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F A X C O V E R S H E E T

DATE: 17 March 1998
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The Chairman
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Number of pages including cover sheet: 32

Message

Please find attached a one-page letter from Mr. Thorvald Moe, Deputy Secretary-General, together with a 30-page document.

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DE DÉVELOPPEMENT ÉCONOMIQUES**OECD**ORGANISATION FOR ECONOMIC
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TM(98)82

17 March 1998

Janet
Dear Ms. ~~Yellen~~,

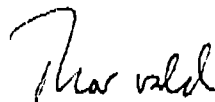
Reference is made to the letter of Secretary-General Johnston to you of 22 December 1997, and my informal meetings with Ms. Blank during Working Party No. 1 in February.

Please find enclosed the final version of "Strategy for Further OECD Work on Sustainable Development" C(98)46 of 16 March. There is a cover note by the Secretary-General and our response to your request for work on climate change is described in some detail in Annex II, pages 13-17. As you see, we will attempt a broad, horizontal effort.

In my opinion, it is extremely important for the quality of the work - and in order to focus on the economic dimension - that the Economics Department (ECO), Working Party No. 1 - which is now chaired by Jean-Philippe Cottis - the EDRC and the EPC itself are importantly involved in this work. This requires priorities as the resource constraints on ECO are getting quite severe.

I have kindly been invited by the US OECD Delegation to a luncheon with you on 26 March and I hope we can touch base on these issues.

Best regards,



Thorvald Moc

Encl: 1

Ms. Janet Yellen
The Chairman
Executive Office of the President
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A STRATEGY FOR FURTHER OECD WORK ON SUSTAINABLE DEVELOPMENT

(Note by the Secretary-General)

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C(98)46

TABLE OF CONTENTS

I. INTRODUCTION.....	3
II. CHALLENGES FOR MEMBER GOVERNMENTS AND THE ORGANISATION.....	5
III. ORGANISATION AND FURTHER WORK.....	6
ANNEX I KEY DIMENSIONS OF SUSTAINABLE DEVELOPMENT	8
1. The Economic Dimension:.....	8
2. The Human Capital and Social Dimension	9
3. The Environmental Dimension.....	11
ANNEX II PROCEEDING WITH CONCRETE PROJECTS	13
1. Further Work on Climate Change	13
2. Other Projects	17
ANNEX III MEASURING PERFORMANCE: ON-GOING OECD WORK ON INDICATORS	20
ANNEX IV ACTIVITIES IN RELATION TO NON-MEMBERS	27
ANNEX V SOME RECENT OECD, ECMT AND IEA PUBLICATIONS RELEVANT TO SUSTAINABLE DEVELOPMENT ¹	30

C(98)46

I. INTRODUCTION

1. Sustainable development is one of five priority areas in my Challenges and Strategic Objectives paper of September 1997 [C(97)180]. The Report of the High-Level Advisory Group on Environment (HLAGE) of November 1997 suggested further impetus to work in this area, and recommended that the OECD "should as a matter of urgency, develop into the key intergovernmental organisation providing the industrialised nations with the analytical and comparative framework of policy necessary for their economies to make the transition to sustainable development". This Report also formulated a number of recommendations as to further work, the most specific being development of the concept of resource productivity, as well as recommendations on how this work should be organised.
2. This Note follows up on my Strategic Objectives paper and gives an initial response - drawing on very useful comments from Delegations - to the report of the Advisory Group, referring as appropriate to past and on-going work. It outlines a strategy for further work, raises some of the challenges faced by member governments and the Organisation, and indicates how to proceed with concrete activities within an overall integrated framework. If the Council agrees with the broad thrust of this note, I will develop with the OECD Directorates, the IEA and NEA concrete proposals within this framework for integrating existing and future work into a broad, horizontal set of activities on sustainable development, and submit a more detailed Progress Report in July for Council consideration.
3. I do not propose to set up a special unit or create new committees. The time frame envisaged is three years, as I intend to present to the Ministerial Council Meeting in 2001, prior to Rio + 10, an overview and synthesis report on the contribution this Organisation and its affiliates have made to sustainable development.
4. A good model for organising major cross-cutting horizontal projects is the ongoing work of the OECD Jobs Study. I have therefore already set up a Sustainable Development Steering Group with myself as Chair, and with Deputy Secretary-General Thorvald Moe as Deputy Chair and co-ordinator of the work. This group should operate flexibly at the Director level, and all Directors involved in the work would participate as appropriate. The Sustainable Development Steering Group will be used as the vehicle for the overall direction and co-ordination of the work, and I will report to Council from time to time on progress.
5. Discussions about the new policy challenges associated with economic development are not new in this Organisation. A first wave of work relevant to sustainable development started more than 25 years ago, with the initiative to establish the Environment Directorate¹. OECD work in this area intensified in the late 1980s and early 1990s, partly as a response to the World Commission's report on Environment and Development (April 1987), and is summarised in: "The Economics of Sustainable Development. A Progress Report" (May 1990).
6. A lot of work related to sustainable development has taken place in the OECD, ECMT and the IEA since then. The Environment Directorate, ECMT and the IEA have contributed jointly to the climate change debate over many years². In the first half of the 1990s the Economics Department became

