PREM 19/4634

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**CONFIDENTIAL**

# 10 DOWNING STREET

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FILE TITLE: Contacts With Sir C Tickell (Environmental Adviser)

SERIES: ENVIRONMENT

PART: 1

PART BEGINS: June 1990

PART ENDS: November 1994.

CAB ONE:

Series Closed see Environment Policy

PREM 19/4634

# SERIES CLOSED

# SEE

# ENVIRONMENT POLICY

SUBJECT
MASTER

Filed on:

FILE
AJ

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

9 November 1994

Dear Alan

**PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL
WEDNESDAY, 9 NOVEMBER**

**Government Panel on Sustainable Development**

Sir Crispin reported that the Panel was currently working well. The five members had different contributions to make. Lord Alexander in particular was making a good contribution. He was more concerned about Ann McLaren. One of the areas of interest and also difficulty was that the Panel's sphere of influence spread to so many areas. It was not always easy to define strict boundaries.

Sir Crispin said that polls showed that environment and environmental issues traditionally came second in people's concerns when asked. There was also a huge interest among the young and any interest in schools was a result of pupils' concern rather than teachers. Sir Crispin would be talking to Gillian Shephard about how to employ that enthusiasm.

Sir Crispin hoped the Government would take advantage of the existence of the Panel to refer to it matters of environmental concern. In this way he felt the Government might have an external and non-partisan view on which it might draw.

**First Annual Report**

Sir Crispin said that the first annual report would note the five main areas which the Panel was considering and it would describe the way in which the Panel had worked to date. The Panel might also look to introducing suggestions into the report which the Government might be able to use. It would also note other areas in which the Panel might take an interest in the future. In particular, the Panel might well be likely to support the main conclusions of the Royal Commission on environmental pollution and to consider whether a national debate might be encouraged.

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## OTHER ISSUES

### The Darwin Initiative

Sir Crispin noted that the Darwin Initiative had been an enormous success. To date it had cost some £6 million. The Panel dealing with the initiative would be meeting soon to discuss what new projects it might adopt.

### Fishing Stocks

Sir Crispin was pleased to note that the Law of the Sea was about to come into force. He commented that the cost of subsidising the world's fishing fleet was twice the value of the fish that were caught and as a result the fishing stocks were being totally wiped out. He was talking to MAFF about this.

On the Global Emission Facility, he commented that there was money available, but that the problem of deep seas was not being studied properly. He hoped the United Kingdom would take the initiative in order to take this forward. The Prime Minister said that, in principle, he was attracted to the idea although our overall approach with other international institutions would need to be borne in mind.

The Prime Minister said that he felt that the time might be right to take the initiative on the environment. With this in mind, he proposed the possibility of offering an article to perhaps the *New Scientist* explaining what the Government had done, what it was doing and what it would be doing in the future. Jill Rutter would contact your Department to consider how this might be best taken forward in order to coincide with the launch of the Panel's first annual report and also the *Going for Green* initiative. Sir Crispin said he would be happy to help in the drafting of such an article.

Yours ever

RACHAEL REYNOLDS

Alan Davies. Esq..
Department of the Environment.

cc BUP

From: Rachael Reynolds
Date: 7 November 1994

PRIME MINISTER

## MEETING WITH SIR CRISPIN TICKELL: 9 NOVEMBER

The meeting with Sir Crispin Tickell has been postponed (again) until 9.30 am on Wednesday 9 November. This means that Mr Gummer has reluctantly accepted that he cannot attend.

Sir Crispin has provided an agenda. Jill's note (below) sets out the background but the issues he wants to raise are:

(i) Government Panel on Sustainable Development
- fish stocks
- environmental pricing
- ozone
- environmental education
- technology transfer

(ii) First anniversary report

(iii) Environment Agency Bill

(iv) Royal commission on Environmental Pollution

(v) International
- law of the sea
- environmental refugees
- existing environmental institutions

[(vi) Sir Crispin's trip to China]

Rachael

**PRIME MINISTER**

**From: Jill Rutter**
**Date: 7 November 1994**

**cc: Mrs Hogg**
**Mr Allan**

## MEETING WITH SIR CRISPIN TICKELL

You are meeting with Sir Crispin Tickell at ~~5.30pm on Tuesday.~~* 9.30 am on Wednesday Mr Gummer will also be attending. He has had a pre-meeting with Sir Crispin. Sir Crispin's proposed agenda is attached. – not now possible

As usual, Sir Crispin will probably do most of the talking. The first item on the agenda should be the work of the (i) Government Panel on Sustainable Development, which Sir Crispin is chairing. He thinks this is going pretty well so far. The panel has selected five issues to study - fish stocks, environmental pricing, ozone, environmental education and technology transfer. On the latter it has concluded that the Government is making pretty good efforts and there is not much more to be done. On fish, they are seeking an early meeting with Messrs Waldegrave and Jack at MAFF. They are drawing together their own paper on environmental pricing which they will then seek to discuss with the Chancellor. They are pleased with the backing they have got from Government - though Sir Crispin will note that he has taken a lot of the burden himself.

(ii) You should be aware they are planning to produce a published report on their first year's work to coincide with their first anniversary on 25 January. You might like to ask Sir Crispin what he envisages being in this report. DOE hope this will be a high quality product.

(iii) There are a few other items Sir Crispin said he wants to touch on. He has written to DOE criticising the Environment Agency Bill which he regards as "a

* on present plans

bit wet" because it fails to incorporate proper duties to promote sustainable development. The environment lobby have criticised provision in the Bill which gives the agency a duty to take account of costs and benefits of pollution control. DOE's line, which I have echoed to Sir Crispin, is that setting the policy framework is a matter for Ministers and what matters is the guidance given to the agency, not what is on the face of the Bill which runs the risk of being over-interpreted by the Courts.

(iv) Sir Crispin wants to touch on the Royal Commission on Environmental Pollution's report on transport policy. He is likely to underline the message that traffic growth is unsustainable. The RCEP's proposals are to be studied by an inter-departmental group under the Department of Transport to prepare the Government's response. Meanwhile, Dr Mawhinney has ideas for creating a "national debate" on the issues raised by the RCEP. He will be talking to you about that on Wednesday.

Ack.
Royal Talks

(v) Sir Crispin has given notice that he wants to raise some concerns in the international area - on the law of the sea and environmental refugees. Mr Gummer suggests the Panel should raise the first issue in their report. The second is a reflection of the perceived weakness of existing environmental institutions - thought to be floundering post-Rio. G7 agreed to review international institutions at the next summit. Alex is very involved in his role as your sherpa. Officials have agreed that better functioning of the environmental institutions should be one of the items that the UK should push. However, Mr Gummer is seeking to make more of the running and is planning to call together an informal meeting of environment ministers from the North and the South in early January. This has not yet been agreed as the way the UK should handle the environment part of what is a more wide ranging agenda across the international institutions.

(vi) Finally, in September, Sir Crispin sent you his report on his last visit to China. He does not see a need to raise any points with you - unless there is anything specific you want to raise with him.

Jill

**JILL RUTTER**

4-11-7.jr

cc. Mr Osborn
EP Directors
Mr Everett
Mr Elwin
Mr Simcock
Mrs Barker (PRESS)
Dr Macpherson
Mrs Cavill
Mr Baker (EED)
Ms Griggs (EPE)
JPT

G

PRIME MINISTER

MEETING WITH SIR CRISPIN TICKELL, 8 NOVEMBER

Sir Crispin Tickell has suggested a range of issues for discussion when you meet him on Tuesday 8 November. I have had a prior meeting with him and I would suggest that there are three key topics to concentrate on; the remainder of the items need only be touched on briefly.

First, I suggest you begin by asking him generally about the work of the Government Panel on Sustainable Development, which Crispin convenes. They are cutting their teeth on several issues and are planning to report publicly to you in January. There are signs that their first report will identify some of the issues which need more attention - whether from the Government, the international community or others. If so, it could be very helpful and would deserve our careful consideration.

The Panel are beginning to have contacts with similar bodies overseas, such as President Clinton's Council on Sustainable Development and Mr Balladur's French Commission on Sustainable Development appointed last April. These various national advisory bodies are likely to draw encouragement and ideas from each other and I think the UK should feel pleased that, in this matter as in others, it is among the pace-setters.

Secondly, you might then ask him to expand on the issues he sees as most important. One of these is the Panel's concern with making markets work better so that environmental costs and benefits are taken directly into account by firms and individuals. We can welcome their interest in this area.

Another major concern of the Panel - which we share - is overfishing. Institutions exist for dealing with this in the waters of the continental shelf; the problem is making them effective. Crispin Tickell has begun to argue that governments and international institutions have ignored overfishing (and possibly

pollution) in the deep seas. We should ask him to cover this properly in the Panel's report, and express a willingness to look at their advice - with, of course, William Waldegrave.

This topic leads to a <u>third</u>: a concern of mine that our international institutions are not properly geared up to identify and tackle emerging global environmental issues. We have an opportunity to tackle this next year at important meetings of the key institutions themselves, including CSD and UNEP, and in the context of the G7 round. I intend to prepare for this, in relation to CSD and UNEP, by calling an informal meeting of Environment Ministers from key Northern and Southern countries in London in January to broker some of our ideas.

I doubt if time will allow for more than a short look at Crispin's other topics. The general line to take would be that we look forward to the Panel's considered advice in its January report.

JSG

7 November 1994

(Approved by the Secretary of State
and signed in his absence)

# THE PRIME MINISTER'S MEETING WITH SIR CRISPIN ON 8 NOVEMBER

## MAIN TOPICS FOR DISCUSSION

**GOVERNMENT PANEL ON SUSTAINABLE DEVELOPMENT**

* Held third meeting in October and decided to concentrate efforts on the market and the environment, fish stock depletion, ozone depletion, and environmental education. Plans to publish a first annual report on 25 January.

Line to Take.

* Give encouragement to high quality report. Ask which are the Panel's top one or two priorities.

**MARKETS AND THE ENVIRONMENT**

* The Panel is concerned with making markets work better so that environmental costs and benefits are taken directly into account by firms and individuals. In principle, this would be stimulated by greater use of economic instruments, on which he wishes to encourage us.

Line to take

* Welcome that encouragement, while reminding him that in practice there can be political and technical constraints (consider the carbon tax).

**DEPLETION OF FISH STOCKS**

* The Panel is seriously concerned at over-exploitation of fish stocks. Within EC waters the task is one for the North Sea Conference and the Common Fisheries Policy. Further out, the so-called "straddling stocks" are being looked at by the FAO. Sir Crispin however has begun to argue that deep sea stocks also are overfished and that there should be new international machinery.

Line to Take

* His hunch about the threat is worth investigation. The answer would not necessarily be new machinery - it might be to make effective use of the FAO which has a remit in this area. This would need thinking about, particularly with the Mr Waldegrave. We should ask the Panel to set out their concern clearly in their report.

**IMPLEMENTATION OF THE LAW OF THE SEA**

* Sir Crispin may also suggest that there are other problems in the deep oceans: from pollution, dumping, etc.

Line to take

* Doubtful that new machinery is needed. The Law of the Sea provides the basic legal regime, and the Convention comes into force in November. Already a range of international mechanisms working within that framework, including UNEP, the Paris and Helsinki Commissions, and other UN agencies.

**INTERNATIONAL ENVIRONMENTAL INSTITUTIONS**

* Sir Crispin's points on the deep seas, ozone and environmental refugees echo concerns Mr Gummer has about the effectiveness of various international environmental institutions. Considering holding an International meeting in UK to broker our views. Opportunity to take these concerns at CSD and G7 next year.

**THE PRIME MINISTER'S MEETING WITH SIR CRISPIN ON 8 NOVEMBER**

**OTHER POINTS FOR DISCUSSION**

**ENVIRONMENT AGENCY**

The Panel has indicated an interest in the Environment Agency and the Scottish Agency (which, subject to legislation, will be operational in 1995-96).

* He may share the view of environmental groups that the Government's draft proposals (published 13 October) do less than justice to sustainable development.

* We think there is a misunderstanding here: the Bill will place a duty on Ministers to give guidance to the Agencies with respect to their aims and objectives, and this will include the contribution they must make to sustainable development. The Agencies will also be required to give appropriate encouragement to conservation, and to pay proper regard to costs and benefits. We have begun discussions with the conservation groups (and others) on the precise wording of these provisions and on the draft guidance.

**MINIMUM ENERGY EFFICIENCY STANDARDS**

Sir Crispin has suggested that there may be scope for action by the UK to show support for a draft EC Directive on minimum efficiency standards for some domestic appliances.

* Draft directive would have the effect of removing the least efficient refrigeration products from the market (about 50% of the products on the market in 1992 would be removed by 1997).

* Understood that the Germans, in particular, have been blocking the proposal on the grounds that they have introduced effective voluntary agreements with industry and that regulation is unnecessary to achieve energy targets and would impose unacceptable constraints on the ability of industry to compete and to innovate.

**Line to take**

* UK committed to policies that will reduce the energy consumed by appliances.

* Prefer voluntary agreements with industry but where that is not possible will press the Commission to introduce European legislation on energy efficiency performance standards.

* Legislation should be designed, so far as is possible to minimise any additional burden on industry and not to create barriers to trade.

**RADIOACTIVE WASTE**

Sir Crispin suggests that the problem of disposing of radioactive waste would be transformed if science found a way of breaking down the radioactivity without waiting on the natural process of decay. He acknowledges that this may seem farfetched, but observes that scientific research has done seemingly impossible things in other areas when people have been determined.

* He makes the novel suggestion of a substantial public prize to encourage research.

Line to Take

Interested in the idea. However, the commercial rewards of finding such a solution would be so large that it hardly seems necessary for any government to offer a prize. The market should provide sufficient incentive to those with a serious interest in solutions of this kind.

REFUGEE ISSUES

* Sir Crispin sees environmental refugees as a new issue which governments are not currently addressing on the international Agenda.

Line to Take

* Listen. But ask whether the problem raised by refugees fleeing an environmental disaster is any different in kind, or in the demands it makes upon the international community, from other disasters.

GREEN MINISTERS

Line to take

* Green Ministers in each Department make a valuable contribution: they consider the environmental effects of policies within their Departments, and push for energy efficiency and other green housekeeping measures.

GOVERNMENT RESEARCH

Sir Crispin is unhappy about the current approach of the efficiency unit.

Line to take

* Government has made it clear there is to be a period of consultation following the efficiency scrutiny. Not appropriate to comment before consultation period ends on 11 November.

**CHINA COUNCIL FOR INTERNATIONAL COOPERATION (CCICED)**

Sir Crispin recently reported on the third meeting of the China Council.

**Line to take**

* Thanks for the report. What were main impressions of the meeting?

* Is there anything else we should be doing to help besides the contributions ODA are already making?

**DARWIN INITIATIVE**

**Line to take**

* Encouraged by progress. Pleased to hear of strengthening links with developing countries, and successful completion of a number of courses. Thanks for work of Advisory Committee.

**UK ROUND TABLE ON SUSTAINABLE DEVELOPMENT**

* Announced by Prime Minister at launch of post Rio reports 25 January 1994; first meeting planned for 13 December. Substantial support from business, public sector, academic world; environmental groups divided about whether it represents a worthwhile new opportunity, but some of the key groups are keen to join.

  Will bring together representatives of the main sectors to discuss the issues of sustainable development with each other and with Ministers.

**Line to take**

* Important to ensure that the Panel keeps in close touch with the work of the Round Table. Welcome Sir Crispin's presence at Round Table meetings (formally as an observer).

***END***

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AT THE RADCLIFFE OBSERVATORY
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OXFORD OX2 6HG
*Telephone* (0865) 274770
*Fax* (0865) 274796

*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary: (0865) 274775*

2 November 1994

Miss Rachel Reynolds
10 Downing Street
London
SW1A 2AA

Dear Miss Reynolds,

This afternoon we had a word on the telephone about my meeting with the Prime Minister at 5.30pm on Tuesday 8 November. I then promised you a somewhat revised agenda (my letter of 5 September to Jill Rutter).

I suggest that the agenda might cover the following points:

- the work of the Government Panel on Sustainable Development
- the Darwin Initiative
- some specific points on the environment:
  - the increasing gravity of the refugee issue, and current work on environmental refugees: this is a major long term problem, which in my view can only get worse
  - the report on Transport of the Royal Commission on Environmental Pollution
  - the Environment Agency Bill
- Some possible British initiatives in the environmental field:
  - with the implentation of the Law of the Sea this month,some of the gaps in its scope are becoming apparent: in particular is lack of coverage of the good health - physical and biological - of the open seas. I have particularly in mind world wide depletion of fish stocks, growing pollution, and use of deep sea resources. For that reason

I wonder whether something like the Intergovernmental Panel on Climate Change might be set up, bringing together existing bodies, to look at the science, the human impact, and possible responses. It might be called the Intergovernmental Panel on the Oceans

- whatever the nuclear industry may say, the problem of disposal of nuclear waste has still to be resolved: I know that the issue is still being looked at under the Nuclear Review, but I think that a more fundamental approach is required

- There has already been discussion within the European Union of setting minimun standards for energy efficiency. Indeed I believe that application of more efficient appliances is supposed to contribute at least 5% of our carbon dioxide savings by the year 2000. In this discussion we are on the side of the angels, but I do not think we are getting much political reward for it. Could we not make a more vigorous campaign in favour, linking it with European policy on energy labels?

Many issues will of course arise on the work of the Government Panel of Sustainable Development. Those I think most immediate and important are over the current drastic decline in fish stocks, and the need for a more rational system of environmental pricing and costing, taking account of economic and fiscal instruments.

I know that all this is a lot for a brief meeting. But we will have done well if we can cover the main points.

Crispin Tickell

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*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary: (0865) 274775*

7 October 1994

Mr. Roderick Lyne
10 Downing Street
London
SW1A 2AA

Dear Roderick,

As you know I had hoped to see the Prime Minister before I went to China to attend the third meeting of the China Council for International Co-operation on Environment and Development in Peking last month. In the event our meeting had to be postponed. It has now been re-arranged for 1 November, and its main theme will be environment and issues of sustainable development.

In view of the Prime Minister's interest in the two previous meetings of the China Council, I thought that you might like to see my enclosed record of what took place this time. Among the foreigners who participate in the work of the Council (including the Canadians who provide most of the finance), the British continue to have a special place. For that reason it seems to me a useful channel for long term co-operation separate from our short term problems over Hong Kong. The Chinese remain particularly grateful to the ODA for its financial contribution to one of the Working Groups.

I am sending copies of this letter with enclosure to the Private Secretaries of the Foreign & Commonwealth Secretary, the Environment Secretary, and the Minister for Overseas Development and to HM Representatives in Peking and Moscow.

Yours sincerely,

Crispin Tickell

# Third Meeting of the China Council on International Co-operation on Environment and Development

## Beijing: 19-22 September 1994

The third meeting of the China Council on International Co-operation on Environment and Development took place in Beijing from 19 to 22 September 1994. I have already given an account of the meeting, together with some of the voluminous papers produced for it, to the British Embassy in Beijing. I believe that the Embassy will be making a separate report.

The China Council is a unique body. It was established by decree, and so ranks as an official Chinese institution. It has a working membership of about thirty, with a majority of Chinese Ministers, administrators and scientists and a minority of foreigners distinguished for their work on environment and development. The first meeting in Beijing in 1992 was somewhat stiff and exploratory. The second one last year - in the city of Hangzhou near Shanghai - was more friendly and more businesslike, and led to the institution of specialised Working Groups. The third one this year was even warmer in character, with fewer long speeches, genuine dialogue, and a greater sense of co-operation in a common enterprise.

The programme of the meeting - copy attached - speaks for itself. Discussion was focused on two broad areas: reports of the Working Groups (on protection of biodiversity; pollution control; monitoring and data collection; resource accounting, environmental economics and pricing policy; scientific research; technological development and training; and energy strategies and technologies); and China's performance to date in carrying out the recommendations of the second meeting and environmental issues generally. On both the Chinese claimed to have done well.

A report from the Secretary-General of the Chinese Environment Protection Agency was inevitably general in character, but showed that genuine notice had been taken of the points raised in previous discussions; and a report from Deng Nan (daughter of Deng Xiaoping) on China's submission on Agenda 21 to the United Nations Commission on Environment and Development revealed the size and scope of a vast inter-departmental exercise (comparable to our own over the Government paper of 25 January on Sustainable Development). In addition the Chinese revealed their own Biodiversity Action Plan, a three year plan for tighter enforcement and improvement of existing environmental legislation, and a major national conference on the environment in October 1995. Listening to Chinese speakers on these themes, I was reminded of the importance they always attached to getting the thinking right before attempting detailed action.

At the end of the second meeting in 1993, the Chinese invited the international members to help them draft some recommendations from the Council, mostly, I think, to impress and galvanize their own colleagues. The Canadians, who provide most of the financing of the Council and a notably incompetent Secretariat, did a not very good best in producing a draft which caused confusion and even some offence on the Chinese side. It was rescued, and the final result was adequate. This time the Chinese and Canadians gave me the job from the start. Single authorship is always easier, and the Chinese had no more than minor changes to suggest to a first draft. The Council then made further small amendments. The result is attached. Although tilted to the future rather than a record of the past, it gives a fair summary of the substantial issues which were debated during the meeting.

The value of the Council's work is hard to measure, but two obvious tests are the reception of the recommendations, and the seriousness with which the Chinese leadership regards the Council. On the first I learned from the Secretary-General of the Chinese Environment Protection Agency that the recommendations are given a wide distribution within the central Administration, and are then copied to provincial authorities throughout China. They mark useful targets or criteria by which performance can be judged. He assured me that his Agency (not the most important in the Chinese hierarchy of Ministries) found it an invaluable instrument for exerting bureaucratic leverage on Departments disinclined to take environmental issues seriously. The amendments he proposed were all intended to apply heat to Departments (such as Transport) otherwise reluctant to take notice.

On the weight the Chinese leadership attaches to the Council, I find it hard to make judgements. It was the Chinese Prime Minister who was, apparently, the prime impulse in setting up the Council, and it was he who received its members for 1½ hours at the end of its first meeting. President Jing Zemin received the members at the end of the second meeting, and the President of the People's National Legislative Council Li Ruihuan received us this time. The introductory address was given by the Chinese Foreign Minister Qian Qichen, and the proceedings were chaired alternately by Song Jian (State Counsellor) and Qu Queping (former Head of the Environment Protection Agency). More important perhaps was the enthusiastic presence at this year's meeting of Deng Nan, whose political influence seemed if anything to be rising (she was followed around everywhere by the television crews), and who more than ever acted the role of high priestess to the oracle who remains her ageing father.

Over the three meetings of the China Council at annual intervals I have seen growing Chinese awareness of the environmental dimension of virtually all their economic problems. The Chinese entered wholeheartedly into the theoretical discussions of how to bring environmental costs into the pricing system of their "socialist market economy". No-one contested the need for removal of subsidies, however gradual, on such

commodities as water, the establishment of a sensible mixture of regulation and fiscal instruments, and recognition that if a command-and-control economy was unworkable, equally the exercise of market forces was not enough. The Chinese paper on Agenda 21 is a remarkably comprehensive document, which could be a model to others (I promised Deng Nan a copy of our corresponding paper on Sustainable Development). The particular emphasis the Chinese wished the Council to bring into its recommendations was on the need for clean production technologies, better environmental monitoring, and the creation of demonstration projects. The one politically difficult exception was transport. The replacement of bicycles by cars seems almost an article of faith. Indeed the day after the Council finished, the Chinese Government announced that it intended to subsidize car production.

At the last session of the Council, I raised the question of Chinese population increase and food supplies. In reply Qu Queping said that Chinese population policy was working. Female fertility was now down to 2.05 (in other words .05 less than replacement rate). But the population would inevitably rise from 1.2 billion at the moment to between 1.5 and 1.6 billion in 2025 before it began to decline. Chinese carrying capacity was estimated at around 1.7 billion people, so even if the population rose to 1.6 billion the problem would be manageable. In discussion I asked how the 1.7 billion carrying capacity figure had been worked out. Did it for example take account of changing diet? Of building on agricultural land? Of environmental, in particular climatic, change, which could cause redistribution of weather patterns? Qu Queping prudently decided not to reply. (Many experts including Chinese themselves estimate that on present trends China will become a major food importing country early in the next century.)

Whatever the problems of Anglo-Chinese relations elsewhere, the British play a disproportionate role in the Council. Among the foreigners the Canadians may preside, but the British, now fortified by Sir Sonny Ramphal (supposedly representing Latin America), provide a lot of the engine power. There are no Russians, no French, only one German, one American and two poorly performing Japanese. Yet including Chairmen of Working Groups there are effectively six of us.

The Chinese went out of their way to thank the Overseas Development Administration for its financial contribution to the Working Groups, paid particular attention to Mr. John Jennings, Managing Director of Shell, relied on Professor Warford of the World Bank for his work on environmental economics, and turned to me for speaking, drafting etc. throughout the meeting. I add that Chinese interest in Mr. Jennings is not disinterested; Shell is the likely contractor for a vast new petrochemical plant, negotiations on which are at a delicate stage. He was the guest of Deng Nan at lunch, a selected speaker at the last session with Li Ruihuan, and the recipient of particularly fulsome praise from Qu Queping.

In my own discussions with such Chinese as Deng Nan, Qian Qichen, Song Jian, and Qu Queping, Hong Kong was conspicuous for its absence. The only reference to it came over dinner in conversation with Qu Queping, who said that long term relations between Britain and China were more important than any short term problems over Hong Kong.

The next meeting of the Council will take place in the autumn of 1995, probably in September. In the meantime the Working Groups will continue their specialized activities, and report back two months before the meeting of the Council.

4 October 1994

Crispin Tickell

THE CHINA COUNCIL FOR INTERNATIONAL COOPERATION
ON ENVIRONMENT AND DEVELOPMENT

THE THIRD MEETING
GRAND HOTEL, BEIJING
20 - 22 SEPTEMBER, 1994

PROGRAMME

Sept. 20 ( Tue. )

9:00 - 9:10 am (Chairperson: Dr. Song Jian)

Election of the International Vice Chair
Approval of the New Members
Adoption of the Agenda

9:10 - 10:10 am (Chairperson: Dr. Song Jian)

Opening Ceremony
1. Speech by Vice Premier Qian Qichen
2. Speech by Chairman Song Jian ( 10 minutes )
3. Speech by the Vice Chairs: Mme. Labelle,
Prof. Qu Geping and Mr.Gu Ming ( 5 minutes each )
4. Speech by the Specially Invited Guests
( 5 minutes each )
-- Mr. Sueyoshi, Mayor of the City of Kitakyushu, Japan
-- Specially Invited Guest from Liaoning Province, China
5. Speech by Observers ( 5 minutes each )
-- UNDP
-- World Bank
-- Ford Foundation
-- E.C.

10:10 - 10:30 am

Coffee Break

10:30 - 11:00 am (Chairperson: Dr. Song Jian)

Report by Mr. Xie Zhenhua, Secretary General of CCICED on:
-- Follow-up Activities after the Second Meeting of the Council
-- Results of and Responses to the Recommendations Raised at the Second Meeting
-- Preparation of the Third Meeting
-- Other Issues

11:00 - 12:00 am (Chairperson: Dr. Labelle)

Reports and Discussion on the Work of the Working Groups
( 20 minutes for each group leader's report followed by a 40-minute discussion )

-- Presentation of the Working Group on the Protection of Biodiversity by Mr. John Macknnion

12:00 - 2:00 pm

Lunch

2:00 - 4:00 pm (Chairperson: Dr. Labelle)

Reports and Discussion on the Work of the Working Groups
( continued )

-- Presentation of the Working Group on Pollution Control by Mr. Tonny Schneider
-- Presentation of the Working Group on Monitoring and Data Collection by Mr. Jin Jianming

4:00 - 4:20 pm

Coffee Break

4:20 - 5:20 pm

-- Presentation of the Working Group on Resource Accounting, Environmental Economics and Pricing Policy by Prof. Li Yining

5:20 - 6:20 pm

-- Presentation of the Working Group on Scientific Research, Technological Development and Training by Mr. Yokoyama / Mr. Sun Honglie

7:00 - 8:30 pm

Banquet Hosted by Dr. Song Jian

**Sept. 21 ( Wed. )**

9:00 - 10:00 am (Chairperson: Dr. Labelle)

Reports and discussion on the Work of the Working Groups
( continued )

-- Presentation of the Working Group on Energy Strategies and Technologies by Mr. Thomas Johansson

10:00 - 10:30 am (Chairperson: Dr. Labelle)

Report by Dr. Arthur Hanson on the Result of the Informal Meeting about the Coordination of the Activities of the Working Groups

10:30 - 11:00 am

Coffee Break

11:00 - 12:00 am (Chairperson: Mr. Gu Ming)

Presentations on China's Implementation of Agenda 21 and the Relevant International Conventions

-- Presentation on China's Agenda 21 by Mme. Deng Nan, Vice Chairman of State Science and Technology Commission ( 15 minutes )
-- Presentation on China's Agenda 21 by UNDP from the International Perspective ( 10 minutes )
-- Presentation on China's Implementation of Basel Convention, Biodiversity Convention and Montreal Protocol by Dr. Ye Ruqiu, Deputy Administrator of NEPA ( 15 minutes )
-- Presentation on China's Implementation of the Convention on the International Trade of Wild Fauna and Flora by Mr. Shen Maocheng, Vice Minister of the Ministry of Forestry ( 10 minutes )
-- Presentation on China's Implementation of the U.N. Convention on Climate Change by Mr. Zou Jingmeng, Administrator of the China Meterological Administration ( 10 minutes )

12:00 - 2:00 pm

Lunch

2:00 - 3:00 pm (Chairperson: Mr. Gu Ming)

Discussion on China's Implementation of Agenda 21 and the relevant international conventions

3:00 - 3:30 pm (Chairperson: Prof. Qu Geping)

Presentations on Substantive Issues

-- International Trade and Sustainable Development by Dr. Hansen and Mr. Gu Yongjiang ( 15 minutes each )

3:30 - 3:50 pm

Coffee Break

3:50 - 5:50 pm (Chairperson: Prof. Qu Geping)

Presentations and discussions on Substantive Issues (continued)

-- Policy Instruments and Measures for Environmental Protection Under the Market Economy by Prof. Li Yining and Prof. Jeremy Warford ( 15 minutes )
-- Role of Business in Environmental Protection by Mr. Shi Wanpeng ( 15 minutes )
-- Public Participation by Prof. Yang Jike

**Sept. 22 ( Thur. )**

9:00 -11:00 am (Chairperson: Prof. Qu Geping)

Presentations and Discussions on the Substantive Issues
-- Presentation by Mr. Jennings on Cleaner Production
-- An Introduction to the Study of Practical Measures to Integrate Economic Planning with Environmental Protection in China by Mr. Martin Lees ( 15 minutes )
-- Clean Pulp and Paper Technology by Dr. Jim Wearing ( 15 minutes )
-- Presentation by Mr. Sueyoshi, Mayor of City of Kitakyushu, Japan ( 15 minutes )

11:00 - 11:20 am

Coffee Break

11:20 - 12:00 am (Chairperson: Prof. Qu Geping)

Report by Mr. Xie Zhenhua and Discussion on the Council's Financial Situation and Budget for the Remaining Years

12:00 - 2:00 pm (Chairperson: Dr. Song Jian)

Lunch

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2:00 -- 2:40
Adoption of the Recommendations to the Chinese Government
1. Introductory remarks by Sir Crisipin Tickell
2. Discussions
3. Adoption of the Recommendations

2:40 -- 3:40
Closing Ceremony

1. Speech by Chairman Song Jian
2. Speech by Vice Chair, Mme Labelle
3. Speech by Vice Chairman, Prof. Qu Geping
4. Speech by Vice Chairman, Mr. Gu Ming
5. Speech by Sir Shridath Ramphal

4:30
The Meeting with President Li Ruihuan
(Depart from the Grand Hotel Beijing at 4:00)
Place of the Meeting: Hunan Hall, the Great Hall of the People

6:00 -- 7:00
Press Conference (with the presence of three vice chairs)
Place: Zijin Hall, Grand Hotel Beijing

7.00 - 9.00 Banquet given by the International Members

# RECOMMENDATIONS TO THE CHINESE GOVERNMENT BY THE CHINA COUNCIL FOR INTERNATIONAL COOPERATION ON ENVIRONMENT AND DEVELOPMENT

22 September 1994, Beijing

The Council is impressed by the progress made by China in the field of environment and development since its second meeting in Hangzhou in May 1993. It is most grateful to the Secretary General, Mr. Xie Zhenhua for his report on the subject. It particularly commends the Government's White Paper - China's Agenda 21 - on China's Population, Environment and Development in the 21st Century. Its implementation will form part of an effort by the world community as a whole.

The Council continues to believe that protection of the environment and promotion of development are complementary. It lays emphasis on the need for greater public understanding of the principal issues and for fuller public participation in activities related to them. There is no higher priority than public education and capacity building. The Council recognizes the importance of environmental considerations in sustainable development, and their central place in all decisions affecting the economy. It particularly welcomes the three year plan to improve relevant legislation and its enforcement. In the words of Vice Premier Qian Qichen in his opening address to the Council, China "must not repeat the old pattern of pollution first and environment control second".

The Council heard reports from its six Working Groups and commends their broad conclusions. On this basis and in the light of debate at the Council, it wishes to make the following specific recommendations. The list is not exclusive. In the future particular attention should be paid to the problems of transportation and water.

1. As always energy is critical to China's development. Present dependence on coal remains a prime cause of pollution and could have global consequences. It is necessary:

   - to improve energy saving, conservation and distribution; diversify

China's energy sources; and develop alternative technologies, especially cleaner coal and greater end-use efficiency. Full use should be made of demonstration projects;

- to promote competition in clean technologies in the areas of, for example, steel making, commercial buildings, fuel cell powered buses, coal and biomass gasification, and cogeneration in the sugar cane industry;

- to ensure that policy on energy and the environment are fully integrated;

- to join in the international effort required to give effect to the Framework Convention on Climate Change.

2. The continued destruction of biodiversity in China is doing major damage to the economy and is likely to get worse. In giving effect to the Government's Biodiversity Action Plan, it is necessary :

- fully to enforce existing legislation to protect existing protected areas and to extend them where possible;

- to cooperate still more closely with neighbouring countries to prevent trade in endangered species;

- to develop a coordinated biodiversity monitoring programme;

- to undertake a major educational campaign on the importance of biodiversity;

- to work with local communities to restore degraded land and habitats.

3. Control of pollution requires detailed knowledge which can only be gained through rigorous monitoring. It must form part of integrated environmental policy planning which in turn must form part of economic planning as a

whole. It is necessary:

- to put sufficient resources into monitoring;

- to establish a sound data base on environmental quality with projections for the future;

- to focus on clean technologies and clean production methods;

- to ensure better coordination between local, provincial and national authorities with a staff training programme;

- to make more and better use of such policy instruments as licenses, levies, fees, incentives and disincentives;

- to set priorities for action in meeting the specific goals in the area identified in China's Agenda 21 report;

- to draw upon the experience and up-to-date technologies of industrial countries, while recognizing cost factors. with the aim of reducing further damage to the environment.

4. Better accounting for resources and measures to ensure the inclusion of environmental considerations in costing and pricing require a new theoretical as well as practical approach. It is necessary:

- to elaborate the theoretical aspects;

- in the meantime to increase charges on pollution and develop use of economic and fiscal instruments;

- to introduce environmental impact assessments more widely on existing as well as new projects;

- gradually to reform prices on such vital natural resources as water, timber and coal, and to remove inappropriate subsidies;

- to pursue the practical implications of price reform in such areas as energy and transport.

- to examine the role of the environment in international trade

The good health of the environment in a country as large and populous as China is the good health of the world as a whole. In dealing with global environmental problems, the particular responsibility of the industrial countries is clear. But all countries, including China, are vulnerable to environmental change and international cooperation is essential. With its special importance, China can give leadership, as it has done over Agenda 21, in taking action on the linked problems of environment and development.

CF pps

PLU | TICKELL. PM-6

cc FCO

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

24 October 1994

Thank you for your letter of 7 October enclosing a copy of your report on the Annual Meeting of the China Council for International Cooperation on Environment and Development (CCICED).

The Prime Minister looks forward to seeing you on 8 November, and will take the opportunity to discuss then both the report and the work of CCICED.

MS PHILIPPA LESLIE-JONES

JONATHAN TILLSON
Private Secretary

Sir Crispin Tickell, G.C.M.G., K.C.V.O.

AS

cc B'Up
J Rutter

F

2 MARSHAM STREET
LONDON SW1P 3EB
071-276 3000

My ref:

Your ref:

21 October 1994

Rachael Reynolds
PS/Prime Minister
10 Downing Street
LONDON SW1A 2AA

Dear Rachael,

**PRIME MINISTER'S BILATERAL WITH SIR CRISPIN TICKELL: 1 NOVEMBER**

Sir Crispin Tickell, the Prime Minister's special advisor on scientific and environmental matters has requested a meeting with the Prime Minister. The meeting will take place at 12.00 noon on Tues day 1 November at No.10.

I attach briefing for the Prime Minister as you requested in your letter of 7 September. Topics are arranged in the order Sir Crispin outlined in his letter of 5 September to Jill Rutter as follows:

A: Government Panel on Sustainable Development

B. Darwin Initiative

C. Refugee issue

E. Green Ministers

F. Implementation of the Law of the Sea

G. Environment Agency

and H. China Council for International Cooperation on Environment and Development.

Yours,

JONATHAN TILLSON
Private Secretary

100%
RECYCLED PAPER

**GOVERNMENT PANEL ON SUSTAINABLE DEVELOPMENT**

**Background Note**
The Panel had its third meeting in October and decided to concentrate efforts on four main topics:

**the market and the environment** - the Panel's primary concern is the need to make progress in developing economic instruments. They plan to convene a seminar this year and then to approach Departmental Ministers including the Chancellor of the Exchequer. They also have some interest in green accounting, green GDP and sustainable development indicators

**ozone depletion** - the Panel's concerns relate to the policing of the Montreal Protocol; current knowledge on the effects of UVB radiation; industry's failure to develop alternatives to HCFCs which were introduced in the 1990s as substitutes for CFCs and HCFCs but are now known to be potent greenhouse gases.

**fish stock depletion** - the Panel is concerned about the serious threats to fish stocks in Europe and worldwide and will be seeking an early meeting with William Waldegrave.

**environmental education** - the Panel is consulting interested organisations before seeking a meeting with Gillian Shepherd.

The Panel plans to publish a first annual report on 25 January (the anniversary of the launch of the Sustainable Development Strategy). The Panel will not have a great deal to report on then, but is of the view that an account of its activities should be given to the public.

DARWIN INITIATIVE FOR THE SURVIVAL OF SPECIES

Line to Take

- Encouraged by excellent progress of Darwin Initiative. Pleased to hear of links with the developing countries being strengthened, and that a number of successful courses already completed. Thank you for your work and please pass on my thanks to the other members of the Advisory Committee.

Background

The Darwin Initiative was set up following the Prime Minister's announcement at the Earth Summit. Sir Crispin Tickell chairs the Committee advising the Secretary of State on key project areas and on individual applications. Achievements so far include: the allocation of £5.7m for 53 projects; the participation of around 40 UK institutions, including Kew and the Natural History Museum, as well as NGOs such as World Wide Fund for Nature; the involvement of over 20 developing countries, including Brazil, China and Russia, helping them to meet their obligations under the Biodiversity Convention; the attendance of 30 students from these countries on formal short UK courses; and coverage of a wide range of ecosystems and species. The invitations for the next round of funding are to go out later this month. It may well be worth considering expanding the Initiative in the future. It attracts good publicity, funds valuable research relevant to negotiations under the Biodiversity Convention, encourages close co-operation between the Government and research institutions and builds excellent links with key developing countries. One way of increasing the funding may be through the private sector, but Sir Crispin is known to be extremely doubtful about this.

