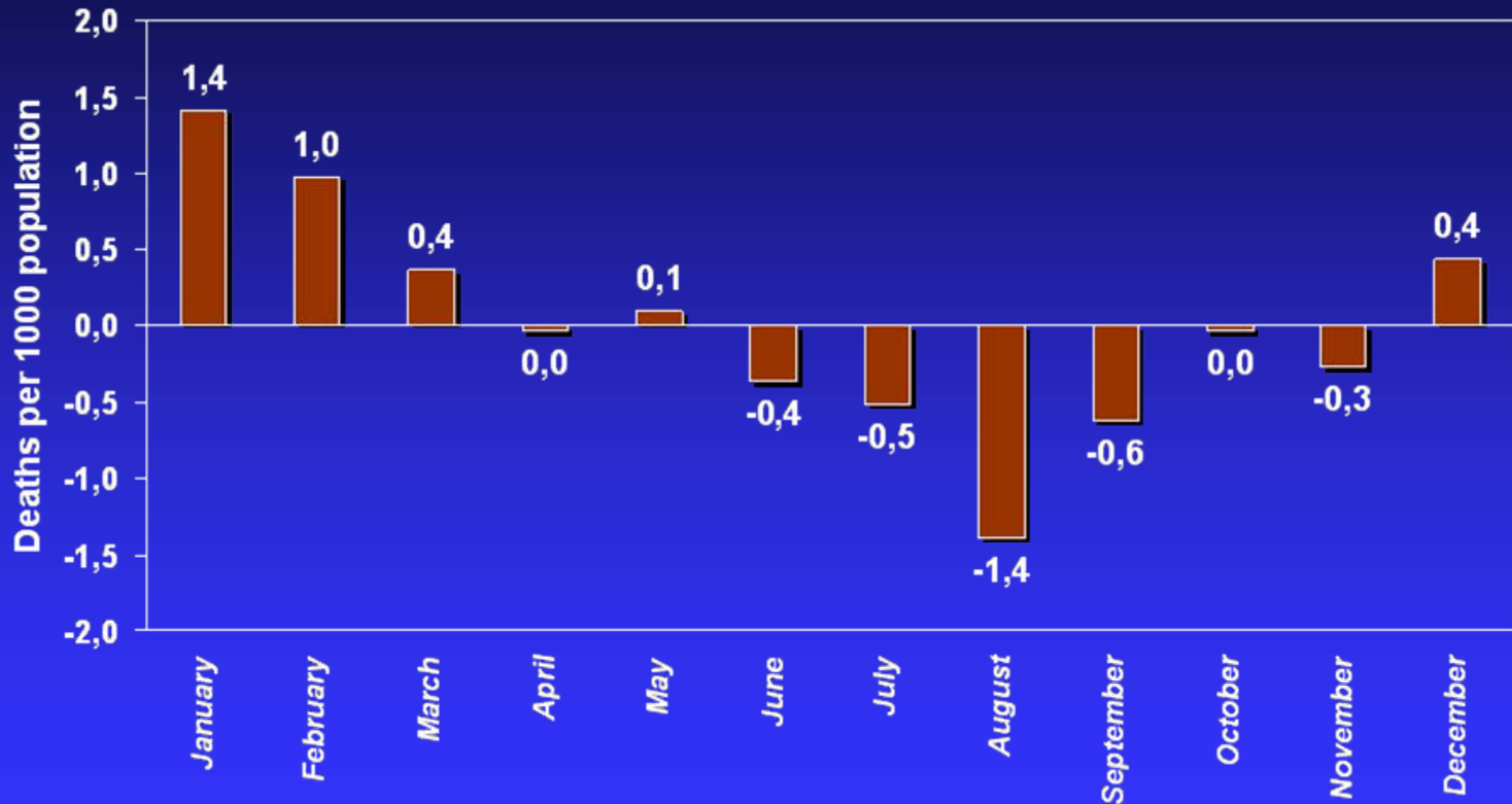
Global temperature was *lower* than its current level for 357 thousand years out of the last 415 thousand years (for 86% this period).

Global temperature last peaked 9,000 years ago, and then embarked on a long-term *downward* trend.



Mortality is sensitive to air temperature.

Russia's mortality seasonal deviations, 1997-2003



Source: Goskomstat RF.

According to the Kyoto Protocol, national and supranational bureaucratic monsters must be created.

They will ration emissions and therefore economic activity worldwide.

The fate of countries, industries, companies, and ultimately individuals around the world will depend on them.



FINAL CONCLUSION:

Kyoto-ism is the most broad-based,
the most intrusive and the most aggressive
assault on basic human freedoms
since the collapse of fascism and communism.