1 *OECD Council, Guiding Principles concerning International Economic aspects of Environmental Policies, Council Recommendation [C(72)128]*".

2 This is evidenced in the publication on sustainable development issued at the time of the UNGASS in June 1997, to which many parts of the house contributed.

C(98)46

involved in this work. The GREEN model was developed, and economic dimensions and policy responses regarding global warming were analysed³. Annex V lists some recent OECD, ECMT and IEA publications relevant to sustainable development apart from those referred to here.

7. In recognition of their global nature and importance, some dimensions of sustainable development have been a growing element of OECD's work in relation to non-Members. In particular, OECD's policy dialogues and analytical work through the CCNM programmes and the Development Centre, and policy co-ordination through the DCD/DAC and the Club du Sahel have been addressing the economic, environmental and social dimensions of the development of non-Members, including the "Big Five" (Brazil, China, India, Indonesia and Russia). On the environment side, it has involved environmental performance reviews of a number of transition economies, with an ongoing environmental review of Russia; policy dialogue with a wide range of emerging and transition economies, e.g. in the Climate Change Forum; and OECD's Partnership Strategy for the 21st Century, which was adopted by the Development Assistance Committee in May 1996, and is the basic framework for the Organisation's work in development co-operation activities, incorporating developmental goals for economic well-being, social development and environmental sustainability and regeneration.

8. Sustainable development has been broadly defined by The World Commission on Environment and Development [the "Brundtland Commission" (1987)] as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The needs in this context concern three dimensions of sustainability -- economic needs, environmental needs and social/human needs. People derive welfare from each, i.e. from consumption of goods and services, from a clean and well-functioning environment, and from a secure and cohesive social framework. Most would agree that these elements are the key factors to be taken into account.

9. A conclusion from the OECD work in the 1990s is not to attempt to develop a formal definition of sustainable development. However, I think that it will be useful for the OECD to clarify the concept somewhat further. Thus, I suggest that, as we move the work forward, we should address in greater detail: i) what are the necessary conditions for sustainable development; and ii) what are the key elements of sustainable development. In this process we should further develop a more integrated framework for policy analysis in order to arrive at concrete and practical recommendations for Member governments. We should aim at focused, policy-relevant and high-quality products, emphasising the economic dimension and areas requiring international co-operation - while not duplicating work in the World Bank, the UN, the European Commission and other international organisations.

10. As a point of departure, and building on work carried out and ongoing, I propose that we consider three components of sustainable development, namely, the economic dimension; the human capital/social dimension; and the environmental dimension. Energy, and the on-going work of IEA and NEA, is an important part of both the economic and environmental discussion and will be incorporated in the work. Fully exploiting the potential for new technology and more efficient and environment-friendly production techniques will also be an important part of the work. A key objective is to proceed with this work in an integrated manner so as to contribute to a coherent, overall policy framework for sustainable development. See Annex I.