## ENVIRONMENTAL REFUGEES

In his capacity as Chairman of the Washington based Climate Institute Sir Crispin has been developing, over the past couple of years, a programme which will look into the perceived increasing problem of environmental refugees. It will prepare an accurate appraisal of refugee numbers (both present and prospective) and of the factors which impel migration. It will prepare estimates of the number of people driven to migrate within countries and across national borders, for environmental reasons. These may include deforestation, land degradation and global warming, plus associated factors such as population growth and pervasive poverty. It will also assess the need and measures taken to accommodate the growing multitudes of refugees, document the overall trends to identify potential refugee "hot spots" and prepare an in-depth assessment of the problem. ODA is contributing £75,000 towards the cost of the programme. A conference is planned at Green College in November to discuss the findings of the programme so far. Sir Crispin has been in touch with Ministers about possible attendence.

**GOVERNMENT RESEARCH**

Sir Crispin is unhappy about the current approach of the efficiency unit.

**Line to take**

Government has made it clear there is to be a period of consultation following the efficiency scrutiny.

One will be interested to hear Sir Crispin's views but not appropriate to comment before consultation period ends on 11 November.

**Background**

The Science Engineering and Technology White Paper announced an efficiency scrutiny of public sector research establishments. Its findings on possible candidates for privatisation go no further than existing proposals by Departments. It also recommended options for re-grouping of existing laboratories to speed rationalisation. These proposals are likely to be contentious, and may be the basis of Sir Crispin's concerns. The House of Commons and House of Lords Science and Technology committees are also taking evidence on the review.

**Proposed Intergovernmental Panel on the Oceans**

This may be a viable proposal but Sir Crispin should talk to the Chairman and Secretary of the UK Inter-Agency Committee on Marine Science and Technology about the current activities of the UN International Oceanographic Commission in association with UNEP, particularly in respect of the proposed Global Ocean Observation System.

**GREEN MINISTERS**

Background - The role of Green Ministers

The White Paper "This Common Inheritance" included a commitment to nominate a Green Minister in each Department. Each Green Minister is charged with integrating environmental considerations into the strategy and policies of their Departments. This is a day to day responsibility within their own Departments.

Green Ministers also meet collectively from time to time (three times since their inception). As separate arrangements exist for Ministers to consider and resolve environmental policies collectively (the Ministerial Committee on the Environment established in May 1992), meetings of Green Ministers have focused more on the responsibilities they exercise within their own Departments, such as on practical aspects.

All Departments now have strategies in place for good environmental housekeeping, covering consumption of energy, water, paper and recycling and pollution prevention, and Green Ministers have discussed the preparation of these strategies and reviewed progress in revising them. Green Ministers have paid particular attention to progress of Departments in meeting the Government's target of achieving a 15% reduction in energy consumption on its own property over 5 years to March 1996.

There have also been discussions about issues such as the use of Contract Energy Management, the development of environmental management systems for green housekeeping strategies, green procurement and the environmental component of Departmental Annual Reports.

Line to take

The Government is committed to integration of environmental concerns into its decision making processes at all levels. Green Ministers, through their day to day work and meetings together, make a valuable contribution to the practical application of policy.

IMPLEMENTATION OF THE UN LAW OF THE SEA CONVENTION 1982

Background

The Convention comes into force in November , one year after ratification by sufficient countries. UK will ratify soon now that some developed countries' misgivings about provisions regarding opportunities for exploitation of mineral resources have been resolved.The Convention provides a comprehensive legal regime balancing the interests of coastal states and others in access, control and exploitation of resources and in pollution control as a basis for action by competent authorities. Global aspects of marine environmental protection and conservation are the concern of various organisations.

Line to take

The Convention provides a basic legal regime which applies everywhere subject to ratification.

The main issues relate to continental shelf areas requiring regional arrangements within global guidelines.There is already a range of international mechanisms for working within that framework on threats to the marine environment and resources.

The main existing mechanisms are:-

1. **UNEP** has a regional seas action programme for some 12 areas;

2.For the oceans and seas around Europe the separate **Paris and Helsinki Commissions** have the issues very much in hand;

3. **UNEP** is preparing a 1995 Conference on Land-Based Sources of Pollution, arising out of the 1992 Rio Conference, which will look at revised guidelines for regional seas action.

4.**GESAMP** ( UN Group of Experts on the Scientific Aspects of Marine Pollution ) provide coordinated scientific guidance to the UN generally;

5. Other UN agencies are dealing with various aspects of the problems -**IMO** on shipping , **UNECE** on aspects such as air pollution, **Bonn Convention** and **International Whaling Conference** on migratory species and cetaceans.

Is a further UN body needed in what is clearly already a crowded field ?

**ENVIRONMENT AGENCY**

Sir Crispin's interest

The Panel has indicated an interest in the Environment Agency as a major initiative. It is anticipated that the Agency will generally contribute to sustainable development through an integrated system of environmental regulation and protection. It will benefit business by providing a more streamlined service.

It is additionally proposed that there should be a specific provision in the legislation to set out that the Agency should contribute to sustainable development, although it is not yet agreed how this might be accomplished - whether by having a specific duty, by making sustainable development the Agency's principal aim, or by committing the Agency to take sustainable development into account in its corporate planning.

No specific points have been raised.

Key points

- Draft provisions to establish Environment Agency and Scottish Agency will be published before the end of the recess to inform interested bodies and public of proposals.

- Hope there will be opportunity to introduce full Bill during next session. Agency could be set up in 1995 and existing bodies incorporated into it at beginning of 1995-96 financial year.

- Agency should contribute to sustainable development through high quality, integrated environmental protection, management and enhancement.

Background note

1) Agency will have major responsibilities for controlling industrial pollution and wastes, and for management and regulation of the water environment - current functions of HMIP, NRA and waste regulation authorities.

2) Agency will bring these responsibilities together in a single national body, providing the opportunity for more coherent and integrated environmental protection and for a more straightforward service to industry and the public.

3) Primarily a regulatory body concerned with minimising the effects of environmental pollution, but should nonetheless have regard to sustainable development as one of its overall objectives in performing its functions.

4) Paving Bill planned to be introduced during 1993/94 session to progress preparatory work but insufficient time. Decision taken at Cabinet on 30 June to include substantive Bill in programme for 1994/95.

5) Publication of draft provisions will demonstrate Government's commitment to Agencies and enable public to see proposals in advance of First Reading of full Bill. Not a consultation paper.

**SIR CRISPIN TICKELL'S CALL ON THE PRIME MINISTER, 1 NOVEMBER.**

**CHINA COUNCIL FOR INTERNATIONAL COOPERATION ON ENVIRONMENT AND DEVELOPMENT (CCICED)**

**POINTS TO MAKE**

- Thank you for your report on the third meeting of the China Council. Pleased to see that the Council appears to be making useful progress.

- What were your main impressions of the meeting? Do you think the Government Of China are likely to take action in the light of the interesting advice emerging from the CCICED process?

- Is there anything else you think we should be doing to help, besides the contributions ODA is already making?

**BACKGROUND**

1. In 1992, the Chinese Government established the China Council for International Cooperation on Environment and Development (CCICED). CCICED is a "think tank" comprising senior Chinese representatives and leading international experts. Its aim is to advise the Chinese Government on the integration of environment and economic development. Sir Crispin is a member of the Council and in that capacity attended the third Annual General Meeting of the Council in Peking on 19-22 September. Sir Crispin subsequently wrote to the Prime Minister on 7 October with a copy of his report of the meeting.

2. The status of the Council appears to be growing, with the opening speech at this years meeting being delivered by Qian Qichen (Minister for Foreign Affairs). Recommendations to central government focused on four main areas; energy policy, biodiversity, monitoring activities and resource accounting. The Embassy reports that UK attendees, which included Dr John Jennings, the Chairman of Shell, were given a high profile, and

SIR CRISPIN TICKELL'S CALL ON THE PRIME MINISTER, 1 NOVEMBER.

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Sir Crispin was able to meet senior Chinese Ministers. A high profile was also given to the UK contribution to Council funding.

3. Six CCICED Working Groups have been established to prepare reports on specific issues. Following an approach to the Prime Minister by Sir Crispin in 1992, ODA is providing £190,000 towards activities of the Working Group on Environmental Economics. The Group has produced some useful research on environmental economics, pricing policy and resources accounting as they affect three key natural resources, namely water, coal and forest products. The Group aims to use the results of these studies to propose a strategy for long-term pricing policy reform to the Chinese authorities. But it is not clear to what extent the Chinese Government will actually be prepared to change its policies in the light of the Group's proposals.

4. ODA has also agreed to provide £930,000 to support a project to strengthen Chinese capacity to provide training in applied environmental economics for key decision makers. This 'Practical Economics for Environmental Management' project was drawn up by the chairman of our CCICED Working Group, Dr Jeremy Warford, in the light of his experiences of CCICED.

Eastern Asia Department
Overseas Development Administration
October 1994

To James Cressy
Company Dept of Environment
From Mrs J S BONNER
Company ODA
Tel No 071 917 0681
No of Pages 2

FAX
Post-it Fax Note

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Eastern Asia Department
Overseas Development Administration
October 1994

To James Cressey
Company Dept of Environment
From Mrs J S Bonner
Company ODA
Tel No 071 917 0651 Pages 2

FAX
Post-it Fax Note

CF pps

R1910

Foreign &
Commonwealth
Office

London SW1A 2AH

19 October 1994

Dear Philippa,

China Council for International Cooperation on Environment and Development: Letter from Sir Crispin Tickell

Sir Crispin Tickell wrote to Roderic Lyne on 7 October, enclosing a copy of his report on the third Annual Meeting of the China Council for International Cooperation on Environment and Development (CCICED).

The Prime Minister is meeting Sir Crispin on 1 November and there would be an opportunity to discuss the report and CCICED then. ODA will provide briefing on CCICED for the meeting. In the meantime we suggest that a short acknowledgement be sent along the lines of the enclosed draft.

Yours ever,

Sam

(S J Sharpe)
Private Secretary

Ms Philippa Leslie-Jones
10 Downing Street

Draft letter from PS/No 10

TO: Sir Crispin Tickell GCMG KCVO
The Warden
Green College
at the Radcliffe Observatory
Woodstock Road
Oxford
OX2 6HG

Thank you for your letter of 7 October enclosing a copy of your report on the Annual Meeting of the China Council for International Cooperation on Environment and Development (CCICED).

The Prime Minister looks forward to seeing you on 1 November, and will take the opportunity to discuss then both the report and the work of CCICED.

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plj/chcnia. 0745

bc RL

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

12 October 1994

dF

**CHINA COUNCIL FOR INTERNATIONAL CO-OPERATION ON ENVIRONMENT: LETTER FROM SIR CRISPIN TICKELL**

Sir Crispin Tickell has already copied to you and copy addressees his letter of 7 October to Roderic Lyne and his report on the proceedings of the China Council in September, enclosed.

I should be grateful for advice and a draft reply for Private Secretary signature by early next week if possible. I should also be grateful if Alan Riddell could incorporate the key points in the report in the brief for the Prime Minister's meeting with Sir Crispin Tickell on 1 November.

I am copying this letter and enclosure to Alan Riddell (Department of the Environment), Matthew Hilton (Department of Trade and Industry) and Susan Speller (Overseas Development Administration).

**MS PHILIPPA LESLIE-JONES**

S. J. Sharpe, Esq.
Foreign and Commonwealth Office

84

NEWS RELEASE: FOR IMMEDIATE USE

**Royal Commission on Environmental Pollution**

Church House
Great Smith Street
London SW1P 3BZ

Direct line 071-276
Enquiries 071-276 2080
Facsimile 071-276 2098

27 September 1994

## ROYAL COMMISSION CALLS FOR PLAN OF ACTION TO ACHIEVE SUSTAINABLE DEVELOPMENT

The Royal Commission on Environmental Pollution has welcomed the lead the government has taken on sustainable development and drawn attention to elements it believes should now be incorporated in a plan of action.

In a statement published today the Royal Commission emphasises the need to assess in the light of monitoring whether present trends and policies can be regarded as environmentally sustainable in the long term. Among other things it highlights the role of science and engineering in developing new technologies which will reduce the environmental effects of human activities and make it possible for economic growth to continue without causing unacceptable damage.

As part of the economic rationale for sustainable development, the Royal Commission believes costs and benefits should be expressed in money terms wherever possible. That will not be possible however in every case. The way of overcoming the difficulty may be to identify targets for environmental protection, which then can be kept under review in the light of the costs of achieving them.

The statement emphasises the international dimension of sustainable development, including the urgency of halting present rates of population growth and the changes which will be necessary over time in the lifestyles of the developed world.

The text of the Commission's statement is attached

NOTE TO EDITORS

The Royal Commission on Environmental Pollution is an independent standing body, established in 1970. Its terms of reference are to advise on matters, national and international, concerning the pollution of the environment; the adequacy of research in this field; and the future possibilities of danger to the environment. The 12 members and the Chairman, Sir John Houghton CBE FRS, are appointed by HM The Queen on the advice of the Prime Minister and serve part-time.

The government published a UK Strategy for Sustainable Development in January this year, with accompanying documents on climate change, biodiversity and forestry.

Contact: David Lewis
Telephone: 071 276 2109
Out of hours: 071 652 6278

**THE APPROACH TO SUSTAINABLE DEVELOPMENT:**
**STATEMENT BY THE ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION**

1 The Royal Commission on Environmental Pollution welcomes the emphasis the government has given to the objective of sustainable development and the lead the UK has taken in following up the Earth Summit at Rio. *The UK Strategy* (Cm2426), published in January, and the accompanying documents on biodiversity, climate change and forestry provide a comprehensive review of the issues involved in sustainable development as they affect this country.

2 The international dimension is of vital importance. For sustainable development to be achieved, the richer countries, including the UK, which are the most conspicuous consumers of the Earth's resources, will have to set an example by taking steps to reduce this rate of consumption. Fundamental changes will be required over a period of time in the lifestyles of the developed world, and those changes need to start now.

3 Sustainable development is therefore a central concern, not only at government level, but for business, local communities and individual citizens. The Royal Commission welcomes the setting up of a Round Table representing the different sectors. Government's task is to draw up a plan of action for achieving sustainable development, so that the contributions from different sectors can be focused and co-ordinated. The Royal Commission has prepared this statement in order to draw attention to those elements which it regards as particularly important to include in the plan of action.

**Future trends**

4 The first step is to assess the extent to which present policies and trends can be regarded as environmentally sustainable in the long term. *The UK Strategy* accepted the principle of looking 20 years ahead, but did not apply it consistently in all fields. In some cases the horizon did not extend beyond the end of this decade. The plan of action for sustainable development must be based on a clear view about the kind of world we want to bequeath to future generations. That means examining the environmental consequences of human activities and developments over as long a period as can reasonably be foreseen, despite the uncertainties and assumptions such an exercise inevitably involves. A 20-year period may well not be long enough. In some important fields, if present trends were to continue, it will be necessary to base the choice of policies on the likely situation in the second half of the next century .

**The scientific and technological basis**

5 The scientific and technological basis for sustainable development is of paramount importance. The first component is long-term monitoring of the environment to improve our understanding of the natural processes on which life on Earth depends, alert us to changes which could put those processes at risk, and confirm the effectiveness of the policies adopted for

sustainable development. The Royal Commission supports the work being done to develop indicators of environmental trends and emphasises the importance of reaching an international consensus on a set of key indicators. It is essential that these should have a sound scientific basis, and also that the issues involved in sustainable development should not be oversimplified. Monitoring of environmental trends is an area of science in which government must necessarily take the lead, and which needs long-term commitment and financial support. It is also an area in which the UK has considerable expertise, and can make a major contribution to what are in many cases appropriately international programmes.

6 The second component is the scientific investigation and research required to assess the seriousness of potential dangers to the environment and to human wellbeing. Such assessments must be based on science of high quality and draw upon the widest range of expertise, not only in the UK but internationally. However long-term environmental processes are not something about which conclusive scientific knowledge can be obtained quickly or easily. In order to achieve sustainable development governments will have to make judgements about the balance of risks. That is why, in discussing sustainable development in its Sixteenth Report, the Royal Commission linked it with the 'precautionary principle'. Where damage would be widespread and irreversible, or disproportionately expensive to remedy, decisions ought to be taken on the basis of what, in the absence of certainty, it is prudent to assume.

7 The third component in the scientific and technological basis for sustainable development is innovatory technologies which will reduce the environmental effects of human activities and thus make it possible for economic growth to continue without causing unacceptable damage. The priorities are:

a development of low-waste, low-pollution technologies and techniques to reduce the use of non-renewable resources, not only throughout manufacturing industry, but also in energy generation and use, transport and construction

b further techniques for making the maximum use of materials which have been regarded as waste, preferably by recycling but otherwise by recovering the maximum amount of energy from them in order to economise on the use of fossil fuels

c methods for cleaning up contaminated land and polluted water

d development of methods and technologies for use in agriculture and forestry which will ensure the continued production of food and timber without impoverishing or polluting soil or damaging the wider environment.

These are all areas in which industry can be expected to make a major contribution, within a framework set by government, and which provide enormous opportunities for UK firms.

8 The future pressures on the environment created by economic growth are likely to be at their greatest in the developing countries. It is therefore vital that the development of innovatory technologies gives high priority to the needs of developing countries, and that governments of developed countries take measures to promote a rapid and effective transfer of technology. Reducing pollution from industry in the UK while environmentally unacceptable processes continue in use elsewhere in the world would not amount to sustainable development.

9 The strategy for sustainable development must pay particular attention to non-renewable resources. The immediate aim is to achieve greater economy in the use of materials and increase the proportions recycled. Even if efficiency of use is maintained however, sources will eventually be depleted to levels at which obtaining further supplies imposes unacceptable costs in energy and damage to the environment. This reinforces the need to look beyond the middle of the next century in framing policies for sustainable development. *The UK Strategy* does not indicate how renewable substitutes will be developed for non-renewable materials. A core of government funding for research in this field is an essential element in achieving sustainability. It cannot be left entirely to industry to identify the new products required far enough in advance of resource depletion.

**The economic rationale**

10 To provide the economic rationale for sustainable development, the costs and benefits involved should be expressed in money terms wherever possible. In some cases however it will be difficult or impossible to do that. In part this reflects the scientific uncertainties referred to above; but putting a money value on something like a habitat or a landscape, which can be regarded as an environmental asset to be protected for its own sake for future generations, may be objectionable on grounds of principle as well as practicality. Alongside quantitative cost-benefit analyses therefore, those environmental costs which have not been quantified, and may not be quantifiable, must also be fully recognised. An effective way of doing that may be to identify targets for the protection or improvement of the relevant aspects of the environment. The costs of meeting those targets can then be estimated and a view taken on whether they should be confirmed or reviewed.

11 The preconditions for a satisfactory system of environmental accounting are agreement on what are the key environmental indicators and monitoring programmes linked to those indicators. Because tested methodologies and reliable data are not yet available, the Royal Commission does not at present favour modifying the national accounts by attempting to incorporate environmental degradation and depletion of natural capital. Work should be carried forward on producing natural resource accounts and materials balance accounts as parallel analyses to the national accounts and as an essential element in the strategy for sustainable development.

12 Another important economic component in the strategy for sustainable development is the provision of incentives which will encourage people to behave in more sustainable ways and contribute to the achievement of environmental objectives. The Royal Commission welcomes the government's commitment to using economic instruments to reflect the damage which particular human activities are causing to the environment. This will enable firms and individuals to take efficient decisions on the basis of all available information about the costs involved, including the external costs they are imposing. So far however only limited progress has been made in this direction.

**Establishing priorities**

13 *The UK Strategy* covered a very wide range of subjects and it is important to establish priorities. A pollution incident for example may cause large-scale destruction of living organisms at the local level, but some ecosystems (such as surface waters) have a natural resilience that may enable them to recover given time. Contamination of soil on the other hand is more difficult to reverse, even with remedial work. It is likely to be impossible to reverse contamination of groundwater. In order to achieve sustainability the major priority must be to prevent irreversible damage, such as loss of species, and minimise the extent of long-term damage.

14 The Royal Commission welcomes the recognition in the UK Strategy (paragraph 3.18) that adopting explicit objectives and setting quantified targets is an effective way of expressing priorities and carrying environmental policy forward. Only after objectives and targets have been identified can progress be monitored, and policies adjusted in the light of experience and further information. The Royal Commission hopes that further work by government Departments, in conjunction with the Round Table and the Panel on Sustainable Development, will result in publication at an early date of a considered and convincing plan of action incorporating specific objectives and targets.

15 In drawing up this statement of its views the Royal Commission has deliberately concentrated on general principles. Sustainable policies for transport are discussed in its Eighteenth Report, which will be published shortly.

16 There are other areas where the need now is to advance beyond the documents so far published by the government. One is energy. Another is the fundamental importance of land as a resource. Neither the UK nor Europe can rely on imports to feed their populations in the long term. If land is taken out of production, provision should be made to return it to agricultural use if and when required. Transport infrastructure, housing, and industrial and other development should be planned in such a way as not to sterilise valuable land, and derelict land must be brought back into appropriate use. The Royal Commission is investigating some of the related issues in its current study of the environmental problems associated with soil. Water is an equally essential resource. The concept of sustainable development was applied to the management of freshwater quality in the Royal Commission's Sixteenth Report in 1992, to which the government has yet to respond.

17 An important indicator of the UK's progress towards sustainability will be the success in implementing the Biodiversity Action Plan published at the same time as *The UK Strategy*. The UK has a respectable record of achievement in conserving species and habitats, but the government now needs to commit itself to targets and measures for halting the decline in native species and re-establishing such species in areas of their former range from which they are now absent. The voluntary conservation bodies, in their document "Biodiversity Challenge", have demonstrated how specific targets can be set for biodiversity.

**The international dimension**

18 It is disappointing that the European Community has not made more progress towards reflecting the principles of sustainable development in the whole range of its policies and activities, including for example its infrastructure programmes. The forthcoming review of the Fifth Environmental Action Programme provides an appropriate forum for the Community to consider how further progress can be made, and the UK government should make every effort to ensure that full advantage is taken of this opportunity.

19 As well as equity between generations, the concept of sustainable development is intimately bound up with the rights of access for different countries to the Earth's resources, not only for their basic needs but for increasing the wealth of their populations. At present countries with 20% of the world's population use 70% of its resources.

20 In international trade, the European Community should not seek to ban imports which are not in themselves environmentally harmful on the sole ground that they come from countries with poor environmental records. Rather than refusing to trade with such countries, the Community should adopt policies and measures which will help them to progress towards sustainable development.

21 Population growth is the most serious and urgent issue. Sustainable development cannot be achieved at the global level unless there is a strategy to halt, and eventually reverse, present rates of population growth. Training and education are an essential part of the support which the developed countries must give to the developing countries in this field. There is good evidence that the education of women, combined with measures aimed at reducing infant mortality, leads to a decline in family size. The UK should work closely with both developed and developing countries to achieve those ends. The Royal Commission supports the conclusions of the Population Summit in Cairo that spending on population programmes should increase from £3.3 billion a year now to £11.3 billion a year in 2000, and that population programmes should be integrated into strategies for sustainable development and proposals for the empowerment of women.

27 September 1994

FILE H/Tillson-KK

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

7 September 1994

**MEETING WITH SIR CRISPIN TICKELL**

This is just to confirm that the meeting with Sir Crispin Tickell has been arranged for Tuesday 1 November at 12 o'clock. The Secretary of State for the Environment is welcome to attend if he wishes to do so. It would be helpful to have briefing along the lines I have already commissioned by Friday 21 October.

**RACHAEL REYNOLDS**

Jonathan Tillson, Esq.,
Department of the Environment.

Fee

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

5 September 1994

Dear Jonathan

**PRIME MINISTER'S BILATERAL WITH SIR CRISPIN TICKELL**

I have already commissioned general briefing from you for this meeting. Sir Crispin Tickell has now passed on his own ideas for the agenda. A copy of his letter is attached. It would be helpful if the briefing could cover not only the work of the panel, but also something on the achievement so far of the "green minister process", and any response to the likely criticism Sir Crispin might make on funding of scientific research in the environment field.

You may also wish to comment on environmental refugees, the law of the sea conference and resource depletion although the Prime Minister is likely to listen rather than respond. It would also be helpful to have advance warning of any specific points he is likely to raise on the Environment Agency.

It would be helpful if briefing could be here by Friday 9 September. A copy of this letter goes to Jill Rutter here.

Yours ever

RACHAEL REYNOLDS

Jonathan Tillson Esq
Department of the Environment

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*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary: (0865) 274775*

5 September 1994

Fax message via telephone number: 071 930 4433

Miss Jill Rutter
10 Downing Street
London
SW1A 2AA

Dear Miss Rutter,

Thank you for your fax message of 1 September about my meeting with the Prime Minister on 15 September. I shall be hard to find this week, so I send a written reply.

I suggest that the agenda might cover the following points:

- The work of the Government Panel on Sustainable Development: of the subjects we have discussed so far, environmental costing and fish stocks are probably the most interesting.

- The Darwin Initiative, and how matters stand.

- Some specific points on the environment which I should like to mention:

  - the increasing gravity of the refugee issue, and current work on environmental refugees: this is a major long term problem, which in my view can only get worse;

  - government funding of scientific research: I am far from happy about the current approach of the Efficiency Unit;

  - green ministers, and whether the system is working.

- A couple of possible British initiatives:

  - with the implementation of the Law of the Sea in November, some of the gaps in its scope are becoming apparent: in particular its lack of

coverage of the good health - physical and biological - of the open seas. I think something like the Intergovernmental Panel on Climate Change should be set up, bringing together existing bodies, to look at the science, the human impacts, and possible responses. It could be called the Intergovernmental Panel on the Oceans;

- with debate on resource depletion and waste disposal continuing worldwide (particularly in the UN Commission on Sustainable Development), we could put forward the idea of a world inventory - or Domesday Book - of the world's sources and sinks, with a view to future as well as current human needs.

- Prospects for the proposed environment agency.

Finally I had in mind to mention the Intergovernmental Conference on the future of the European Union. The hazards for Britain are obvious. I wonder whether it might not be possible to set up a relatively small independent panel which would look at the ideas put forward by different members of the European Union, and make impartial proposals to the Conference on what might command general assent.

I know that this is a lot for a brief meeting. But at least it might be possible to cover the main points. As you know there is a virtue in initiatives and leading from the front, and I see many opportunities for the Government.

Yours sincerely,

Jean Bagnall Smith

pp. Crispin Tickell

Dictated by Sir Crispin and signed in his absence

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

5 August 1994

The Prime Minister is meeting Sir Crispin Tickell on Thursday 15 September at 17.00 to discuss the Sustainable Development Panel. It would be helpful if appropriate briefing could be received by 18.00 on Tuesday 13 September.

A copy of this letter goes to Sam Sharpe (Foreign and Commonwealth Office) because Sir Crispin Tickell also wishes to discuss his forthcoming visit to China.

RACHAEL REYNOLDS

J Tillson Esq
Department of the Environment

10 DOWNING STREET

Pachaer -

Crispin Tickell
now a diary
a Thursday 15
September 1700 - 1730.
To discuss attached
And also China
before he leaves
for there on 18 Sept.
FCO need to advise. ΔSTS.

29-4-1.jr

From: Jill Rutter
Date: 29 April 1994

cc: Mrs Hogg

USTAINABLE DEVELOPMENT

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I pointed to the usual diary
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ving problems in access to other
anel is waiting a paper due from
nt.

esday to discuss matters. If you
.....

JILL RUTTER

1/ Arabella,
Is Crispin in the diary now?
2/ Rachael,
To note

1/8

From: Jill Rutter
Date: 29 April 1994

cc: Mrs Hogg

MR ADAMS

GOVERNMENT PANEL ON SUSTAINABLE DEVELOPMENT

Sir Crispin Tickell rang me today. He asked whether it was going to be possible to fix a meeting for the Prime Minister with the Sustainable Development Panel. I pointed to the usual diary pressures etc, but he reiterated that it was important that the Panel should see the Prime Minister and that would raise its visibility. He also said that he would like to have a brief 20 minute session with the Prime Minister on his own - though he was clearly willing to piggy-back this onto a session with the Panel. The main thing he wants to raise on his own with the Prime Minister is his next trip to China - in September.

I pleaded diary etc, but I think we probably should aim to schedule something in late summer or early autumn. Depending on where things have got to with DOE, I can raise this at Gen 33 on Wednesday. I asked if he was having problems in access to other Secretaries of State, but the Panel is waiting a paper due from Gen 33 on sustainable development.

I have offered him lunch on Wednesday to discuss matters. If you would like to join us .....

JILL RUTTER

29-4-1.jr

h/tickell.ch

10 DOWNING STREET
LONDON SW1A 2AA

20 January 1994

From the Private Secretary

Thank you for your letter of 18 January, enclosing a copy of a letter you have sent to William Waldegrave.

I was myself unaware of the possible scrapping of the Meteorological Research Flight, but prompted by your letter, will make one or two enquiries.

I enclose a copy of the note I took after your meeting with the Prime Minister last week. I am pursuing with DOE the question of the letter from the Prime Minister to you in your role on the Advisory Panel.

**MARK ADAMS**

Sir Crispin Tickell GCMG KCVO

**NOTE FOR THE RECORD** cc Ms Rutter

**PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL: WEDNESDAY 12 JANUARY**

The Prime Minister held a brief meeting with Sir Crispin Tickell. Jill Rutter, No.10 Policy Unit, was also present.

Government's Advisory Panel on Sustainable Development

Sir Crispin referred to the forthcoming launch on 25 January of the Advisory Panel. There were to be five members, with a possibility of one or two in addition. The Panel would meet four times a year and would take as its starting point the sustainable development paper being launched on 25 January.

Sir Crispin suggested that the first meeting of the Panel might have before it a letter from the Prime Minister setting out the areas the Government wished the Panel to cover. The Prime Minister was minded to agree. The main issues Sir Crispin mentioned which he thought should be covered were agriculture, nuclear energy and transport; but he also thought it would be important to examine international aspects, in particular how environmental considerations could be taken into account in trade policy.

Post Rio follow-up

Sir Crispin reported that the main outstanding item was the ratification of the Biodiversity Convention. He understood the delay to be due to the difficulties over the negotiations on the Global Environmental Facility. He thought however that the issues would soon be resolved satisfactorily.

Sir Crispin mentioned that the issue of population might also be usefully followed up. The Prime Minister expressed some interest.

Darwin initiative

Sir Crispin reported that he had interested a television company, TVE, in producing six programmes looking at different aspects of the initiative. He had passed the proposition on to DOE.

Environmental refugees

In passing, Sir Crispin mentioned a two year Anglo-US programme he was running to look at future programmes caused by migration in response to environmental problems. He said that currently there are around 12 million environmental refugees, but that this could rise to 50 million by 2010.

Concluding the meeting, the Prime Minister said he looked forward to seeing Sir Crispin on 25 January and hoped they would have an opportunity soon for a lengthier discussion.

MARK ADAMS
12 January 1994

h\tickell.ecl

PPS CF?

RL9/1

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cc J.U Rutter ~~David~~ Poole

To note

MAA
19/1

*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary:* *(0865) 274775*

18 January 1994

Mr. Mark Adams
10 Downing Street
London
SW1A 2AA

Dear Mark,

I thought that you might like to see the attached letter which I have just sent to William Waldegrave. It speaks for itself. Anything you could do to help would be much appreciated.

It was very nice to see you last week. Some time it would be useful to see a copy of the record you made of my discussion with the Prime Minister. It will be carefully locked up in my archives.

+ ||

copy due

With all good wishes,

Yours sincerely

Crispin Tickell

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*From the Warden:*
*Sir Crispin Tickell* GCMG KCVO
*Secretary:* (0865) 274775

17 January 1994

The Rt. Hon. William Waldegrave, M.P.
Chancellor of the Duchy of Lancaster and
Minister of Public Service and Science
The Office of Science and Technology
70 Whitehall
London SW1A 2AS

Dear William,

I write to you about a serious issue for British science. I suspect that part of the problem is that it falls between departmental responsibilities. You may already have heard about it through official channels. If so please forgive me for bothering you personally.

The issue is simple. At present the Hercules aircraft of the Meteorological Research Flight (MRF) undertakes research into a wide range of topics relevant to detailed weather forecasting and general environmental issues. Unfortunately it falls within the responsibility of the Ministry of Defence. Like other Government departments, the Ministry of Defence has to cut its budget. Obviously MRF does not have high priority for defence. Thus the Ministry of Defence wants to scrap it.

In environmental terms the case for maintaining the MRF programme is overwhelming. The biggest single cause of uncertainty in climate prediction arises from the behaviour of clouds. To reduce this uncertainty requires a better understanding of their characteristics and more accurate representation of them in computer modelling. The MRF aircraft, with its long endurance and comprehensive instrumentation, is ideally equipped to tackle the problem, and is now doing so in cooperation with other aircraft from the United States, France and Germany. The programme is directed by scientists at the Hadley Centre for Climate Prediction (which you will remember was set up by Margaret Thatcher), and the resulting airborne observations are designed to improve our modelling, which remains the main underpinning of the British contribution to policy on climate change. As an example, recent airborne measurements have been used by the Hadley Centre to show for the first time how changes in clouds containing sulphur aerosols may be masking part of the greenhouse effect.

Although larger computers will improve climate forecasts, the full gain from this investment can come only from better representation in the modelling. The equivalent US programme has recently taken delivery of a Hercules of its own, and has visited MRF for advice on how best to equip it for atmospheric research. The Germans are currently investing in a purpose built stratospheric aircraft. I should add that the MRF aircraft also undertakes studies into the chemical behaviour of such greenhouse gases as methane, ozone and CFC substitutes and other pollutants. It was able to make the first measurement of pollution from the Kuwaiti oil fires and to confirm that the global effects would be small. Current work undertaken jointly with the Americans, Germans and Norwegians should identify more clearly the cause of growth in low level ozone so that the need for control policies can be rationally determined.

Some economies have already been made in the programme, and I believe some £3,400,000 will be saved over the next ten years. But apparently the Ministry of Defence remains determined to axe it altogether. Although ideal for research, the aircraft is over twenty-five years old, and having been extensively modified has virtually no commercial value. It has attracted some £1,000,000 of external funding, namely from the United States, over the last four years. To scrap the aircraft - an internationally recognised facility in demand for climate research projects - does not sit easily with our claim to be playing a major role in climate research and our recent ratification of the UN Framework Convention on Climate Change.

It is obvious that the Ministry of Defence is not the natural home of the programme. The ideal solution would be to transfer responsibilities and budgets to the Natural Environment Research Council. I know that this might create a host of other problems, but before we lose an important facility, I would be most grateful if you would look at the problem and see what might be done.

With all good wishes for 1994,

Yours sincerely,

Crispin Tickell

SUBJECT
MASTER

Filed on:

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

12 January 1994

Dear Jonathan,

**PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL**

I enclose a record of the meeting the Prime Minister held this morning with Sir Crispin Tickell.

As the meeting record relates, Sir Crispin touched on the launch on 25 January, but did not go into the details. He was keener to outline for the Prime Minister the possible work of the Advisory Panel on Sustainable Development. He suggested the Prime Minister might write a commissioning letter to the Panel. I should be grateful for your comments.

Yours

Mark

**MARK ADAMS**

Jonathan Tillson, Esq.,
Department of the Environment.

**NOTE FOR THE RECORD** cc Ms Rutter

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Sir Crispin reported that the main outstanding item was the ratification of the Biodiversity Convention. He understood the delay to be due to the difficulties over the negotiations on the Global Environmental Facility. He thought however that the issues would soon be resolved satisfactorily.

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Darwin initiative

Sir Crispin reported that he had interested a television company, TVE, in producing six programmes looking at different aspects of the initiative. He had passed the proposition on to DOE, although he was not explicit about the help he was seeking.

Environmental refugees

In passing, Sir Crispin mentioned a two year Anglo-US programme he was running to look at future programmes caused by migration in response to environmental problems. He said that currently there are around 12 million environmental refugees, but that this could rise to 50 million by 2010.

Concluding the meeting, the Prime Minister said he looked forward to seeing Sir Crispin on 25 January and hoped they would have an opportunity soon for a lengthier discussion.

MARK ADAMS
12 January 1994

h\tickell.ecl

cc B'up

From: Jill Rutter
Date: 11 January 1994

PRIME MINISTER

**MEETING WITH SIR CRISPIN TICKELL: 12 JANUARY 1994**

You are seeing Sir Crispin Tickell tomorrow at 12.30.

He has called Mark with his proposed agenda for the meeting. These are:

1. The Advisory Panel's sustainable development;
2. Rio follow-up;
3. Darwin initiative;
4. Sustainable agriculture;
5. China;
6. Environmental refugees.

On the last four items, Sir Crispin simply wants to brief you on what he is doing. DOE are unsighted about his ideas. So you need simply sit back and take note.

The two substantive items are the Advisory Panel and Rio follow-up. As you know, we are launching the four documents arising out of the Rio commitments on 25 January. You will be involved at the start, though the substance will be left to Mr Gummer and Mr Lang. Sir Crispin has become the convenor of the new Government Advisory Panel on Sustainable Development. The members of the Advisory Panel will be Lord Alexander of NatWest Bank, Dr Anne MacLaren, Secretary of the Royal Society, Lord Selborne and Sir John Houghton.

DOE are currently having discussions with Sir Crispin on precisely how the Advisory Panel will function. DOE are very concerned to ensure that it is seen as a Government Advisory

Panel, not as DOE Advisory Panel. Its purpose should be to advise the Government on environmental implications of the range of policies, and to try and bring more coherence. The Panel will of course have to be realistic on what it can expect the Government to do - and the Advisors have been chosen as sensible people who have a realistic view of the constraints as well as the possibilities.

Sir Crispin has warned that he wants to raise transport. The Department of Transport has started making some nods in the direction of greater environmental awareness - but still falls far short of what the environmentalists seek. I think there would be no harm in encouraging the Advisory Panel to open up a dialogue with the Department of Transport.

Sir Crispin is likely to ask about access to you. I think it would be difficult for you to avoid seeing the Panel at least once a year - and I think you should indicate to Sir Crispin that, although their prime contacts will be with Departments, you will want to keep track of their activities and have a chance to discuss developments with Panel members.

Sir Crispin is also likely to press on ratification of the Biodiversity Convention. You will recall that following the break down of the GEF discussions in Colombia before Christmas, Ministers took a view that the financial basis for ratification had not yet been established. A substantial diplomatic effort is under way to try to establish that basis - not least an approach by Mr Portillo to fellow Finance Ministers to get them to share our view on the need to resist anything that risks becoming a blank cheque for the G7. Sir Crispin is likely to point out that the Germans, the Americans, the Spaniards and the Canadians have all already ratified or set the process in train. He is likely to press for rapid ratification. I do not think you need to be too defensive on this. You could stress to Sir Crispin that you still have every intention of ratifying the Convention, but that it is important to have a Convention that

works and it is much better to be clear on finances first than leave it all to be sorted out later.

JILL RUTTER

11-1-4.jr

File

**From:** MARK ADAMS
**Date:** 10 January 1994

**JILL RUTTER**

**SIR CRISPIN TICKELL**

Crispin rang me late this afternoon to list the subjects he wished to run through with the Prime Minister:

(i) the Advisory Panel on sustainable development. He wishes to outline the substantive issues likely to emerge, particularly transport;

(ii) Rio follow-up - in particular the state of play on the biodiversity convention, where presumably the Prime Minister will be able to pass on the good news;

(iii) the Darwin Initiative. Crispin will touch on his ideas for taking the initiative forward;

(iv) Sustainable agriculture. Crispin will report on a project he is now working on in conjunction with the National Farmers' Union;

(v) China. Crispin likes to give a short update on his work with the International Environment Council the Chinese have established;

(vi) environmental refugees. Crispin will report on a new Anglo-US initiative to examine the problem of environmental refugees, i.e. those forced to migrate due to environmental problems. Crispin is chairing the project.

The only unusual issues are those where Crispin wishes to report on his latest pet projects, where the Prime Minister can simply take note. I see no reason to bother DOE for briefing on these issues, but you might like to discuss with Derek Osborne in the morning.

MARK

h\crisp.as

AJ

FILE

mcn

h/FCO. mcn

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

20 May 1993

**Chinese Council for International Cooperation on Environment and Development**

As you will know, Sir Crispin is a member of the above Council which advises the Chinese government on environmental matters. Crispin recently returned from the second meeting of the Council.

