

PROFESSOR STEWART'S  
CONTRIBUTION.

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W0621

MR POWELL

Sections outlined  
in yellow are  
his. *WDS*

29 October 1990

WORLD CLIMATE CONFERENCE

*Edn with COP-*

You asked for a few possible paragraphs. I have incorporated these (yellow lined) into this text.

2. Having spoken to Caroline Slocock today, I appreciate that I may have been too cautious but let me know if I can help further.

*WDS*

PROFESSOR WILLIAM D P STEWART  
Chief Scientific Adviser

a:second

2168 words

DRAFT SPEECH

FOR THE

PRIME MINISTER

TO

THE SECOND WORLD CLIMATE CONFERENCE

Introduction

Since the last World War, our world has faced many challenges, none more vital than that of defending our liberty and keeping the peace. Gradually and painstakingly we have built up the habit of international cooperation, above all through the United Nations. The extent of our success can be seen in the Gulf, where the nations of the world have shown unprecedented unity in condemning Iraq's invasion and taking the measures necessary to reverse it. We are determined - all of us - to ensure that aggression does not succeed, does not pay.

But the threat to our world comes not only from tyrants and their tanks. As we know with increasing certainty, it can be more insidious

even though less visible. The danger of global warming is as yet unseen. But it is nonetheless real: real enough for us to make present changes and sacrifices for the benefit of future generations.

Our ability to come together to stop or limit damage to the world's environment will be perhaps the greatest test of all of how far we can act as a world community. No-one should under-estimate the imagination that will be required, nor the amount of scientific research, nor the unparalleled co-operation. We shall have to show statesmanship of a rare order. If we did not know that, we would not be here today.

Living in harmony with Nature.

For millions of years our global ecosystem has existed as a delicate and intimate balance between the plants and animals which are component of it. The plants, through photosynthesis have generated the oxygen which the animals require to breathe; in return the animals have generated the carbon dioxide essential for plant growth.

During evolution a biological deal was struck which was of mutual advantage.

It has given us the rich biological diversity of Africa and South America, the beauty of Antarctica, the marine Flora and Fauna of the Pacific Rim and its islands; the food producing crops on which we depend.

The biological balance has provided on this planet a safe and secure habitat in which man has prospered

But just as Columbus showed that the Earth was not flat; as Darwin discovered that species were not immutable, we have, belatedly, come to realise that man's activities and numbers threaten to destabilise the biological balance which we have taken for granted and on which human life depends.

On the environment we have been unthinking rather than deliberately uncaring.

Insensitive rather than deliberately inconsiderate.

New 4A

We have treated the environment with short-term subjectivity rather than long-term objectivity.

We, as a world community, are learning late - but not too late - of the need to live in harmony with Nature.

In the United Kingdom, my Government has already completed and published a White Paper on the Environment.

It charts out what the Government has done, what it is doing, and what it shall do on every aspect of the Environment. It is the most thorough analysis ever carried out on environmental issues and it is openly available for all to consider, to analyse and to comment upon. Everyone has a role to play in helping to protect the environment.

Most of these policies in the White Paper are not obligatory; they are not demanded by existing legislation. We are raising them as policy objectives because we care about the environment - just as all of us here today care.

Man and Nature: out of balance

We have become more and more aware of the threat posed by our unbalanced relationship with Nature. For two centuries, since the Age of Enlightenment, we assumed that whatever the advance of science, whatever the development of our economics, whatever the increase in the numbers of humanity, the world would go on much the same. It was progress. And that was what we wanted.

Now we know that this is no longer true. In recent years, we have been playing with the very make-up of our planet. We have cared too little for our seas, our forests and our land. We have treated the atmosphere like a dustbin.

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We must remember our duty to Nature before it is too late. That duty is never completed. It lives on as we breathe. It endures as we eat and sleep, work and rest, multiply and pass away. The duty to Nature will remain long after our own endeavours have brought peace to the Middle East. It will weigh on our shoulders for as long as we wish to dwell on a living and thriving planet, and hand it on to our children and theirs.

I want to pay tribute to the important work which the United Nations has done to advance our understanding of global warming. Dr. Tolba and Professor Obasi deserve our particular thanks for their far-sighted initiative in establishing the Intergovernmental Panel on Climate Change.

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It is worth pausing to recall two of the key factors which led to an appreciation of the problems of global Global Warming and Climate Change.

First there was the discovery by the British scientist Joe Farman that in Antarctica released weather balloons were disappearing through a hole in the atmosphere.

A small team, led by an innovative scientist, with sound logic, backed by the dedicated infrastructure of the British Antarctic Survey made this discovery possible.

Second, greenhouse warming. Temperature measurements collected on a local basis, coordinated nationally and internationally and modelled on an international basis with dedicated, underpinning, first class equipment has led to an appreciation that global warming was occurring.

The individual contributed locally, the national, and international <sup>perspectives</sup> ~~lens~~ and global policies develop and are implemented.

We must now progress that international template as we thrust forward into the next century as a caring community in control of our own destiny.