3 OECD (1996), Global Warming. Economic Dimensions and Policy Responses. An update on work on climate change is given in: "OECD Work on Climate Change: Economic Theory and Policy Implementation", Annex 2: Contributions of the OECD to Climate - Relevant Activities (ECO/CPE/WP1(98)7/ANN 2), and "Key issues in the Design of New Mechanism under the Kyoto Protocol: A Scoping Paper", COM/ENV/EPOC/DCD/DAC/IEA(98)1.

C(98)46

11. As a further step, I propose that we develop our horizontal work on sustainable development starting with a number of specific projects, which are outlined in the next section.

II. CHALLENGES FOR MEMBER GOVERNMENTS AND THE ORGANISATION

12. The integration of economic policy with environmental and social concerns is a major challenge for governments aiming at sustainable development. The implication of the concept for work in the OECD is that committees and the Secretariat - and ultimately Ministers - need to view this particular concern through a broader, multidisciplinary prism than they have done in the past. This is effectively an extension of my triangular paradigm of "carefully balancing economic growth, social stability and political stability which is necessary to achieve the economic and social progress for which OECD was created" [C(97)180, paragraph 15]. In this respect let me come back to the first Article of the OECD Convention which mandates the Organisation "... to promote policies designed ... to achieve the highest sustainable growth and employment and a rising standard of living...". I would hope that there is general agreement that environmental considerations need to be an important element in this context, and that it is also important to focus on social considerations and hence the longer term welfare of our populations.

13. A major thrust of the HLAG report was to ask the OECD to develop a framework for the successful integration of economic, environmental and social policy, which is necessary for making the transition to sustainable development. I feel that the OECD - in close co-operation with the IEA and the NEA - is well equipped with broad, multidisciplinary expertise to assist Member governments in this task. Work on dimensions of sustainable development encompasses the full range of activities of this Organisation. Macro and micro-economic analysis; extensive experience on environmental matters; labour markets, education, health and social policies; agricultural and fisheries policies; energy policies; technological development and development co-operation. Our outreach activities give a necessary dimension for global co-operation. The challenge confronting the Organisation and its affiliates is that of moving beyond a narrow sectoral approach to policies, and of making greater use of synergy between these different competences. Our response should involve the harmonisation and integration of policies addressing economic, social and environmental objectives.

14. I propose that we develop and intensify our horizontal work on sustainable development by elaborating on and commencing four specific, concrete projects. First, work on climate change will address a number of issues which are raised by the agreement reached in Kyoto. Second, getting prices to reflect the social costs of environmental damage is an important priority of sustainable development; hence the importance of a horizontal review of the environmental impact of economic subsidies. Third, provided the signals delivered by incentives built into the system are improved, the potential for solutions to environmental degradation arising from new knowledge, from product and process innovation and from advances in technology is considerable; collaboration among a number of OECD Directorates and the IEA and the NEA will be important for this work. This could throw light on eco-efficiency and resource productivity. Fourth, measuring performance through indicators of the economic, social and environmental dimensions has been an on-going activity in the OECD: providing an analytical framework and an integrated overview - without embarking on large new projects - would be a contribution and is an objective of further work. The project on climate change is further detailed in Annex II. The other three projects are briefly outlined in the last part of that Annex. They will have to be elaborated on and further specified, which I propose to do in my first Progress Report to Council in July.

C(98)46

III. ORGANISATION AND FURTHER WORK

15. While sustainable development will be a major horizontal activity for the next three years, a number of intermediate outputs will be produced as the work moves along. A key objective would be to produce in an integrated manner across Directorates, the IEA and NEA consistent policy analysis and concrete and pragmatic recommendations to be used in several ways:

- As objective and high quality analytical inputs to on-going international processes of considerable economic importance, e.g. the Climate Change negotiations.
- As a point of departure for strengthened co-operation with non-Member countries, focusing perhaps on a few key aspects of global relevance in some of the "Big Five".
- As a basis for peer reviews of overall national policies towards sustainable development in a number of Member countries, drawing as appropriate in an integrated manner on economic, environmental, energy and social/ educational reviews. (Annex I countries will have to develop national policy strategies according to the Kyoto Protocol).
- To throw further light on the environmental interface with important sectoral policies pertaining to agriculture and fisheries, energy and transport. Regional and local aspects could also be explored at a later stage and incorporated in the report to the Ministerial meeting in 2001.