I attach a copy of Crispin's report to the Prime Minister on the meeting of the Council, for your information.

I am copying this letter and enclosure to Mark Lowcock (ODA) and Jonathan Tillson (DoE).

MARK ADAMS

Christopher Prentice, Esq.,
Foreign and Commonwealth Office

FILE

h/Ticket. mer

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

20 May 1993

Thank you for your letter of 17 May. I am glad to hear that you have returned safely from China.

I very much enjoyed your report on your visit, which I shall be putting to the Prime Minister over the weekend. I was pleased to hear how seriously the Chinese are taking the work of the Council.

**MARK ADAMS**

Sir Crispin Tickell, GCMG, KCVO

→ File

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(4)

Prime Minister

A typically amusing letter from Crispin reporting on his work in China. I have marked him for it.

MRA
21/5

*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary: (0865) 274775*

17 May 1993

The Rt. Hon. John Major MP
10 Downing Street
London
SW1A 2AA

✓

Dear Prime Minister,

When you were kind enough to receive me on 21 April, we discussed my visit to China from 1 to 9 May. I have already briefed our Ambassador in Peking, and will be letting others concerned have a full report. In the meantime I thought you might like a note of the main points.

The China Council for International Co-operation on Environment and Development has a majority of Chinese Ministers, administrators and scientists, and a minority of foreigners distinguished for their work on environment and development. For the record I attach lists of both. We met in the ancient city of Hangzhou near Shanghai. I was lodged in a lakeside villa which was, I believe, one of the boltholes set aside by Mao Zedung, Chou En-lai, and Deng Xiaoping in the event of a war between China and the Soviet Union. Underground it was honeycombed with escape tunnels.

We spent three days debating such issues as future Chinese policy on energy and energy technology; pollution control, monitoring and data collection; scientific research, technical development and training; resource accounting; and protection of biodiversity. We also heard at length and in impressive detail how the Chinese government intended to give effect to its undertakings at the Rio conference. At the end the Chinese Chairman, the Canadian Vice-Chairman and I put together, at the request of the Chinese, a list of recommendations to the Chinese government. It went through five drafts. The result is enclosed.

We were then flown up to Peking and three of us presented the paper to the President of China. The Canadian Vice-Chairman covered agriculture, research and related issues; the Malaysian Minister of the Environment spoke on energy and the need for an integrated transport policy; and I covered resource valuation and biodiversity. In reply President Jiang Zemin kept to generalities, but recalled a happy visit to London in 1988 and the success of the British government in cleaning up the Thames. Throughout our discussions, which were chaired by the Chinese Minister in charge of the State Commission for Science and Technology, the Chinese showed how seriously they took the work of the Council. They were handicapped by obvious infighting between Ministers and Ministries. These issues of turf were what bedevilled the drafting of the recommendations.

As at the first meeting of the Council last year, the Chinese treated us with honour. The British contribution of £70,000 a year for two years to the Working Group on Valuation and Pricing of Resources won us much credit, and was apparently given publicity in the Chinese press. The Working Group is going well, and is effectively run by the British. When the time comes I shall recommend renewal of our contribution for one or two more years. Knowing of my position as your unofficial adviser, the President, the Minister for Science and Technology and the Head of the Chinese Environment Agency asked me to convey their respects to you.

Obviously Hong Kong was far from our agenda, and in my discussions with the Chinese I avoided it. But Qu Geping (Head of the Environment Agency) took me aside after dinner one evening to say that he knew there had been problems over Hong Kong, but that we should not worry. All would be well. Knowing that I had worked with the Governor when both of us were in different capacities, he asked if I could give him any guidance about him. I replied that Mr. Patten had no hidden agenda. The Chinese should listen carefully to what he had to say because that was what he meant.

In discussion with other Chinese, I found that the threat to China from Hong Kong looked bigger than the threat to Hong Kong from China. They obviously feared the impact which the Hong Kong might have on both the Chinese economy and Chinese politics. In southern China the economy is overheating (I believe growth rates are over 8%), and the central government finds it more and more difficult to exert control. There was talk about the need to open China to the outside world on one hand, and the risks of cultural pollution on the other. A Peking taxi driver well summed it up for me: his main interests were Nigel Mansell and motor racing, the fortunes of Manchester United, and a pop group (new to me) from Hong Kong.

You will remember that you kindly offered to send a message to the Chinese Prime Minister about my visit. In discussion afterwards it was agreed that this might not be the right time or best occasion for it. In the event Li Peng was ill in hospital. The story, as I could piece it together, was that he was suffering from pneumonia and not a political malady. Time will tell.

With all good wishes,

Crispin Tickell

A

# Second Meeting of China Council for International Coperation on Environment and Development Iternational Participants

Members

1. Dr. Marcel Masse
   International Vice–Chairman of CCICED
   Secretary in Charge of Federal–Provincial Relations
   Government of Canada
   Former President
   Canadian International Development Agency
   Canada

2. H. E. Mr. Kazuo Aichi
   Member of the House of Representatives;
   Vice Chairman,
   The Policy Research Council of the LDP;
   Former Minister of Environment
   Japan

3. The Hon. Barber Conable
   Former President of the World Bank
   President, U.S.–China Relations Association
   USA

4. H.E. Mr. Law Hieng Ding
   Minister of Science, Technology and the Environment
   Kuala Lumpur
   Malaysia

5. Mr. Sinji Fukukawa
   Executive Vice President
   KOBE Steel Ltd
   Former Vice Minister of MITI
   Japan

6. Mr. Daniel Goeudevert
   Chairman of the Executive Committee
   Volkswagen AG
   Germany

7. Professor Jose Goldemberg
   Minister of Education
   Brazil

X 8. Mr. Charles de Haes
Director General
World Wide Fund for Nature
Switzerland

✓ 9. Dr. Martin W. Holdgate
Director General
International Union for the Conservation of Nature
Switzerland

X10. Mr.John S. Jennings, C.B.E. [His place was taken by Mr. Kevan GOSPER of Shell]
Managing Director
Royal Dutch/Shell Group of Companies
Shell Centre
United Kindom

✓ 11. Dr. Volkmar Köhler
Vice Chairman,
CDU Committee on Development Cooperation;
Former State Secretary,
Ministry of Development Cooperation,
Member of the Bundestag,
Germany

✓ 12. Mr. Martin Lees
Adviser to the Secretariat
International Consultant
Former Assistant Secretary General of the United Nations
France

✓ 13. Ms. Julia Marton–lefevre
Executive Director
International Council of Scientific Unions
France

✓ 14. Mrs. Karin Söder
Former Foreign Minister of Sweden
Vice Chairman
Stockholm Environment Institute
Sweden

15. Mr James Gustave Speth
Former President
World Resource Institute
USA

16. Dr. Emil Salim
Professor, Faculty of Economics,
University of Indonesia;
Former Minister,
Ministry of Population and Environment
Indonesia

17. Professor M.S. Swaminathan
Madras, India
Former Director of International Rice Research Institute

18. Sir Crispin Tickell
President
The Royal Geographic Society
Former Ambassador to the United Nations
United Kingdom

19. Mr. B.C.G. Zoeteman
Deputy Director General for Environmental Protection
Adviser to the Minister
Ministry of Housing, Physical Planning and Environment
The Netherlands

Specially Invited Guests:

1. Mr. Kozo Watanabe
   One of the Leading LDP Member of the House of Representatives
   Former Minister of International Trade and Industry
   Japan

2. Mr. Choi Young Choul
   Former Prime Minister
   The Republic of Korea

Oberservers:

1. Mr. Peter Harris
   Resident Representative for China , The Ford Foundation
   Beijing, China

2. Dr. Arthur Holcombe
   Resident Representative for China, UNDP
   Beijing, China

3. Dr. Pieter P. Bottelier
   Resident Representive for China, The World Bank
   Beijing, China

4. Prof. Earl Drake
   Director, Vancouver Suport Office for CCICED
   Canada

5. Mr. Seiki
   Director,
   Global Industrial and Social Progress Research Institute,
   Japan

6. Mr. Vandebon
   Councillor of Science and Technology
   Mission in China, European Economic Commission
   Beijing, China

7. Ms. Margaret Jack
   Director
   Shell Companies in China and Hong Kong
   Hong Kong

8. Mr. Arthur Hanson
President
International Institue for Sustainable Development
Canada

9. Mr. Ansger Vogel
Director General for International Affairs
Ministry of Environment, Germany

International Co–Chairmen of the Working Groups:

1. Dr. Thomas B. Johansson
Co–Chairman of Working Group on
Energy Strategies and Technologies
Environmental & Energy System Studies
Professor
Lund University, Gerdagatan, Lund, Sweden

2. Mr. Jeremy J. Warford
Co–Chairman of Working Group on
Resource Accounting, Environmental Economics and
Pricing Policy
Professor, University College London
London, U.K.

3. Dr. Yokoyama Osayuki
Co–Chairman of Working Group on
Scientific Research, Technological Development and Training
Director General
National Institute for Resources & Environment of Japan
Japan

4. Dr. T. Schneider
Co–Chairman of Working Group on
Pollution Control, Monitoring and Data Collection
National Institute of Public Health and Environmental
Protection (RIVM), The Netherlands

5. Dr. John MacKinnon
Co–Chairman of Working Group on Protection of Biodiversity
Director
Asian Bureau for Conservation, Hong Kong

Accompanying Members:

1. Mr. Henri–Taul Normandin (Accompanying Dr. Marcel Masse)
2. Mrs. Dai Yichun (Accompanying Dr. Marcel Masse)

3. Miss. Melanie Alton (Accompanying Dr. Marcel Masse)
4. Ms. Allison Namkirvell (Accompanying Dr. Marcel Masse)
5. Miss. Marilet Fideles (Accompanying Dr. Marcel Masse)
6. Mr. Foong Seng Ham (Accompanying Mr. Law Hieng Ding)
7. Mr. Ishida Yasuhiko (Accompanying Dr. Yokoyama)
8. Mr. Koezuka Masahiro (Accompanying Mr. Watanabe)
9. Mr. Koizumi (Accompanying Mr. Watanabe)
10. Mr. Choi In (Accompanying Mr. Choi Young Choul)
11. Mr. Choi Kyung Ju (Acompanying Mr. Choi Young Choul)
12. Mr. Joden Ryan, UNDP
13. Mrs. Liu Shuqin, UNDP
14. Mrs. Yao Licheng, UNDP
15. Mrs. Sun Chongwu, World Bank
16. Mr. Husayn Anwar, Chinese Research Academy of Environmental Sciences

B

# NAME LIST OF THE CHINESE MEMBERS OF THE CHINA COUNCIL FOR INTERNATIONAL COOPERATION ON ENVIRONMENT AND DEVELOPMENT

| | |
|---|---|
| 1. Song Jian | State Councillor; Chairman of the Environment Protection Commission |
| 2. Qu Geping | Administrator of NEPA; Chairman of Environmental Protection Committee of the National People's Congress |
| 3. Gu Ming | Legal Expert; Former Vice-Chairman of the Legal Affairs Committee of the National People's Congress |
| 4. Liu Huaqiu | Vice-Minister Ministry of Foreign Affairs |
| 5. Yao Zhenyan | Senior Engineer, Vice-chairman of the State Planning Commission |
| 6. Li Xue | Research Fellow, Vice-Chairman, State Scientific and Technological Commission (SSTC) |
| 7. Huang Yichen | Senior Engineer, Minister, Ministry of Energy |
| 8. Liu Zhongyi | Former Minister, Ministry of Agriculture |
| 9. Hou Jie | Minister, Ministry of Construction |
| 10. Zhang Youcai | Vice-Minister, Ministry of Finance |
| 11. Liu Guangyun | Forestry Expert, Vice-Minister, Ministry of Forestry |
| 12. Pan Lianshen | Senior Engineer, Vice-Minister, Ministry of Chemical Industry |
| 13.Li Guohua | Assistant Minister, Ministry of Foreign Economic Relations and Trade |
| 14.Yan Keqiang | Vice-Minister, Ministry of Water Conservancy |
| 15.Zhang Hongren | Vice-Minister, Ministry of Geology and Mineral Resources |
| 16.Song Honglie | Former Vice-President Chinese Academy of Sciences |
| 17.Zou Jingmeng | Administrator, State Meterological Administration |
| 18. Liu Hongru | Professor, Deputy Director, State Commission for Restructuring Economic Systems |
| 19.Jin Jianming | Adviser to and former Deputy Administrator of National Environmental Protection Agency |
| 20.Li Yining | Vice-Chairman of the Legal Affairs Committee of the National People's Congress; Economist and Professor, Beijing University |

| | |
|---|---|
| 21.Ma Hong | Research Fellow, Director, Development Research Centre of the State Council(DRC) |
| 22.Liu Shu | Vice-Chairman, Chinese Association of Science and Technology |
| 23.Qian Yi | Member of the Standing Committer of the National People's Congress, Professor of Qinhua University |
| 24.Cai Shiwen | Director Institute of Environmental Health and Health Engineering Chinese Academy of Preventive Medicine |
| 25.Wang Song | Vice-Chairman, National Science Committee of Endangered Species; Research fellow, Institute of Zoology, Chinese Academy of Sciences |

C

final version

# RECOMMENDATIONS TO THE CHINESE GOVERNMENT BY THE CHINA COUNCIL FOR INTERNATIONAL COOPERATION ON ENVIRONMENT AND DEVELOPMENT

May 5, 1993, Hangzhou

The Council commends China for having set a 10 point policy and other post-UNCED action plans and encourages effective implementation of the policy and the plans.

The Council believes that environment and development are complementary. Together they should be designed to advance the modernization of China. The Council wishes to bring to the attention of the Chinese Government the importance of environmentally sound development at this time of rapid economic growth. In this respect China should learn from the mistakes as well as the achievements of the industrial countries, and build on China's assets to create a sustainable economy. Environmental considerations should be brought into the centre of economic and social policy making from the beginning.

The Council is giving detailed study to the means by which sustainability can be achieved. It identifies some priorities and formulates the following recommendations.

1. Energy is critical. At present dependence on coal is a prime cause of pollution and contributes to global as well as local climate change. It is necessary to promote:

   - Energy conservation and efficiency in domestic and industrial use.
   - Clean coal technologies.
   - Alternative renewable sources of energy.

2. China is rich in biodiversity. Its continued destruction could do enormous damage to the economy by weakening its natural base and depriving China of its potentialities for future food, medicine and other materials. It is necessary to:

   - Strengthen the system of terrestial and aquatic protected areas.
   - Restore degraded habitats to ecological productivity; in order to achieve this, enlist the indispensable help of local communities.
   - Cooperate with neighbouring countries to work out regional agreements on the prevention of trade in endangered species; in this respect, China should convene a regional conference on the issue.

3. Correct valuation and pricing of resources is the key to a sustainable economy.

- Develop and adopt resource pricing policies which reflect environmental and social costs.
- Remove inappropriate subsidies.
- Improve the present National Economic Accounting System by incorporating environmental costs into it.
- Develop and use economic and fiscal instruments for environmental management and pollution control.

4. Nothing is possible without public understanding, support and participation. Taking this into account:

- Disseminate environmental information to the public through the media.
- Carry out environmental education at various levels, paying special attention to youth and women.
- Establish mechanisms which will guarantee public participation.
- Consider public choices and wishes.
- Encourage the public to exercise supervision of behaviour that causes damage to the environment.

5. Allocate adequate funds to support the implementation of environmental laws, standards and regulations.

6. As an important member of the international community, China should play an active role in international efforts to cope with global environmental problems. For example, it should join in fixing national targets for atmospheric carbon emissions as part of an equitable international regime.

PM: Meetings with Sir C. Tickell June 1990

19.05 A193

cc Jill Rutter

GREEN COLLEGE
AT THE RADCLIFFE OBSERVATORY
WOODSTOCK ROAD
OXFORD OX2 6HG
*Telephone* (0865) 274770
*Fax* (0865) 274796

*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary: (0865) 274775*

17 May 1993

Mr. Mark Adams
10 Downing Street
London
SW1A 2AA

Dear Mark,

As you will see from the enclosed, I have prepared a brief report for the Prime Minister on my visit to China from 1 to 9 May. I should be grateful if you would deliver it to him.

I have not made any copies, and leave any further distribution to you.

Crispin Tickell

K: H/TICKELL.AB
Ncc Jill Rutter
[plus enc]

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

27 April 1993

I am enclosing a copy of the meeting record from our meeting last Wednesday. Jill and I are pursuing the various action points.

I have investigated the possibility of a letter for you to take to China. I know you appreciate the possible difficulties of doing this and indeed the advice I have been receiving is that it would be wise not to pursue it. The Chinese are of course well aware of your close links with the Prime Minister.

I hope your visit to China goes well. I look forward to hearing all about it on your return.

**MARK ADAMS**

Sir Crispin Tickell GCMG KCVO

589 - 5466

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R23/4

*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary: (0865) 274775*

22 April 1993

Mr. Mark Adams
No.10 Downing Street
London SW1A 2AA

PERSONAL

cc Jill Rutter

I am suggesting Crispin goes ahead as he has suggested. You might like to pass a copy of the attached letter to Tom Burke (it should go via that route rather than Private office to Private office). It might be helpful if the Government were ready with a response if he covered a pre-emptive strike.

26/4

Dear Mark,

We had a word this morning about the attached letter I have received from Stephen Tindale, the secretary of the Labour Environment Policy Commission. His letter is self explanatory.

I am minded to reply as follows

- Unfortunately I am already heavily committed elsewhere on 7 June (alas too true!), and so will not be able to speak at the first meeting of the Commission;

- As he will know, I am an unofficial adviser on environmental matters to the Prime Minister;

- If in my capacity as former British Permanent Representative to the United Nations I could give any advice to Chris Smith on the international aspects of environmental issues, I would be happy to do so.

I should be grateful for your advice before I reply. I shall regard it as decisive!

Yours sincerely,

Crispin Tickell

CHRIS SMITH, MP
*Shadow Secretary of State for Environmental Protection*
House of Commons London SW1A 0AA
Telephone 071-219 5119
Fax 071-219 5820

Sir Crispin Tickell
Director
Green College Centre for Environmental Policy and Understanding
Radcliffe Observatory
Oxford OX2 6HG

7 April 1993

Dear Sir Crispin,

The Labour Party has recently established a Policy Commission on the Environment to consider the party's policies, in particular the integration of environmental and economic policies and international environmental issues. The aim is to develop a radical and coherent set of policies, and to ensure that the environment is given a much higher priority at the next election than it was at the last.

We are planning to launch the Commission with an all-day meeting chaired by John Smith MP on 7 June, probably at Regent's College in London. This is an important opportunity to engage the Leader of the Opposition in debate on the environmental agenda, and we will be inviting a number of leading academics and environmentalists.

I would be extremely pleased if you would agree to make a short presentation on international environmental issues, and if possible to stay for the rest of the meeting as well. If you are able to attend, we can discuss in more detail what issues you think need to be addressed.

I look forward to hearing from you.

Yours sincerely

Stephen Tindale
Secretary, Labour Environment Policy Commission

File

SUBJECT MASTER

**NOTE FOR THE RECORD** cc Ms Jill Rutter

Filed on:

**PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL**

The Prime Minister yesterday had a meeting with Sir Crispin Tickell. The meeting ranged with efficient speed over a large number of subjects.

Prime Minister's Rio initiatives

Sir Crispin reported that the Birmingham Conference on the Global Partnership Initiative had been successful and he looked forward to constructive follow-up work over the lifetime of the initiative. On the forthcoming NGO Conference, he had heard some complaints from the NGOs themselves over possible restrictions in their numbers and to the agenda. The Prime Minister wondered if he should speak at the Conference himself, although it might not be possible due to his visit to Japan. It might be appropriate for Sir Crispin himself to speak, although Sir Crispin said that he had not yet been invited. It was agreed to investigate with DoE how the current arrangements stood, including what was likely to be on the agenda, how the cast list would be determined, which speakers were being invited and what the outcomes were likely to be.

Sir Crispin outlined the work he had been leading on the Darwin Initiative, on which proposals were due shortly to be submitted to Michael Howard. The initiative would highlight some excellent examples of the benefits of bio-diversity and might be suitable material for the Prime Minister to include in a speech on the environment.

WWF Speech

Sir Crispin asked the Prime Minister if he had decided to accept the invitation from the World Wide Fund for Nature to make a speech around the first anniversary of the Rio Conference. Such a speech would be able to report on

progress on the three UK initiatives, it could draw out ideas from the White Paper on the environment and include an outline of the Government's approach to using fiscal measures positively to promote energy conservation. Sir Crispin also mentioned an issue he was concerned with, the Greening of the NHS, which might be included. The Prime Minister said he had not yet decided whether he would be able to make the speech. Although he was attracted to the idea much depended on whether there was enough material to include.

Seminar on the environment

Sir Crispin asked whether the Prime Minister might host a seminar on the environment, to include a cross-section of Green Ministers, business representatives and representatives from environmental organisations. Lady Thatcher had held a day-long seminar on climate change, which had made an enormous impact both in this country and abroad, particularly in the United States. The Prime Minister was concerned that the pressure on his diary would make it difficult to hold such a seminar this year, but thought it might be helpful for Jill Rutter to work up a possible agenda, in consultation with Sir Crispin.

Parliament and the environment

Sir Crispin said that it was rather astonishing that there was no all-party group on the environment in Parliament. The Environment Select Committee inevitably concentrated on local government and housing issues. He wondered if the Government could encourage the creation of such a group. The Prime Minister agreed that it was rather astonishing that no group existed and agreed that it might well be valuable if such a group were established.

China

Sir Crispin said he was due shortly to travel to China to offer environmental advice. While there he would see Li Peng. The Prime Minister suggested that he might prepare a letter for Li Peng which Sir Crispin could take with him.

Mahogany exports

Sir Crispin raised his concern about the widespread illegal export of mahogany from Brazil. Much of the exports were then imported, albeit legally, by British companies, who were the source for over 50 per cent of Brazilian exports. The trade was a prime agent of deforestation in Brazil. The Brazilian Government were keen for action to be taken by other countries against mahogany exports. It was possible that there might be a campaign for a voluntary moratorium on the trade. The Prime Minister agreed to investigate the matter with the DTI.

Follow-Up

Ms Rutter will be considering further the case for the Prime Minister accepting the invitation to speak to the WWF and will consider a programme for a possible seminar on the environment. I shall write to DoE concerning the current state of preparations for the NGO Conference in September, arrange for a letter to be taken to China by Sir Crispin, and write to DTI concerning the mahogany trade.

MARK ADAMS

22 April 1993

h\environment.ab

Prime Minister
You have a half-hour meeting with Sir Crispin tomorrow - although he has suggested a rather long agenda for it. It has proved difficult to find a slot for Crispin in your diary - although it is almost a year since you saw him. He may raise his concern that he should see you more regularly. You may wish to avoid a specific commitment.

20/4

**PRIME MINISTER** **20 April 1993**

cc: Mrs Hogg

**MEETING WITH SIR CRISPIN TICKELL**

You are seeing Sir Crispin Tickell, your Environmental Adviser, at 5.00 p.m. tomorrow. He has sent in his own ideas for an agenda - these are attached. (1) This is not intended to be a comprehensive brief. Sir Crispin is supposed to be offering your advice, and you will, in the main, want to listen. This note attempts to do is to give you some up-to-date background on the items he intends to raise under these headings, based to some extent on a preparatory talk he had with Mark and me.

Rio and its aftermath

(i) Your initiatives

The Global Technology Partnership Conference took place and DTI have now set up the mechanisms for pushing it forward. Arrangements are underway for the NGO Conference in Manchester. Sir Crispin expressed concern to Mark and me about whether DoE would make this a success. DoE tell me things are well in hand: the International Advisory Group is meeting again this week to develop the agenda. DoE also say that they think the prospects for enticing Vice President Gore to attend are looking good. You might ask Sir Crispin what he believes the outcome of this Conference should be and how to ensure it is the success you want. (He may ask you whether you are attending - this is still in balk pending decisions on your trip to Japan.)

You should ask Sir Crispin to report on progress on the Darwin initiative. He is chairing the Advisory Committee. He told Mark and me that he thought things were going rather well on this.

(ii) Sustainable development

At the end of last month, Sir Crispin was one of the co-chairs of a conference jointly sponsored by DoE and Green College Oxford on the form of the UK's report to the Sustainable Development Commission. (You committed us to produce a national report by the end of the year). This meeting gathered together officials from interested departments and a large number of the "environmental stakeholders" (aka environmental lobbyists). In my view it was a shame that the conference was limited to those with clear axes to grind - there were a few representatives from business, but no people who could articulate the concerns of ordinary citizens (a flavour of the unreality of the occasion: one speaker said that "the government has one easy option - to stop subsidising the production of fossil fuels" - no one queried that). Nevertheless, you might want to ask Sir Crispin what lessons he took from that conference, what he believes should be in the UK's report, and more generally how he sees the Sustainable Development Commission developing.

In this context, Sir Crispin might mention Mr Howard's Indo/British Initiative on the environment which is being launched tomorrow (Wednesday). I have sent you a separate note on DoE's handling of this. There is relatively little of substance in the initiative - but one of its objectives is to give some political substance to the Commission on Sustainable Development and has some advantage in breaking the traditional North/South split. Given how opposed Indian and UK objectives are, it is doubtful how long that common front will hold.

(iii) Biodiversity

The other piece of news, of which you should be aware, is that it is likely that President Clinton will be announcing tomorrow (Wednesday) that the US is signing the Bio-diversity Convention. He is likely to attach a statement of various areas where the US will require clarification before ratification. DoE claim that they have been crucial in bringing the US to a position where they are prepared to sign the Convention. The US should prove

useful allies on sorting out the financing worries that put a questionmark over our signature last year.

Role of Government in the Environment

(i) Green Ministers

Sir Crispin may express concerns about the inactivity of "Green Ministers" and whether we are close to achieving "policy integration". I think it would be difficult to claim too much at this stage for Green Ministers. However DoE have just produced an analysis of how departments have reacted to the requirement to cover their performance on environmental objectives in their annual reports.(2) The attached note shows that most departments have at least made some nod in the direction of reporting on environmental commitments and their own green housekeeping. You should note however that the Green Ministers have not met since the Election.

(ii) Policy integration

There are some successes to report on the policy integration front. Environmental considerations are clearly now much more of a major factor in agriculture and Sir Crispin himself spoke quite positively at the Green College Seminar about Chancellor's Budget Statement - you will recall that he said that one principle of tax policy was that it should serve social, health and environmental objectives. However, he does think it should have contained some measures on energy efficiency. You will recall that we have already set some in train before the Budget, to deliver greater savings than the Budget measures.

Sir Crispin is likely to express particular concern that the Department of Transport still shows no signs of having taken on board environmental worries. Since transport will be the fastest growing source of $CO_2$ emissions to the end of the century, this is clearly a great concern to environmentalists. (The Green Paper on Road Charging, which DTp re putting to EDI this week, is evidence of that).

(iii) Structure of Government/Parliament

Sir Crispin has also wants to discuss the structure of government and the role of Parliament. Sir Crispin, along with many other environmentalists, is concerned at the lack of interest in environmental issues in the British Parliament. There is, amazingly, no all party group on the environment. The Environment Select Committee tends to consist of people who are housing or local government specialists. He may seek your ideas on why that is/what to do about it. Sir Crispin may want to suggest to you that the present DoE is unwieldy and should be split to create a separate Environmental Protection Department. That would also give him an Environmental Protection Select Committee as a by-product.

Initiatives to improve Government's Environmental Record

Sir Crispin wants to raise the greening of the NHS, Local Government and Education. I suggest you let Sir Crispin make the running here. There is a general feeling that local government is quite well advanced in developing local "Agenda 21"s. DoE have established a Local Environment Forum to discuss environmental issues with local government. Local government representatives were active, and quite sensible, players at Sir Crispin's Sustainable Development Seminar. We are still in discussion with DoE about a possible Local Environment Charter - this may emerge in a month or two's time.

Sir Crispin is likely to raise the importance of children being educated about the environment at an early stage. He feels very strongly about this. At the moment this is one of the cross curricular themes - and you know Nick's views on those.

Other business

Sir Crispin is likely to mention to you that he is about to go to China. He is an outside expert on a panel advising the Chinese Government. There is a possibility I understand that the

Indians may be setting up something similar. He will no doubt want to tell you what he is proposing to do in China.

These last two items he has suggested are on "imports of mahogany from Brazil" and "paper and bureaucracy". No one I have asked knows what he is likely to raise.

JILL RUTTER

(031.JR)

Annex 1

POSSIBLE AGENDA FOR MEETING WITH THE PRIME MINISTER:
19 April 1993

1. Rio and its aftermath: the Prime Minister's three initiatives:

   - global technology partnership
   - conference of NGOs at Manchester
   - Darwin Initiative and progress so far (including the US aspect)

   Work on the National Report for the UN Commission on Sustainable Development.

2. The role of government in the environment:

   - Getting existing arrangements to work better:

     - green Ministers
     - integration of policy
     - the precautionary principle

   - Structure of government

   - Role of Parliament (and possible creation of an All-Party Group)

3. Initiatives to cope with criticisms of the government's environmental record:

   - The greening of the National Health Service, local government and education

4. Some general points:

   - Imports of mahogany from Brazil
   - Paper and bureaucracy

Annex 2

DEPARTMENTAL ANNUAL REPORTS - ENVIRONMENTAL STEWARDSHIP

1. The table below summarises the responses received from Departments to PS/Secretary of State's letter of 25 February (copy attached). All Departments have responded with the exception of Department of Health and the Northern Ireland Office.

| | Commitments to Include | | | | |
|---|---|---|---|---|---|
| Department | 1 | 2 | 3 | 4 | Total |
| DFE | x | ✓ | x | ½ | 1½ |
| MAFF | ✓ | ✓ | ✓ | ✓ | 4 |
| Exchequer Departments | ✓ | ✓ | ✓ | ½ | 3½ |
| DTI | ✓ | ✓ | ✓ | ✓ | 4 |
| LCD | x | ✓ | x | ✓ | 2 |
| ODA | ✓ | x | x | ✓ | 2 |
| Scottish Office | ✓ | ✓ | ✓ | ✓ | 4 |
| DNH | ✓ | ✓ | ✓ | x | 3 |
| FCO | ✓ | ✓ | ✓ | x | 3 |
| Cabinet Office (OPSS) | x | ✓ | ✓ | ✓ | 3 |
| DOT | ✓ | ✓ | ✓ | x | 3 |
| DEmp | x | ✓ | ✓ | ✓ | 3 |
| MOD | x | ✓* | ✓ | ✓* | 3 |
| DSS | x | ✓ | ✓ | ✓ | 3 |
| Welsh Office | ✓ | ✓ | ✓ | ✓ | 4 |
| Home Office | x | ✓ | ✓ | ½ | 2½ |

* Included in Defence Estimates (as agreed). Cross-referenced in Report.

Holding for Health

NI office.

2. Departments' inclusion of environmental considerations in their Annual Reports is on the whole quite good. However, only four Departments have addressed the four commitments in a complete way. Other Reports demonstrate some scope for improvement (some Departments have acknowledged this; some maintain that the inclusions suggested are not practicable). On the whole, the best Reports are from those Departments whose activities have the greater environmental impact.

3. The main points of note are these :

a) On the whole, Departments have not adopted the agreed common approach. However, most Reports include a separate section on environmental issues, which in the main make mention of the White Paper.

b) The commitment to include environmental considerations in Departments' statements of objectives (1) is the item least adequately addressed. Some of those Departments not including this item were aware of the omission and undertook to ensure that this was addressed in their next Report. Others said that their Department's work was too diverse to include the environment in their main policy objectives. In most cases however, commitment to environmental considerations is stated in the separate sections of the Reports dealing with the environment.

c) Mention of White Paper commitments (2) is well addressed in the Reports. The one Department which did not specifically mention the White Paper did, however, stress that similar language was used in their Report.

d) Most Reports included the name of Departments' Green Minister (3). One did not because they wished to avoid duplication with the White Paper Second Year Report; another believed it to be superfluous as they only have one Minister.

e) Inclusion of Departments' Green Housekeeping initiatives (4) is patchy. Of those which did not include their initiatives in their Report, most said that this was because their strategy had not been finalised at the time of drafting the Report. Some of these Departments nevertheless outlined their actions/intentions for 1993 in their replies to PS/Secretary of State. Some had also included some mention of energy efficiency and/or environmental management.

Mark Adams

F/u

10 DOWNING STREET
LONDON SW1A 2AA

16 April 1993

Tom Burke Esq
Special Adviser
Department of the Environment
2 Marsham Street
LONDON
SW1

Dear Tom,

**PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL**

Sir Crispin Tickell is to come to see the Prime Minister next Wednesday in his capacity as the Prime Minister's "environmental adviser". I am sure we can leave Sir Crispin to make most of the running.

However, I would be grateful if you could have a quick look at the agenda that Sir Crispin has proposed and let me have any background observations. In conversations I have had with Sir Crispin I know that he is pleased at progress on the Darwin Initiative (if you could give me one or two facts so the Prime Minister can look briefed on that, that would be helpful), but I know that he has had concerns (some of which are now being allayed) about whether the "Partnerships for Change" Conference will be sufficiently international in scope. Again a brief update on where you are on that would be tremendously useful. I would also be grateful for a revised note on timing on the sustainable development report. I note from the forward look on environmental developments that DOE were hoping to publish a consultation document on the form of the report later this month. I assume, since you have not yet written round, that that will now not be achieved. But again it would be nice to have the Prime Minister looking clued up on progress there.

I would also be grateful for a line to take on the meetings of Green Ministers. As far as I am aware the Green Ministers have not met since the Election. But you have now written round to Departments. It would be useful to know what the PM can say on what happens next. I will leave the Prime Minister to cope on the role of Parliament - but I will warn him of Sir Crispin's line on this.

Any observations you have under heading 3 would be useful - though not mandatory.

I am not sure what he intends to raise on mahogany imports from Brazil and paper and bureaucracy. You may have some clues - in which case I would welcome enlightenment.

Sir Crispin has said that he wishes to add his upcoming visit to China to the agenda. I am not sure what is going on there - again any light you can cast would be very gratefully received.

I see from today's FT that the Americans may announce next week that they <u>will</u> sign the biodiversity convention, but will want OECD support for a clarifying statement. I am sure a state of play report on that would be very useful.

I realise this looks horrendous - and very short notice. But you are in Canada. A quick chat through the issues over the phone will do - and I am sure that the Prime Minister needs no more information than you have at the top of your head anyway. But perhaps you could have a look through this and come back to me.

I see Sir Crispin is coming in on the 21st. Perhaps we could chat in time for me to put something to the Prime Minister's box on Tuesday night. Monday afternoon would be even better.

Finally, to add, that I have booked my tickets for the US - so you need to deliver me some fascinating Americans.

Yours,

Jill

bcc Mark Adams

JILL RUTTER

POSSIBLE AGENDA FOR MEETING WITH THE PRIME MINISTER:
19 April 1993

1. Rio and its aftermath: the Prime Minister's three initiatives:

   - global technology partnership
   - conference of NGOs at Manchester
   - Darwin Initiative and progress so far (including the US aspect)

   Work on the National Report for the UN Commission on Sustainable Development.

2. The role of government in the environment:

   - Getting existing arrangements to work better:

     - green Ministers
     - integration of policy
     - the precautionary principle

   - Structure of government

   - Role of Parliament (and possible creation of an All-Party Group)

3. Initiatives to cope with criticisms of the government's environmental record:

   - The greening of the National Health Service, local government and education

4. Some general points:

   - Imports of mahogany from Brazil
   - Paper and bureaucracy

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File

5pm Wed 21st

*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary* (0865) 274775

13 April 1993

cc Mark Adams

Ms. Jill Rutter
10 Downing Street
London
SW1A 2AA

Dear Jill,

Thank you for your letter of 2 April. I hope I did not unduly burden your Easter with reading.

I attach a possible agenda for my meeting with the Prime Minister on 19 April. It is very general in character, and I doubt if things will work out so tidily. As I mentioned to you, I shall be giving the Tripartite Lecture on the Diversity of Life at the centenary meeting of the Geographical Association on 14 April; but I shall be speaking from notes, and so unable to give you a text before then. But I have to produce one for publication fairly soon, and will then let you have a copy.

With all good wishes,

Crispin Tickell

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4. Some general points:

   - Imports of mahogany from Brazil
   - Paper and bureaucracy

W/Tickell. 82

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

29 October 1992

Thank you for your letter of 26 October. The message certainly was clear, conveying a powerful sense of urgency as it should. Incidentally, I did wonder what precisely is the example of Teotihuacan and the classic pre Columbian states!

As Amanda has probably passed back to you, the prospect of a meeting with the Prime Minister in the immediate future is highly unlikely. Urgent though the matters you wish to address are, the focus of the Prime Minister's current concern is even more short-term. Until we relinquish the EC Presidency, I fear it will be difficult for the Prime Minister to turn his mind to environmental matters in any detail. I shall contact you as soon as the position becomes clearer.

MARK ADAMS

Sir Crispin Tickell, G.C.M.G., K.C.V.O.

R28/10

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*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary:* *(0865) 274775*

26 October 1992

Mr. Mark Adams
10 Downing Street
London
SW1A 2AA

Dear Mark,

You might be interested to see the enclosed copy of a speech I made to the Royal Geographical Society on 19 October. Some of it is more fully worked out than other parts, but the message is I think clear.

Amanda Ponsonby has, I know, been in touch with you about a possible meeting with the Prime Minister. He has had more than enough on his mind recently, but there is a great deal going on over the environment since the Rio conference, and I should like to have the opportunity to bring him up to date, and suggest some ways forward.

With all good wishes,

Yours sincerely,

Crispin Tickell

Lecture to the Royal Geographical Society
19th October 1992

# *The Human Species: A Suicidal Success*

Crispin Tickell

First a reminder of who we are and what we have achieved. Louis Leakey at the Royal Institution: "Animals: you are all animals".

We are a member of the class, or taxon, of mammals - a reasonably successful group until you consider that there are some 4,000 mammals species while estimates of the total number insect species run in excess of six million.

- Within the mammal taxon we belong to: the order of primates;
  - the super family of hominoids;
  - the family of hominids;
  - the genus of homo, which we share with chimpanzees (only 1.6% of our DNA is different from that of the chimpanzee);

- Yet if Darwin was right in measuring the success of a species by its numbers, we have done amazingly well since the last ice age ended

  - we were less than 10 million 10,000 years ago; but
  - 2 billion in 1930, the year of my birth;
  - 5.4 billion now; and the human population is increasing at nearly 100 million every year. That is a quarter of a million people every day and the equivalent of a new China every ten years.

Viewed from a great enough distance we have the look of an assemblage of sociable insects. As Lewis Thomas once said of ants, "They are so much like human beings as to be an embarrassment. They farm fungi, raise aphids as livestock, launch armies for wars, use chemical sprays to alarm and confuse their enemies, capture slaves. The families of weaver ants engage in child labour, holding their larvae like shuttles to spin out the thread that sews the leaves together for their fungus gardens. They exchange information ceaselessly. They do everything but watch television".

A prime reason for our success is our flexibility as a switcher predator and scavenger. We are consummately adaptable, able to switch from one resource base - grasslands, forests, or estuaries - to another - as each is exploited to its maximum tolerance or used up.

Like other successful species we have learned to adapt ourselves to new environments. But, unlike other mammals, we made a jump from being merely successful to being a runaway smash hit. I use the words advisedly. We have made this jump because of our ability to adapt environments for our own uses in ways that no other animal can match.

We now consume - or abuse - 40% of total photosynthetic production on land.

- we live in all climates (jungles to poles);
- we have changed the face of the land;
- we have coped with most infectious diseases, thereby greatly increasing life expectancy, even in poor countries;

- we have changed the genetic inheritance of other animals and plants to meet our food tastes;
- we face no challenge from other animal predators (excluding bacteria, viruses and retroviruses);

Since the industrial revolution 250 years ago, those who have benefited from it have amazingly increased their living standards. Economic wealth on the normal - highly misleading - definition has risen at an almost incredible rate during this century. Global gross net product was around

- US$ 600 billion in 1900;
- US$ 5 trillion in 1960;
- US$ 17 trillion in 1988 (of which 14.7 trillion came from the industrial countries, accounting for less than a quarter of the world's population and 2.3 trillion from the rest of the world, accounting for over three-quarters of it). This imbalance is getting worse. In industrial countries per capita income rose by 2.4% in the 1980s. Elsewhere it rose by 1.5 %.