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The IPCC report is a remarkable achievement. It is almost as difficult to get a large number of distinguished scientists to agree as it is to get agreement from a group of politicians. As a scientist who became a politician, I am perhaps particularly qualified to make this observation!

Of course, much more research is needed. We do not yet know all the answers; some uncertainties and doubts remain. No-one can yet say with certainty - the IPCC report is very careful on this point that it is man's activities which are causing the increase in global warming. For instance, the total amount of carbon dioxide reaching the atmosphere each year from natural sources is some 600 billion tonnes, while the figure from human sources is

18 billion tonnes.

Global climate change within limits need not by itself pose serious problems - our globe has seen a great deal of climate change over the centuries. The real dangers arise when it is combined with other problems of our age, such as the population explosion and consequent deterioration of soil fertility, and increasing pollution of the sea; and when we reduce nature's capacity to absorb CO<sub>2</sub> by cutting down the tropical forests.

What we are doing now is superimposing damaging man-made activities on top of natural perturbations.

By increasing soil erosion, by depleting soil fertility, by polluting both freshwater and the seas, by adding greenhouse gases to the air at an unprecedented rate.

To put it in perspective. Life has been present on Earth for some 3,000 - 4,000 million years and almost from the start there has been an ozone layer which has protected the organisms on land from harmful ultraviolet light.

Since the start of the industrial revolution <sup>18</sup> ~~only 100~~ <sup>around 200</sup> years ago, man's activities have led both to a thinning of the ozone layer, and to an annual increase in the production of carbon dioxide of some three billion tonnes per year.

The difference now is the scale of the damage and the rapidity with which it is occurring.

We have reached agreement on how to deal with the emission of CFCs.

We must progress in concert with nature to deal with the problem of CO2 emissions.

One of the major questions relating to CO2 is whether or not the natural balance which has persisted since life evolved on Earth will be able to self-regulate in time to deal with increased man-made emissions.

It is notable that the micro-organisms - the blue-green algae - which dominated the Precambrian period at the dawn of life are still major components of the marine phytoplankton today. Despite the global perturbations of many millions of years these microbes have persisted on Earth, virtually unchanged, pumping out life-giving oxygen into the atmosphere and mopping up CO2.

Biological systems will surely survive enhanced greenhouse warming - but will man be one such system?

Britain will continue to play a leading role in trying to answer the remaining questions and to advance our state of knowledge of climate change. This year, we have established the Hadley Centre for Climate Prediction and

Research for this purpose. We need to improve in particular our understanding of the effect of the oceans on our weather and our capability to model climate change. I have seen for myself the outstanding work being done on both these subjects at the National Center for Atmospheric Research in Boulder, Colorado.

We must also make sure that research is carefully targeted. As the number of institutions increase, we have danger of overlap and duplication.

The need for precautionary action

But the need for more research should be no excuse for failing to act. There is already a

clear case for precautionary action at an international level. The IPCC tells us that we cannot repair the effects of past behaviour on our atmosphere in the same way as we might cleanse a stream. It will take, for example, until the second half of the next century, until the old age of my grandson, for the hole in the ozone layer above the Antarctic to disappear. Greenhouse gases will endure in the upper atmosphere for just as long.

The IPCC tells us that, on present trends, the earth will warm up faster than at any time since the last ice age. The consequences could be irreversible - irreversible, at least, for as long as humanity today would care to contemplate. Homes would be consumed by the sea. Species would migrate to different zones

or disappear for ever. Forests would move. And deserts would advance as green fields retreated.

Many of the precautionary actions that we need to take would be sensible in any event. It is sensible to develop sustainable sources of fuel supply; sensible to use energy prudently; sensible to take care of the world's store of energy; sensible to replant the forests which we consume. I understand that the latest vogue is to call this a 'no regrets' policy - and it seems a serviceable description.

And our uncertainties about climate change are not all in one direction. The margins of error in the IPCC report are admittedly great. Climate change may be less than predicted. But

equally it may occur more quickly than the present computer models suggest. Should this happen it would be doubly disastrous were we to shirk the challenge now. Nor can we be entirely sure of how global warming could change our weather. Violent storms, droughts and floods could become more regular occurrences. We cannot afford to take that risk.

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The precautionary principle is crucial.

The population of the world is increasing rapidly - at a current rate of 10,000 extra hungry to feed every hour.

The world's population is expected to double within 30 years.

These populations should have the expectation of improved standards of living - and it is up to politicians to facilitate those expectations.

Climate change, however, will impinge on all our aspirations. Let me take water supply as an example.

Water is vital to our success and survival. Over 90% of virtually every living organism on Earth - including man - is water.

Even in South-East England crop production is limited eight years out of ten by a water shortage. There is a much greater water shortage in the Mediterranean countries, in the Middle East and in many parts of Africa. In the Sahel desertification is continuing to increase. The availability of water affects our food supplies, our health, the well-being of each and every one of us. It is also a powerful political weapon.

The IPCC study emphasises that climate change will affect rainfall and soil moisture levels in almost all regions of the world.

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Temperate summers, when most crops grow may become drier; winters wetter. In the Sahel the soils may become even drier; in South East Asia more rain - and more flooding. Sea levels are expected to rise.