16. If the Council agrees with the strategy for further work on sustainable development outlined in this note, I will establish a more detailed overall framework for the work that will be carried out over the next three years, and present the Council with a first Progress Report containing proposals for further specific work in July this year.

17. The work will be co-ordinated - as mentioned in paragraph 4 of section I - by a Director-level Steering Group (SD Steering), and I intend to keep the Council fully informed and present progress reports at regular intervals. As intermediate outputs emerge, they will be presented to relevant committees and working groups, and it may also be appropriate to arrange joint meetings of senior officials representing economic, social and environmental expertise from different ministries in capitals. I may also ask Chairs of the most involved committees and working groups to joint meetings - as was done with the OECD Jobs Study.

18. A cautious, gradual approach to develop the OECD external relations on work on sustainable development, be it the social partners, the NGOs or Parliamentarians, is suggested. We should continue to use BIAC and TUAC as appropriate, develop our relationship with the World Business Council on Sustainable Development (and perhaps others) in a pragmatic way, and include NGOs in meetings where their inputs are valuable. As we develop the major projects further, we should consider whether a more explicit multi-stakeholder approach would help to ensure higher quality products. We should also be conscious of enhancing the transparency of the work. Parliamentarians do come to the OECD on an *ad hoc* basis today. They should be briefed as they come, and according to their interests.

19. As we move along, we should also reflect further on our information/publication strategy regarding sustainable development. The wealth of material on sustainable development attested to in the Annexes needs to be integrated and presented in a more coherent and visible way, so as to be of maximum help in formulation of policies for sustainable development in Member countries.

C(98)46

20. I will come back to the Birkhofer Report on the future of the OECD Nuclear Energy Agency at a later date.

21. The Secretary-General invites the Council to adopt the following draft entry in its Summary Record:

THE COUNCIL

- a) noted document C(98)46;
- b) noted that this document would be presented to the next meeting of the Economic Policy Committee on 26 and 27 March 1998, the Environmental Policy Committee at Ministerial level on 2 and 3 April 1998, and the Meeting of the Council at Ministerial level on 27 and 28 April 1998;
- c) noted that a first Progress Report would be presented to the Council in July 1998.

C(98)46

ANNEX I

KEY DIMENSIONS OF SUSTAINABLE DEVELOPMENT

22. The sustainable development concept has placed emphasis on the links that may exist between economic, social and environmental concerns, bearing in mind that such links are complex and that whether there is complementarity or substitutability will depend importantly on the specific circumstances of each case. It has put the focus on welfare more broadly rather than just economic growth, and on equity considerations and the need for governments to address threats to the global "commons". It is important, in this context, to ensure that economic policy considerations take into account environmental and social policy concerns, and vice-versa, while fully exploiting the potential for new technology and more efficient production techniques. The notion of purely economic sustainability -- for example, saving and investment behaviour by current generations that will permit future generations to enjoy appropriate economic living standards and suitable institutional frameworks such as pension and health systems which are viable over time -- is certainly not sufficient for ensuring the maximisation of welfare over the longer term.

23. Full integration of economic policy with environmental and social concerns and full exploitation of the potential of new technology are an essential requirement for governments aiming at sustainable development. The economic, social and environmental dimensions are further elaborated below.

I. *The Economic Dimension:*

24. The intensified interest in environmental and social problems in economic policy discussions can be attributed to a growing awareness that such problems have economic dimensions that must be brought to the forefront in order to enhance social welfare. In practical terms, however, what does this mean as regards the economic dimension of sustainable development?

25. A major cause of environmental degradation is the presence of external environmental costs and the lack of well-defined property rights. Open access to many environmental resources, which are regarded as common property by economic agents, means that agents lack incentives to take the full costs of environmental degradation into account. A key factor in an effective pursuit of sustainable development is thus "getting the price right". The divergence of the private costs of an activity from the social costs, which characterises the use and hence misuse of many environmental resources, notably air and water, means that the desired mix between environmental amenity and the production of goods is not achieved by market forces under *laissez-faire* conditions.