How can all this have happened? How have we removed or circumvented the restraints or obstacles which normally limit the increase of a species? The answer is that our cultures have evolved much faster than the biological systems on which they depend.

At the end of the 18th century Malthus identified the relationship between resources and population, and incidentally greatly influenced Darwin. Malthus argued that unless profligate childbearing were checked, preferably through abstinence, hunger and famine would follow.

Malthus was wrong in that he did not anticipate the enormous potential of advancing technology to raise land productivity. He was, after all, writing before Mendel formulated the basic principles of genetics and before Leibig demonstrated that all nutrients taken from the soil by plants could be returned in mineral form. He also grossly underestimated human ingenuity. But Malthus was right in identifying the difficulty of expanding food output as fast as population growth.

- The first take off came with the introduction of agriculture, creation of cities, and specialization of human functions. Demand for labour was a spur to population increase.

- The second take off came with the industrial revolution, based on new resource exploitation, in particular fossil fuel. Again demand for labour was a spur to population increase.

- The third is a feature of the last few decades when such new devices as solid state electronics and biotechnology have enabled us to do and produce much more from much less. In those parts of the world affected, supply of labour now generally exceeds demand and this trend is likely to accentuate.

It is an ingrained almost implicit belief that human progress with one or two blips has been upwards and onwards. In fact few trends go in curves. They jump backwards as well as forwards. All previous human civilizations have collapsed. The proximate reasons are various. But all are subject to three variables: population, resources, and environment. They are not always easy to distinguish in their effects. The balance between them is different in different times and circumstances.

Let me take some examples, some better known and more definite than others.

- Harappa around 3,000 BC
- Crete around 1,500 BC
- Petra in the 2nd & 3rd Centuries AD
- Teotihuacan & the classic pre Columbian states in the 7th and 8th Centuries AD
- Medieval Europe between the 11th and 15th centuries.

But perhaps the best illustration in microcosm was the fate of Easter Island:

- a small group of Polynesians discovered it ±400 AD: it was then covered in rich forest;
- by 1500 the population was over 7,000 divided into little nations, with virtually no forest but over 1,000 statues;
- then came civil war, fighting over resources, with not a single tree left to permit escape;
- the Dutch explorer Roggerveen arrived in 1722: the population was around 400 in miserable condition: the statues were abandoned.

What is happening now? I have already given some global figures for human population increase. In looking at them we should not forget the parallel increase in the animals and plants we have somewhat arbitrarily chosen for our nourishment, support and employment: among animals, cattle, goats, horses, sheep, pigs and dogs; and among plants wheat, rice, maize, cassava and potatoes. The effects of human population increases on resources and the environment cannot be dissociated from those of our involuntary companions in the process of life.

But the prime engine of that dizzymaking rise in the human population and change generally is the industrial revolution. We have the misfortune to be perhaps the first generation in which the magnitude of the global price to be paid is becoming manifest.

There are many aspects. Take land use. The most significant change has not been the spread of brick, stone, concrete and urban sprawl, but an acceleration of the destruction of forest content worldwide and declining fertility of soils. According to a report by the World Resources Institute published a few months ago, some 10% of the vegetation bearing surface of the earth is suffering from moderate to extreme degradation, an area the size of China and India combined. Although forest cover is slightly increasing in industrial countries, its destruction elsewhere, with accompanying loss of species, is on a scale to change the global ecosystem. There will be pressure to convert some 4.5 million square kilometres of additional wildlife habitat to human uses in future. This is the equivalent to four-fifths of the total area of nature reserves in the world in 1990. Meanwhile, enough good productive topsoil to cover the whole of France washes away or degrades beyond reasonable use every year.

In addition to the degradation of land by farming practices, outside forces are also beginning to take a toll on agriculture. Air pollution is already reducing U.S. crop production by 5 to 10 per cent, according to US Government estimates. It is probably having a worse effect on the coal burning countries in Eastern Europe and in China.

On a Malthusian reckoning we should have had a major crisis in food products from 1950 onwards. We were of course saved by the green revolution which led to the establishment of new and more productive strains of plants, in particular, rice. Such strains are genetically vulnerable and are often dependent on abundant water and fertilizer. Between 1950 and 1984 there was a ninefold increase in fertilizer use.

The question we have to consider for the future is whether the application of similar techniques can save us again on the scale likely to be required. There are enormous possibilities for biotechnology, even in semi arid areas. So far, the very best Western agricultural technology has been able to meet a growth in demand of 2 to 3% against a likely growth in demand of 3 to 5%. Unfortunately there are indications that some new technology has been at the cost of future growth; and the penalties of use of fertilizers - and dependence on them - are well known.

Fresh water is a particular problem. The global use of water doubled between 1940 and 1980, and is expected to double again by the year 2000. Many countries already suffer severe shortages and droughts. Competition for water was a prime source of conflict in the past, and will be in the future: for example

- over the Nile, which flows through nine states, each with its own interests and demands;

- over the Euphrates and the Jordan which nourish Turkey, Syria, Iraq, Jordan and Israel;

- over the Colorado, now no more than a sickly salty stream when it finally reaches the sea.

Then there are the direct effects of industrialization: pollution and recent accidents have demonstrated the international character of industrial hazards. Within the vast land mass of the former Soviet Union, some 16% (or 1,382,000 square miles) was recently judged an ecological disaster area by the Academy of Sciences. Chemical accidents may be limited, but chemical wastes are a world wide problem. Nuclear war could damage the world as a whole but even accidents are serious enough: the fall out from Chernobyl was some fifty times that of Hiroshima. Against those dangers must be seen the prospects of another kind of industrial era held out by the new technologies of the microchip. For most they are still far away.

Marine pollution is serious but of less immediate concern. But competition for fishing resources, and again the transnational character of pollution, make the seas a potent source of trouble.

Next the atmosphere. Acid precipitation is a problem for those down wind of industry; but it is essentially local in character and can be solved if there is political will to solve it. Depletion of the ozone layer is more serious. The miracle molecules known as chlorofluorocarbons and halons (for use as refrigerants, deodorants, fire extinguishers, etc.) have been depleting the protective screen which prevents short wave ultra violet radiation reaching the surface of the earth. Damage to the human metabolism (melanoma, etc.) may seem alarming to us, but the more fundamental problem could be the effects on other organisms, not least phytoplankton in the oceans.

Global warming through enhancing the natural - and indispensable - greenhouse effect could affect almost every aspect of human society. The main conclusions of the Intergovernmental Panel on Climate Change of 1990, updated this year, represented a broad scientific consensus. On the assumption that we continue to pump carbon dioxide, methane, chlorofluorocarbons and nitrous oxide into the atmosphere, there is likely to be:

- a rise of global mean temperature of around 1.0°C by 2025, and around 3.0°C by the end of the century: compare a drop of around 5.0° during the last glacial episode;

- marked regional differences:

  - land areas more than oceans: southern Europe and north America more than average, with less summer precipitation and lower soil moisture. More precipitation generally;

  - snow cover and ice reduced;

  - general redistribution of weather patterns with drastic local effects;

- continuing sea level rise by over half a metre between now and the end of the next century;

- a long lag time between cause and effect due to the stabilizing effect of the oceans.

There are of course many uncertainties, among them variations in solar radiation; clouds and the hydrological cycle; oceanic exchanges with the atmosphere; the carbon cycle; and the behaviour of polar ice sheets. The most important is the sheer speed of change. According to the Intergovernmental Panel, change in temperature will be greater than has occurred naturally in the last 10,000 years, and the rise in sea level will be 3 to 6 times faster than in the last 100 years.

Last the consequences of the industrial revolution on other forms of life. The destruction of species can be compared to earlier disasters in the history of the earth: the elimination of 90% of species at the end of Permian times 250 million years ago, or the famous extinction of the dinosaur family and many less famous ecosystems at the end of Cretaceous times 65 million years ago. Current calculations suggest that perhaps a quarter of the earth's remaining biodiversity is now at serious risk. It is a crisis with two aspects: mass extinction of species,and gross depletion of genetic variability within given species as a large proportion of a population is wiped out.

The destruction of one species can profoundly change a whole ecosystem. Some changes could be quick, like the evolution of new viruses and bacteria; Others could be very slow. Once a species is destroyed it has gone for ever. As has been well said: "Death is one thing; an end to birth is something else."

So now we have an accumulation and combination of formidable hazards, each driven to a greater or lesser degree by human population increase. In the past societies have responded to change, whether caused by depletion of their resource base or by deterioration of their environment, by collapse or dispersal or both. The process was painful. It was usually accompanied by drastic reductions in population. Sometimes it was quickly accelerated by external as well as internal shocks. Sometimes it was slow and lingering. Often most people did not understand what was happening, and failed to link causes with effects. Even if a few did understand, they felt powerless to do anything about it. Their inability to cope was matched by lack of vision of any alternative way to go.

We are supremely adaptable and ingenious mammals. If our brains get us into a mess, our brains should at least try to get us out of it. They will not be able to do so until they recognize what is happening and what will happen. In short, we need eyes to see. There are some obvious points of high significance:

- in an overpopulated world any important changes in weather patterns could affect hundreds of millions of people. We have seen beginnings in Africa and Asia.

- the same goes for even a small rise in sea levels. A high proportion of people live close to the sea. For example: Egypt and Bangladesh.

- crude figures for population growth do not convey the magnitude of the accompanying growth of cities: 83% of population growth will be in urban areas: the equivalent of 10 cities the size of London every year;

- increasing dependence of poor countries on food imported from a few rich countries. Africa is particularly affected.

- political instability, breakdown of internal administration and often civil war: This also is most evident in Africa; take the example of Ethiopia.

  - the fertile upland areas, which has long had the bulk of the population (88%) have been losing fertile top soils at a rate of between 1.5 and 3.5 billion tons a year.

  - population has increased from around 20 million in 1950 to 31 million by 1970, and almost 50 million now;

  - the resulting economic strain, when combined with small shifts in patterns of rainfall, produced the famines of 1984/5 when at least 5 million people faced starvation and some 15 million people remained undernourished. Yet in terms of Ethiopia's total population, the million or so who died during the famine were replaced in just over six months.

- a vast rise in human displacement: there were less than 5 million refugees on a strict political definition in 1978, but over 17.3 million in 1990. If we add a further 10 million environmental refugees and economic migrants, we find that more than 27 million people today are displaced in one way or another. I recall my lecture on this subject to the Society in 1989, and will not go into the details again now. Since then the prospects have become even more serious, and barriers against refugees have been going up throughout the industrial world.

- human liability to disease: as some countries are further impoverished or liable to change, in particular to warmer, moister conditions, the return of old diseases (malaria, cholera, effects of malnutrition etc.), and the spread of such new diseases as AIDS interacting with and enhancing old killers like TB, is helped by greatly improved communication between all continents.

For a moment it is worth standing back, and asking a difficult question. Is there a human carrying capacity of our planet? Obviously any answer must be somewhat subjective and only brave people attempt one. Among them is Norman Myers. This result was

- if we all had a vegetarian diet and shared our food equally, the biosphere could support around 6 billion people;

- if 15% of our calories came from animal products (and again food were shared equally), the figure would come down to 4 billion people;

- if 25% of our calories came from animal products, then it would fall to 3 billion;

- and if 35% of our calories came from animal products, as in North America today, then it would fall to 2.5 billion.

As we are already at 5.4 billion and are set to at least double these calculations are scarcely cheering.

This brings me back to the centre of the argument: The three variables of population, resources and the environment. Robert McNamara in his Rafael Salas lecture last December put it in mathematical terms:

Ed (environmental damage) = P (population) multiplied by C (consumption per capita) multiplied by D (environmental damage per unit of consumption).

And Paul and Anne Ehrlich, in their book Healing the Planet write of

I (impact on the environment) = P (population) multiplied by A (per capita affluence) multiplied by T (damage down by technologies supplying each unit of consumption).

Whether expressed as Ed = P x C x D, or as I = P x A x T, the results as we can now foresee them are ultimately the same: catastrophe, whether in fast or easy stages.

But if there is one principle in human affairs to which we should cling, it is this. Nothing is inevitable. It ain't necessarily so. My family motto is Facta Ficta. There is something fictitious about any particular selection of facts which this or that generation accepts as revealed truth. We need flexibility of mind, or thinking differently. This is painful. It means abandoning assumptions, changing hallowed habits, creating new models of thought, accepting different values, and seeing the world through other eyes, and still knowing how little we know.

- We need to recast our vocabulary. Words are not only a means of expression but also the building blocks of thought. The instruments of economic analysis are blunt and rusty. Such words as "growth", "development", "cost benefit analysis", even "gross national product", all require redefinition.

- We need to realize that conventional wisdom is often a contradiction in terms. There are no universal answers to anything. The closer to those who exercise power, the better the realization that they have little idea what they are doing.

- We need to change the culture. Many have lamented the division between the cultures of science and the arts. They are right to do so. But neither is now in charge. Our real bosses are the business managers, and they are not known for their ability to think long.

- We need to recast our educational system to promote better understanding of broad issues and lateral thinking between them. Specialization is the bane of wisdom.

- We need a value system which enshrines the principle of sustainability over generations. Sustainable development may mean different things to different people, but the idea itself is simple. We must work out models for a relatively steady state society, with population in broad balance with resources and the environment.

So let us go back to population (P), resource consumption (R) and environment (E). Projections of population increases vary widely. Some suggest that after reaching around 10 billion in the middle of the next century (in other words around double present levels), population will become steady and then decline. Others foresee a rise to 12.5 billion and a continuing rise to 20 billion sometime in the 22nd century. Much will depend on what happens in the next ten years.

But neither the present nor the past is a sure guide to the future. The reasons for increase - lower child mortality, longer lives, better health and so on - are well known. There is a rough, but only rough correlation between lower rates of increase and improved living standards. No wonder that population levels in most industrial countries are broadly stable whereas those elsewhere are not. Indeed current rates of increase elsewhere far exceed those of the industrial countries at the time of their demographic expansion in the last century. In the 1950s and 1960s the global rate rose rapidly. It diminished in the 1970s, but there was no further fall in the 1980s. Declines in fertility in East and South East Asia in the 1970s were not repeated in South Asia or some parts of Latin America. Brazil and Mexico are among the few industrializing countries where fertility declined in the 1980s.

Sooner or later Nature will of course take care of us. Lack of resources, environmental degradation, famine, and disease will in the painful fashion known by our ancestors cut our species back. AIDS is the obvious example of a way in which to do it. According to computer predictions at Imperial College London, conditions already exist in several African countries for the virus to kill more people than are being born. When the proportion of women of childbearing age who are infected exceeds 30%, even the highest growth rates (and some countries have rates exceeding 3% per annum or a population doubling in a little over 20 years) would be cancelled out. This could lead to further disaster: the most creative and active, and the very young, would be the worst affected. The longer term impact of AIDS across the world is uncertain. In our age of rapid travel it can spread easily. With its incubation period of as much as ten years or even more, AIDS is not a boom-and-bust infection like the Black Death. Unchecked it could move on a timescale of 200 rather than 20 years. But the effects could be as devastating.

This is not the way most of us would like things to happen. Peering ahead we realize that demography has much in common with economics: it is a combination of social studies, algebra and necromancy. But there is a case for letting Nature rip. In some places, notably Africa, it is ripping already, with results that we have seen on our television screens. It is a case implicitly favoured by the Pope of Rome, by those engaged in racial competition between peoples and tribes, by those accustomed to high infant mortality, by those who are looking for care in their old age, and by millions who have never known anything else and have no sure means of limiting family size. Fertility anyway rises and falls for reasons not fully understood. Mysteriously sperm-counts in industrial countries seem to be dropping. Perhaps the factors which operate in limiting the increase of such animals as rats may affect us too.

But this is a doctrine not only of despair but also of profound irresponsibility. In many parts of the world people are already taking control of their destiny. There are many ways of doing so:

- the Chinese experiment: (population now 1.1 billion and will rise inevitably to 1.5 billion): one birth/one family in the towns, slightly more relaxed in the country, freedom for minorities: use of State power to punish;

- open persuasion, using the apparatus of State power and propaganda for the purpose, and provision of cheap or free contraceptive devices wherever possible;

- policies directed to coping with the underlying cultural problems:

  - the status of women: to give them more power of choice so they are no longer regarded as baby-making machines or second class citizens

  - reduction of infant and maternal mortality

  - protection of the old: to ensure they are supported and cared for

  - access to information about family planning and services

  - education, particularly for girls and women, whereby ignorance about sex is reduced

It is often, and rightly, said that the industrial countries, which inadvertently created the conditions for current population increase, should do a lot more to help others cope with it. Obviously they have to proceed with circumspection:

- the delicacy of the issue: for a few industrial countries, especially the United States, there are hang-ups about abortion; for poor countries there are hints of racism etc: witness what happened at the Earth Summit at Rio, where the biggest single environmental issue was almost ignored: but

  - the meeting of the Academies in Delhi next year: see the Royal Society/National Academy of Sciences declaration on Population and Development

  - the World Population Conference in 1994

- increases in earmarked proportion of aid programmes could make a big difference: and much more support for the UNFPA and relevant NGOs is necessary.

In the last resort population policies have to come from individuals, families, and communities in the countries themselves. Some significant successes: e.g. Thailand, Swaziland, Namibia and even Bangladesh. But take particularly interesting examples from India:

- in the 5 northern states of Rajasthan, Uttar Pradesh, Madhya Pradesh, Bihar and Orissa, making up 40% of national population, steepest population growth, poverty and exemplar of disaster for humans, resources and environment alike

- in Kerala in the south, the contrary: most significant factor the status of women:
  - low infant and maternal mortality
  - high use of contraceptives
  - diminishing poverty
  - fertility down to 2.3 children per woman
  - high literacy rates, especially among women
  - inheritance of land through women

and incidentally much better care of the environment

In 1986 the US National Research Council made a simple calculation based on modelling: that a 1% reduction in the growth of the labour force would increase growth of per capita income by 1/2% a year, or 16% over thirty years. In 1992 in its annual report - The State of World Population - the UNFPA noted a central difference between groups of countries with high economic growth rates in the 1960s and 1970s.

- of 19 whose populations were growing faster than 2.5% between 1965 and 1980, only 10 achieved positive income growth in the 1980s (and 4 of them only just);

- of 17 whose populations were growing less then 1.5% during the same period, 15 had positive income growth in the 1980s.

Let me turn briefly to resources (R) and the world's consumption of them. It should go without saying that the more people there are, the more resources will be consumed. Indeed even if higher living standards usually go with lower rates of population increase, higher living standards also mean more consumption of resources and more pollution. Most resources are renewable, and even those that are non-renewable - for example fossil fuels - can sometimes be replaced. Pressure on resources was the principal theme of Limits to Growth published in 1972. Those who questioned it may care to have a look at its successor Beyond the Limits by the same authors earlier this year.

The problem today is that pressure of consumption can easily render renewable resources unrenewable, or renewable only after long stretches of time. Any price system which does not attach values to such things as the hydrological service rendered by forests or the waste absorbing capacity of the atmosphere is bound to create increasingly dangerous distortions. Renewable resources under threat include

- the fertility of land
- forest cover
- animals and plants

At present there is a gross imbalance in consumption between people in industrial countries and those in the rest of the world. The economic power of industrial countries enables them to take both renewable and non-renewable resources from others as well as exploiting their own. There is little that the others, often in debt, dependent on industrial country markets, and striving desperately to meet unrealistic expectations of economic progress, can do about it. This issue was also judged too delicate for proper discussion at the Earth Summit at Rio.

Last I come to Environment (E). Here too there is a gross imbalance between the damagers and the damaged. The primary responsibility for the accelerating changes we are seeing rests directly or indirectly with the industrial countries. To take one example relating to the greenhouse effect, over 70% of current carbon emissions into the atmosphere come from them, and 23% from the United States alone. In 1988 average per capita emissions per year from industrial countries was about 3 1/2 tons, and from the rest of the world less then 1/2 a ton. But the poor are much more vulnerable than the rich. They lack resources to react to change: and have neither the skills nor the administrative structures capable of organizing adaptation to new circumstances.

This issue was of course discussed at the Earth Summit. At least it was exposed, and the world became more aware of it. Through agreements reached at Rio, in particular the Climate Convention, frameworks will be set in place for dealing with global problems which

many only twenty years ago scarcely knew existed. But the shortfall between the size of the problems and the money offered to cope with them, between the rhetoric and the action, was stark. For example on carbon emissions, the industrial countries, some sheltering behind the United States, made no specific commitments, or even targets, to reduce them. The failure of the big polluters to give an example on this, as on resource consumption and other issues, rendered unconvincing their efforts to persuade the rest of the world to take seriously the nexus of population/resource/environment problems which may affect every member of the human species.

In my view there are five principles on which all governments of whatever complexion should act singly and together:

- First they should now do what makes sense for reasons other than any one environmental factor. For example global warming might suggest the conservation of forests and the creation of new ones to draw carbon out of the atmosphere, and using fuels which do not add to atmospheric carbon dioxide. There are equally good reasons for not running down too fast our non-renewable resources of coal and oil.

- Next they should look at their systems of value, and attempt to introduce environmental pricing to take account of intergenerational equity. This would make it easier for them to take out insurance policies against disaster, and pay the necessary premiums in terms of precautionary investment: for example improving coastal defences, attaching a proper price to waste disposal in all its aspects, and anticipating changing patterns of rainfall and thus availability of fresh water.

- They should re-target relevant scientific research and co-ordinate the results on a global basis. At a global level we need much better monitoring of changes in land, sea and air.

- They should work out an international strategy which sets a framework for collective action, takes good account of equity, and is founded on national as well as international interest.

- Last they should always see and deal with environmental issues together. Isolated measures to cope with one of them can sometimes make others worse.

Yet when all this is said and some of it is done, we still have to ask ourselves whether our actions are nearly enough to and whether we are not dealing with symptoms rather than the disease. But at least such actions would represent a start; and once started other actions would follow. They would indeed be driven by events. The critical issue then would be whether we had some control over events, or whether events took control of us.

I sometimes reflect idly on what would happen if we, like nearly all species that have ever lived, were simply to be eliminated. At the beginning of this century rabbits were introduced to Lisianki Island west of Hawaii. Within a decade they had, in the words of Jared Diamond, "eaten themselves into oblivion by consuming every plant on the island except two morning glories and a tobacco patch". Could we do likewise to ourselves on this small planet?

There is a book by Dougal Dixon entitled <u>After Man</u>, a zoology of the future, in this case a future 50 million years ahead. The author invents some formidable creatures developing from those we recognize as most successful today: for example rats, squirrels, baboons and rabbits. If I have a reproach, it is that he concentrates unduly on mammals, a class of organism which might no more flourish in the future than did the dinosaurs after the cataclysm 65 million

years ago. It then took up to 10 million years for the mammals to occupy the niches left vacant. Next time it could be the insects or the crustaceans who inherit the earth.

My own day dream is shorter term. If we perished more or less together - say over 50 rather than 50 million years - what would become of the earth? How long would it take for the cities to fall apart, for the earth to regenerate, for the animals and plants we have selected for ourselves to find themselves a more normal place in nature, for the waters and seas to become clean, for the chemistry of the air to return to what it was before we disturbed it?

Life itself is so robust that the human experience could soon become no more than a tiny episode. Nature is not fragile. But we are. I like to recall that Darwin at the end of his life focused his powerful attention on one of the most vital creatures of regeneration, the earthworm. He calculated there were 53,767 worms to the acre on his estate. Whatever he or others might do to the land, this army of worms was always at work re-establishing its fertility. For him as for us it is a kind of consolation.

GREEN COLLEGE
AT THE RADCLIFFE OBSERVATORY
WOODSTOCK ROAD
OXFORD OX2 6HG
*Telephone* (0865) 274770
*Fax* (0865) 274796

*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary:* *(0865) 274775*

19 August 1992

Mr. Mark Adams
Private Secretary
10 Downing Street
LONDON SW1

1) Stephen
You may wish to copy to FCO
1/a AH/FCO
2) Prime Minister
To note
MA 25/8
Rex, Lecanto, Tristan has the job already
No. It's mine!
AH 25/8
25.8

Dear Mark,

As you know I have just been in Mexico and Colombia. In Mexico I was staying in Jimmy Goldsmith's nature reserves, of which many a tale could be told but not now.

The main purpose of my visit to Colombia was to give a lecture on environmental matters at the University of the Andes, and to meet members of the Colombian Government interested in environmental issues. In the process I contrived to spend three days on the Amazon and to climb a high peak in the Andes. Everywhere I found that I travelled on the Prime Minister's coat-tails. Rarely can such a visit have made such an impression. As a result I addressed the Environment Commission of the Colombian Senate, and joined in a roundtable discussion with a number of ministers and heads of nationalised industries presided over by the Minister of Foreign Affairs.

The reason for my letter is to pass on warm messages of good will to the Prime Minister from the Minister of Foreign Affairs and her colleagues. They were immensely flattered that the Prime Minister should have visited Colombia on his way to Rio and they are looking forward to the Home Secretary's visit next month. They obviously want to develop their relationship with Britain in every way they can. The Minister of Foreign Affairs even invited me to become her environmental adviser! Colombia faces hideous problems. The weekend I was there, there were sixty-seven assassinations in Bogota alone. But the social disruption is caused as much by the demand for drugs in the United States and Europe than it is by the supply from Colombia and its neighbours, and most Colombians I met, including interviewers on radio and in the press, felt that without a much greater attempt

.../

to curb demand, there own problems would eventually be insurmountable. The Colombians are of course most anxious for British help in preserving their extraordinary environment, particularly in the forests of the Amazon. I spoke about the Anglo-Brazilian Agreement on forestry, and I suspect that the Colombians would greatly welcome something similar. I told those concerned that I would raise the issue with Lynda Chalker when I had the opportunity.

The Prime Minister has many other problems on his mind at the moment. But please let him know what a remarkable success he achieved in Colombia, and how much the Colombians want to build on it.

Yours sincerely

Crispin Tickell

8181/6

**ODA**

**Overseas Development Administration**

**94 Victoria Street, London SW1E 5JL**

**Telephone 071-917 04019**

File - NFA

*From The Private Secretary*

17 June 1992

Mark Adams Esq
Prime Minister's Office
10 Downing Street
London SW1A 2AA

Dear Mark,

**CHINA COUNCIL FOR INTERNATIONAL CO-OPERATION ON ENVIRONMENT AND DEVELOPMENT (CCICED)**

Thank you for your letter of 27 May about Sir Crispin Tickell's suggestion to the Prime Minister that HMG might provide financial support for activities with which he is involved under the auspices of the CCICED.

Sir Crispin discussed this with Baroness Chalker when he called on her on 19 May. She told him that she was sympathetic to the idea of supporting with aid funds the CCICED Working Group with which Sir Crispin is involved.

After that meeting ODA's Eastern Asia Department agreed with Sir Crispin that he should ask Dr Marcel Massé (International Vice-Chairman of the CCICED) to write to Lady Chalker seeking specific support from HMG. Pending receipt of that letter we are considering the modalities of financial support.

I do not think Sir Crispin is expecting any communication from No 10 on this subject. However, if you felt a letter would be appropriate, you might write to him along the lines of the enclosed draft.

Yours,

Suma Chakrabarti
Private Secretary

**DRAFT LETTER FOR SIGNATURE BY PS/PRIME MINISTER**

Sir Crispin Tickell GCMG KCVO
Green College
At the Radcliffe Observatory
OXFORD
OX2 6HG

June 1992

During your discussion with the Prime Minister on 21 May you mentioned that HMG might usefully support the work of the Resource Accounting and Price Policy Working Group of the China Council for International Co-operation on Environment and Development.

We have been in touch with the Overseas Development Administration about this and I understand that Lady Chalker has undertaken to give sympathetic consideration to support for the Resource Pricing aspects of the CCICED's work, and that Dr Marcel Masse is likely to write to her requesting support.

The Prime Minister was interested to hear of your involvement with the work of the CCICED. He feels that some financial support for the Resource Pricing Working Group is likely to prove a worthwhile investment.

PS/Prime Minister

823

Mr. McClean
PS
*Manafe
Mr. Lankester
Mr. Aimson
Mr. Manning
Mr. Ireton
Mr. Stratton
Mr. McCulloch
PS/SoS f.i.

28/5.

Advice and draft reply from PS/SoS (through me) by c.o.p. 4/6.

S. Chakrabarti
28/5

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

27 May 1992

PRIVATE OFFICE
27 MAY 1992
ACKD .....

Dear Suma,

**CHINA COUNCIL FOR INTERNATIONAL COOPERATION ON ENVIRONMENT AND DEVELOPMENT**

As you know, Sir Crispin Tickell came in last Thursday to brief the Prime Minister. One of the issues he raised was his recent visit to China.

Sir Crispin reported that he had been co-opted on to a sub committee of the Council concerned with prices. He referred to the Canadian funding for the Council, and suggested that consideration should be given to a contribution from the UK. He thought that a sum of up to £100,000, to support the work of the sub committee on which he will sit, would be a useful investment to further UK interests in China. The Prime Minister thought the idea was worth investigating, although you will be relieved to know that he gave no firm commitment.

I should be grateful for advice on the question of a UK contribution, and on how we should take it forward if it were worth pursuing.

Yours
Mark

**MARK ADAMS**

Suma Chakrabarti Esq
Overseas Development Administration

2 MARSHAM STREET
LONDON SW1P 3EB
071-276 3000

My ref:

Your ref:

3 June 1992

Mark Adams Esq
Private Secretary to
The Prime Minister
10 Downing Street
LONDON
SW1A 2AA

Dear Mark

PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL

Thank you for your letter of 27 May reporting on Sir Crispin Tickell's meeting with the Prime Minister in which he put forward a number of suggestions for possible inclusions in the Prime Minister's speech at the Earth Summit. We shall certainly see if we can take some of these on board once our position on the biodiversity convention has been clarified.

You drew attention in particular to Sir Crispin's suggestion that the Prime Minister might have a well-publicised meeting with the UK NGO delegation at the alternative summit. We endorse this proposal, provided that we are to sign the biodiversity convention. Were we not to sign it, I fear the Prime Minister would face a hostile audience.

We have considered here whether the meeting with NGO representatives should be restricted to UK nationals or widened to encompass international NGO representatives as well. We have been in touch with Sir Crispin who has no strong view either way. Our marginal preference here is to go for a mix of international and UK representatives. The Prime Minister has already held a meeting with UK representatives and this modifies the added value of a meeting in Rio. We have made the involvement of all NGOs a major feature of our domestic preparations for Rio, and the Prime Minister wrote to the UN Secretary General urging full involvement for NGOs in the final Prepcom and at Rio itself. In addition, we have contributed $1m to rescuing the NGO global forum from collapse. These factors should stand us in good stead with the international NGO community generally. Indeed it is our view that no other national leader would be able to arrange such a meeting with the same confidence of a reasonable reception at the Prime Minister. You may consider that this gives the Prime Minister a unique media opportunity and the chance to take the credit for what has been a consistent UK effort.

We should of course need to set in hand quickly the necessary arrangements to select a suitable mix of NGO figures and to arrange a well-managed and constructive meeting. We would not envisage the Prime Minister spending more that about 20-30 minutes with the NGO representatives.

I should be grateful for an early indication of the Prime Minister's views so that we may take early steps to arrange a meeting if he wishes.

Yours

Richard

RICHARD SHAW
Private Secretary

CONFIDENTIAL
REGISTRY
10 DOWNING STREET
LONDON SW1A 2AA
30 JUN 1992

PM: Mtgs with Mr Tickell
Jun 92.

covering CONFIDENTIAL

KW
c/hlunced

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

27 May 1992

Dear Richard,

**PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL**

As you know, Sir Crispin Tickell came in last Thursday to brief the Prime Minister on a range of issues, including the UK contribution to the Rio Summit. Although Sir Crispin's meetings with the Prime Minister are intended to be private briefings, it may be helpful if I copy you the extract from the record relating to UNCED.

Most of Sir Crispin's comments about the Summit related to the speech, for which he had a number of suggestions which the Prime Minister found useful. Some of Sir Crispin's comments are already reflected in the draft speech, but you may like to consider whether the remaining suggestions could be usefully included.

Sir Crispin also suggested a high profile meeting with the UK NGOs in Rio. I should be grateful for advice on this as well.

Yours
Mark

MARK ADAMS

Richard Shaw Esq
Department of the Environment

KW

file ku

(C:\Home\Tickell)

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

27 May 1992

Dear Suma,

CHINA COUNCIL FOR INTERNATIONAL COOPERATION
ON ENVIRONMENT AND DEVELOPMENT

As you know, Sir Crispin Tickell came in last Thursday to brief the Prime Minister. One of the issues he raised was his recent visit to China.

Sir Crispin reported that he had been co-opted on to a sub committee of the Council concerned with prices. He referred to the Canadian funding for the Council, and suggested that consideration should be given to a contribution from the UK. He thought that a sum of up to £100,000, to support the work of the sub committee on which he will sit, would be a useful investment to further UK interests in China. The Prime Minister thought the idea was worth investigating, although you will be relieved to know that he gave no firm commitment.

I should be grateful for advice on the question of a UK contribution, and on how we should take it forward if it were worth pursuing.

Yours
Mark

MARK ADAMS

Suma Chakrabarti Esq
Overseas Development Administration

E.R.

(2)

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SUBJECT cc MASTER

NOTE FOR THE FILE

PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL:

THURSDAY, 21 MAY 1992

The Prime Minister met Sir Crispin Tickell on Thursday, 21 May. Mark Adams and Alex Allan were present.

UNCED

Sir Crispin said that the Rio Summit was an opportunity to lay a foundation for Government action in the future. In his view the climate change convention was quite feeble, and little was likely to be achieved at Rio itself. The Prime Minister would therefore need to make it clear that the Summit should be seen as the beginning of a process, not an end in itself.

Sir Crispin set out a number of suggestions for inclusion in the Prime Minister's speech. He suggested that the Prime Minister should make it clear that international action should respond flexibly to changes in scientific theory and evidence. The follow-up would therefore be vital and the Prime Minister might like to set out a number of strands. First, an efficient institutional framework would be needed within the United Nations. The UN Environmental Programme needed to be taken seriously, and it was important that Governments should make a contribution. Sir Crispin did not believe that ECOSOC should be given responsibility for follow-up action, as it was in his view discredited. The Prime Minister might propose a Commission within the UN on sustainable developments to be composed of heads of environment in the member States. The Commission might examine progress before meetings of the General Assembly. The Secretary-General might be asked to co-ordinate environmental work better, using his personal authority to oversee it. He might present an annual report to the new Session.

Second, the Prime Minister might emphasise Britain's prominence in three key areas, namely in the science of climate change, the science of bio-diversity, and technology transfer. The UK might push for a new centre for bio-diversity in this country to take forward some of the post-Rio work.

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Third, the Prime Minister might stress his willingness to work with the NGOs. He might have a well-publicised meeting with the UK NGO delegation at the alternative summit.

Finally, Sir Crispin expressed concern over the difficulty the UK faced over its target to contribute 0.7 per cent of GNP to aid. He believed that the Government should stick to its position of being prepared to replenish the Global Environment Facility. In addition the UK might contribute to projects with a proven environmental impact.

The Prime Minister thanked Sir Crispin for his thoughtful suggestions. He said it offered him much to draw on. He was particularly attracted to the idea of a meeting with the UK NGOs, and would ask for this to be investigated. He also agreed that it was important to emphasise that the Earth Summit was part of a process, so as not to encourage unrealistic expectations for progress at the Summit itself.

CHINA COUNCIL FOR INTERNATIONAL CO-OPERATION ON ENVIRONMENT AND DEVELOPMENT

Sir Crispin reported on his recent visit to China for a meeting of a new China Council which he had been invited to join. While in China, he had been treated with great honour by the Chinese authorities, including a meeting with Li Peng. Sir Crispin reported that the Canadian Government had provided around US $5 million to fund the work of the Council. He recommended that the UK should consider a small contribution itself. The meeting of the Council had agreed to set up a number of working parties, and Sir Crispin would be working on a sub-committee on prices. It might be appropriate for the UK Government to make a contribution to assist the work of the Group. Sir Crispin thought that a sum of up to £100,000 might be appropriate. He felt it would be a worthwhile investment to improve UK links with China. The Prime Minister agreed that it would be worth considering the possibility of making funds available, and he asked for it to be looked into.

**EC GREENHOUSE POLICY ADVISORY COMMITTEE**

Sir Crispin reported briefly on a meeting of the Advisory Group he had attended. It was clear that the UK Government's role in the run up to Rio was highly regarded throughout the Community.

**GREEN COLLEGE CENTRE**

Sir Crispin reported on the readiness of his Centre at Green College. He explained that they would be looking for research contracts from Government and other bodies. The Prime Minister said he was sure that appropriate Government Departments would wish to bear the Centre's existence in mind.

MARK ADAMS
26 May 1992

c\h\tickell (aa)

(1)

(1) Process — not single event.

(2) F/up:-

Tech.

Must take - give it over
(we doubled contrib.).

Polit.

No revamped Eco Sec.

Comm. on sustainable dev- (to meet one a/m).
(Min. of Env.).

Not pre-Gen. Assembly.

Get Bourbon B. Ghali to co-ordinate

Sec. Gen. - personal auth. to pull together
(+ W. Bk. + IMF)

Annual Report.

For pre-reference

Climate Change (Hadley Centre).

Centre for Bio-diversity
(linked to Kew
Nat. Research)!

Look @ mech of T. transfer.

---

Published meeting with NGO's.

E.R.

PRIME MINISTER cc: Mrs. Hogg

ENVIRONMENT

You are due to meet Sir Crispin Tickell tomorrow for one of your regular meetings with him on the environment. He was particularly keen to advise you before the Earth Summit. He has also recently had meetings with Michael Howard and Lynda Chalker.

The issues Sir Crispin will want to raise include:

(i) UNCED

Now that it is looking as if the Conference will produce a good level of agreement, particularly on climate change and bio-diversity, attention is focusing on what the next stages will be. (An FCO report on the latest state of play is attached at Flag A.) Sir Crispin may wish to offer advice on the UK strategy for achieving its emissions target, which has yet to be announced. In particular, Sir Crispin may outline his plan for what he calls "social cost pricing of energy", which would involve developing methods for analysing the costs of alternative energy forms on for example the environment. He has not sent out his idea for us in detail before, so we are not clear exactly what he has in mind.

On bio-diversity, there may be an opportunity for the UK to be seen to lead the field in taking forward the results of Rio. We have a good record on the science and practice of bio-diversity (e.g. Kew Gardens, Natural History Museum). Sir Crispin may offer some suggestions for taking the theme forward.

Sir Crispin may wish to comment on the preferred institutional arrangements within the UN following Rio. There is some disagreement over whether the work should be taken forward in the ECOSOC committee, which has the disadvantage of being rather disorganised, or through a new arrangement, which has the disadvantage of creating new bureaucracy.

Finally Sir Crispin might offer (or you might like to ask him to offer) some general thoughts on maximising the impact of your attendance at the Earth Summit.

(ii) China

Among his very many noble environmental activities, Sir Crispin is an honorary member of the China Council for International Co-operation on Environment and Development. The Council aims to encourage co-operation between China and the international community in this field. Sir Crispin has recently been in China for a meeting of the committee and was apparently feted at high levels by the Chinese (FCO report on the meeting is at Flag B). Indeed it appears he was among a small number from the Council received by Li Peng. Clearly the Chinese see the Council as another way of improving their relations with the West.

Sir Crispin is personally very keen for the UK to respond positively to the work of the Chinese. Apparently the Canadian Government has given funds to support the work of the Council, and Sir Crispin has had discussions with the ODA about a British contribution. I understand the proposal is receiving a sympathetic hearing, although this may not of course produce any cash. At the very least, Sir Crispin believes that the UK should be helpful to the Chinese after Rio. They clearly will need much advice to take the necessary environmental action that the Rio conventions will require. Obviously the UK will be contributing indirectly via the Global Environmental Facility upon which the Chinese will make calls. However, Sir Crispin may have something more specific to help in mind.