As responsible politicians how can we realistically plan our national long term strategies on issues such as flood barriers, irrigation systems, crop production, energy, transport and communications and industrial competitiveness without more knowledge on how climate change will impinge on each of our countries.

We need soundly based modelling data which the IPCC action plan can provide.

In addition to the need for local information, our most urgent need is to take agreed joint international action to minimise the damage that we may be causing.

For that environmental diplomacy is essential.

The need for environmental diplomacy

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We are all aware of the immense challenge. The enormity of the task should not drive us to despair. We have already established a model of international environmental diplomacy to deal with ozone depletion. For the first time ever, rich and poor nations alike set out together to save our planet from a serious

danger. This painstaking work culminated in the historic agreement reached in London this year. That agreement is a real beacon of hope for the future.

The main focus in London was on protecting the ozone layer. But the agreement will have other consequences. We should not forget that CFCs are 10,000 times more powerful, molecule for molecule, than carbon dioxide as agents of global warming. We must focus on all greenhouse gases if we are to be successful in slowing the rate of climate change to acceptable levels.

Of course, at the present time, carbon dioxide is by far the most important greenhouse gas. It contributes around half the manmade

greenhouse warming. All our countries are sources of it. The latest figures which I have seen show that 14 per cent of carbon dioxide emissions come from Western Europe, 24 per cent from North America, 25 per cent from the Soviet Union and Eastern Europe and 28 per cent from the less developed countries. These figures underline why a joint international effort to curb CO<sub>2</sub> is so important. There is little point in action to reduce the amounts of carbon dioxide being put into the atmosphere in one part of the world, if the amounts are promptly increased in another.

The United Kingdom is prepared, as part of an international effort, to set itself the demanding target of returning carbon dioxide emissions to this year's level by 2005. That

will mean stabilising emissions before that date. Taken together with action in other areas, this would lead to a cut in our present contribution to greenhouse warming from all gases before the turn of the century.

Targets on their own are not enough. They have to be achievable. We have spelt out a strategy which sets us on the road to achieving the target. We propose ambitious programmes both to save energy and to encourage the use of cleaner fuels. Many of the measures we propose have little or no cost, and we shall get on with those as quickly as possible.

We now require, by law, that at least 20% of our electricity comes from sources which do not generate carbon dioxide. We plan a tenfold

increase in power from renewable sources. We also envisage a continuing important contribution from nuclear energy.

Measures like these - which increasing numbers of countries are adopting - should be seen as the premium on an insurance policy. They buy us insurance against the possibility of unprecedented climate change: but they also pay dividends even if catastrophe does not materialise - dividends such as less air pollution, lowered acid rain, reduced energy costs.

We also wish to contribute to conserving the world's forests, and to planting new ones. Trees help to reduce global warming. We intend to plant more at home. We have just

announced our plans to replant one of the ancient forests of England - destroyed in an earlier phase of our development. We shall offer our expertise and aid funds to help plant and manage forests in developing countries. A year ago I told the UN General Assembly that the UK would aim to increase its funds for tropical forestry by f100m: we now have 115 projects underway in more than 30 countries.

The need for a Global Convention

But our immediate task this week is to carry as many countries as possible with us on the road to negotiating a successful framework convention on climate change in 1992. We must also begin work on the binding protocols that will be necessary to make the convention work. To accomplish these tasks, we must not waste

time and energy disputing the IPCC's report or debating the right machinery for making progress. The IPCC's work should be taken as our sign post and the United Nations Environment Programme and the World Meteorological Organisation should be the principal vehicles for reaching our destination.

We will not succeed if we are too inflexible. we will not succeed if we try to take environmental diplomacy into selfrighteous point-scoring for the benefit of audiences and voters at home. We have to work sympathetically together. We have to recognise that continued economic growth in all our countries - not only to raise living standards but to generate the wealth required to pay for

protection of the environment. It would be absurd to adopt policies which would bankrupt the industrial nations or doom the poorer countries to increasing poverty. We have to recognise the widely different circumstances facing individual member states, with the better-off assisting the poorer as we agreed to do under the Montreal Protocol on the ozone layer.

The differences can't be drafted away in communiqués and declarations. They need to be resolved by tolerant and sympathetic understanding of our various positions. Some of us use energy more efficiently than others. Some of us are less dependent on fossil fuels. And all of us are at differing stages of economic development. These are the realities

that we must face if we are to move forward towards a successful conclusion to our negotiations in 1992.

Rich and poor, North and South, West and East - all of us have to play our part if we are to succeed. And succeed we must for the sake of this and future generations.

One of our greatest poets, George Herbert, in his poem on "Man" wrote presciently:

"Man is all symmetry,  
Full of propostives, one limb to another,  
And all to all the world besides;  
Each part may call the farthest, brother;

For head with foot hath private amity,  
And both with moons and tides."

We are, as we know, in symmetry with nature.  
To help that precious balance, we need - all  
men and women - to work together for our  
environment. I give this pledge. The United  
Kingdom will work with all of you in this  
common cause - a common cause to save our  
common inheritance.