26. Unless prices for raw materials and products properly reflect the social and environmental costs and benefits, and unless prices can be assigned to air, water and land resources that presently serve as cost-free receptacles for the waste products of society, resources will be used inefficiently and environmental pollution will likely increase. Hence, "externalities" need to be internalised either through the price system or by establishing property rights. The Polluter Pays Principle (PPP), established by the OECD governments in the 1970s, was aimed at dealing with one part of this problem but is by no means easy to apply, given the difficulties in estimating social costs. Valuing and dealing with environmental benefits is even more challenging. The acceptance of PPP -- even though it has not been fully applied -- and the increasing use of economic instruments, as well as the examination of subsidies harmful to the environment, seem to indicate the increasing awareness that economic considerations must be factored into the setting of environmental policy. An example is the ECMT Task Force on the Social Costs of

C(98)46

Transport, which completed its work in 1998, establishing a common basis for the examination of external costs, reviewing methodologies and estimates of transport externalities, and making recommendations on the mix of policy instruments (both economic and regulatory) for internalising them.

27. With energy being a fundamental element in economic development, a key question is whether energy demand growth can be compatible with sustainability. This depends on the level of economic activity, the composition of outputs as well as the technology and fuel mix. The IEA has been working in this area to provide a comprehensive understanding of the relationship between energy and growth, and in particular the relation between CO₂ emissions from energy and economic development, taking into account several technological issues (see below).

28. The substantial resources involved as a result of policy measures to enhance developments in the environmental and social dimensions, and thereby the opportunity costs in terms of economic development, present a strong argument for pursuing these targets in the least cost way. In terms of environmental protection, it is important that the extra benefit in terms of improved environment for each extra resource spent is equal across various fields. Previous OECD work has illustrated this clearly in the case of measures to alleviate climate change. Concentrating a given overall emission cut in a few countries, where the costs of abatement are high, leads to an economic loss for the world as a whole compared to the situation where emission cuts are distributed so that their marginal costs are similar across countries.

29. The main economic instruments in this field, environmental taxes and tradeable permits, can be used to improve economic efficiency while meeting environmental objectives, though they also give rise to distributional implications. Used within a country, the revenues obtained through such taxes or the proceeds of selling off permits may allow governments to reduce other taxes that distort economic behaviour and thereby possibly reap a double dividend in the form of improved economic performance. Used across countries, these instruments can be used to ensure lower-cost outcomes. Wide involvement of non-OECD countries is desirable for minimising the costs of emission reductions; and necessary to achieve the objective of containing global emissions in the longer term within acceptable limits. But securing limitation commitments from developing countries is a highly political issue, which will only be successfully tackled by persuading these countries that such commitments serve their own self-interest.

30. Sustainable development must be seen in a dynamic and long-term perspective. Integrating sustainability criteria and objectives into economic strategies, in particular into investment decisions, requires integration of the time dimension, for instance by applying an appropriate discount rate. Current conventional discounting practices should therefore be assessed from the point of view of their impact on sustainable development.

2. *The Human Capital and Social Dimension*

31. Work on the human capital and social dimensions of sustainable development is particularly important in view of:

- the *changing nature of the OECD jobs*, with rising skill requirements, the implication of worsening employment opportunities for low-skilled workers, and the need for substantial investment in human capital formation;

C(98)46

- the *continuation of high and persistent unemployment* in many countries, an indication of chronic under-utilisation of human resources;
- the desire to *minimise the extent of poverty and social exclusion*;
- *ageing populations* in OECD countries and the implications this has for prospective living standards, income and wealth distribution, and government expenditures.

These phenomena have a significant, but as yet not fully understood, effect on trends in consumption, which deserves further exploration in view of the latter's environmental impact.