(iii) EC Greenhouse Policy Advisory Committee

Sir Crispin is also a member of a Commission advisory group made up of experts from member governments with a detailed policy and scientific knowledge of the greenhouse effect. Sir Crispin recently attended a meeting of the Committee, and may want to give a short report on it. In essence the meeting seemed to praise the performance of the British delegation involved in the drafting of the Climate Change Convention. It is clear that the UK reputation on environmental matters within the Community is very good (and perhaps much better than Commissioner Di Meana

would like to think!).

(iv) Marine College Centre

Since taking up post as Warden of Green College Oxford, Sir Crispin has set up a Centre at the College with the intention of bridging the gap between science and policy-making in matters of the environment. Start-up funding has been provided by the Sainsbury Trustees and the Centre will be looking for commissions for work, including obviously from Government. The principles of the Centre are sound - anything which increases lay person access to the rather obscure world of environmental science is welcome. The Centre has already hosted an excellent conference on climate change, which I attended. Crispin will not be expecting you to commit Government funds in your meeting with him, but you may like to make encouraging noises about the possibility of Government funding specific projects at the Centre as appropriate.

MARK ADAMS
20 May 1992

C:\HOME\ENVIRONMENT (ECL)

UNCLASSIFIED
FM FCO
TO PRIORITY CANBERRA
TELNO 178
OF 191500Z MAY 92

YOUR TELNO 270 OF 18 MAY

1. WE WILL SEND YOUR LATEST VERSION OF UNCED MEDIA GROUP BRIEF WHEN FINISHED (END OF WEEK). FOLLOWING IS LATEST STATE OF PLAY ON UNCED:

GENERAL

2. THE UN CONFERENCE ON ENVIRONMENT AND DEVELOPMENT (UNCED) IS TO TAKE PLACE IN RIO FROM 3-14 JUNE. UNCED IS EXPECTED TO AGREE A PROGRAMME OF ACTION (AGENDA 21) AND A LIST OF PRINCIPLES (THE RIO DECLARATION). IN ADDITION, CONVENTIONS ON CLIMATE CHANGE AND BIOLOGICAL DIVERSITY AND AN AGREEMENT ON FOREST PRINCIPLES ARE EXPECTED TO BE SIGNED.

CLIMATE CHANGE CONVENTION

3. THE CLIMATE CHANGE CONVENTION NEGOTIATIONS ENDED SUCCESSFULLY ON 9 MAY WITH A UK BROKERED CONSENSUS AGREEMENT ON A TEXT WHICH IS WEAKER THAN WE INITIALLY WANTED, BUT GOES A LOT FURTHER THAN THE BAREBONES FRAMEWORK CONVENTION WHICH FOR A LONG TIME APPEARED THE MAXIMUM ACHIEVABLE. BINDING TARGETS AND TIMETABLE TO REDUCE EMISSIONS WERE NOT AGREED BUT THE BROAD SUPPORT FOR THE AGREEMENT, INCLUDING FROM THE US, IS THE KEY AT THIS FIRST STAGE. THE NEXT STEP WILL BE TO ENSURE THAT KEY WAVERERS (EG MALAYSIA, INDIA) SIGN AND RATIFY THE CONVENTION.

BIOLOGICAL DIVERSITY CONVENTION

4. REASONABLE PROGRESS WAS MADE AT THE LAST NEGOTIATING SESSION. THE FINAL ROUND IS UNDERWAY. THE WEAKNESS OF SOME OF THE PROPOSED CONSERVATION COMMITMENTS MEANS THAT THE CONVENTION CAN BE SEEN AS ONLY THE BEGINNING OF A PROCESS, WITH MANY OF THE DETAILS BEING FLESHED OUT BY THE CONFERENCE OF THE PARTIES AT A LATER STAGE. AS IN THE CLIMATE CHANGE CONVENTION, FUNDING ISSUES, AND PARTICULARLY THE FUNDING MECHANISM, ARE KEY. THE SUCCESSFUL CONCLUSION OF THE CLIMATE NEGOTIATIONS MEANS THE

PROSPECTS FOR A BIODIVERSITY CONVENTION TO BE READY FOR SIGNATURE AT RIO MUST NOW BE GOOD.

FORESTS

5. THE UK SUPPORTS AGREEMENT AT RIO ON A STATEMENT OF PRINCIPLES FOR THE CONSERVATION AND SUSTAINABLE MANAGEMENT AND USE OF THE WORLD'S FORESTS. WE ARE SEEKING A LEGALLY BINDING INSTRUMENT ON FORESTS TO BE NEGOTIATED AFTER UNCED. BUT KEY DEVELOPING COUNTRIES (NOTABLY MALAYSIA) OPPOSE WORK ON A LEGALLY BINDING AGREEMENT. WE WILL NEED TO ENSURE THAT OUR PRESSURE FOR AGREEMENT TO START WORK ON A CONVENTION DOES NOT DERAIL THE NEGOTIATIONS ON A STATEMENT OF PRINCIPLES.

6. A G7 INITIATIVE ON A PILOT PROGRAMME FOR BRAZILIAN TROPICAL FORESTS WAS AGREED AT THE HOUSTON SUMMIT. HOWEVER, THE PROJECT WAS SLOW TO GET OFF THE GROUND WHICH LED TO SOME BRAZILIAN IRRITATION AND HIGH LEVEL INTERVENTIONS. DLRS 250M HAS BEEN IDENTIFIED TO LAUNCH THE FIRST PHASE, INCLUDING DLRS 30M FROM THE UK.

FINANCIAL RESOURCES AND MECHANISMS

7. ONE OF THE MOST DIFFICULT ISSUES IN THE PREPARATION FOR UNCED, INCLUDING THE CONVENTION NEGOTIATIONS, HAS BEEN FUNDING TO HELP DEVELOPING COUNTRIES MEET ENVIRONMENTAL OBJECTIVES. THE MAIN ISSUES ARE PROVISION OF ADDITIONAL RESOURCES AND THE ESTABLISHMENT OF NEW FUNDING MECHANISMS.

8. FOR PROGRAMMES RESULTING FROM AGENDA 21 OUR POLICY IS THAT FOR ACTIVITIES JUSTIFIED BY THE NATIONAL BENEFITS TO THE COUNTRY CONCERNED, FINANCE SHOULD BE FOUND FROM DOMESTIC RESOURCES AND TRADITIONAL AID. WE BELIEVE THAT THE GLOBAL ENVIRONMENT FACILITY (GEF) SHOULD BE THE MECHANISM TO PROVIDE ADDITIONAL RESOURCES TO DEVELOPING COUNTRIES TO HELP MEET THE INCREMENTAL COSTS OF THEIR OBLIGATIONS UNDER THE CONVENTIONS ON CLIMATE CHANGE AND BIODIVERSITY (IE WHERE COUNTRIES ARE CARRYING OUT ACTIONS BECAUSE OF GLOBAL BENEFITS, WHICH ARE NOT JUSTIFIED BY RESULTS AT THE NATIONAL LEVEL). THE UK HAS CONTRIBUTED DLRS 40.3 MILLION TO THE GEF. WE ARE PREPARED TO PROVIDE NEW AND ADDITIONAL FUNDS TO REPLENISH THE GEF, PROVIDED THAT OTHER DEVELOPED COUNTRIES ARE WILLING TO DO LIKEWISE, AND THAT THE DEVELOPING COUNTRIES ARE WILLING TO ACCEPT THE COMMITMENTS IDENTIFIED DURING THE CONVENTION NEGOTIATIONS.





HURD

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.1992 ENVIRONMENT CONFERENCE
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NRED/ODA
PS
PS/BARONESS CHALKER
PS/MR GOODLAD
PS/MR LENNOX-BOYD
MR LANKASTER
MR CROWE
SIR J COLES
MR AINSCOW
MR BONE
MR BEAMISH
MR BENNETT
MR FREEMAN

ADDITIONAL 15

PS/PM
MR NICKLESS CABINET OFFICE
MR B MORRIS HMT
MR HOBSON CDEP/DOE
DR FISK DACTS/DOE
MISS MCCONNEL EPINT/DOE
MR HAMMOND GA4/DOE
MR BENT HMT
MR R WILLIAMS DEP SEC DTI
MR A PRYOR DIRECTOR GENERAL (BNSC DTI)
DR R JUDE BNSC DTI
DR D WILLIAMS BNSC DTI
DR A APLING GAD DOE
MR C YARNELL DTI
MR GARFORTH FORESTRY COMM'SION (VIA SCOTTISH OFFICE)

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TELELETTER NFR
OF 040144Z MAY 92
AND TO TELELETTER ODA

FROM D COATES, POLITICAL COUNSELLOR
TELELETTER NFR OF 04 MAY 1992
FOLLOWING FOR HUGH DAVIES, FED, FCO
COPIED TO ROLAND SMITH, ESED, FCO
PS/PRIME MINISTER, 10 DOWNING ST
ODA

CHINA COUNCIL FOR INTERNATIONAL CO-OPERATION ON ENVIRONMENT AND DEVELOPMENT (CCICED)

SUMMARY

1. CCICED HOLDS FIRST MEETING IN PEKING. SIR CRISPIN TICKELL AMONG THE INTERNATIONAL DELEGATES. COUNCIL SETS UP WORKING GROUPS TO TACKLE VARIOUS ENVIRONMENTAL PROBLEMS AND ISSUES FIVE-POINT PLAN. MESSAGE TO PRIME MINISTER ON CHINESE COMMITMENT TO OPENING UP AND SUCCESS OF THE CCICED.

DETAIL

2. THE CCICED, WHICH WAS FORMALLY ESTABLISHED IN 1991 TO FACILITATE CO-OPERATION BETWEEN THE PRC AND THE INTERNATIONAL COMMUNITY IN THE FIELDS OF ENVIRONMENT AND DEVELOPMENT HELD ITS INAUGURAL SESSION IN PEKING FROM 21 TO 23 APRIL. SIR CRISPIN TICKELL WAS AMONG THE 25 FOREIGN GUESTS (WHO INCLUDE A VARIETY OF FIGURES FROM THE SCIENTIFIC, ECONOMIC AND ENVIRONMENTAL FIELDS). ALTHOUGH SIR CRISPIN WILL BE MAKING HIS OWN REPORT HE HAS ASKED THE AMBASSADOR TO PASS ON THE FOLLOWING DETAILS OF THE MEETING, TOGETHER WITH A NUMBER OF STATEMENTS BY CHINESE MEMBERS OF THE COUNCIL, WHICH FOLLOW BY BAG.

3. THE MAIN OUTCOME OF THE MEETING WAS A DECISION TO ESTABLISH A NUMBER OF WORKING GROUPS DEALING WITH:

- MONITORING DATA COLLECTION AND POLLUTION CONTROL
- SCIENTIFIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT AND TRAINING
- BIODIVERSITY AND CONSERVATION
- ENERGY STRATEGY AND TECHNOLOGY
- RESOURCE ACCOUNTING AND PRICE POLICY.

4. EACH OF THESE FIVE WORKING GROUPS IS TO HAVE TWO CO-CHAIRMEN: ONE CHINESE AND ONE FOREIGN. THE CHINESE WERE ALL NAMED: THE FOREIGNERS HAVE YET TO BE DECIDED. IT WAS AGREED THAT FIVE FOREIGN MEMBERS OF THE COUNCIL WOULD ACT AS 'SHADOW ADVISERS' TO THE WORKING GROUPS. AT CHINESE INSISTENCE, SIR CRISPIN AGREED TO BE ADVISER TO THE WORKING GROUP ON RESOURCE ACCOUNTING ETC. THE COMPOSITION OF THE GROUPS HAS YET TO BE DECIDED. THEY WILL REPORT TO THE NEXT MEETING OF THE CCICED WHICH IS TO BE HELD FROM 3-6 MAY 1993, FIRST IN HANGZHOU AND THEN IN PEKING.

5. IT WAS LEFT FLEXIBLE AS TO WHETHER FURTHER WORKING GROUPS SHOULD BE CREATED LATER ON. FOR THE AGREED ONES, THE CHINESE PRODUCED LONG DRAFT TERMS OF REFERENCE WHICH THE INTERNATIONAL MEMBERS DECLINED TO ACCEPT BECAUSE THEY WERE TOO COMPLICATED. THE FIRST TASKS OF THE WORKING GROUPS WILL THEREFORE BE TO AGREE THEIR OWN TERMS OF REFERENCE. MEMBERS WERE ASSURED THAT ONCE THE WORKING GROUPS' REPORTS HAD BEEN FINALISED AND SUBMITTED TO THE CHINESE GOVERNMENT, THE LATTER WOULD CIRCULATE THEM WIDELY TO PROVINCIAL AS WELL AS CENTRAL GOVERNMENT BODIES.

6. ANOTHER QUESTION WHICH WILL HAVE TO BE SETTLED IS WHETHER THE MEMBERS SHOULD BE PAID. SIR CRISPIN THINKS THAT SOME PAYMENT WILL BE NECESSARY TO ATTRACT REALLY FIRST CLASS PEOPLE. THE LIKELIHOOD IS THAT MORE MONEY WILL BE NEEDED THAN IS AT PRESENT AVAILABLE AND THAT THERE WILL BE AN APPEAL TO DONOR COUNTRIES FOR FUNDS. THE UK GOVERNMENT MIGHT WELL BE ASKED TO FINANCE ONE OF THE WORKING GROUPS.

7. THE MEETING ALSO DREW UP A FIVE-POINT PLAN WHICH WAS SET OUT BY THE COUNCIL'S CHAIRMAN, STATE COUNCILLOR SONG JIAN AND REPORTED IN THE ''CHINA DAILY''. THESE FIVE POINTS ARE:

- TO DEVELOP A NEW CONCEPT THAT ENVIRONMENTAL PROTECTION IS NOT NECESSARILY A BURDEN ON CHINA'S ECONOMIC DEVELOPMENT.
- TO EXPAND CHINA'S PRESENT ENERGY STRUCTURE AND ENERGY EXPLORATION BY ADOPTING ADVANCED TECHNOLOGY.
- TO ESTABLISH A MACRO CO-ORDINATION AND MANAGEMENT MECHANISM FOR THE ENVIRONMENT AND DEVELOPMENT.
- TO ESTABLISH A RESOURCE PRICING AND ACCOUNTING SYSTEM COVERING ENVIRONMENTAL RESOURCES IN ORDER TO TAKE FULL ADVANTAGE OF LIMITED RESOURCES.
- TO TRY TO REALISE THE SIMULTANEOUS DEVELOPMENT OF RURAL ENVIRONMENTAL PROTECTION AND RURAL ECONOMIC PROSPERITY.

8. A HIGHLIGHT OF THE PROGRAMME WAS THE MEETING WITH LI PENG AT THE ZHONG NAN HAI LASTING TWO HOURS. THE FIRST HOUR WAS TAKEN UP WITH PRESENTATIONS BY SIX OF THE INTERNATIONAL PARTICIPANTS. LI PENG THEN SPOKE FOR AN HOUR. ACCORDING TO SIR CRISPIN, HIS REMARKS DEMONSTRATED THAT HE HAD LISTENED CAREFULLY TO WHAT HAD BEEN SAID, AND HE PICKED OUT SOME OF THE IMPORTANT POINTS.

9. FOUR OR FIVE OF THE INTERNATIONAL MEMBERS WERE INVITED TO LUNCH WITH DENG NAN (DENG XIAOPING'S DAUGHTER) IN HER DUAL CAPACITY AS VICE-PRESIDENT OF THE STATE COMMISSION ON SCIENCE AND TECHNOLOGY AND A CHINESE NGO DEALING WITH ENVIRONMENT PROTECTION FOR THE COUNTRYSIDE. SHE REFERRED TO HER FATHER AS ''VERY, VERY OLD NOW''. FINALLY, SIR CRISPIN HAD A LONG TALK OVER BREAKFAST WITH QU GEPING. QU ASKED SIR CRISPIN TO PASS ON TO THE PRIME MINISTER THAT THE CHINESE REALLY WERE OPENING UP TO THE OUTSIDE WORLD: THAT THEY NEEDED HELP: AND THAT THE CHINESE LEADERSHIP ATTACHED GREAT IMPORTANCE TO THE CCICED. SONG WAS ALSO REPORTED AS SAYING THAT WHILE SEEKING FOREIGN CO-OPERATION FOR ENVIRONMENTAL AND ECONOMIC DEVELOPMENT, CHINA SHOULD RELY MOSTLY ON ITS OWN EFFORTS.

COMMENT

10. SIR C TICKELL'S INVOLVEMENT IN CCICED LOOKS LIKE PROVIDING A VALUABLE CHANNEL OF COMMUNICATION FOR US WITH THIS ORGANISATION ABOUT WHICH PREVIOUSLY IT HAS BEEN DIFFICULT TO OBTAIN DETAILS. ITS FIRST MEETING APPEARS TO HAVE BEEN PRODUCTIVE, AND THE CHINESE HAVE SOUNDED INCREASINGLY COMMITTED TO PURSUING ENVIRONMENTAL PROTECTION. WE MUST HOPE THAT THE COMMITTEE DOES NOT, AS IT SETS UP ITS WORKING GROUPS, BECOME OVERLY CONCERNED WITH BUREAUCRATIC MATTERS. SIR C TICKELL TOLD THE AMBASSADOR THAT HE WAS LEFT IN LITTLE DOUBT THAT QU GEPING'S COMMITMENTS TO THE PRIME MINISTER WERE TRUE. NONETHELESS, AS WITH ALL MATTERS ENVIRONMENTAL THERE WILL BE A FINANCIAL ASPECT AS INDICATED BY SIR CRISPIN'S COMMENTS ON THE WORKING GROUP. ESED IN PARTICULAR MAY WISH TO CONSIDER WHERE WE WOULD STAND IF ASKED TO SUPPORT ONE OF THE GROUPS FINANCIALLY.

11. I AM COPYING THIS TELELETTER TO ROLAND SMITH, ESED, FCO, PS/PRIME MINISTER, 10 DOWNING STREET AND TO ODA.

12. FED REGISTRY, FCO PLEASE PASS TO ESED, FCO AND 10 DOWNING STREET.

D COATES

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PEHPAN 9256

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ODA

Overseas Development
Administration

94 Victoria Street, London SW1E 5JL

Telephone 071-917 9134

*From The Private Secretary*

20 May 1992

Mark Adams Esq
Private Secretary
10 Downing Street
London SW1A 2AP

Dear Mark,

We spoke yesterday about the Prime Minister's meeting tomorrow with Sir Crispin Tickell. As agreed, I enclose copies of previous correspondence on the China Council (marked 'A'), and copies of the briefing and records of yesterdays meeting between Lady Chalker and Sir Crispin (marked 'B' and 'C').

Just in case Sir Crispin does raise his various requests for funds, I should be grateful if the Prime Minister could be briefed to give non-committal answers. We are looking into Sir Crispin's requests and will get back to him shortly.

Yours,

Suma

Suma Chakrabarti
Private Secretary

bdc Minister

Mr Ainscow
Mr Manning
Mr Bennett
Mr Turner
Mr Scott
Mr Lowcock
Mr Bearpark
Mr Bone, ERD
Mr Davies, FED
Mr Brenton, ESED
Mr McClean

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(A)

T P Lankester
*Permanent Secretary*

**ODA**

**Overseas Development Administration**

**94 Victoria Street, London SW1E 5JL**

Telephone 071-917 0500

Mr McClean.

13/3/92

11 March 1992

Sir Crispin Tickell GCMG KCVO
Green College
Woodstock Road
Oxford OX2 6HG

Dear Crispin.

**CHINA COUNCIL FOR INTERNATIONAL CO-OPERATION ON ENVIRONMENT AND DEVELOPMENT**

In your letters to William Chapman of 13 January and Roger Bone of 14 January, and at our meeting on 15 January, you suggested that we should consider a modest contribution to the China Council for International Co-operation on Environment and Development (CCICED).

I was delighted to hear that you had decided to join CCICED. I am sure you will make a valuable contribution to their work, which we will follow with considerable interest. However, you will understand that we have reservations about handing over a sum of money to an organisation without a clear idea as to what it will achieve and how it will be spent. I also have some doubts about how such an apparently modest contribution would appear when compared with $5 million promised by Canada.

However, we do regard the environment as an important area of focus for our programme of technical co-operation with China and are already pursuing a number of environmentally beneficial projects there. These include a demonstration project in environmental protection and energy efficiency in coal utilisation in Taiyuan, an air pollution control consultancy in Chongqing, an energy efficiency in buildings consultancy, environmental/water projects in Shanghai and Tianjin which we are planning in conjunction with the World Bank, and a programme of assistance in temperate forestry which is now in preparation. Apart from their environmental impact, these projects will offer immediate commercial opportunities for British consultants and, we hope, downstream opportunities for British suppliers as projects are implemented.

We are keen to increase our support for the environment in China, and in particular wish to assist the development of Chinese environmental institutions. The approach we have in mind is to engage consultants to go to China and talk to the Chinese National Enviromental Protection Agency (NEPA) and other relevant institutions at National or Provincial level. The consultants could be explicitly tasked to take account of the CCICED's conclusions when developing project proposals with NEPA. The aim would be to identify a number of projects with well defined objectives, in support of which ODA would finance specific inputs, eg. the provision of know-how from British institutions, plus UK training for staff from the Chinese institutions and support for in-country and third country training, seminars, subscriptions to periodicals etc. We might wish to invite competing bids from British institutions for the provision of services and project management and we would monitor the progress of the projects and take appropriate action if they seemed not to be developing as we would wish. We have been discussing with the Chinese a similar approach to institutional development projects in the management and public administration sectors - they have responded with enthusiasm.

We shall let you have by way of briefing before the CCICED Meeting details of ODA environment projects in China (either in place or planned). You might wish to refer to these activities at the meeting and to add that the ODA would be interested in identifying institutional development projects in China for support under our technical co-operation programme and would be ready to send people out to discuss possibilities with NEPA and other appropriate organisations. We shall have to be careful not to commit ourselves to an over-ambitious programme or to a timetable that we cannot stick to for reasons of financial constraints. Apart from our ambitions in the environmental sphere, we have our institutional development initiatives for management and public administration to finance. However, I think we shall be able to put in place a worthwhile programme and that our suggestion that you announce what we are doing, and what we are prepared to do, will meet your point that we should not be seen to leave the running to the Canadians.

We shall of course be very interested in your impressions of the CCICED meeting and in particular to hear any views you may have on the organisations most likely to prove effective collaborators for the sort of institutional development projects* we have in mind and which our consultants should follow up.

Tim Lankester

* And if you have specific ideas of projects, that would be helpful too.

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ODA

Overseas Development
Administration

94 Victoria Street, London SW1E 5JL

Telephone 071-917 0419

From The Private Secretary

13 March 1992

Mark Adams Esq
Private Secretary
10 Downing Street
LONDON SW1A 2AP

Dear Mark,

Thank you for your letter of 4 February enclosing letters of 13 and 29 January from Sir Crispin Tickell about the Chinese Council for International Co-operation on Environment and Development (CCICED).

As indicated in my interim reply of 28 February, ODA's view is that rather than providing a token contribution to CCICED, it would be better to try to identify a number of institutional development projects in China. I attach a copy of a letter dated 11 March from Tim Lankester which explains this to Sir Crispin. I also attach a draft reply for you to send to him.

I am copying this letter to Christopher Prentice (Foreign and Commonwealth Office) and Michael Shaw (Department of the Environment).

Yours ever,

Suma

Suma Chakrabarti
Private Secretary

DRAFT LETTER FOR SIGNATURE BY PS/10 DOWNING STREET

ECO

Sir Crispin Tickell GCMG KCVO
Green College
Woodstock Road
OXFORD OX2 6HG

Thank you for your letters of 13 and 29 January about the Chinese Council for International Co-operation on Environment and Development (CCICED).

I understand that the Overseas Development Administration have now considered your suggestion of a British contribution to CCICED, and that Tim Lankester has written to you setting out an alternative approach.

I hope your involvement in the CCICED and ODA's proposed support for environmental institutions in China will help get the first meeting of the CCICED off to a good start.

RECORD OF MEETING BETWEEN SIR CRISPIN TICKELL AND BARONESS CHALKER TO DISCUSS ENVIRONMENTAL ISSUES IN CHINA, TUESDAY 19 MAY 1992 ODA

1. Sir Crispin Tickell called on Baroness Chalker on Tuesday 19 May to report on progress on the China Council for International Co-operation on Environment and Development (CCICED). Mr McClean, Mr Chakrabarti and Miss Rees were also in attendance.

2. The Minister said that she was delighted that the Chinese Government had invited Sir Crispin to act as 'Shadow Adviser' to the CCICED Working Group on Resource Accounting and Price Policy.

3. Sir Crispin said that he was still awaiting the official record of the CCICED meeting. He handed over copies of some meeting documents: the Agenda and Programme, the 'Assumptions and Criteria used for defining Expert Working Groups', the list of the Chinese and international membership, and the draft terms of reference for the Resources Accounting Working Group. (These documents are available in China Section for consultation if required.) He said that the terms of reference for the Working Group would need substantial re-writing and he had suggested amendments.

4. Sir Crispin said that he and the other British participants had been given a prominent role in the proceedings by the Chinese. He had been invited to meet Premier Li Peng and had discussed with him the international role of governments in relation to the environment and the measures which national governments should take in the environmental field. In particular he had emphasised the importance of each ministry having an environmental 'watchdog'. Premier Li Peng had guaranteed that the conclusions of the working groups would be widely circulated. Sir Crispin had also made the closing speech at the final banquet. The number of British participants in the CCICED was disproportionately high - he mentioned Mr Martin Lees, (International Co-ordinator for the CCICED), Dr Martin Holdgate, (Director General, International Union for the Conservation of

Nature), and Mr John Jennings (Royal Dutch/Shell). Sir Crispin had been asked to suggest further names for the Working Group and those he had proposed had inevitably been weighted towards the UK and USA, as more work was being done on resources accounting and price policy in those countries than elsewhere.

5. Sir Crispin thought that the prominence given to British participants reflected partly the desire on the China side to improve Anglo-Chinese relations, and partly the belief of the conference organisers that the British participants were in a position to have some influence in raising awareness of environmental issues in some quarters in China.

6. Lady Chalker welcomed the active part played by British representatives in CCICED's proceedings. Apart from the intrinsic importance of environmental issues in China, this provided another opening for the United Kingdom to influence Chinese thinking. The Chinese were no doubt mindful of relations with the United Kingdom over Hong Kong, and this also provided an opportunity for the UK to improve relations in the run-up to 1997. She and Mr Patten would be meeting on 20 May to discuss ways in which the aid programme for China could assist HMG's Hong Kong objectives.

7. Lady Chalker added that she wished to support British involvement in CCICED. She could not hold out hope of additional funds being available for the China Aid Programme, but felt that there was scope for increased assistance in the environmental field within the finance available. She noted that
Mr Lankester had already written to Sir Crispin suggesting that ODA would be interested in developing relations with key institutions within the scope of the existing technical co-operation programme, which already contained a number of worthwhile environmental projects. In considering future possibilities ODA would be looking for specific proposals for projects with clearly defined objectives. Mr McClean noted that the setting up of the Working Group came at an opportune time. ODA was seeking to initiate discussion in the OECD Development Assistance Committee of environmental issues in China and the

working Group offered an opportunity to influence Chinese thinking and policy on such key issues as energy pricing.

8. Sir Crispin welcomed the possibility of ODA support and undertook to obtain any further information which ODA required from the Canadian co-chairman of CCICED, Dr Marcel Masse (President of the Canadian International Development Agency).

9. Sir Crispin mentioned that the President of the Royal Society, Sir Michael Atiyah, had also been in China and was keen to develop relations with the Chinese Academy of Sciences. He had found the Chinese very open to discussion and concerned about their 'fairly horrific' predictions for climate change and population growth. (Their forecasts for population growth from the present 1.1 billion and decreased rainfall in the fertile coastal provinces pointed to the possibility of serious shortfalls in food production leading to mass migration.) A link between the Royal Society and the Chinese Academy of Sciences might offer a further useful opportunity for Anglo-Chinese co-operation.

10. In discussion with Mr McClean after the meeting with Lady Chalker Sir Crispin suggested that Dr Marcel Masse should write to Lady Chalker seeking specific support from HMG for the Resources Accounting and Price Policy Working Group. This was agreed.

Rhiannon Rees.

Rhiannon Rees
Eastern Asia and Pacific Department
Overseas Development Administration
20 May 1992

copies to:
PS/Baroness Chalker
PS/Mr Goodlad
PS/Mr Lennox-Boyd
PS/Mr Patten
Mr Lankester
Mr Ainscow
Mr Manning
Mr Bennett
Mr Burns
Mr Turner
Mr Davies
Mr Brenton
Mr Johnson, BE Peking
Mr Coates, BE Peking

1473.ree

Reference 1451-35 0053

From: Rhiannon Rees

Date: 19 May 1992

cc Mr J H S Chard
Mr D P Turner
Mr McClean (w/o encs)
PS/Minister

Mr A J Bennett
Chief Natural Resources Adviser

**JORDAN: ROYAL GEOGRAPHICAL SOCIETY RESEARCH EXPEDITION**

1. Sir Crispin Tickell called on the Minister on Tuesday 19 June to discuss environmental issues in China (minutes being circulated separately). He also raised the question of ODA assistance to a forthcoming Royal Geographical Society research expedition to Jordan.

2. Speaking in his capacity as President of the Royal Geographical Society, Sir Crispin requested ODA assistance for this expedition. He said that the Society was just completing a research study of the rainforest in Brunei, which would lead to the establishment of a 'University of the Rainforest' to study environmental problems in South-East Asia. The next project would be in the arid North-West of Jordan and would be a Research and Development Programme on population and the environment in arid lands. The Crown Prince of Jordan and the Duke of Kent had agreed to be patrons. Most of the funding would come from elsewhere but he would appreciate a modest ODA contribution as a token of ODA's support for the expedition.

3. The Minister agreed that ODA would consider the request, and contact Sir Crispin. I enclose the papers on the Badia Research and Development Programme which Sir Crispin handed over. Please would you take this forward and reply to Sir Crispin?

Rhiannon Rees

Rhiannon Rees
Eastern Asia and Pacific Department
V636 X0294

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Reference .....

From: Rhiannon Rees

Date: 19 May 1992

cc Mr A J Bennett
Mr P D M Freeman
P/S Minister
Mr McClean fi

Mr M A Power, IFID

**CALL BY SIR CRISPIN TICKELL ON THE MINISTER,MAY 19 1992: IDA 10 REPLENISHMENT**

1. Sir Crispin Tickell called on the Minister on Tuesday May 19, mainly to discuss environmental issues in China (minutes are being circulated separately).

2. Sir Crispin also mentioned that he had picked up from contacts in the USA that a major row was brewing over IDA 10. Apparently the US Government was pressing to make the IDA 10 replenishment conditional on the World Bank taking the lead on the national environmental action plans drawn up by national governments. The International Institute for the Environment and Development (IIED) and the environmental lobby felt very strongly about this, as they feared that IDA would seek to impose World Bank priorities on recipient Governments. He himself agreed that the action plans should be the responsibility of national governments.

3. The Minister agreed with Sir Crispin that the American initiative, if that is what it is, appeared odd. She would investigate and let Sir Crispin know.

4. Please would you follow this up and let Sir Crispin know the outcome.

Rhiannon Rees

Rhiannon Rees
Eastern Asia and Pacific Department
V636 X0294

1467.ree

Reference .....

From: Rhiannon Rees

Date: 19 May 1992

cc Mr D P Turner
Mr G Hand, APD
PS/Minister
Mrs Knowlton
Mr McClean, fi

Mr A J Bennett
Chief Natural Resources Adviser

**ROYAL GEOGRAPHICAL SOCIETY CONFERENCE ON ECO-TOURISM**

1. Sir Crispin Tickell called on the Minister on Tuesday 19 May, mainly to discuss environmental issues in China (the minutes are being circulated separately).

2. Speaking in his capacity as President of the Royal Geographical Society, Sir Crispin said that the Society was organising a Conference in September to discuss the issue of 'eco-tourism'. This was a complex subject and developing countries were not always sufficiently aware in their enthusiasm to promote tourism of the dangers to the environment and risk of 'killing the goose which laid the golden egg'. He invited the Minister to deliver the key-note address.

3. The Minister agreed and said she would welcome the opportunity to deliver a major speech on the environment in the Autumn. She also suggested that Richard Leakey would be a suitable guest speaker, and Sir Crispin agreed.

4. Please would you take this forward and suggest suitable dates to Sir Crispin (in consultation with Mrs Knowlton).

Rhiannon Rees

Rhiannon Rees
Eastern Asia and Pacific Department
V636 X0294

1463.ree

Reference .....

From: Rhiannon Rees

Date: 20 May 1992

cc Mr Bearpark
Mr Hodges -
Mr McClean
Dr Nabarro -
Mr Stanton
Mr D P Turner -
PS/Minister

Mr A J Bennett
Chief Natural Resources Adviser

**CALL BY SIR CRISPIN TICKELL ON THE MINISTER MAY 19 1992 - GREEN COLLEGE CENTRE, OXFORD**

1. Sir Crispin Tickell called on the Minister on Tuesday, May 19 1992, mainly to discuss environmental issues in China (the minutes of this part of the discussion are being circulated separately).

2. Sir Crispin also mentioned that a centre has been set up at Green College Oxford, of which he is Warden, whose purpose is 'to help bridge the gap between science and policy making in matters of the environment'. The Centre will both commission work and accept commissions for work. The Sainsbury Foundation had donated £200,000 over two years (which he hoped would be continued). So far two research assistants had been engaged. He envisaged that the role of the Centre would be not so much to do original research as to research and present the salient issues on the environment in simple form for policy-makers and for the public. The Minister welcomed this and said she felt there was a need to bridge the gap between scientists and policy-makers. I enclose a shortnote on the Centre which Sir Crispin handed over (not to all).

3. Sir Crispin said that the Centre would welcome the opportunity to carry out work for ODA. In particular he would be interested in the Centre doing some work on population issues and the environment. He welcomed the Minister's initiative on population issues. In a recent conversation he had had with Dr Nafiz Sadiq she had mentioned the success of population policies in some countries, but had been unable to quote case-studies. He felt that there was a need for research to identify common factors which had led to success in certain countries and not others.

4. The Minister suggested a series of 'Green College Centre Information Papers' and Sir Crispin said this was under consideration.

5. The Minister agreed to consider whether there was any work which the Centre could usefully carry out for ODA. Please would you consider this in consultation with copy recipients as appropriate and let Sir Crispin know direct?

Rhiannon Rees

Rhiannon Rees
Eastern Asia and Pacific Department
V636 X0294

1468.ree

File

GREEN COLLEGE
at the RADCLIFFE OBSERVATORY
OXFORD OX2 6HG
*Telephone* (0865) 274770/1

*with Compliments*

Sir Crispin Tickell

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Crispin Tickell

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could not understand when we declined to endorse them in those tedious statements with which they wished to end every international encounter. Traces of this line of wishful thinking continue today. In 1990 I was still arguing with Russians about whether there could be such a thing as ecological security.

We must be realistic. We constitute one out of millions of animal species in a dangerous world. Our planet is vulnerable to constant hazard, as the past well shows: from radiation from close and outer space to impacts from meteorites, asteroids and planetesimals. Every one knows about the object which probably struck the Yucatan peninsula of Mexico some 65 million years ago, and brought to an abrupt end the dominance of the dinosaur family which had lasted in its many forms over a hundred million years. Fewer are aware of the near misses of 1970 and 1989, or of the noisy arrival of a small warm black object at the feet of a retired civil servant in his deckchair near Peterborough last year.

Then there are the hazards within the earth: such major volcanic events as the explosion of Santorini around 3,600 years ago, which contributed to the end of Minoan civilization; of Tambora in 1815, which led to the year without a summer; and of Pinatubo last year, which is still giving us some technicolor sunsets. For humans with a tiny life span, the processes of environmental change, made manifest in climatic variability, seem interminably slow. But there are of course dramatic oscillations of which the most important for us was the ending of the last glaciation some 12,000 years ago. The warming then, like the freezing which preceded it thousands of years before, could have been rapid, a matter of a century or centuries. It led to the vast multiplication of our numbers: from less than 10 million people to 5.3 billion now. The present rate of increase is over 90 million a year.

Like other animal species we are adjusted to whatever environment there is, and have always been so. Adjustment has often been painful. It has happened through the natural processes of selection and mutation, sometimes using such

The International Peace Lecture 1992
Medical School, University of Manchester:
19 May 1992

# INSECURITY: THE HUMAN CONDITION

Crispin Tickell

You may think I have chosen a curious theme for your International Peace Lecture. I did so because no-one should confuse a desire for peace and security with the continuing realities of conflict and insecurity. I remember that when I was dealing with arms control issues in the 1970s, the Soviet Government elevated the notions of irreversible detente and irreversible security into principles of foreign relations, and could not understand when we declined to endorse them in those tedious statements with which they wished to end every international encounter. Traces of this line of wishful thinking continue today. In 1990 I was still arguing with Russians about whether there could be such a thing as ecological security.

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Then there are the hazards within the earth: such major volcanic events as the explosion of Santorini around 3,600 years ago, which contributed to the end of Minoan civilization; of Tambora in 1815, which led to the year without a summer; and of Pinatubo last year, which is still giving us some technicolor sunsets. For humans with a tiny life span, the processes of environmental change, made manifest in climatic variability, seem interminably slow. But there are of course dramatic oscillations of which the most important for us was the ending of the last glaciation some 12,000 years ago. The warming then, like the freezing which preceded it thousands of years before, could have been rapid, a matter of a century or centuries. It led to the vast multiplication of our numbers: from less than 10 million people to 5.3 billion now. The present rate of increase is over 90 million a year.

Like other animal species we are adjusted to whatever environment there is, and have always been so. Adjustment has often been painful. It has happened through the natural processes of selection and mutation, sometimes using such

instruments as disease, famine and competition for resources, whether good hunting, fertile soils, fresh water, mineral deposits, or more recently, energy as stored sunlight in the form of coal and oil. Conflict within and between communities is therefore endemic. The greater the pressure on resources, the more likely the use of force. The organization of communities into nation states has led in many cases to the consecration of armed forces as the symbol of statehood. Sometimes it is also an expression of ideological commitment. Marching men, the terrors of cavalry and tanks, or the biggest bang of all - nuclear weapons - are in their different ways the icon of the state. No wonder that it is the newest - even if the poorest - countries, with a need to trumpet their nationhood, which spend proportionately most on what is euphemistically called defence. In such countries there are many more soldiers than teachers.

All but the last three years of my professional life from 1954 to 1990 were spent in the ice age of the cold war. Now, with the melting of the ideological glaciers, we can see what lies beneath them. Some things we knew about, others are new. We can also realize the artificiality of the world order created by the long freeze. There are still many icebergs drifting about, dangerous reminders of the very recent past. We have moved into new political surroundings which are unfamiliar, in some cases surprising, in others alarming, in all challenging. It may be too early to discuss the outlines of the order which will surely follow. But we can say already that the problems will look very different, even if their fundamentals, whether visible or invisible, remain the same.

The last major upheaval was of course the Second World War. With its ending came the creation of the United Nations and a Security Council whose mission was the maintenance of international peace and security. As we know that mission was hard to discharge. Since 1945 there have been over 150 wars, mostly in poor countries. If there was an East/West ice age, with occasional remissions, among the industrial countries, the earth still turned on a North/South axis. The poor former colonial countries, few amounting to nations in the strict sense, sought to redress the balance of the world economy and to enjoy a place in the sun. There was competition for their favours, often expressed by the supply of arms, and a new rhetoric about "development", which, however meaningless in some respects, is still in currency. In their own interest they banded together in such ill assorted groups as the non aligned movement, or the G77, and pressed their claims on the industrial countries for help, or at least understanding, of their multiplying internal problems. For their part the industrial countries, still preoccupied by their own divisions, were wise enough not to let these differences open into the catastrophe of a major war between them.