32. The need for an integrated approach to policy is important in the area of social and human capital. One partial approach, often used in the assessment of social insurance programmes, defines sustainability in narrow financial terms, e.g. that anticipated payments should be covered by anticipated contributions to the scheme. A more comprehensive approach to sustainability should take into account other concerns, e.g. social expectations, the effectiveness of social programmes in meeting their objectives, and their efficiency and employment impacts. "Balance" is the key for governments in achieving sustainability of social programmes: too little social expenditure may result in poverty and inadequate human capital formation; too much social expenditure could provide excessive public benefits which do not generate worthwhile outcomes, reducing incentives for private provision and lowering work incentives.

33. The equity/efficiency trade-off perceived by many countries with their social, education and labour market policies is central to the identification of sustainable policies. This trade-off is one of the major social policy issues facing OECD countries (to be discussed by Social Policy Ministers at their meeting at the OECD on 23-24 June 1998). However, the policy choices are more complex as equity goals -- an adequate and sufficient income, health care and learning opportunities for all -- cannot be met in a shrinking economy. And 'growth in aggregate incomes from which significant sectors of society are excluded is illusory: it is "growth" in only a statistical sense if a growing pall of insecurity and social tensions leads to a consensus that society is regressing, not progressing.

34. An important challenge is to identify as precisely as possible key points of sustainability, which will differ between countries on the basis of their prevailing social institutions, social norms and employment experiences. A substantial body of work is now available on the nature, effectiveness and deficiencies of education, labour market and social policies:

- In the education area, positive links have been found between investment in skills, on one side, and economic growth and social cohesion on the other, though there is still uncertainty over the nature of the linkages. Outcomes such as lower unemployment, higher productivity, better health, more environmentally responsible behaviour, lower crime and higher levels of social participation are all associated with more education and training. Long-term economic growth is not sustainable without major and continued efforts by individuals, organisations and governments to invest in human capital through lifelong learning. To produce substantial benefits for individuals and society, education and training investments must be well directed towards a broader range of economic and social goals.
- The follow-up to the OECD Jobs Study has produced detailed recommendations for countries to reduce high and persistent unemployment and tackle the problems of low pay and poverty;

C(98)46

these recommendations assign major roles to education and training, labour market and social policies. Implementation is being monitored by a range of committees.

- We now have a good understanding of the nature of social programmes and recent reforms in OECD countries, as a result of the Caring World synthesis project and the on-going social assistance reviews in selected countries. This work will be reported to Social Policy and Health Ministers at their meeting in June 1998.

3. *The Environmental Dimension*

35. OECD Member countries have made significant achievements in environmental policy in recent decades. Reductions in emissions of sulphur dioxide and ozone-depleting CFCs, for instance, reflect successful national and international policy-making processes, informed by careful scientific research. However, major environmental difficulties remain to be solved. A number of OECD Member countries' energy use and associated CO₂ emissions show an upward trend. A variety of local problems remain concerning waste disposal, water supply and water pollution. Globally, deforestation and the depletion of some fish stocks are continuing.

36. The ecosystem can be viewed as a life-support system whose functioning is essential to human and other species' survival. The need to maintain its integrity for present and future generations, as expressed in the Brundtland Report, provides a set of boundary conditions for economic development. These conditions centre on ensuring that disturbances to ecosystems are not beyond such bounds and do not therefore serve to adversely influence economic, social and environmental conditions. This has led to the following principles for setting policy:

- Limiting the release of substances to rates within the absorption capacity of the environment — this principle has been applied, for example, in international agreements on sulphur emissions, national regulations on water pollution, and national regulations on radioactive emissions based on international guidance;
- Managing renewable resources in a manner that ensures maintenance of their ecological functions — this principle has been applied, in some cases, to forestry and fish stocks;
- Managing non-renewable resources in a manner that preserves their ecological function within the potential of renewable resources to replace them — this principle is beginning to be applied, for example, to soil management in some countries.

37. The application of these principles requires the critical levels of resource use or pollution that would lead to irreversible damage to human health or ecosystems to be identified. The causal links between some activities and their environmental and human health impacts have been clearly demonstrated, for example in the case of lead from gasoline or CFCs. Others remain the subject of scientific uncertainty. The Precautionary Principle, which formed part of the 1992 Rio Declaration signed by virtually all the world's nations, provides a basis for coping with this uncertainty, such that lack of full scientific certainty about threats of serious or irreversible damage should not be a reason for inaction.