When I arrived in New York as British Ambassador to the United Nations in May 1987, I found this stereotype of a world changing fast. The heat had gone out of the ideological arguments between East and West. Indeed it had become necessary



for the Western countries, in their own interest, to help Eastern Europe and the Soviet Union. If one super power had gone into an evolutionary dead end, the other had relatively less power, with obvious internal weaknesses. The European Community at one end of Asia and Japan at the other had begun to rise in wealth and influence. The non-aligned movement was coming unstuck at its always fragile seams, and its place was being taken by regional groupings. Efforts were being made to redefine development. There was continuing crisis over the Middle East where Israel remains an intrusion in a hostile Arab world, and other Islamic countries, Iraq and Iran, were jockeying for land and what lies beneath it. Over the world as a whole a new set of problems had arisen. With it came a new global agenda, including the issues set out in the report of the Brundtland Commission on Environment and Development, published later that year. As so often in international affairs, the new processes, once established, began to accelerate. By the time I left the United Nations in September 1990, it was indeed a different geography.

I want now to stand back and look at things in a longer perspective. Here are a few simple points:

- in the last 2½ million years, the earth has been in an ice age mode. The rhythm is very roughly 100,000 years of glaciation, and between 10,000 and 15,000 years of warm intermission. We are the second part of the last intermission;

- the last 10,000 years have seen all human civilization;

- in the last 250 years the industrial revolution has changed the face of the planet. It is based on an unprecedented consumption of natural resources;

- the last 20 years have seen growing awareness of some of the consequences. We are perhaps the first generation to see the down side of the industrial revolution.

What are its consequences? In the countries which pioneered it, there has been an amazing rise in living standards. Economic wealth on a familiar definition rose at an almost incredible rate during most of this century. Global gross domestic product was of the order of US$600 billion in 1900. It stood at US$5 trillion in 1960 and at about US$ 17 trillion in 1988. Such growth was highly uneven: of the US$17 trillion, around 14.7 trillion came from the industrial countries (accounting for 23.3% of the world's population), and 2.5 trillion from the rest of the world (accounting for 76.6% of its population).

At the end of the 18th century Malthus wrote about the relationship between resources and population, and the disaster which would follow disequilibrium between them. The manner of

his calculations may have been wrong. Every time a critical point was reached, we have so far managed to find ways of evading or concealing the problem. Perhaps the last such was the green revolution. Unfortunately that does not mean that we can be equally deft in the future.

The success of the industrial countries was founded on their ability to feed their growing populations. They each had an agricultural revolution before an industrial one. Others have not done so well. Total world population will rise to over 8 billion by 2025. But the ability to feed this population is in doubt (more and more poor countries, for example, in Africa and Latin America, have to import food), the drift from country to towns greatly complicates the issue, and the prospect of any substantial rise in living standards in countries without the resources and skills of industry must be illusory.

Even if resources were limitless, the condition of life - in short the environment - would be bound to deteriorate. It is doing so already. We have to look at the repercussive effects of the industrial revolution on land, ocean and air.

The most significant change in land use has not been the spread of brick, stone, concrete, houses, factories, and roads, (although these now account for around 10% of Britain) but the acceleration of the destruction of forest cover and declining fertility of soils. According to figures just published by the World Resources Institute, more than 10% of the world's vegetation-bearing soil has suffered moderate to extreme degradation through human activity since 1945. The total amount of land affected is about the size of India and China combined. Although forest cover is slightly increasing in industrial countries, its destruction elsewhere, with accompanying loss of species, is on a sufficient scale to change the global ecosystem. Whatever the differences in different parts of the world, the total impact is that human beings are consuming their capital of the earth's resources rather than the income from it.

Fresh water is a particular problem. The global use of water doubled between 1940 and 1980, and is expected to double again by the year 2000. 97% of the water of the earth is sea water and of the other 3%, 2% is locked up in ice at the Poles. The remaining 1% is already in excessive demand, not only for agriculture and human consumption, but also for industry. Many countries already suffer severe shortages and droughts. Competition for water was a prime source of conflict in the past, and is likely to be so in the future: for example over the Nile, which flows through five states, each planning to extract much more water without regard to supply from Ethiopia and Uganda.

Then there are the direct effects of industrialization: pollution and recent accidents have demonstrated the international character of industrial hazards. Within the vast land mass of the Soviet Union, some 16% (or 1,382,000 square miles) was recently declared an ecological disaster area by Soviet scientists. Pollution in the Soviet Union and Eastern



Europe is perhaps the worst in the world. But every industrial country has its own pollution problems which touch directly on the quality of life.

Nuclear disasters inspire particular horror. The fall out from Chernobyl was some fifty times that of Hiroshima. Europe is one of the most crowded areas of the world, and an accident of comparable magnitude could, if the wind were in the wrong direction, do long lasting damage to people and land alike. Yet there are sixteen Chernobyl-type power stations in Eastern Europe and Western Russia, and some are notoriously unstable. Of the three main nuclear hazards, safety could be greatly improved; but there is so far no completely satisfactory solution to the problem of waste disposal; and few want proliferation of nuclear weapons.

Marine pollution is serious but less of an immediate source of conflict: but competition for fishing resources, and again the transnational character of pollution, make the seas a potent source of trouble in the future.

Then come the problems of the atmosphere. Acid precipitation is a problem for those down wind of industry; but it is essentially local or regional in character and can be solved if there is political will to solve it.

Depletion of the ozone layer is much more serious. The miracle molecules known as chlorofluorocarbons and halons (for use as refrigerants, deodorants, fire extinguishers, etc.) have been depleting the protective screen which prevents short wave ultra violet radiation reaching the surface of the earth. Damage to the human metabolism (for example melanoma) may seem alarming to us, but the more fundamental problem for the planet could be the effects on critical organisms in the food chain, not least phytoplankton in the oceans.

Global warming through enhancing the natural - and indispensable - greenhouse effect could affect almost every aspect of human society. The main conclusions of the Intergovernmental Panel on Climate Change, published in 1990, have just been reaffirmed. On the assumption that we continue to pump carbon dioxide, methane, nitrous oxide and other greenhouse gases into the atmosphere at currently increasing rates, there will be a rise in global mean temperature of around 0.3°C (between 0.2°C and 0.5°C) a decade, leading to an overall rise of 2.5°C (between 1.5°C and 4.5°C) by the time atmospheric carbon dioxide doubles, as expected, towards the middle of the next century. This may seem very small. But the global mean temperature was only 5°C less at the time of the last ice age.

Regional variations would be wide, with a general redistribution of weather patterns, sometimes having drastic local effects. Thus the equator might be much the same, but ice and snow cover towards the poles would be substantially reduced. Some areas, such as the Middle West of the United States and the Mediterranean basin, might be dryer, but in general there would

be more precipitation, particularly in areas subject to the monsoon. The effects on the oceans, and the effects of the oceans on the atmosphere, are particularly hard to determine. But sea levels would rise, as they have risen before, through thermal expansion and melting of ice, and the current distribution of currents might change. A paradoxical result might be a cooler Western Europe if the Gulf Stream were to change direction.

There are of course many uncertainties, but none, singly or together, affects the main predictions. Among the uncertainties are variations in solar radiation; clouds and the hydrological cycle; the role of oceans as a kind of thermostat; the carbon cycle; and the behaviour of polar ice sheets and sea ice.

I have left to the end the consequences of the industrial revolution on other forms of life. Biodiversity, or the variety of life, is under heavy and sustained assault. Like many other animal species, we have changed the environment to suit our needs. The effects on other organisms have been devastating. Indeed they can be compared to earlier disasters in the history of the earth: the elimination of 90% of species at the end of Permian times, or the famous extinction at the end of Cretaceous times. Since the end of the last glaciation, there has been an unquantifiable loss; but current calculations suggest that perhaps a quarter of the earth's remaining biodiversity is at serious risk in the next quarter century.

The destruction of one species can profoundly change a whole ecosystem. Ancient balances can be rudely upset. Some changes could be quick, like the evolution of new viruses and bacteria; others could be very slow, like the replacement of dinosaurs by mammals in Palaeocene and Eocene times over millions of years. Of course once a species is destroyed it has gone for ever. As has been well said: "Death is one thing; an end to birth is something else."

Most of the current losses come from destruction of moist tropical rain forest, and to a lesser extent coral reefs. Such forests cover only 7% of the earth's land surface but they contain at least 50% of its species. As other species recede in importance, so ours increases. Human beings now use, waste or co-opt some 40% of all net primary productivity, with all that implies for other species and their life support systems.

These changes are driven by two main forces: consumption of resources by industrial countries, whose standards of living, real or supposed, are a model for others; and pressure on resources elsewhere through poverty, ill adaptation, mismanagement and population increase. Most economists are still reluctant to understand that the earth has limited resources, and that wealth lies as much in capital stock, yielding an income from generation to generation, as in vulgar notions of growth, which often involves deterioration of the natural resource base. Thus in many industrial countries consumption and waste - the doggybag syndrome - are still held



up as virtues; and elsewhere such renewable resources as forests become as unrenewable as coal, oil or natural gas.

These differences have been particularly evident in the preparations for the Earth Summit at Rio next month. The industrial countries tend to think of environmental problems as the concern of others. They forget that they are directly or indirectly (and however unwittingly) responsible for the mess (for example they produce 70% of human generated carbon emissions, 23% from the United States alone); their consumption patterns, which are a root cause, are so far unchanged; by not giving an example of restraint but continuing to preach it to others, they lack credibility; and they are as guilty as anyone in continuing to use economic instruments and methods of thought that fail to take account of the environmental dimension.

For their part the non-industrial and other countries believe - in my view wrongly - that they have the industrial countries over a barrel: somehow they see a bargain in which they trade some measure of environmental restraint against massive quantities of aid, debt forgiveness, and new terms of trade. They too are guilty, although more forgivably, of using outdated economic analysis and policies. Many still see the concern in industrial countries about the environment as a trap to slow their development, and keep them in subservient poverty.

In my view both sets of countries are sadly mistaken. The division between them is artificial. Environment concerns them all, and so does development. The interests they share are vastly greater than those which divide them. Most important, environmental change will affect all, but will be more damaging to poor countries than to rich ones.

The poor are supremely vulnerable. Most are in zones affected by small climatic shifts. They lack resources whether natural or technical to react to change. They are often without government or administrative structures capable of organizing adaptation. By contrast, most of the industrial countries should be able to manage over time. But they could scarcely prosper in an impoverished world when they would be a shrinking proportion of the population and where they would be vulnerable to invasion, infiltration and the growing pollution of others. Wealth and poverty cannot sit together for long. Yet the gap between rich and poor is ever widening. The global interest is shared by governments, communities and individuals. But those who need it most are the poor. They should be the leaders rather than the laggards in pressing for an international regime.

It is obvious that in this complex of issues we have all the potentialities of greater conflict between states, peoples and communities. There may be a peace dividend arising from the ending of the arms race between the main industrial countries: but elsewhere there are no signs of it. Indeed the pointers are the other way. The meeting of the ideological ice has lifted the weight which had previously suppressed local nationalisms and inter-community resentments and conflicts. For the historian

it is perhaps astonishing how long standing and deep rooted such ancient animosities are.

Environmental change in the form of new pressures on resources could make them worse. There are obvious catalysts. Population increase where combined with deterioration of top soils and changes in weather patterns is already a prime cause of instability in Africa. Then there is the prospect of sea level rise. A substantial proportion of the human population lives in low lying areas, which would be flooded or liable to high tides or storm surges. Underground aquifers and fresh water supplies would also be affected.

It would be pointless to try and work out all the consequences. But two stand out of particular importance. First we should expect a great increase in human displacements. In 1978 there were something like 5 million refugees in the world on a narrow political definition. By 1989 that figure had risen to 14.5 million on the same definition. I believe there are now more than 17 million. If we add in some 10 million environmental refugees or economic migrants, it means that at present there are more than 25 million refugees worldwide. With disruption of current patterns of life, that number would increase dramatically. It is not fanciful to estimate that with world population rising to 8 or 10 billion, the refugee rate could rise disproportionately with alarming consequences for the integrity of human society as a whole.

There would also be more direct risks to human health with changes in existing patterns of disease. Temperature and moisture are both critical to the ability of viruses, bacteria and insects to multiply. Thus we could see the spread of diseases we had thought under control or far away; contamination of water supplies; increase in skin cancer, melanomas and cataract arising from atmospheric ozone depletion; respiratory problems worsened by petrochemical smog in urban areas; malnutrition and diseases related to poverty; and the spread of new unforeseeable diseases (on the pattern of syphilis in the 16th century, and AIDS in our own times). Nor should we forget that with loss of biodiversity, it will be less easy to tap the natural world for the constituents of drugs to cope with changes in bacterial and viral populations.

I have assembled some lively looking figures for the gallery in the Chamber of Horrors. Some may be more intimidating than others. But I hope you will agree that, in spite of the inventiveness of our animal species, most look pretty real. If insecurity has been our past condition, and is our present condition, it will certainly be our future condition. Is there anything we can do to diminish it?

Frankly I doubt it. But so much is at stake that at least we should try. Our ability to kill and maim each other, and damage the life system of the planet, has created a unique challenge for this and future generations. Any response to it must range from the mind of the individual through the behaviour



of governments to the collective functioning of international institutions.

Changing minds is the most difficult. But if there is any message from this lecture, it is that the model we have of the world no longer fits. It is ridden with anomalies and inconsistencies, and urgently needs replacement. For the moment I set aside such stale issues as national sovereignty against human rights, or the various prejudices incorporated in the conventional wisdom. Instead let us look at the natural world. We face not the end of Nature (the foolish title of a recent book), but a change in Nature, in many ways an acceleration of the processes of life.

In looking to the future we must reckon first with our alarming degree of ignorance. We simply do not know enough about how the world works. Much current science is about detail and the short term. Few even try to encompass the scene as a whole; they are often regarded with suspicion when they do. Next is the character of much change. We tend to see change as something gradual. But critical change is often abrupt. It proceeds by steps or thresholds instead of slopes. We bounce rather than progress from one apparently stable state to another, and the bouncing (and necessary readjustment) can be extremely painful for those around at the time. Last is the prospect of surprises. Most people feel that something will always happen to stave off disaster; but disasters have happened in the past, and will happen again. The discovery of ozone holes was entirely unexpected. We must expect more of the unexpected.

At the level of governments, from which we expect leadership, change is also indispensable. They have to think again about six main clusters of issues: people, population and refugees; generation and the use of energy; the use of land and fresh water; the management of industry and the wastes it produces; and the conservation of life as part of the earth's natural capital. To cope effectively with any of these issues, governments also need to reorganize themselves to incorporate the environmental dimension into every aspect of social and economic management. Some have already started. Our own deserves credit. But to judge from the speed and scope of the current negotiations for the Earth Summit at Rio, most have still to acknowledge that the problems are even serious. As someone once said of a former President of South Africa, his head is so deep in the sand, you can only recognize him by the shape of his toes.

As for international institutions, they too are behind. It remains to be seen what will emerge from Rio. But there, curiously enough, I see signs of hope. Even if expectations of a new environmental world order are - as they must be - disappointed, I think that the basis for looking at and coping with problems of global significances is being laid. No-one now contests that some problems can only be dealt with at global level: the issue is rather how, and when, and at what - and whose - cost. Even if the Rio conference is a failure, the problems will come back; and every year that passes they will

be more acute. The sooner we set the right machinery in place, the easier it will be to cope.

The dangers of war and organized violence are also more evident. Classical wars of first and second world war type have become less likely, at least between industrial countries. The ending of the cold war between East and West has made possible the kind of intervention which we have seen over the Iraqi invasion of Kuwait in 1990/91, and which was originally envisaged in the United Nations Charter. The invention of weapons of mass destruction, whose effects would go far beyond the contending parties, has increased the need for effective means of intervention. After all the use of nuclear weapons would have results similar to that of the impact of an asteroid from outer space: the whole world would either freeze or grill, or perhaps both.

So far the United Nations has focused on smaller scale violence between states. Hence its role in successive peacekeeping operations worldwide. It has not ventured far into peace enforcement, and only recently over the Kurds has it breached old notions of sovereignty by protecting people against their own governments. Progress in this direction is likely to be slow. It will be driven by evolving public opinion, and the readiness of the more powerful countries to use their forces in an international cause. A permanent or earmarked police force may still be distant; but it is not far over the horizon.

The United Nations has acquired new symbolic importance as the magic world in which humankind is one in the darkness of space. No matter that the myth does not correspond with the reality, or that the principles and standards are not always observed. The truth behind any set of myths, principles and standards is acceptance of aspirations held in common. that is the ultimate strength of the United Nations.

My last word is a quotation from John Reader. He has well said:

> "... in the brief space of time that civilization has been a feature of human existence, it has not demonstrated any tendency to produce a well regulated steady state whereby people are well fed and secure, generation after generation. Civilization is distinguished more by its erratic cycles... Time and again it has risen dramatically from the field of human endeavour, then collapsed and fallen. Human ingenuity drives the process. Human inability to impose adequate restraint brings it down. Inventions provide the initial impetus, intellect supplies methods of application and solutions to problems that arise as the system swells and grows, but in every instance so far, the uncontrolled growth of civilization has ultimately thrown up more problems than human intellect can solve."

Let us hope that this time it will be different.

Mr. McClean

Thank you v. much.

S. Chakrabarti

19/5

1. Miss Rees
2. Mr Brooks

Meeting with Crispin Tickell

Back-up folder only

9.45

B

From Vincent McClean
Extn 0308
Date 18 May 1992

PS/Baroness Chalker

**CALL ON BARONESS CHALKER BY SIR CRISPIN TICKELL, 9.45AM 19 MAY**

I attach a brief for the above meeting.

2. I spoke to Sir Crispin last week and he confirmed that he would be seeking finanical support for inputs for the Working Group referred to in the brief.

18 May 1992

Vincent McClean
Eastern Asia and Pacific Department

1449.mcc

BRIEF FOR CALL ON BARONESS CHALKER BY SIR CRISPIN TICKELL, 9.45AM ON TUESDAY 19 MAY 1992

POINTS TO MAKE

- Delighted that the Chinese invited you to join their Environmental Council and that you were able to accept.

- The high importance we attach to environmental issues in China is already reflected in our regular aid programme, but we would like to do more (within the financial limits that apply).

- Have seen the Embassy's telegram reporting the First Meeting of the Council last month. It seems to have made a good start. The Working Group on Resource Accounting and Price Policy will address issues that we see as of critical importance and I am very pleased you will be Shadow Adviser to that Group.

- Am keen that ODA should support your efforts. Will ask the Department to consider your suggestions and report to me.

- Also very ready to consider ways in which we could develop key Chinese institutions concerned with environmental issues. Would welcome ideas as the activities of the Working Group progress. Important, however, that ODA keeps control of any finance that we commit. This means that we should seek to identify <u>projects</u> with clearly defined objectives, rather than just write cheques or finance lots of training places.

1448.mcc

**BACKGROUND**

1. Sir Crispin will wish to fllow up the first meeting of the China Council for International Cooperation on Environment and Development (CCICED) with Lady Chalker and to solicit financial support for the CCICED Working Group for which he is to act as 'Shadow Adviser'.

2. Sir Crispin's connection with this working group fits in well with ODA ambitions to influence Chinese policy on environmental issues - particularly on pricing mechanisms. The Points to Make above suggest that Lady Chalker should take a fairly forthcoming line.

3. We need to hear more from Sir Crispin and to see his report (delayed by his current involvement in UNCED work).

4. The Embassy's reporting telegram is attached (flag A) with an initial Departmental commentary dated 5 May, which Lady Chalker has already seen.

5. We have agreed with FED and ESED that EAPD should have lead responsibility for follow-up work on CCICED activites.

18 May 1992

Eastern Asia and Pacific Department
Overseas Development Administration

1448.mcc

Day

Reference .....

From: VINCENT McCLEAN
Ext. 0308

Date: 5 May 1992

copy: Mr Lankester
Mr Ainscow
Mr Bennett o/r
Mr Turner
Dr Haines
Mr Mosselmans

Mr Manning

**CHINA COUNCIL FOR INTERNATIONAL COOPERATION ON ENVIRONMENT AND DEVELOPMENT (CCICED)**

Peking's teleletter of 4 May (attached) contains an encouraging report on the first meeting of the CCICED.

2. Sir Crispin Tickell attended by invitation of the Chinese Government, but in his own right rather than as a representative of HMG. ODA briefed him and indicated that we would in principle be willing to extend our programme of assistance for environmental protection activities to a project to develop Chinese institutions concerned with environmental issues.

3. The decision to establish working groups seems sensible and I think that Sir Crispin's selection as 'Shadow Adviser' to the Working Group on Resource Accounting and Price Policy is potentially very helpful in terms of ODA's objective of persuading the Chinese Government to pay more attention to resource allocation mechanisms - in the interests of economic efficiency and environmental benefit e.g. in terms of investments in the energy sector. (As you know, we are pursuing this objective, inter alia, by promoting informal discussion among selected DAC members next month on the basis of an ODA paper on environmental issues, economic reform and aid coordination/ policy dialogue.)

4. The teleletter mentions Deng Nan (Deng Xiaoping's daughter). She is Vice-President of the State Commission on Science and Technology, an organisation with which ODA has substantial dealings. A senior official who visited ODA recently remarked that he was sure Mme Deng would wish to meet Lady Chalker and has just written (to me) inviting Lady Chalker to visit China as an SSTC guest. (The Department is considering the case for Lady Chalker visiting China and weighing, inter alia, the implications and timing for such a visit of a decision on future concessional finance for China.)

5. The involvement of Mnme Deng, the reported meeting of the CCICED with Li Peng (para 8 of teleletter) and the message from

Qu Geping, Vice Chairman of the State Council Environmental Protection Commission, to Mr Major (para 9) combine to give the CCICED a high political profile. This is welcome as a sign of the importance the China Government attaches to environmental issues. However, notwithstanding the fact that the reporting teleletter is from the Political Counsellor in the Embassy to the Head of FED, I think it appropriate and desirable that ODA should have lead responsibility within Whitehall for follow-up work on the CCICED activities, keeping FED and ESED informed and consulting them as necessary. I propose to pursue this with the Head of FED.

6. On the question of financial support for one of the Working Groups, I am inclined, in principle, to regard support for the Group for which Sir Crispin is 'Shadow Adviser' to be a legitimate charge on the TC programme for China. We would need more information about just what the money was needed for, but the time and air fares of offshore (i.e. non-Chinese) participants, plus perhaps some research and secretarial costs, if necessary, would be reasonable costs for us to pick up.

7. We await Sir Crispin's report on the CCICED meeting. He is calling on Lady Chalker on 19 May and it seems likely that he will wish to pursue CCICED issues.

Vincent McClean
V631
Eastern Asia and Pacific Department

5 May 1992

Doc: CCIDED.man

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*Director*
***Sir Crispin Tickell GCMG KCVO***

# GREEN COLLEGE CENTRE, OXFORD

***SUMMARY***

1. A Centre has been set up at Green College, Oxford. Its main purpose is to help bridge the gap between science and policy making in matters of the environment. It will both commission work and accept commissions for work. It will co-operate closely with other organizations in Britain and overseas.

***NATURE OF THE PROBLEM***

2. Too often there is a barrier between scientific research and environmental thinking on one side, and politics, economics, policy formation and decision taking on the other.

3. Responsibility must be shared. Scientists find it hard to communicate outside their specialities. They prefer to deal in relative certainties of fact or judgement, and feel uneasy with shades of probability and the ambiguities of policy-making. They are not used to lateral thinking, and often dislike the interdisciplinary approach which is essential in all work on the environment. Some cling to abstract notions of pure science, and are reluctant to accept responsibility for the practical consequences of their work.

4. For their part those who take most of the decisions in our society, whether politicians, industrialists, managers, civil servants or others, often have no more than hazy ideas about science, and do not give scientific considerations the weight due to them. Science, and even more so the environment, does not fit easily into their frame of reference, and can represent an awkward intrusion. For that reason scientific information and environmental considerations are often taken out of context, and sometimes seem marginal or even unintelligible. The long-term and important often has to give way to the urgent and trivial.

5. There is no shortage of science (although whether it is well targeted is another matter). Most of our leaders are aware of environmental problems but few are sufficiently confident to give leadership. Efforts have already been made to accelerate the conveyor belt between science and policy making at both the giving and receiving ends. What has been achieved serves to demonstrate how much more needs to be done.

***PURPOSES OF A CENTRE***

6. In this light the main purposes of the Green College Centre, Oxford are to

- identify key environmental issues, and drawing upon scientific research to illuminate the subject for a general audience, and put together recommendations for policy in a form intelligible to government, industry and management, universities and the media.

- look forward to the likely problems of the future, in particular those relating to environment and human health.

- help establish the environmental dimension in our thinking and actions.

***POSSIBLE ISSUES***

7. Without identifying particular issues and areas for action, the following, selected from many, may serve by way of illustration.

A. **Physical Processes**
Examination of likely supply of and demand for fresh water in Britain within the next thirty years. The results could affect work on future distribution systems and economic planning generally.

B. **Biological Processes**
Interpretation of regional demographic trends, taking account of the effects of such new diseases as AIDS and environmental factors on population increase and human health. Work is also needed on the effectiveness of current programmes of population restraint in different parts of the world.

C. **Social Processes**
Examination of social cost pricing, in particular of energy and transport. At present the price to consumers of different kind of transport and different sources of energy rarely includes the environmental cost. Current pricing is therefore artificial and often prejudicial. We need new guidelines.

8. Short papers on policy issues of this kind will be used as appropriate for public discussion and debate, or private recommendation to responsible bodies, which will be encouraged to commission them. While firmly maintaining its independence, it will take pains to co-ordinate its work with others, avoid duplication of effort, and co-operate with other bodies as appropriate.

***ARRANGEMENTS***

9. At the beginning the Centre, accommodated at Green College, consists of a secretariat of two research assistants and a secretary responsible to the Warden of Green College, Oxford who is Director.

10. In addition there will be about five non-stipendiary Visiting Fellows and a few Visiting Scholars of Green College whose work and activities will be associated with the Centre. The Centre will pay for their use of some College facilities.

11. An Advisory Group will watch over the development of the Centre, and meets twice a year. Its membership includes:

| | |
|---|---|
| Sir Crispin Tickell | Director (Warden, Green College, Oxford) |
| Dr Muir Gray | Deputy Director (Oxford Regional Health Authority) |
| Mr Hugh de Quetteville | (a representative of the Monument Trust which has generously provided the start up money for the Centre |
| Sir Anthony Cleaver | (IBM) |
| Dr Arthur Kleinman | (Harvard Medical School) |
| Professor Martin Parry | (Environmental Change Unit) |
| Sir Richard Southwood | (Vice Chancellor, Oxford University) |

Crispin Tickell
Green College Centre
1st May 1992

SUBJECT
MASTER

Filed on:

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

13 December 1991

I now enclose a copy of the note of your discussion with the Prime Minister. I am sorry I have not done this before.

I have commissioned messages to the Chinese, Indian and Malaysian leaders as proposed. Once I have these in hand I should be grateful for your comments, on the message to the Chinese leadership in particular.

**WILLIAM E CHAPMAN**

Sir Crispin Tickell GCMG KCVO

NOTE OF A MEETING BETWEEN THE PRIME MINISTER AND SIR CRISPIN TICKELL

Sir Crispin Tickell came into see the Prime Minister on 22 November to discuss various environmental matters.

Sir Crispin emphasised the importance which he attached to the social cost of different forms of energy being reflected in prices. Although the United States were opposed to carbon taxes, they were not averse to reflecting social costs.

The Prime Minister commented that this would presumably accelerate the contraction of the coal industry. Sir Crispin thought this possible but, by reflecting the true price, the UK would become less dependent on oil and coal and the real benefits of nuclear and "alternative" sources of power would become more apparent. He recognised that there could not be such tax in the short-term but it was important that the Government should be addressing the issue.

The Prime Minister asked about the likelihood of change in national attitudes to carbon taxes in Japan and the United States.

Sir Crispin thought that the Japanese would accept the need for carbon taxes but that international pressure would be required on the United States.

The Prime Minister pointed out the domestic circumstances preventing the USA from responding positively to various environmental issues. For example, it was unlikely that President Bush would go to UNCED because of the Presidential election.

Sir Crispin thought that in the end it would be very embarrassing for the President not to go. However, the position of China was even more important than that of the United States in the longer term. The Chinese had now realised the environmental problems they were creating for themselves. They

had just set up a Council of the Environment on which he had been invited to serve. It would annually review the entire environmental scene in China, including the role of energy. The Chinese realised how important UNCED would be.

Sir Crispin then went on to talk about the politics of greenery. The Conservative Party was in a strong position.

The Prime Minister interjected that the Labour Party was suddenly beginning to wake up to environmental issues.

A short discussion ensued about the political advantages and disadvantages of environmentalism.

The Prime Minister raised the question of a seminar being held at No.10 for environmental groups and businessmen. After discussion, the Prime Minister decided that he would host such a seminar in late January or early February. Its purpose would be for the Prime Minister to hear the views of the relevant bodies in good time before UNCED.

He would not need to make a speech, but he could make some substantial opening remarks which might reprise the Government's aims for UNCED and explain the Commission's proposals for a carbon tax which would still be relatively new. It might also be possible to cover the issue of whales. The Secretary of State for the Environment should certainly attend with, probably, the Minister for the Environment and Countryside, the Miniser for Overseas Development, and the Party Chairman. A small number of journalists with environmental credentials should also be invited. Sir Crispin would think further about potential guests. A similar evening at the Royal Geographical Society had been organised very successfully by Mr. Koi Thomson of the RGS, whom Sir Crispin would consult in confidence.

Sir Crispin suggested that it would be appropriate if the Prime Minister could announce at the seminar a decision to move our $CO_2$ target from the year 2005 to 2000.

The Prime Minister proposed that he should send messages to the Chinese leadership, the Indian president and the Malaysian Prime Minister urging on them the importance of UNCED in suitable terms. The message to the Chinese would refer to Sir Crispin's membership of their Environmental Council. The Prime Minister could also refer to these messages at the seminar.

Sir Crispin indicated that he wished to discuss the structure of science funding at his next bilateral with the Prime Minister. A clearer allocation of responsibility within the DES was needed. This might take the form of two Ministers of State being responsible for, respectively, primary and secondary education, and tertiary education and research.

Sir Crispin also mentioned his concern about the British Antarctic Survey [to which I will be replying].

WILLIAM CHAPMAN

22 November 1991

C:\home\environment (pmg)

PRIME MINISTER cc Carolyn Sinclair

ENVIRONMENT

You are meeting Sir Crispin Tickell tomorrow for one of your regular six monthly bilaterals with him.

Sir Crispin will wish to raise the following issues, many of which you would have wished to raise with him yourself:

(i) $CO_2$ Emissions: the second page of Carolyn Sinclair's note at Flag A reports on the latest developments;

(ii) progress Towards UNCED: it is hoped that conventions on climate change and biodiversity will be ready for signature at UNCED. UNCED itself is expected to result in a declaration on sustainable management of the world's forests; an Earth Charter (principles on general rights and obligations), the agenda 21 action plan and agreement on financial resources, technology transfer and institutional changes needed to implement all these. I attach a note on the main international meetings leading up to UNCED (Flag B).

You will recall that, at your recent UNCED presentation, Sir Crispin recommended that you meet Maurice Strong, the UNCED Secretary, to put pressure on him to adopt a more reasonable approach towards what the developed world might contribute to UNCED's aims. You decided at the last diary meeting that you would not have time to meet Mr Strong. As a courtesy to Sir Crispin, I have not yet minuted out on this decision in case you wished to inform him first.

I also attach at Flag C a note from David Trippier responding to another question of yours at the presentation, analysing the opportunities and risks of working through the European Community towards UNCED.

I am sorry that you have not seen this before. I held it back to form part of the briefing for your meeting with Sir Crispin. Unfortunately, this meeting has now been postponed twice, hence the delay in your seeing the note.

(iii) the Politics of Greenery: relevant here is news, which has just reached us, that Neil Kinnock intends to host a dinner for members of environmental pressure groups on 25 November. This is in response to criticism that he has never spoken on the environment as leader and that the Labour Party's policies in this area are ineffective. You will recall that you yourself recently decided not to host a seminar for environmentalists and business leaders at Number 10, nor to give a further speech on the environment, ideas to which you were previously attracted at the UNCED presentation. You thought you might attend instead part of a seminar which you would ask Mr Heseltine to host;

(iv) The British Antarctic Survey: Sir Crispin is concerned that future funding is likely to be inadequate. I attach a letter from him and a line to take from the Cabinet Office at Flag D;

(v) Science Funding: Sir Crispin is concerned about the level of Government funding. A line to take is at Flag E. The simple point to make is that Government funding for civil science will rise by 2½ per cent in real terms next year and is planned to rise by 7 per cent in real terms by 1994-95.

Carolyn's note at A also updates you on the Advisory Committee on Business and the Environment, should Sir Crispin raise it.

You may wish to ask for Sir Crispin's views on a point that you raised at the UNCED presentation - how to maximise use of our aid programme to achieve our environmental objectives. You will recall that you saw a note from Mrs Chalker responding to this.

It was couched in disappointingly general terms and you may wish to ask Sir Crispin whether he has some specific ideas. (I have not attached Mrs. Chalker's note, which you do not need to read again; there is more than enough to read here already.)

You may wish to tell Sir Crispin of the environmental element of CHOGM.

Carolyn and I will be at the meeting.

R. Langham (Duty Clerk).

pp WILLIAM E. CHAPMAN
21 November 1991
C:\HOME\ENVIRONM (DAS)

A

**PRIME MINISTER** 21 November 1991

**ENVIRONMENT: MEETING WITH SIR CRISPIN TICKELL, 22 NOVEMBER**

You may like to be aware of the following before your meeting with Sir Crispin Tickell.

**First Report from the Advisory Committee on Business and the Environment**

This Committee was set up last May under the chairmanship of John Collins of Shell (membership at Annex A). Its remit is:

> "to advise on the implications for business of the strategic and practical environmental issues of the day and to advise DOE and DTI on measures which might enable them to meet targets and to deliver their action programmes".

The Committee's first report is a businesslike document. You may like to glance at the summary at Annex B. The Government is responding positively.

One of the best features of the report comes from the global warming group. It recommends that:

- companies which are major energy users should set themselves targets for energy efficiency improvements over the next five years;

- the car manufacturing industry should declare targets for improving the fuel efficiency of their cars over the next ten years.

This voluntary approach is sensible. DOE at one stage hankered to set sectoral targets for energy efficiency improvements, but the economic Departments opposed this vigorously.

**$CO_2$ Target**

You will be discussing this in GEN4 on 28 November. The papers for that meeting will show that:

- the Department of Energy's revised projections of CO2 emissions are down compared with the figures on which we based our 2005 target. This should make our target easier to reach.

- much of our $CO_2$ target could probably be delivered by a carbon/energy tax. The Government does not have to propose this. It is already on the table in Brussels.

- if we can accept the EC tax in principle, we could bring forward our conditional $CO_2$ target from 2005 to 2000.

- the Commission's ideas for an EC tax need a lot of work and refinement. Other member states have as many questions as we do. It should be possible to play all this long, which is helpful politically.

Sir Crispin is likely to know about the revised $CO_2$ projections. He may argue that this justifies bringing forward our target to 2000.

You will want to be non-committal - despite what is said above. It is possible that John Wakeham may be more negative than the Treasury on the carbon/energy tax because of coal privatisation (though we think he is wrong on this).

CAROLYN SINCLAIR

024.CS

ANNEX A

# ADVISORY COMMITTEE ON BUSINESS & THE ENVIRONMENT

| Name | Position | Company |
|---|---|---|
| John Collins (Chairman) | Chief Executive | Shell UK Ltd |
| Norman Adsetts | Chairman | Sheffield Insulations Group Plc |
| Rod Aspinwall | Chairman | Aspinwall & Company |
| John Baker | Chief Executive | National Power |
| Tony Bird | Managing Director | Bird Group of Companies |
| David Challen | Director | J Henry Schroeder Wagg & Co Ltd |
| Tony Cleaver | Chairman & Chief Executive | IBM UK Ltd |
| Peter Costain | Group Chief Executive | Costain Group Plc |
| Ian Coull | Director of Development | J Sainsbury Plc |
| Sue Green | Group Communications Director | Legal & General Group Plc |
| Christopher Hampson | Director | ICI |
| Sir Christopher Harding | Chairman | British Nuclear Fuels Plc |
| Peter Heath | Chairman | Cleanaway Ltd |
| Nicholas Hood CBE | Chairman | Wessex Water Plc |
| Robert Jones | Coodinator, Conservation Projects | British Gas |
| David Lyon | Chief Executive | Bowater Plc |
| Dorothy MacKenzie | Chief Executive | Dragon International |
| Cameron McLatchie | Chairman & Chief Executive | British Polythene Industries Plc |
| Nigel Palmer | Former Chief Executive | C W Pittard & Co. Ltd |
| Robin Paul | Managing Director | Albright & Wilson |
| Paul Rink | Joint Managing Director | Wolstenholme Rink Plc |
| John Speirs | Managing Director | Norsk Hydro (UK) Ltd |
| George Simpson | Chief Executive | Rover Group |
| Derek Wanless | Chief Executive, UK Financial Services | National Westminster Bank Plc |
| David Yeomans | Former Managing Director | Wincanton Group Ltd |

ANNEX B

## SUMMARY OF RECOMMENDATIONS OF THE GLOBAL WARMING WORKING GROUP

The following is a brief summary of the recommendation which were endorsed by the Advisory Committee at its meeting on 10 September:

1 The government should declare a target for national energy efficiency improvements up to 2005, to complement its conditional $CO_2$ target.

2 The Energy Efficiency Office should have a high public profile and be strengthened to meet a more active and urgent work programme. It should itself have a target for its work.

**Industrial and Commercial Sectors**

3 The efficient use of energy should be publicly adopted by the Committee as a major theme, and should include a public statement of commitment.

4 The major energy using industries should set themselves targets for energy efficiency improvements over the next five years (iron and steel industry, the chemical industry, the food, drinks and tobacco industry, and the minerals industry).

5 If the Committee Chairman was reassured on 2 above the Committee would support for the EEO's Top Management Publicity Campaign, due to be launched in October 1991.

6 The Advisory Committee would support the development and marketing of a simple guide for small businesses.

7 The EEO should consider broadening the availability of its local advice/consultancy services, particularly for small businesses and encourage the development of energy survey services.

8 The pricing and regulatory structure for surplus electricity generated by CHP schemes should be made more favourable.

9 VAT on energy efficiency products to be lowered to reduce their costs and reduce the distortions caused by zero-rating of energy. The Government should consider incentive schemes for take up of energy efficiency measures.

10 Minimum standards of energy efficiency in domestic and commercial appliances should be developed.

**Public Sector**

11 The Government's action programme to promote energy efficiency in each Department should be extended to local authorities and other levels of government activity.

recycled paper

**Domestic Sector**

12 A single government approved energy rating system for homes and industrial and commercial buildings should be agreed as a matter of urgency.

13 Building Regulations should be tightened and to include a requirement for energy rating.

14 Energy labelling of commercial and domestic appliances should be introduced by manufacturers, initially on a voluntary basis.

15 Programmes should be developed to allow

- development by the insulation industry and increased availability of approved quality products and installers.

- establishment, jointly by Government and industry, of local energy advice centres.

**Transport Sector**

16 The car manufacturing industry should declare targets for the overall increased fuel efficiency of their cars over the next ten years.

17 The members of the Advisory Committee should commit themselves to a thorough review of their company transport policies, particularly company cars.

18 Company car tax policy should be adjusted and the price threshold be abolished to encourage take-up of smaller engined cars.

19 Petrol tax should be increased, and Government declare long term pricing objectives. Consideration should be given to the structures which would favour diesel and other less emissive fuels.

20 Vehicle Excise Duty and road tax should be graded according to the engine size of the car.

21 The car manufacturing and retail industry should promote awareness of the environmental impacts of driver behaviour.

22 A system of tradeable permits and standards for fuel efficiency should be developed on an EC wide basis.

ycled paper

ANNEX C

## ENVIRONMENTAL MANAGEMENT WORKING GROUP

The Group, having agreed their Terms of Reference, identified the following priority areas:

1. To establish the relationships between higher environmental standards and economic performance, competitiveness and innovation.