38. In a sustainable development perspective, environmental protection has to be balanced with economic growth when these are in conflict, although policy should be aimed at integrating environmental concerns with economic and social imperatives and, whenever possible, exploiting complementarities. Hence, the application of environmental principles must be put into a cost-benefit framework, because

C(98)46

ecosystems and natural resources cannot be protected regardless of the cost to society. The overarching objective is to maximise human welfare, and provide a sound economic, social and environmental base for future generations.

39. A mix of different instruments will be necessary to ensure the most cost-effective means of achieving such aims. As mentioned in the remarks on the economic dimension, the presence of environmental externalities and hence the divergence between private and social costs requires a range of measures which attempt to take account of these factors. Since Council's recommendation in 1972 on the application of the Polluter Pays Principle, numerous OECD reports have examined its practical implications, and reviewed experience with economic and other instruments.

40. A considerable effort has been made in Member countries and in the Organisation to develop methods for evaluating environmental damage costs or externalities. In principle, these costs can be internalised through environmental taxes. Placing values on environmental goods and services also allows, in theory, for their inclusion in national accounts, forming a better basis for policy strategies. Alternatively, risk analysis allows the application of concepts such as environmental "options" or "insurance". Environmental criteria can also be introduced into economic processes as boundary conditions. In this case, the most common policy solution so far has been regulation, although there is also a role for economic instruments in ensuring that such constraints never bind. Again, the OECD has carried out a great deal of analysis of the theory and practice of the various policy instruments.

41. Several horizontal OECD studies have to some extent examined the relationship between environmental, economic and social priorities with regard to specific issues. These include the work on employment and the environment, trade and the environment, agriculture and the environment, sustainable fisheries, "Regulatory Reform", "Linkages" and "Globalisation".

C(98)46

ANNEX II

PROCEEDING WITH CONCRETE PROJECTS

42. It is proposed that we develop and intensify our horizontal work on sustainable development by elaborating on, and commencing the following specific, concrete projects:

- Climate change.
- A cross-organisation review of subsidies
- A cross-organisation project on technology development
- An integrated review of indicators of performance

The project on climate change, which builds on existing work in the OECD and the IEA, in response to proposals from the US authorities in the context of the Economic Policy Committee, is further specified below. The other three projects are briefly outlined in the last part of this Section. They will have to be elaborated on and further specified, which I propose to do in my first Interim Report to Council in July.

1. Further Work on Climate Change

43. The agreement reached in Kyoto raises a number of issues which should be covered by future work. These concern basically the following areas:

- Issues of clarification and implementation
- Effects of achieving the Kyoto targets
- Moving beyond Kyoto

Work in these three areas will involve a number of OECD directorates, as well as IEA and NEA. While climate change is likely to remain on the agenda for the foreseeable future, this project will be organised on a three-year time-frame. Through this period intermediate outputs will be produced, and strategic check-points will allow course corrections to be made.

Issues of clarification and implementation

44. The Kyoto Protocol established both a set of targets for future emission reductions to be achieved by Annex 1 countries and a set of mechanisms for achieving these targets. However, the Protocol also raises a number of questions concerning the exact meaning of both targets and mechanisms for reaching them. In the near future, countries will have to find ways of agreeing on the exact interpretation of its various clauses, and the OECD may continue to be a venue for such discussion.

45. The economic costs of implementing the Kyoto agreement will, to a large extent, depend on the use of the flexibility mechanisms built into the protocol. These include, apart from possibilities for achieving least-cost emission cuts by differential cuts in the six gases covered, the use of sinks and of joint attainment of emission targets (or "bubbles"), joint implementation mechanisms and banking of unused emission rights.

C(98)46

46. While there has been some experience with the use of economic instruments to deal with environmental issues at the national level, the use of these flexible mechanisms at the international level raises questions of how they should be implemented, and of how to achieve low cost, reliable monitoring and verification of emissions. There is also a wider need to monitor and ensure compliance with the targets established under the Protocol.