2. Promulgation. To help companies (especially SME) establish effective, appropriate and practical environmental management programmes.

3. To ensure that the proposed BSI standard does not conflict with, but complements the forthcoming EC "Eco-Audit" Regulation.

These were endorsed by the Advisory Committee.

### Item 1. Environmental Standards and Economic Performance.

There is insufficient information on this topic for the Group to be able to make any recommendations at this stage. A three stage work programme is planned.

1. Information gathering from companies with international operations, sectoral sources and by meetings with consultants.

2. Analysis of this information.

3. A "brainstorming" session which takes this information and seeks to answer the following questions:

   - Where should the UK be in 10 years time?
   - How should government and business work together to get there?

### Item 2. Promulgation

A number of organisations are already active in this area. The role of ACBE is to complement and, if appropriate, coordinate the activities of these other bodies. The Group plans to proceed along the following lines.

1. Develop the rationale as to why companies should adopt environmental improvement programmes. As a first step, members of ACBE and BiE will be interviewed to understand the quantified business case and the "selling" message.

2. Define the audience. Who are affected most? Who have the most impact? Who are the most effective influencers?

3. Analyse the effectiveness of the various means of communications.

4. Implement 3 pilot programmes in early 1992. One to be sector based, one to be network based (eg Chambers of Commerce) and one to be based on the purchasing process.

ycled paper

Item 3. EC and BSI proposals.

Following a detailed analysis of both proposals, the Group recommended that the Committee should:

1. support in principle the development of both schemes as having the potential to assist UK industry in improving environmental performance;

2. endorse the view that the Eco-audit scheme should be regarded as the senior initiative;

3. endorse the proposal that the British Standard should be compatible with the Eco-audit scheme and that it be one way of demonstrating compliance with part of the Eco-audit requirements;

4. support a programme of pilots to test and develop the draft British Standard to ensure that it maintains compatibility with the Eco-audit scheme when it is finalised (probably towards the end of 1992); and

5. agree that joint arrangements for an accreditation/certification scheme should be encouraged.

ycled paper

P.a. Chatham will
Stick brief following
He presentation on 26/9.
Ok
Ltr after
Ltr
Thanks
S 9/9

**10 DOWNING STREET**

L.
9/9

William o.r.
I spoke to Sir
Crispin Tickell +
have tentatively
arranged a call
on Tuesday 1 October
at 1000-1045 a.m.

(I have warned him,
however that there is a
possibility of a foreign
visitor that day —
Chancellor Kohl)

(NB: in case change is required.
Sir CT has to be in Oxford
by 6.00 pm that day:
He is making a speech in
Darlington on eve of 2 Oct.)

S. 30/8

OK - leave him
out. J

ote from William whether Sir Crispin
adviser should attend the

count, very much someone who
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mple, Sir Percy Cradock is. You
from meeting him whether William's
r dominate the presentation on
rtainly if you specifically want
I will arrange that, but this is
e is no formal reason why he needs

Sandra Oh

Pl fix a meeting w Sir
Crispin after 26 Sept.

16 August 1991

J:\d\private\home\tickell

PRIME MINISTER

OK - leave him out. M.T.

You queried on the attached note from William whether Sir Crispin Tickell as your environmental adviser should attend the presentation on 26 September.

Sir Crispin is, on his own account, very much someone who occasionally gives advice rather than an Adviser in the formal sense in the way that, for example, Sir Percy Cradock is. You will have formed your own view from meeting him whether William's assessment that he might rather dominate the presentation on 26 September is justified. Certainly if you specifically want him to be at the presentation I will arrange that, but this is just to let you know that there is no formal reason why he needs to be there.

DOMINIC MORRIS
21 August 1991
c:\parly\tickell (kk)

PS fix a meeting w Sir Crispin after 26 Sept.

PRIME MINISTER (1)

Sir Crispin Tickell, your Environmental Adviser, has asked if he could see you later this year to update you on various international environmental initiatives. I think this could be useful, given that, over the next few months, and in the run-up to the UN Conference on the Environment and Development next year, you will be involving yourself more deeply in environmental issues.

You are to have a presentation on our objectives for the UN Conference on 26 September. It might be useful for you to see Sir Crispin shortly after that so that you can bounce some of the "official" ideas off him and get his "unofficial" reaction and perspectives. Half an hour should be sufficient.

You could, of course, ask him to the presentation, but I fear he might tend to dominate that - and a separate discussion with him could be more unrestrained should you wish to take a sceptical look at the official advice.

Content for me to fix a suitable date after 26 September?

WC

Yes - but, if he is my Adviser, surely he should attend the presentation?

18.8.

WILLIAM CHAPMAN

16 August 1991

jd c:\wpdocs\home\tickell

PRIME MINISTER

CLIMATE CHANGE

You asked Sir Crispin Tickell for a note setting out how work on climate change might be carried forward, concentrating in particular on the domestic debate, between now and the United Nations Conference on the Environment and Development in June 1991.

Sir Crispin's paper (at A) has now arrived. Frankly, both Carolyn and I find it rather disappointing. We had hoped for a paper which would indicate a staged strategy for the period concerned. Despite your clear request of Sir Crispin, and a subsequent meeting which Carolyn and I had with him, the paper contains no advice on staging. Nor does it range its many ideas in any priority.

I suggest that, at this stage, you need only skim the paper, and that the next stage is for Carolyn and I to identify some of the more promising and practicable items from it, to discuss them with Departments, and to put them to you for consideration in conjunction with work on the environmental speech which you are to make in July.

When you met Sir Crispin you asked if work had been done in Whitehall on the distributional effects of higher taxes on fuel. A note from Carolyn is at B (which I have held back until Sir Crispin's paper arrived). The short answer is "no". Carolyn considers that detailed distributional analysis in the Treasury will be stimulated by the EC Commission's thoughts on an EC carbon tax. As part of the work to refine a strategy on climate change over the next year or so, however, we may need to initiate such an analysis ourselves. But we can consider this further in the context of preparations for your speech.

Content for us to proceed with further work to refine Sir Crispin's paper, as in the third paragraph above?

WILLIAM E CHAPMAN
17 May 1991
c:\wpdocs\home\climate (srw)

FILE V8

**MISS SINCLAIR**

I enclose a copy of Sir Crispin Tickell's paper. As I mentioned, I hope to put this to the Prime Minister in the weekend box and, after he has seen and commented, to send it to the Department of the Environment. I think, if possible, we should suggest the Prime Minister pursues some of the many suggestions put forward by Sir Crispin, and also give him some sense of how events and themes will develop and pan out between now and June 1992. Perhaps we could have a word before the end of the week?

**WILLIAM CHAPMAN**

**14 May 1991**

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SEW
Home/Tickell

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

2 May 1991

One thought occurred to me following yesterday's meeting. As you said, the very fact of G7, the Commonwealth Meeting, and UNCTED, and the related preparations will, of themselves, raise the profile of the environment in domestic debates. However, this is also likely to raise public expectations of new government measures, all of them likely to have a cost, which we may not be able to take. It would be most helpful if you could include in your paper any ideas you may have on how we could address this potential problem of raising public expectations without necessarily being able to fulfil all of them.

WILLIAM CHAPMAN

Sir Crispin Tickell, G.C.M.G., K.C.V.O.

cc WEC

**RECORD OF A MEETING WITH SIR CRISPIN TICKELL**

Sir Crispin came in briefly this morning to discuss the paper on climate change, which he is preparing for the Prime Minister, with Miss Sinclair and myself.

Sir Crispin explained that he envisaged the paper covering the period up until the UNCTED in June 1992, and including the G7 Summit and the Commonwealth Heads of Government Meeting in Harare in October. It would include ideas for the Prime Minister's speech preceding G7. British involvement in these three events would automatically bring the subject of climate change, and Government policy on it, on to the agenda for domestic debate.

Sir Crispin was asked to draw out the priorities which he thought the Prime Minister ought to emphasise from the myriad initiatives in the White Paper. Energy efficiency in particular might be a fruitful one. A further miniature White Paper (in September probably) would be another environmental event for Sir Crispin's paper to take account of.

Sir Crispin suggested that we should look back to the preparations for and outcome of the 1984 G7. The Prime Minister's speech could focus in part on progress since the 1984 meeting. It would be crucial for the British Sherpa to take a leading part. We should consider whether G7 participants should set up a committee to play a role between then and UNCTED. In particular, the Sherpas could brief non-G7 countries on what had happened at the Summit as part of this.

WEC

**WILLIAM E CHAPMAN**
1 May 1991

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MEETING RECORDS.
SUBJECT MATTER

CONFIDENTIAL

NOTE OF A MEETING BETWEEN THE PRIME MINISTER AND SIR CRISPIN TICKELL

Not to be circulated outside No. 10 Downing Street

The Prime Minister met Sir Crispin Tickell, his informal adviser on the environment, on Monday 22 April. Miss Sinclair from the Policy Unit was also present.

The Prime Minister asked Sir Crispin for his views on the issue of global warming and on the likely United States' position over the coming months, when compared to ours.

Sir Crispin said that the United Kingdom were world leaders on climate change matters. The UK was certainly ahead of the US in terms of both theory and practical measures to tackle climate change as set out in the White Paper. The UK Government had thought out its views more clearly than the US Government. In the United States there were still significant differences of thinking between academics and government; US industry was greener than the Administration.

The Prime Minister asked about European attitudes. Other European countries seemed always to be pushing to go faster than the UK.

Sir Crispin thought this was largely artificial. The Europeans often demanded huge targets but had not thought through either how to achieve them or the consequences. The UK could meet the 1990 targets by the year 2000 if necessary.

The Prime Minister said that this would have serious economic implications. He asked how Sir Crispin thought we could keep our intellectual lead without damaging our industrial interests.

Sir Crispin thought that the Hadley Centre on climate change would help us maintain the lead. We should also consider setting up an independent panel to make recommendations on policy - this might be something the Royal Society could take on. Sir Crispin then reverted to the position in the USA.
He explained that the US National Academy of Sciences' Panel, of which he was a member, had recommended full social price costing

for energy. This would obviously need to be a political decision.

The Prime Minister asked about the attitudes of poorer countries to climate change and measures to combat it. In particular, could China and India be brought on board?

Sir Crispin thought that energy technology transfer would have to play a part. Solar energy could be a promising route for many poorer countries. The Chinese and Indians had started producing some serious scientific papers. The Chinese were even more worried than the industrialised countries about the effects of climate change on their country.

The Prime Minister said he was concerned to retain our international lead. It had been suggested that he should make a speech before the G7 Summit, setting out our position. He was concerned that if he raised the issue of global warming too starkly it would provoke the question of what he would do about energy price increases. He was also concerned that relations with the EC should not be prejudiced.

Sir Crispin said that the Prime Minister should certainly make a speech before the G7 Summit. It would be useful for the world to know that the Prime Minister was showing an interest inclimate change and energy pricing. The speech would prepare the ground for the Summit's discussion of environmental issues and would help it to make progress. The Americans would want to dither: the policy argument among the President's closest advisers would not have been resolved by then. Any meeting with President Bush should, if possible, take place without Mr Sununu being present.

The Europeans were no longer so concerned about the argument over whether 1990 targets should be met in the year 2,000 or 2,005. At G7 they would be on the same side as the UK.

Sir Crispin went on to say that he was concerned that the Prime Minister was not getting independent advice from outside bodies. The Prime Minister pointed out that he already received advice from Professor William Stewart, his Scientific Adviser.

The Prime Minister asked what were the main obstacles to overcome if the United Nations Conference in 1992 was to be a success. Sir Crispin thought that progress would be needed to overcome American hesitation on climate change and on biodiversity. If the Americans were pushed, they would move. It was a question of how quickly, rather than whether, they would move. Our Ambassador in Washington could ask Bill Reilly of the EPA where things had got to.

The Prime Minister explained that the Secretary of State for the Environment proposed to visit Washington soon to try to narrow the differences inour national positions.

The Prime Minister went on to say that he was willing to take the issue of climate change and energy pricing forward. The questions were in what way and, in particular, how far should the issues be raised now. Public opinion would need to be prepared. The ideal solution would be to seek significant changes to the tax structure to discourage energy use while making offsetting tax reductions in other areas. He would need to see a detailed analysis of how this could be done. Some work had already been carried out within Government on this.

The Prime Minister asked Sir Crispin if he would think about how work on climate change might be carried forward and produce a very short action paper concentrating in particular on the domestic debate. It should cover the period from now up until June 1992 when the United Nations Conference would be held.

The Prime Minister asked briefly about the possibility of Mrs. Thatcher being involved in preparations for the UN Conference. Sir Crispin replied that there was a proposal to set up a group of eminent people, with Mrs. Brundtland as Chairman, to meet a couple of times before the conference. Its main purpose would be to heighten the importance attached to the conference. The Prime Minister and Sir Crispin thought that Mrs. Thatcher would probably accept any invitation to join such a group.

WILLIAM CHAPMAN WRC

26 April 1991

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FIG

10 DOWNING STREET

LONDON SW1A 2AA

*From the Private Secretary*

23 April 1991

Dear Sir Crispin,

I know the Prime Minister was most grateful to you for coming again to discuss environmental issues with him yesterday. You kindly agreed to provide a brief note on how we might carry forward the issue of climate change between now and UNCED in June 1992, with particular reference to developing the policy in terms of the domestic debate.

Yours sincerely,

William Chapman

W. E. CHAPMAN

Sir Crispin Tickell, G.C.M.G., K.C.V.O.

**10 DOWNING STREET**

Prime Minister.

UNCED is considering asking Mrs Thatcher to join a small advisory group of eminent persons, in preparation for the UNCED meeting in Brazil next year.

You could ask Sir Crispin where matters stand on this.

✓

ell, your informal adviser on the

l Sir Crispin can be loquacious.
s views on important
:s. There will be a number of
:t year or so, beginning with the
ıvironment will be on the agenda,
ımn, and subsequent meetings
n Environment and Development
The meeting could also be good
ed bilateral with Michael
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in's views on:

nal progress (very slow so

ates action - they have now
e gas concentrations will lead
warming but continue to refuse
to adopt stronger controls over
ispin was a member of the
ence Panel which recently
greenhouse warming and did not
g). Will the US Government
adopt the measures which were recommended by the Panel;

- how should we try to bridge the gap between our (and the Europeans') attitudes and the Americans (Michael Heseltine is to visit the States shortly to explore this); how far can we build on the American 'no regrets' approach - which involves taking measures that can be justified because they have other benefits;
- how does he see the European attitude developing - in particular, what (if any) scope will there be for compromise on a nation-by-nation share out of a likely

PRIME MINISTER (1)

**MEETING WITH SIR CRISPIN TICKELL**

You are to meet Sir Crispin Tickell, your informal adviser on the environment, on Monday.

The slot is half an hour only and Sir Crispin can be loquacious. You will want to get Sir Crispin's views on important international environmental issues. There will be a number of international events over the next year or so, beginning with the London Summit in July when the environment will be on the agenda, the UN General Assembly this autumn, and subsequent meetings leading up to the UN Conference on Environment and Development (UNCED) in Brazil in June 1992. The meeting could also be good preparation for your much postponed bilateral with Michael Heseltine, to be re-fixed shortly.

You may want to ask for Sir Crispin's views on:

- climate change
  - prospects of international progress (very slow so far);
  - prospects for United States action - they have now accepted that greenhouse gas concentrations will lead to unprecedented global warming but continue to refuse to set a $CO_2$ target or to adopt stronger controls over $CO_2$ emissions. (Sir Crispin was a member of the National Academy of Science Panel which recently produced its report on greenhouse warming and did <u>not</u> recommend target setting). Will the US Government adopt the measures which <u>were</u> recommended by the Panel;
  - how should we try to bridge the gap between our (and the Europeans') attitudes and the Americans (Michael Heseltine is to visit the States shortly to explore this); how far can we build on the American 'no regrets' approach - which involves taking measures that can be justified because they have other benefits;
  - how does he see the European attitude developing - in particular, what (if any) scope will there be for compromise on a nation-by-nation share out of a likely

for $CO_2$ reductions

overall Community target which could pose difficulties for our industry.

- The Environment and Development and International Environmental Institutions
  - what are the priorities to ensure that the UN Conference on Environment and Development is a success?
  - can we realistically hope to get poorer nations to adopt environmental measures?
  - what about the giants like China and India?
  - how genuine/effective is the new 'green-ness' of bodies like the World Bank?
  - any other international issues he thinks we should be keeping an eye on or which could creep up on us unawares. (Biodiversity?)

Sir Crispin will give you a copy of the NAS report and a copy of a recent speech of his. You can thank him for these and say the Government is studying the report with interest.

You could also invite Sir Crispin to write whenever he feels there is an issue on which you may need an extra, non-institutional view.

I attach briefing on global warming, including the US and EC attitudes, on UNCED, and a note from Carolyn Sinclair alerting you to Sir Crispin's enthusiasm on climate change and pointing out how we compare internationally.

Sir Crispin may raise green taxes with you (he has criticised the effect of VAT increases on energy efficiency measures like loft insulation). A note on green taxation is also attached.

W. E. CHAPMAN
19 April 1991
c:\home\tickell (kk)

BRIEFING FOR PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL

Green Taxation

1. Widespread enthusiasm and discussion of scope for "green" taxes. But so far no country has implemented major revision of tax structures.

2. Activity and study in EC and OECD fully supported by UK. Importance of national factors in determining application of taxes has been stressed by UK.

3. Recognise that in principle there may be grounds for a measure of international cooperation in determining some green taxes - notably these affecting energy prices in the context of an eventual international agreement to reduce $CO_2$ emissions.

4. Environment White Paper recognises that eventually energy prices will have to rise if carbon emissions are to be reduced over long term. Rules out early introduction of new taxes. Other factors - impact on inflation, scope for other effective measures - need to be considered.

5. In last Budget duties on petrol and diesel increased by 15% - ensuring that those who pollute most, pay most.

6. In general, government wishes to avoid 'tinkering' with taxes in an attempt to meet minor environmental objectives. However clear that environmental impacts need to be included when tax structures are under evaluation. Differential between leaded and unleaded petrol - which was widened in last Budget - important success.

6. Not strictly "taxes", but wider use of charging systems to deliver pollution abatement policies is under serious consideration. Government's policy of removing subsidies and opening up market structures essential step in integrating environmental and wider economic objectives - means that prices (eg of water and power) will properly reflect resource costs, including environmental costs.

RW/EPE/19 IV 91

DoE note.

**PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL**

**GLOBAL WARMING ASPECTS**

US attitude

The US attitude to the global warming question has moved significantly over the past 6 months.

They still (rightly) argue that much more scientific research is needed to give us a clearer understanding of the problem and its likely impacts. But they now accept the IPCC message that greenhouse gas concentrations are increasing and that this will lead to global warming and climate change almost certainly at rates greater than the World has seen over the past 10,000 years.

This has led the US to claim a leadership role in action on climate change, as well as on research. In February they published "America's Climate Change Strategy", which brings together a variety of individual measures that the US is taking to reduce emissions of greenhouse gases, of which the most significant is the recently enacted Clean Air Act. These measures are all actions which can be justified because of the other benefits they bring (so-called no regrets measures), such as reductions in acid rain, energy conservation, or reduction of emissions of CFCs, which both destroy the ozone layer and also contribute significantly to the enhanced greenhouse effect.

The strategy states that the overall effect of these actions will be that US greenhouse gas emissions in the year 2000 will be equal to or below 1987 levels. This does not represent a target that the US have set - the US still oppose that sort of top-down approach. And the strategy was widely criticised as inadequate when it was published, because it implies growth in $CO_2$ emissions of some 15% by 2000, mainly paid for in global warming terms by major reductions in CFC emissions, most of which are a direct result of the Montreal Protocol controls introduced because of ozone layer depletion. Our EC partners and most other developed countries oppose this sort of double counting. Nevertheless, the

UK welcomed the publication of the strategy, because it represented a significant move, and provided the opportunity for detailed discussion of the US response.

The continuing refusal of the US to set a $CO_2$ target, or to take much stronger steps to control $CO_2$ emissions, and their insistence on a comprehensive approach which brings together all sources and sinks of greenhouse gases, including those covered by the Montreal Protocol, represent significant obstacles to the agreement of a more united developed country position, which we regard as essential if we are to negotiate an effective global agreement on climate change in time for signing during the 1992 UN Conference in Brazil. The Prime Minister wrote to President Bush last week, pointing to the need to address this and other key environmental issues, such as forestry and our aims for the UN Conference, at the London summit. He proposed that the Secretary of State for the Environment visit Washington in early June to discuss these issues, and in particular explore the scope for bridging the gap between US and European countries on climate change.

Our aim would be to persuade the US of the need to make a greater effort on $CO_2$, and to explore a possible compromise on the comprehensive approach.

<u>NAS report on global warming</u>

One other recent development on climate change in the US is the publication of a National Academy of Science Panel Report - 'Policy Implications of Greenhouse Warming' - earlier this month. The report was commissioned by the EPA at the request of Congress in 1988, and Sir Crispin Tickell was a Member of the Panel. The report effectively endorsed the White House's "no regrets" approach and did not recommend target setting. It seems unlikely, therefore, to increase pressure on the White House. It did, however, claim to identify a series of measures that would either cost relatively little or produce net savings, and would have the overall effect of reducing US greenhouse gas emissions to 10-40% below the 1990 level. Professor Nordhaus of

Yale University, who has in the past been one of the most influential of the US academics who argue that US $CO_2$ emission reductions would impose large economic costs, was a member of the Panel, so this may prove a significant development. Apart from this the report contained very little new material, although it took a strong line of the need for population control, and raised the possibility of exotic "geoengineering" possibilities in the longer term such as mirrors in space, deliberately injecting dust into the atmosphere, and iron enrichment of the ocean to promote the growth of $CO_2$ absorbing plankton.

Sir Crispin was reported in the Guardian as pointing to the messages in the report about the need for the US to play a leadership role in ensuring early action on global warming, and the likely need for fiscal measures. In that context he criticised the recent changes in the UK's Budget which increased the rate of VAT charged on energy efficiency material such as loft insulation, while leaving electricity and gas zero rated.

Sir Crispin's involvement with the EC

We understand that Sir Crispin Tickell has been employed by the Commission as a consultant on climate change issues. The extent of his role in this is not clear, but the Commission are keen to play a major role in the negotiations on a global agreement on climate change, and it seems likely that they will want Sir Crispin to help them achieve this.

EC POSITION ON CO2 EMISSIONS

In the Environment White Paper we said that, if other countries take similar action, the UK was prepared to set itself the target of returning CO2 emissions to 1990 level s by 2005. All the other Member States that have set targets have gone for stabilisation at present levels by 2000 or earlier, and the leading countries want the Community to take unilateral action, arguing that this will shame the US into action.

At a joint Energy and Environment Council last October Member states agreed to take action aimed at stabilising CO2 emissions in the Community as a whole at 1990 levels by 2000. The Council conclusion contains various qualifications which the UK argues preserve our conditional 2005 target. These arguments are not accepted by the Commission or other Member States, however, and we shall face difficult arguments in the second half of this year, when the Commission and the Dutch Presidency are likely to propose a share out of the "Community Target: which would involve the UK reducing its CO2 emissions compared with current levels by 2000.

The electricity supply industry was privatised against the background of the UK target, which makes an early change in it difficult. We will, however, have to consider whether our conditionality can be said to be met by the number of countries that have adopted targets, in order to give us some room for manoeuvre in the EC discussions.

Department of the Environment
April 1991

UN CONFERENCE ON ENVIRONMENT AND DEVELOPMENT 1992 (UNCED)

1. UNCED will be held in Rio de Janeiro, from June 1 to 12 1992, at Head of Government level. The Conference marks the 20th Anniversary of the 1972 UN Conference on the Human Environment. It is hoped that UNCED will be the occasion for signature of new international agreements on climate change, conservation of biodiversity and possibly forestry. UNCED will also agree an action agenda for further international environment/development work and produce a Declaration or Charter of environmental rights and principles.

2. On 15 April the Prime Minister wrote to President Bush to pave the way for a visit to Washington by the Secretary of State for the Environment. This visit, which will take place in early June, is intended to make common cause with the US on the need for greater political input to the UNCED process as well as to overcome differences between us on the major issues of climate and forests. It is hoped that this will in turn lead to an unambiguous political signal on environment and development issues at the Economic Summit at Lancaster House in July.

3. DOE Ministers are giving sympathetic consideration to a suggestion by UNCED Secretary-General, Maurice Strong of Canada, that the UK might host a meeting early next year of the 23 distinguished members of the Brundtland Commission which produced the influential report "Our Common Future", launched in London in 1987. Such a prestigious gathering, to which other world statesmen interested in the environment would be invited, would give political stimulus and publicity to the UNCED process.

4. The UK is participating actively in the preparations for UNCED where the most difficult debate so far has centred on demands by developing countries for new and additional financial resources and concessional access to environmentally friendly technologies. We are one of the few countries to have submitted a national report (the Environment White Paper). We are providing financial support so that developing countries can attend the main preparatory meetings and we have seconded a DOE official to work in the Geneva Secretariat. We are also working closely with the non-governmental community in the UK.

Department of the Environment
April 1991

NATURE VOL 350 nature 18 APRIL 1991

# Too much caution on global warming

The much awaited Evans report in the United States is a disappointment, chiefly because it says too little about the prospect of global warming caused by the greenhouse effect. And because it says too little generally.

SLIM volumes are none the worse for not being encyclopaedic, and may well be more widely read. Yet there is a sense in which the much-awaited report on greenhouse warming published last week by the National Research Council in Washington could judiciously have been weightier. The Evans report, as the document has been called (after its chairman, previously a US Senator from the State of Washington), to which people have been looking for a resolution of the US government's doubts on global warming, is brief to the point of being laconic, even delphic. And it is late: a few months ago, people were hoping it would see the light of day before last February's climate conference in Washington. Has the extra time been spent winkling out the occasional sentences that might have given offence to to one side or another in what has become a polarized debate?

In the event, the report comes to all the right conclusions, but undemonstratively and with such an air of studied judiciousness that even the middle-of-the-road position that it adopts will not necessarily seem compelling to its readers. Indeed, the most striking and potentially controversial of its recommendations is that there is such a close link between the growth of the world's population and the future potential for global warming occasioned by the greenhouse effect that the "United States should resume full participation in international programs to slow population growth" and should contribute financially towards their cost. It is now roughly a decade since, early in the Reagan presidency, the US government declined to support most international birth-control programmes on the grounds that many of them held abortion to be a birth control method of the last resort. The case for participation is of course compelling, but has Evans reason to believe that the circumstances have changed?

On the more immediate international question, that of the clamour now under way for an international treaty to limit the emission of greenhouse gases, the relevant Evans recommendation is simply that the United States should "participate fully with officials at an appropriate level" in the discussions now under way, "including diplomatic conventions and research and development efforts". But the body of the report, referring to the plan to sign a treaty by June next year, adds the more prescriptive sentence that "the panel believes the United States should fully participate in this process". Hardly fighting talk.

For the United States in particular, the decision that lies ahead about the global warming treaty is at once more complicated and more interesting. There are arguments on either side. There is, for example, something in the general suspicion that some would-be participants in a global warming treaty regard it all as a way of diverting yet more of the prosperity of the United States in their direction. On the other side of that coin, there are practical and almost incalculable considerations of the costs that may arise domestically — the huge amounts of capital that will be needed to maintain supplies of irrigation water at the level US farmers have come to expect. It will be strange if the nation boasting the most substantial research programme in the field stands aside from an international agreement from the fear of what happens to US governments seeking to control the demand for, say, gasoline by increased taxes.

Less tangible arguments also deserved a place in the Evans report. For example, as things are, the United States would be well-placed to ensure that next year's treaty is one that it could live with. So many of the critics of its recent display of unwillingness would be so quickly disarmed by a decision to join that they would sign whatever piece of paper the United States offered. (There are other reasons why the best agreement at this stage would be an agreement to act when research had shown that the time has come to do so, and in what way.) And as things are, the United States is well-placed to shame other recalcitrants, from Saudi Arabia to the Soviet Union, to put their weight behind a treaty. A cool discussion of these and other issues by a committee as influential as that of Evans might have had the scales falling from many pairs of US eyes. The document is an opportunity missed. □

# Closing Europe's farms

The latest impending crisis in European agriculture argues for getting people off the land, and quickly.

PROSPECTS for a settlement of the long-standing dispute on agriculture between Europe and the rest of the world are fading fast, to judge from the commotion in Brussels in the past few weeks. By now, the story is familiar. Four years of negotiations towards an improved agreement on international trade under the General Agreement on Tariffs and Trade (GATT) broke down last December. By February, it seemed as if life might be breathed into the corpse of all that work by a change of policy at the European Communities (EC) headquarters in Brussels. But now it emerges that the members of the EC are unable to agree among themselves on how the

CONFIDENTIAL

PRIME MINISTER

19 April 1991

## MEETING WITH SIR CRISPIN TICKELL - 22 APRIL

Crispin Tickell is mainly interested in climate change - he has written a book about it, although he is not a scientist by training. He is an enthusiast.

He may press you to ensure that the UK stays in the lead on research into climate change. We have a very good record here, and there is no intention to reduce the amount of Government funding in this area. But the Chief Scientific Adviser has recommended that there is no case for increasing support for climate change research in real terms: there are other priorities. The important thing is that action to reduce global warming should be based on the best scientific advice - not the national origin of that advice.

Crispin Tickell may also urge you to take a forward position in international discussions on the environment - especially on global warming. You have recently written to President Bush arguing that the key developed countries need to take a firm political lead in the run-up to the major UN Conference on the Environment in Rio in June 1992.

Our position is already more "forward" than that of the US - or the Soviet Union - insofar as we have committed ourselves to a target for reducing emissions of $CO_2$ and they have not done so. But you are likely to come under pressure from Michael Heseltine over the next couple of months to go further.

We have said that we are prepared to stabilise emissions of $CO_2$ by 2005, provided other countries take similar action. France, Germany and the Netherlands are all prepared to move faster than this (though France less so than the others). There will be pressure from the Commission for a Community target based on 2000 - with the Commission deciding how much each member state would be required to contribute to the total. This would certainly require us to move faster on adapting our economy than we envisaged in the Environment White Paper.

It is clearly attractive for the UK to maintain a high profile in international discussions on global warming. But you will need to judge in due course how far we can do this without getting into the position of having to put ourselves at a competitive disadvantage. The conditionality attached to our $CO_2$ target - which was part of the background to the electricity privatisation prospectuses - recognised that there was no point in our incurring costs to our economy to reduce $CO_2$ emissions unless the other major $CO_2$ emitters (US, Soviet Union, China, India) acted as well. Even action by the EC as a whole will only have a limited effect on global warming.

CAROLYN SINCLAIR

354.CS

Fax Sir Crispin will
discuss matter &
AT on 10 April on
3rd PM 22nd. 5/4

Andrew

P.S. - Sir C.T.
may ring
this afternoon

**10 DOWNING STREET**

Andrew

Re Sandra's note attached:
Sir Crispin's meeting has
been postponed (by 2 weeks) because
otherwise it would have
occurred only a few hours
after the rearranged ~~visit~~
bilateral with Heseltine.
We may need to reflect on the
outcome of the bilateral, and
consider how to build on it
with Sir Crispin, before the
PM meets the latter.
William. 27/3

WC

**WILLIAM CHAPMAN**

**14 March 1991**

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cc Carolyn Sinclair

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adviser on environmental issues, as
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Michael Heseltine has taken

10 DOWNING STREET

① William

② Andrew

Sir Crispin Tickell very disappointed that his call on PM on 9 April has been postponed. Main reason is that he had sought, & received, US authority to give PM advance copy of US National Academy of Sciences report due to be published on 10 April. He has now agreed, however, that if he can look in on Andrew morning of 10 April to drop off report, he will pay his call on PM at 1130 on Monday 22 April. (He is lunching with Sara Hogg that day).

Sir Crispin will telephone Andrew to talk this further.

S. 27/3

cc Carolyn Sinclair

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WC2

WILLIAM CHAPMAN

14 March 1991

c\home\tickell (kw)

cc Carolyn Sinclair

10 DOWNING STREET

Cf
M gave a file for this meeting — or do we have a minute already? WEC 11/3.

Offered for C.T. Tuesday 9 April at 1500. They will confirm. S 18/3

Can you please ring Sir Crispin and try to arrange the mtng. for the slot we had in mind? (How is the Chinese to Andrew last week). W. 18/3.

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WEC

WILLIAM CHAPMAN

14 March 1991

c\home\tickell (kw)

PRIME MINISTER

Content ✓

cc Carolyn Sinclair

You will recall that you recently accepted Sir Crispin Tickell's offer to act as your informal adviser on environmental issues, as he had done with Mrs Thatcher. Sir Crispin has now suggested a meeting with you in the reasonably near future.

A meeting next month would be opportune. By then you will probably have had your bilateral with Michael Heseltine on, among other things, the environment (although the meeting may succumb to other pressures). GEN 7 will have taken its programme further forward, implementing the Environment White Paper (including consideration later this month of carbon emissions). You have not so far had to develop an environmental profile but, with the Gulf war over, this may change.

The second week of the Recess would be convenient for a comparatively leisurely chat with Sir Crispin. I would ask him what issues he wants to raise, and Carolyn Sinclair and I would bring forward some ideas which you could raise in turn. You could use the discussion to crystallise some priorities.

Content to meet Sir Crispin in the week beginning 8 April provided that your bilateral with Michael Heseltine has taken place by then?

WC

WILLIAM CHAPMAN

14 March 1991

c\home\tickell (kw)

From the Warden:
Sir Crispin Tickell GCMG KCVO
Secretary: (0865) 274775

GREEN COLLEGE
WOODSTOCK ROAD
OXFORD OX2 6HG
*Telephone* (0865) 274770
*Fax* (0865) 274796

7 January 1991

Mr. Andrew Turnbull
10 Downing Street
London
SW1A 2AA

Dear Andrew,

Thank you for your letter of 4 December. Let me confirm that I should be delighted to be an informal adviser to the Prime Minister as before on environmental issues.

I do not know whether the Prime Minister has yet had time to consider such issues. He has more immediate and alarming ones on his mind. But when occasion arises and the time is right, I should like the opportunity to discuss them with him and find out how I can best help. I am also writing to Sarah Hogg.

Yours ever,

Crispin Tickell

10 DOWNING STREET
LONDON SW1A 2AA

*From the Private Secretary*

4 December 1990

The Prime Minister very much appreciated your letter and its message of congratulations. He was also grateful to you for your offer to act as an informal adviser on environmental issues along the lines agreed with Mrs. Thatcher. He would be delighted to continue a similar arrangement. He has not yet had an opportunity to address environmental questions but will no doubt have to do so before too long.

ANDREW TURNBULL

Sir Crispin Tickell, G.C.M.G., K.C.V.O.

Prime Minister
DJ you
U1 want to accept her offer to act as informal adviser
(ii) to avoid any ongoing link but to consult him ad hoc
(iii) to "bear her offer in mind" re desk calls as well my you.

AT 3/12

R 3/12

From the Warden:
Sir Crispin Tickell GCMG KCVO
Secretary: (0865) 274775

GREEN COLLEGE
WOODSTOCK ROAD
OXFORD OX2 6HG
*Telephone* (0865) 274770
*Fax* (0865) 274796

Yes. Letter please.

f 3.12

30 November 1990

Dear Prime Minister,

Here is another letter to add to the pile of those from your thousands of well wishers. I send warmest felicitations to you both, with more than usual confidence in your success in managing the future, whatever it may be. Anyone who can cope as dextrously as you with the UN General Assembly and a string of Foreign Ministers can surely cope with anything else.

As Brian Griffiths will probably have told you, I have for long been an adviser (with a small "a") on Environmental matters to Margaret Thatcher. When I left the Diplomatic Service on retirement in mid September, I regularized this very informal arrangement with Andrew Turnbull. I do not know whether I can be of service to you as I tried to be to her, but I should be very happy to give any help I can if that is your wish. These are early days, but I wanted you to know from the beginning of my readiness to serve.

I have the happiest memories of your and Norma's visit to New York last year. I shall not forget the call made by the wrong Foreign Minister (E for Ethiopia instead of Egypt),

for the speed with which we were able to fix my brief for the subsequent Anglo-Argentine negotiations.

Penelope joins me in sending the best of all wishes to you both.

Yours sincerely

Geoffrey Howe

GREEN COLLEGE
WOODSTOCK ROAD
OXFORD OX2 6HG
*Telephone* (0865) 274770
*Fax* (0865) 274796

(2)

*From the Warden:*
*Sir Crispin Tickell GCMG KCVO*
*Secretary:* *(0865) 274775*

19 October 1990

PERSONAL

Charles Powell Esq
No. 10 Downing Street
London SW1

NOT GR

Some fascinating work here

CRAN 24 X.

Dear Charles, meeting record at flap

You will remember that when the Prime Minister saw me on 17 October, I mentioned the Radcliffe Lecture given by Professor Freeman Dyson at Green College on 15 October.

Dyson's speech contained a lot of original material, and I think that the Prime Minister might be interested to glance at it. A copy is enclosed.

I much enjoyed the conversation. As I mentioned, I shall be in the United States next week, and not in London again until 30 October.

Yours ever

Crispin

Crispin Tickell

# Carbon Dioxide in the Atmosphere and the Biosphere.

Radcliffe Lecture given at Green College,
Oxford, on October 11, 1990.

*Freeman J. Dyson*
*Institute for Advanced Study*
*Princeton, New Jersey, USA*

## I. The Mystery of the Missing Carbon

Let me begin by thanking Green College and in particular the Warden of Green College, Sir Crispin Tickell, for inviting me here and giving me this opportunity to meet old and new friends in Oxford. Let me also congratulate Green College for acquiring Sir Crispin, fresh from his demanding and effective service as Her Majesty's Ambassador to the United Nations in New York. He also happens to be an expert in his own right on the subject of this lecture. He became seriously interested in climate long before it was politically fashionable, wrote an excellent book, [Tickell, 1986], with the title "Climatic Change and World Affairs," and played a major role in pushing the problems of carbon dioxide and climatic change onto the political agenda of mankind. I am delighted that Sir Crispin is here to correct my mistakes and to question my assumptions.

Fifteen years ago, Sir Crispin went to Harvard to study climate and I went to Oak Ridge in Tennessee. He was attached to the Center for International Affairs at Harvard, a good place for a diplomat whose primary interest is the political dimension of the climate problem. I was attached to the Institute for Energy Analyses at Oak Ridge, a good place for a scientist whose primary interest is facts and figures. In this talk I shall be mainly concerned with facts and figures. If you want an authoritative lecture on the politics of climatic change, you have the best possible speaker right here at Green College.

The main theme of this lecture is a scientific puzzle which I call "The Mystery of the Missing Carbon." I was shocked to discover, when I went to Oak Ridge in 1975, that nobody knew what happened to half the carbon that we were burning. Under the leadership of my late friend Ralph Rotty, Oak Ridge had collected a meticulously accurate data-base concerning the quantities of carbon dioxide dumped into the atmosphere by coal-burning,

oil-burning, gas-burning, wood-burning and cement-production in various countries. Rotty's numbers were, and still are, accepted world-wide as the most reliable. It is convenient when discussing these numbers to use the unit "Gigaton of Carbon," meaning a thousand million metric tonnes of carbon. The quantity of carbon dumped into the atmosphere was running close to 5 gigatons per year in 1975 and is now running close to 6. These numbers, unlike most of the numbers in the carbon-cycle budget, are accurately known, with an error that does not exceed one gigaton.

The other reliable number in the carbon budget is the observed rate of increase of carbon dioxide in the atmosphere. The atmospheric carbon dioxide has been measured for 32 years by Charles Keeling, a scientist as meticulous and as dedicated to accuracy as Ralph Rotty. Keeling began in 1958 with a single measurement site on the mountain Mauna Loa in Hawaii. He now has ten sites extending down the Pacific basin from Point Barrow in Northern Alaska to the South Pole. The records from all his sites show a steady increase of carbon dioxide from year to year [Keeling, 1989]. The rate of increase for the entire atmosphere was $2\frac{1}{2}$ gigatons of carbon per year in 1975, $3\frac{1}{2}$ gigatons per year today. Roughly half of the carbon burnt appears in the atmosphere. The other half has somehow disappeared. More precisely, Keeling calculates that 57 percent of the fossil-fuel carbon has been retained in the atmosphere, while 43 percent has gone somewhere else. This is the mystery of the missing carbon. It is preposterous to claim any ability to predict the future of the carbon cycle so long as we lack a rudimentary understanding of what has happened to the carbon in the past.

There are other items in the carbon budget besides fuel-burning and the growth of the atmospheric reservoir. In particular, there is the intensive destruction of forests and the accompanying erosion of topsoil and peat. Both these processes add carbon dioxide to the atmosphere. The quantities are difficult to measure, but there is a rough agreement among the experts that destroyed trees are worth about 2 gigatons and eroded soil about 1 gigaton per year. The true figures might be considerably larger, as some of our environmental activists believe. In any case, the additional 3 gigatons from deforestation and erosion only deepen the mystery. Taking fuel-burning and environmental destruction together, human activities are putting 9 gigatons of carbon per year into the atmosphere. More than half of the carbon is missing. At this point it may be helpful to look at the overall carbon budget presented in Fig. 1.

The left side of Fig. 1 shows the sizes of the various carbon reservoirs that are actively involved in the cycle. I have omitted the biggest reservoir of all, the carbon in chalk and limestone rock, because it does not contribute significantly to the cycle on a short time-scale. If we were looking at processes on a geological time-scale, the limestone reservoir would dominate the others. But on a time-scale of years or decades, the weathering and deposition of limestone is comparatively unimportant. The essential fact which emerges from the left side of Fig. 1 is that the three smallest and most active reservoirs, the atmosphere, the plants and the soil, are all of roughly the same size. This means that large human disturbances of any one of these reservoirs will have large effects on all three. We cannot hope either to understand or to manage the carbon in the atmosphere unless we understand and manage the trees and the soil too.

The right side of Fig. 1 shows the annual increases and decreases of the various reservoirs, estimated for the year 1990. Here the most important things to notice are not the numbers but the letters which I have attached to them. A means that a quantity is known with an error less than 20 percent, which in this context is considered high accuracy. B means that a quantity is known within a factor of 2 up or down. C means that the quantity is highly uncertain, a mere guess. For a quantity labeled C, we are not sure that even the sign is correct. The essential fact on the right side of Fig. 1 is that the B's and C's outnumber the A's. The uncertainties dominate the certainties. The bottom line of minus 4 gigatons is the missing carbon, the annual deficit, which is obtained by adding all the flows together. If the numbers were correct, the flows would necessarily add up to zero. The size of the deficit indicates the size of the errors in our estimates of the flows. We need to find an additional sink of carbon equal to 4 gigatons per year.

The easy way to explain the disappearance of the missing carbon is to say that it has gone into the ocean. We might simply proclaim that the annual flow into the ocean is $5\frac{1}{2}$ gigatons instead of $1\frac{1}{2}$ gigatons. The problem with this explanation is that oceanic measurements do not support it. The surface layer of the ocean is almost saturated with carbon dioxide and cannot absorb much more. Any large flux of carbon into the ocean must somehow be transported from the surface into the deep cold layers below. There are two known mechanisms for moving carbon into the deep ocean. Either it is carried down as dissolved carbon dioxide in the sinking currents that flow downward from the Arctic and Antarctic seas. Or it is carried down as Particulate Organic Carbon, a rain of little corpses

and fecal pellets produced by plankton proliferating and dying in the ocean surface. When oceanographers compute the quantities of carbon carried down by both these routes, they arrive at estimates in the range of 1 or 2 gigatons, and not $5\frac{1}{2}$ gigatons. When I asked some famous oceanographers whether they might be able to transport $5\frac{1}{2}$ gigatons, they protested vigorously. They said it was impossible.

The only other explanation of the missing carbon is that it is absorbed in trees and topsoil. If this is the true explanation, it means that the trees and topsoil, where they are not being destroyed by human activities, are growing in volume at a rate large enough to outweigh the destruction. The rapid growth, if it exists, must be a response to the world-wide fertilizing effect of the increased carbon dioxide in the atmosphere. This hypothesis of a growing biospheric reservoir of carbon is implausible for two reasons. First, it sounds absurdly optimistic to claim that Nature herself is able to repair more than half of the damage that we are inflicting upon her. Second, the experts on trees and soil reject the idea of a large biospheric sink of carbon just as vehemently as the oceanographers reject the idea of a large oceanic sink. I spoke recently on this subject at Duke University in North Carolina, which happens to have a first-class Department of Botany with some of the world's great experts on trees and soil. Boyd Strain the tree-expert and William Schlesinger the soil-expert were in the audience. Boyd Strain said he is sure the missing carbon is not going into trees, and William Schlesinger said he is sure it is not going into soil.

So the mystery remains. Either the oceanographers are wrong or the botanists are wrong. Perhaps both are wrong. What we need in order to solve the mystery is more observations. Rotty spent his life making careful and meticulous analyses of fossil fuel-burning. Keeling spent his life making careful and meticulous observations of carbon dioxide in the atmosphere. We need another Rotty and another Keeling to spend their lives making equally meticulous observations of oceans, trees and soil. That is the only way to convert the C's in our carbon budget into A's. When the C's become A's, we shall know who was right and who was wrong.

We have recently seen some new evidence that supports the hypothesis that the missing carbon goes into the biosphere. If the new evidence is to be trusted, then the oceanographers were right and the botanists were wrong. I will come back to the new evidence later. It is indirect and not conclusive. Until we have direct measurements of all channels in the carbon cycle, the fate of the missing carbon will remain in doubt.

## II. The Oak Ridge Manifesto

Everything I have said so far in this lecture is old stuff, well known to the experts. You would not need to invite a theoretical physicist to fly across the Atlantic to tell you things that every geochemist knows. I chose to talk today about the carbon problem because I have things to say which contradict the accepted wisdom. From this point on, I am speaking for myself and not for the experts. Where I diverge from the experts, the disagreement is not a matter of fact but a matter of emphasis. I do not say that the experts are giving us wrong answers. I say that they are frequently not asking the right questions. In the view of the majority of experts, the central question is the prediction of climatic change caused by carbon dioxide, and the problem of the missing carbon is a peripheral issue of no great consequence. In my view, the fate of the missing carbon is central, and the question of climatic change is only one of many important questions that cannot be answered satisfactorily until the missing carbon is understood.

My work at Oak Ridge was part of a big programme of research into the carbon-dioxide problem directed by the U.S. Department of Energy. In 1978 I found myself in disagreement with the management of the programme. I expressed my disagreement in a one-page manifesto addressed to my Oak Ridge colleagues. The manifesto disappeared into the dustbin of history without producing any response. I resurrect it today because it states clearly an issue which is as vital in 1990 as it was in 1978. So here it is:

"In the May 1978 Comprehensive Plan for Carbon Dioxide Effects Research and Assessment of the Department of Energy, the direct effects of carbon dioxide increase on plant growth and interspecific competition receive little attention. The plan is drawn up as if climatic change were the only serious effect of carbon dioxide on human activities. The programs for monitoring the biosphere on land and in the oceans are mainly aimed at measuring the effect of the biosphere on atmospheric carbon dioxide rather than the effects of carbon dioxide on the biosphere.

"I submit that this distribution of emphasis is wrong. To indicate the crucial nature of the non-climatic effects of $CO_2$, it is sufficient to mention the fact that a field of corn-plants growing in full sunshine will completely deplete the $CO_2$ from the air within 1 meter of ground in a time of the order of 5 minutes.

"In a comparison of the non-climatic with the climatic effects of $CO_2$, the non-climatic effects may be:

(1) more certain,

(2) more immediate,

(3) easier to observe,

(4) potentially at least as serious.

The non-climatic effects are primarily effects on plant growth and physiology, including effects on the utilization by plants of water and nitrogen. The effects of the present 10 percent enrichment of atmospheric $CO_2$ by human activities may already be large, both in changing agricultural yields and in changing the balance of natural ecosystems. The effects of a future larger increase of atmospheric $CO_2$ may change the conditions of agriculture and plant ecology quite radically, long before any climatic effects become apparent. Our research plan should address these issues directly, not as a mere sideline to climatic studies." End of manifesto.

Twelve years have gone by since these words were written, and nothing much has changed. The 10 percent enrichment of atmospheric $CO_2$ has now grown to 15 percent. The financial resources of government research programs investigating the carbon dioxide problem have grown even more rapidly. But the increased funds have mostly been poured into computer simulations of the global climate rather than into observations of the real world of roots and shoots, trees and termites. I do not blame only the government bureaucrats for the excessive emphasis on computer simulations. We scientists must share the blame. It is much more comfortable for a scientist to run a new computer model in an air- conditioned supercomputer centre, rather than to put on winter clothes and try to keep instruments correctly calibrated outside in the mud and rain. Up to a point, the computer models are useful and necessary. The point at which they are harmful is when they become a substitute for real -world observation. In the twelve years since 1978, the results of computer models have tended to dominate the political discussion of the carbon-dioxide problem. The computer results are simpler and easier for politicians to understand than the vagaries of the real world. The computer results say nothing about non-climatic effects. The advent of the supercomputer has accentuated the neglect of non- climatic effects about which I complained in 1978.

Let me give you a simple example of a non-climatic effect of carbon dioxide on the biosphere. Figure 2 shows the results of an old experiment published in 1975, measuring the effects of carbon dioxide on the growth and transpiration of leaves of the American

poplar, Populus Deltoides, [Regehr et al. 1975]. Many similar experiments have been done on other plant species, usually with similar results, [Gates et al. 1983]. The horizontal scale measures carbon-dioxide concentration in parts per million, the present concentration in the atmosphere being 350. The measurements were made in atmospheres ranging from one-tenth to three times the present concentration. The resulting growth-rates are shown in the curve that rises from left to right. As you might expect, the growth-rate increases with concentration until the concentration is about double the present value, and then remains constant. The saturation value of growth-rate is $1\frac{1}{2}$ times the present growth-rate and is reached at 3 times the present concentration of $CO_2$. So far, the results are unsurprising.

More surprising and of greater practical importance are the measurements of water transpiration shown in the curve that falls from left to right. The rate of transpiration falls steadily as carbon dioxide increases, and is reduced to about half its present value when the carbon dioxide is enriched threefold. How is this decrease of transpiration to be explained? The essential point is that carbon dioxide molecules are rare in the atmosphere. They are hard for a plant to catch. The only way a plant can catch a carbon dioxide molecule is to keep open the little stomata or pores on the surface of its leaves, and wait for the occasional $CO_2$ molecule to blunder in. But the air inside the stomata is saturated with water vapor. On the average, about 200 water molecules will diffuse out of the hole for every one $CO_2$ molecule that diffuses in. You may observe, if you look at Fig. 2 carefully, that the scale of water loss on the right is 100 times as big as the scale of $CO_2$ photosynthesis on the left. The plant is forced to lose a lot of water in order to collect a little $CO_2$. When the $CO_2$ in the atmosphere is enriched, the plant has a choice. The plant may either keep its stomata open and lose water as rapidly as before while increasing photosynthesis. Or it may partially close its stomata and reduce the loss of water while keeping photosynthesis constant. Or it may make a compromise, closing the stomata only a little, so that water- loss is decreased while photosynthesis is increased. The poplar leaves in the experiment of Fig. 2 chose the compromise strategy. Plants will in general choose whatever strategy they find optimum, depending on local conditions of temperature, humidity and sunlight.

The moral of this story is that for plants growing under dry conditions, enriched carbon dioxide in the atmosphere is a substitute for water. Give a plant more $CO_2$, and it can make do with less water. Since the growth of plants, both in agriculture and in the wild, is frequently limited by lack of water, the effect of carbon dioxide in reducing transpiration

be of greater practical importance than the direct effect in increasing photosynthesis. It is easy to measure both these effects of $CO_2$ in green-houses and growth-chambers. It is difficult to measure them in the real world out-of-doors. Here then is the crucial task for understanding the human dimensions of the carbon- dioxide problem. Our research programs must come to grips with the responses of crop-plants and grasses and trees all over the world to increased $CO_2$. To measure these responses, experiments in growth-chambers are inadequate and computer simulations are useless. There is no substitute for field observations, widely distributed in place and extended in time.

If we can establish research programs, putting as much money and time and talent into the measurement of ecological responses to carbon dioxide as we are now spending on climatic effects, we may be able within a few years to answer the politically crucial questions. Is the direct effect of increasing carbon dioxide on food-production and forests more important than the effect on climate? Is the human species already hooked on carbon dioxide, needing a continued increase of fossil-fuel burning to fertilize our crops? When the coal and oil are all gone, shall we be burning limestone to keep the atmosphere enriched in carbon dioxide at the level to which the biosphere will have become addicted? I am not saying that the answers to these questions should be yes. But we must be aware that we do not have the knowledge to answer them with a confident no.

## III. Oxygen

I now turn to another important aspect of the real world that our climate research programs have neglected. I shall talk about oxygen. As every school-child is supposed to know, the burning of fuels uses up oxygen from the atmosphere and the growth of plants puts oxygen back. You might imagine that one of our busy scientists might have measured the rate at which the oxygen in the atmosphere is being used up. The reservoir of oxygen in the atmosphere is large but not infinite. It amounts to about 1.2 million gigatons. Since 8 tons of oxygen are used up for every 3 tons of carbon burned, and we are burning 6 gigatons of carbon per year, we might expect that the oxygen is being used up at a rate of about 16 gigatons or 13 parts per million per year. 13 parts per million should be measurable. The measurement is not easy, but with modern precise instruments it should be about as difficult to measure the oxygen today as it was for Charles Keeling to measure the carbon dioxide when he began his work 32 years ago. All we need is an individual scientist willing

to dedicate her life to the oxygen measurements as Keeling has dedicated his life to carbon dioxide. Ten years ago, a panel of scientists recommended to the U.S. Department of Energy that a program of oxygen measurements be started. Nothing happened. Again, it is not only bureaucrats who are to blame. We scientists are also to blame for not practicing what we preach. It is easy to give advice, and not so easy to follow it.

I am surprised that the general public all over the world is not clamoring to know how fast we are using up the oxygen. You might imagine that ordinary citizens would want to know. The public is now aware that we have a serious problem with the depletion of ozone. I wish we could arouse the same public interest in the depletion of oxygen.

Whether or not the general public is concerned, there are important scientific reasons for measuring the oxygen. The oxygen cycle and the carbon cycle are coupled together. If we had an accurate measurement of the oxygen depletion, this would give information about the fate of the missing carbon. Roughly speaking, the oxygen depletion must balance the increase of carbon dioxide in the atmosphere and ocean, but will not be affected by the carbon that is absorbed in the biosphere. An accurate measurement of oxygen depletion will tell us how much carbon is going into the ocean and how much into the biosphere.

For those of you who are not frightened by a couple of equations, I have displayed in Figure 3 a precise statement of the carbon and oxygen balance sheets. From these you can see how oxygen measurements might determine the division of the missing carbon between biosphere and ocean. Unfortunately, to achieve this result we have to measure depletion of oxygen not only in the atmosphere but also in the ocean. The measurement of oxygen in the ocean is in some ways easier and in some ways more difficult than in the atmosphere. The ocean is easier because the reservoir of dissolved oxygen is much smaller, a mere 8400 gigatons compared with 1.2 million in the atmosphere. The expected decrease in the ocean is of the order of one part per thousand per year instead of ten parts per million. On the other hand, the ocean is more difficult because the water is not well mixed. The global atmosphere, as Keeling's measurements have shown, is well mixed on a time-scale of a few years. Measurement of oxygen at a single site such as Mauna Loa would determine the rate of oxygen depletion for the whole earth. In the ocean the mixing-times are of the order of thousands of years. To determine the depletion of oxygen for the whole ocean, the whole ocean would need to be sampled. Oxygen would have to be measured with an accuracy of one part per thousand at many thousands of places and at many depths. In the process, we

would learn other important facts about the ecology of the oceans.

There is a remarkable symmetry between the atmosphere and the ocean so far as carbon and oxygen are concerned. In the atmosphere, oxygen is abundant and carbon dioxide is scarce; in the ocean, carbon dioxide is abundant and dissolved oxygen is scarce. Because carbon dioxide in the atmosphere is scarce, the disturbance of the natural ecology by human activities appears most prominently in the increase of $CO_2$. In the oceans, since oxygen is scarce, the disturbance of the natural ecology will appear most prominently in a depletion of oxygen. It is possible that the depletion of oxygen in the oceans presents an even more serious long-term threat to the global ecology than the build-up of carbon dioxide in the atmosphere. Reducing oxygen by 50 percent will cause more drastic damage to more species than increasing carbon-dioxide by 50 percent. A doubling of $CO_2$ would be for the majority of species a tolerable insult; a reduction of oxygen in the ocean to zero would be a total catastrophe.

If we take the total inventory of 8400 gigatons of oxygen in the ocean and divide it by a plausible rate of depletion, say 10 gigatons per year, we obtain a comfortably long time of the order of 800 years before the ocean is asphyxiated. Since the ocean is not well mixed, this estimate is misleading. Catastrophe may come to parts of the ocean long before the entire oxygen reservoir is exhausted. The Pacific Ocean as a whole is already seriously depleted. It contains 50 percent of the planet's water but only 40 percent of the dissolved oxygen. So long as we are not measuring the rate of depletion year by year, we have no basis for guessing how soon the asphyxiation of large parts of the Pacific Ocean might begin. For this reason, a programme of measurement of the oceanic oxygen fluxes is urgently necessary, quite apart from the additional light that it would throw upon the missing carbon.

## IV. Growing Trees and Topsoil

I now turn from questions of science to questions of public action. Newspaper writers often describe the political argument concerning what they call "The Greenhouse" as a debate over priorities, with science on one side and action on the other. "The Greenhouse" means the climatic effect of carbon dioxide and other atmospheric gases which are warming the earth. "Science" means the computer models of global climate which predict the warming. "Action" means the imposition of drastic restrictions on fossil-fuel burning in order to hold the warming in check. The debate is supposed to go like this. The "Action First" people

on detailed understanding. Understanding is not a prerequisite for action, and action is not a substitute for understanding. While we act, the quest for a deeper understanding must continue.

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This is not a review article. I have not attempted to make the references comprehensive, nor even to acknowledge my many debts to earlier writers.


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**Figure 1.**

**Carbon Budget**

(Gigatons of Carbon)

| Capital Account | | Annual Flow |
|---|---|---|
| 7000 B | Fossil Fuels | -6 A |
| 700 A | Atmosphere | $+3\frac{1}{2}$ A |
| 40000 A | Ocean | $+1\frac{1}{2}$ C |
| 1500 B | Topsoil and Peat | -1 C |
| 800 B | Plants and Forests | -2 C |
| | Spring & Summer Growth | +50 B |
| | Autumn & Winter Decay* | -50 B |
| Total "Missing Carbon" | | -4 C |

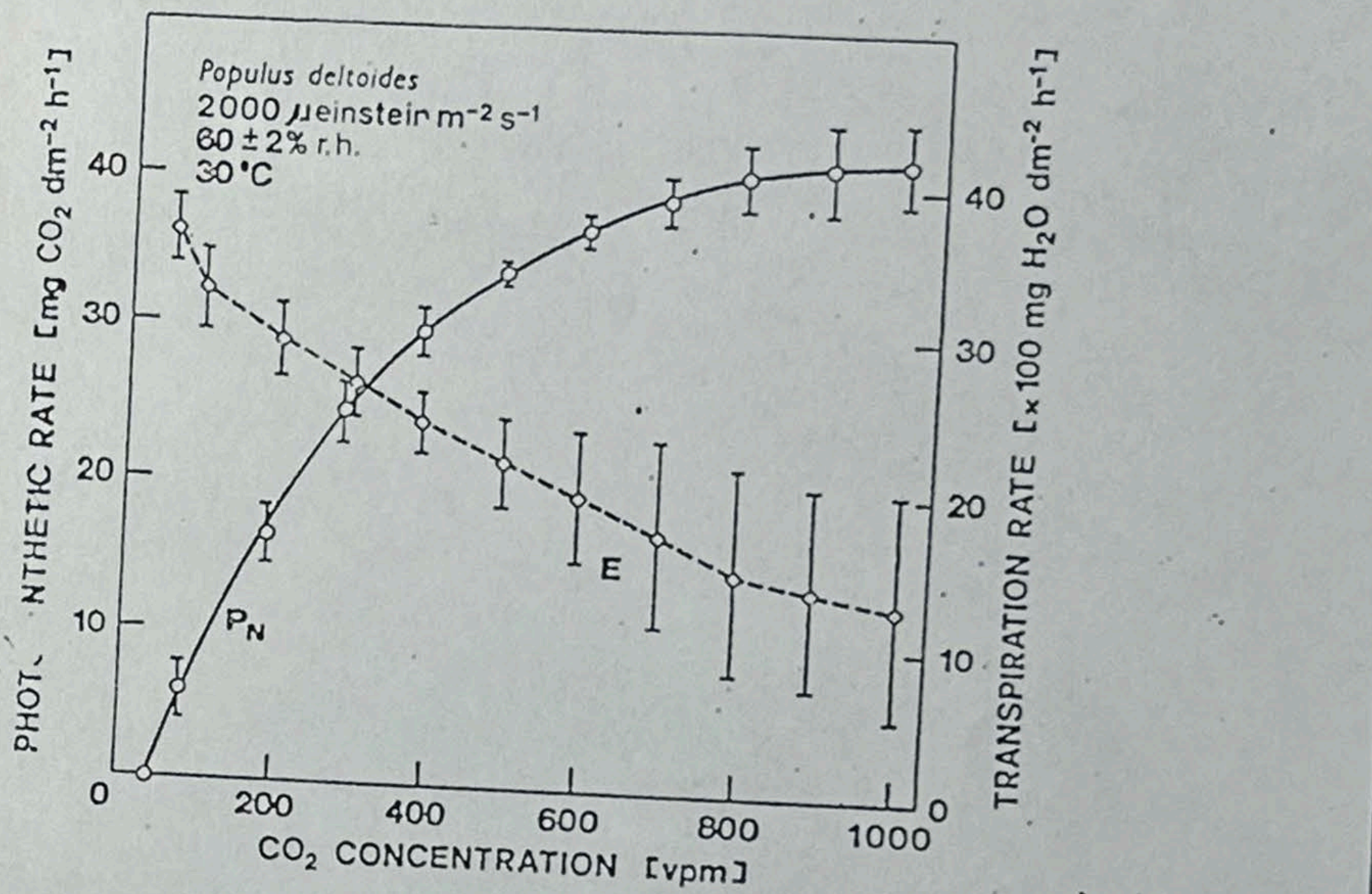
A - Well measured (error ± 20 percent)

B - Roughly known (error ± factor of 2)

C - Highly uncertain (sign may be wrong)

*This includes consumption by animals and humans.

**Figure 2.** Photosynthetic and Transpiration Rates as a Function of $CO_2$ Concentration.




Photosynthetic ($P_N$) and transpiration (E) rates as a function of $CO_2$ concentration. Vertical bars indicate one standard deviation. Leaf conductance ($1/r_l$) at compensation point, 200, 500, and 1000 vpm was 0.77, 0.54, 0.34, and 0.17 cm $s^{-1}$, respectively. From: D. L. Regehr et al. (1975).

**Figure 3.** **Carbon and Oxygen Balance- sheets**

Carbon: $F + D = A + B + S.$

Oxygen: $P + Q = 8H + R + \frac{8}{3}(A + S).$

F = Carbon fuel burning,
D = Deforestation and erosion,
A = Increase of $CO_2$ in atmosphere,
S = Increase of $CO_2$ in ocean,
B = Increase of carbon in biomass
and soil in response to A,
P = Decrease of oxygen in atmosphere
Q = Decrease of dissolved oxygen in ocean,
H = Hydrogen fuel burning,
R = Oxidation of nitrogen and sulphur
minus reduction of iron ores, etc.

Known values : $F = 6$, $D \sim 3$, $A = 3\frac{1}{2}$,
$H = \frac{3}{4}$, $R = 1.$

These give

Carbon: $B + S = 5\frac{1}{2}$,

Oxygen: $P + Q = \frac{8}{3} S + 16.$

If we can measure P and Q, we can deduce B and S.

Figure 4. Carbon Dioxide Concentration, Monthly Averages and Seasonal Amplitudes at Mauna Loa, 1958-1988. From Keeling (1989).

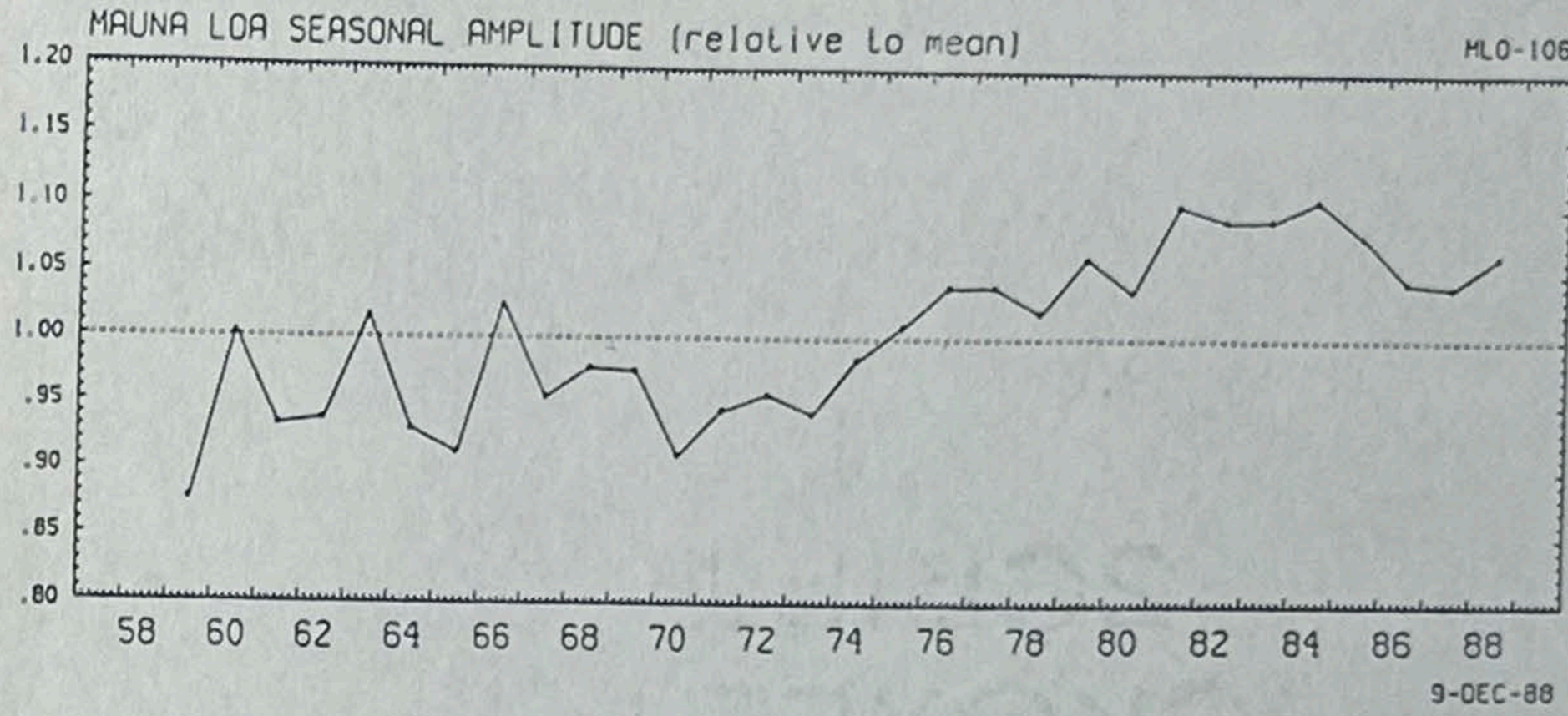



Figure 6

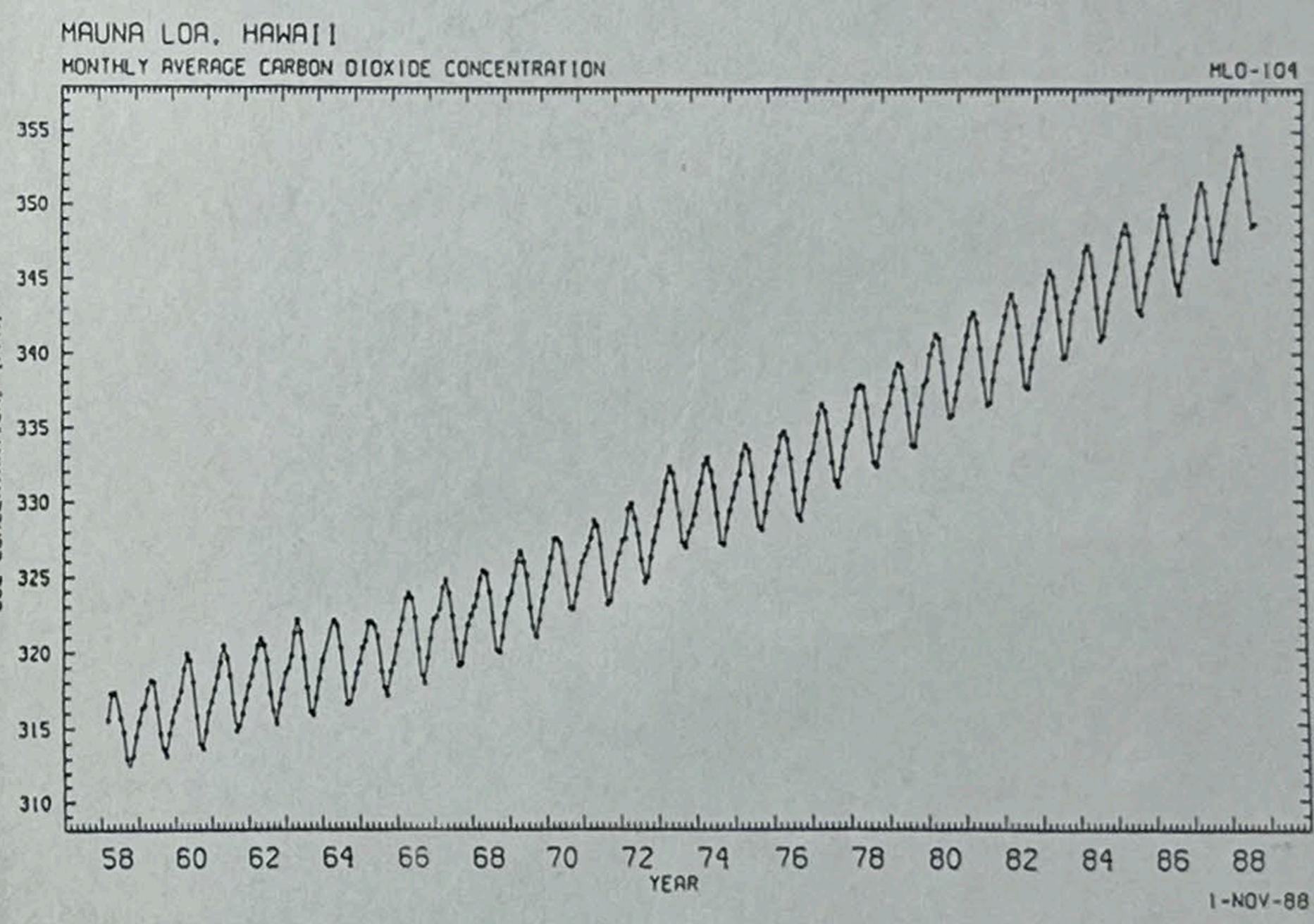
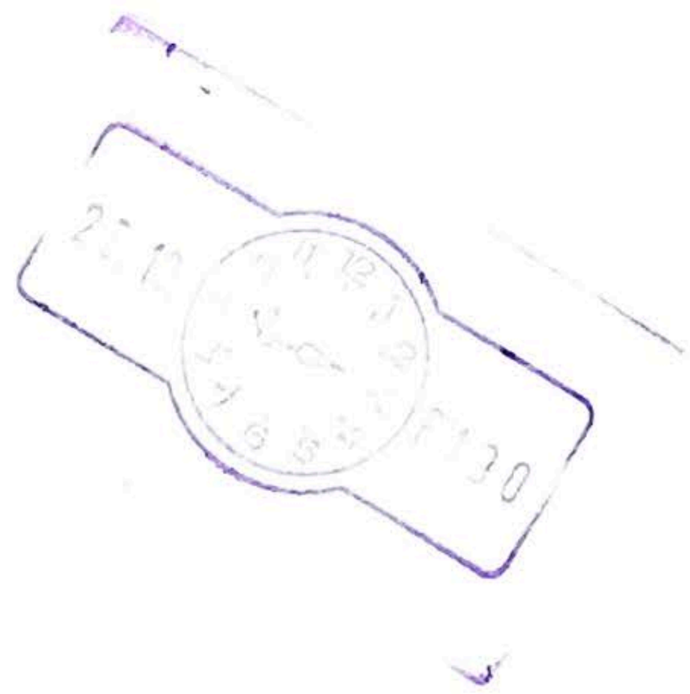



Figure 7



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NOTE FOR THE RECORD

PRIME MINISTER'S MEETING WITH SIR CRISPIN TICKELL

The Prime Minister had a meeting this morning with Sir Crispin Tickell.

Sir Crispin said that he had been appointed a member of a group to advise the President of the United States on aspects of environmental policy, in particular global climate change. The group would meet in Washington next week. It had reached five tentative conclusions:

(i) there would be a process of global warming over the next 30-40 years within the range $+1^0$ - $+4.5^0$. But the tolerances were wide. There are some risk of disaster: and a possibility that there would be no change at all.

(ii) in this situation of uncertainty it was best to put forward policies which were demonstrably useful on <u>other</u> grounds, for instance reafforestation. This approach was being called a "no regrets" policy.

(iii) Government should also adopt the concept of paying an insurance premium against disasters. Sea defences were a good example of this.

(iv) research on global climate change should be more carefully targeted than in the past. At present there was a great deal of overlap.

(v) by itself, global climate change need not pose serious problems. The latter arose only when it was combined with other problems such as the population explosion and deterioration of soil fertility.

The Prime Minister asked Sir Crispin to work these themes into the draft for her speech opening the World Climate Change Conference in Geneva.

The Prime Minister encouraged Sir Crispin to make early contact with the new Chief Scientific Adviser, Professor Bill Stewart.

CDP

CHARLES D POWELL

18 October 1990

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NOTE FOR THE FILE

Subject ce Matter

MEETING WITH SIR CRISPIN TICKELL, 28 JUNE

Sir Crispin Tickell came in today for the first of his meetings with the Prime Minister in his new capacity as her occasional environmental adviser.

He explained that he had asked to take on an occasional role rather than a full-time position because of his other commitments. He had just taken on the Presidency of the Royal Geographical Society and when he left his current post as Ambassador to the UN he would among other things he taking up a position at Green College, Oxford and would become President of the National Academy of Science in the USA. He also mentioned that when Professor Lovelock steps down as President of the Marine Biology Association, he planned to take over this post. A further responsibility was that he was Director of Earthwatch, which is an organisation which gives young scientists the opportunity to travel and take part in specific environmental missions across the world.

The Prime Minister commended Sir Crispin on his job as Ambassador to the UN; and invited him to see her before he finally stepped down so that she could formally thank him for all his work. On the environment, she asked him for his views about the way ahead. She said that she thought that work on the ozone layer and on global warming was progressing reasonably well. Areas which needed more work, she thought, were biodiversity and research into the circulation of the sea, which would have a crucial effect on how global warming manifested itself. The effect of clouds on global warming also needed more work. Sir Crispin warmly welcomed the Prime Minister's decision to announce targets for reducing $CO_2$ emissions. He agreed about the importance of the circulation of the sea's currents. At the end of the last Ice Age, as he understood it, the flow of fresh water into the North Atlantic had, for example, had an enormous effect in diverting currents further south so that western Europe had frozen up but not America.

On the American position, he was critical of the Marshall Report and said that in certain particulars it was certainly not right,

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especially on the effect of sunspots. The man who had carried out much of this work, Lindzten from MIT, had recently emerged very badly from scientific debate about the Report. However the signs from the USA were not all bad. He had learned that Diamond had suddenly awoken to the fact that a green tax might be a powerful weapon in tackling the federal deficit.

Sir Crispin had a specific proposal for getting the developing countries on side. Sir Crispin suggested that these countries would never believe the warnings on global warming unless they were told of this by their own scientists. One of the most useful ways of getting their cooperation would be to help them set up their own research institutes, rather than giving them information. He mentioned that a Chinese scientific paper had been prepared by the Chinese Government as part of their response to the IPCC Report. This had pointed out to the Chinese Government that they had a quarter of the world's population and only 5 per cent of the world's fresh water. The Government were now concerned that global warming would reduce their water supplies. A further fear was that the permafrost in Northern China, on which many buildings had been constructed, would melt with catastrophic results.

The Prime Minister pointed out that if developing countries set up their own research institutes this might only lead to duplication but Sir Crispin said that this was a small price to pay for getting the cooperation of developing countries. The Prime Minister picked up his point about fresh water which she saw as a considerable problem for the future. Sir Crispin mentioned that the major expert in desalination was James Weir in Glasgow. The Prime Minister agreed and said that she thought we would need desalination plants in East Anglia for example. Sir Crispin mentioned the need for greater use of solar energy but the Prime Minister said that she had been told at the Hadley Climate Prediction Centre that solar energy would provide only 3-4 per cent of the world's energy needs. Sir Crispin cast doubt on this and said that he knew of a major solar energy project in California and also believed that ways were being developed of getting energy from lower light levels. The Prime Minister

wondered whether it might be possible to reduce the cost of solar panels and referred to some work being carried out by BP in this area.

The Prime Minister mentioned to Sir Crispin an idea that she had been mulling over of getting young scientists together to look at fresh solutions to environmental problems. Established scientists tended to get stuck in a groove, she thought, and there might well be positive insights and ideas which younger scientists might bring to these issues. What she was hoping to do was to identify the younger generation of Lovelocks.
Sir Crispin agreed and thought that he might well have some suggestions of scientists who might usefully be involved. He stressed that any such meeting would need a good chairman who could marshal discussion and there would need to be a clear agenda, even though scientists should be encouraged to think imaginatively in a wide-ranging way. Some of the scientists he had come across at Earthwatch might be good candidates. The Prime Minister said that she had asked Mr. Patten to consider this further. She might also approach the Royal Society. She might have a dry run at No.10, she thought: a one-day seminar rather like the one she had held on the environment some time ago. Numbers involved would need to be small: 30 at maximum.
Sir Crispin offered to give any help he could when he returned to Britain in mid-August.

Finally, Sir Crispin mentioned that the Prime Minister would enjoy seeing an astro-physicist, Freeman Dyson FRS, who would be over here on 11 October. The Prime Minister agreed that she would see him whenever she could.

After the meeting, Sir Crispin asked whether I would send him any key papers c/o the Foreign Office so that he could be up to speed on environmental issues. He said that he would be in London until 7 July (telephone number 071-289 1898). After that he would be in New York returning here in mid-August.

CAROLINE SLOCOCK

28 June 1990 c:\home\tickell (ecl)

PRIME MINISTER

MEETING WITH SIR CRISPIN TICKELL, 12.30

Sir Crispin has asked to come in to see you while he is in Britain for his first meeting with you in his new role as your occasional adviser on the environment. You may like to ask him whether he has any initial thoughts on particular projects or ideas which he might like to develop. But you may also like to take his views on:

- the US position on global warming and the scope for developing targets of CO2 equivalents;

- the forthcoming Economic Summit;

- your idea of involving young scientists in looking at new ways of tackling environmental problems;

- any particularly interesting research projects you might visit in the year ahead. I understand that it was he who suggested that you should visit to the Scott Polar Research Institute last year.

CPS

Caroline Slocock
27 June 1990