47. Costs will also depend on how individual countries go about achieving their national targets. Use of the new mechanisms under the Protocol is to be accompanied by domestic action. The choice of policy instruments at the domestic level will determine the overall environmental effectiveness, economic efficiency and equity of implementation strategies. The OECD is a traditional venue for Member countries to exchange policy experience, to review domestic strategies and identify good practice. In the coming years, the OECD may be an important venue for such an exchange to occur on climate change policy as countries move forward to implement Kyoto.

Effects of achieving the Kyoto targets

48. The effects of achieving the Kyoto targets will depend on how much use is made of the flexible mechanisms built into the agreement and on the way countries go about implementing emission cuts domestically. Demonstrating the different economic impacts of achieving the desired emission cuts depending on the use of mechanisms will be part of the OECD work programme. In addition to overall production and income levels, economic structures, trade patterns and transfers between countries will be affected.

49. At the same time as affecting the economic dimension of sustainability, the emission cuts to achieve the Kyoto targets will have implications for the human/social dimension in that wealth and income distribution will be affected. Depending on how implementation takes place in individual countries, the domestic distribution of real incomes will be affected. Moreover, there will be an impact on income distribution between countries. A particular issue in this context is how international investment patterns may be affected and how international technology flows will respond to the implementation of the agreement, including the clean development mechanism.

Moving beyond Kyoto

50. Over the longer term, emission cuts concentrated on Annex 1 countries will both be costly in terms of economic loss and insufficient to contain climate change. Thus, dealing effectively with the challenge of climate change over time will have to involve a wider set of countries. This raises some difficult issues. First, developing countries may not perceive it as being in their interest to incur economic costs to achieve emission cuts that will benefit the much richer Annex 1 countries. Second, since existing greenhouse gas concentrations reflect, to a large extent, past emissions by Annex 1 countries, asking non-Annex 1 countries to contribute to future emission cuts on an equal footing with the Annex 1 countries may be perceived as unfair. Third, the benefits of achieving emission cuts will not be equally distributed across countries since the costs of climate change differ across countries.

51. Against this background, incentives will have to be created for the integration of more countries into future agreements to cut greenhouse gas emissions. These incentives may take different forms, such as side payments, or could be integrated into initial allocations of tradable emission permits. One important aspect of future OECD work will be the examination of what incentives are necessary to achieve in the future more broad-based agreements, and on how such incentives can be established.

C(98)46

52. Another important aspect of future work will be to look to the long term and to consider how to assist OECD Member countries to achieve deeper reductions in greenhouse gases. Long term solutions to climate change can only be achieved through technical and social change in individual countries. OECD countries are an important source of technological and social innovation and, in particular, can play a critical role in making climate friendly technologies available for the future. OECD may play an important role in assessing alternative OECD policy strategies to achieve the technical, social and behavioural change needed to reach long term greenhouse gas reduction objectives.

Integrated work by the individual directorates involved

53. This work programme will begin by developing a common approach to the above issues, and will involve several Directorates, the IEA and the NEA, working in close collaboration and under the guidance of a co-ordination group chaired by the Deputy Secretary-General responsible for this project. The relevant committees will discuss individual pieces of work which will fit into the overall project. Committee discussions and the papers that feed into them may be considered both as final outputs of individual pieces of work and as intermediate inputs to a final report on the current phase of this work which will be delivered to the OECD Ministerial Council Meeting in 2001. Main lines of the work undertaken by individual directorates are briefly outlined below.

- ECO's work will follow a three-stage process. A first stage, lasting until spring 1999, will include a general evaluation of the Kyoto agreement focused on its macroeconomic effects, a review of implementation issues, and an assessment of how incentives can be established for a wider set of countries to participate in future agreements. The main vehicles for the vetting of this work will be WP1/EPC. A second stage, continuing through year 2000, will review the policies pursued by individual countries to implement the agreement. It will be based in part on the first-phase work for WP1 and should be examined by EDRC as part of that committee's work on how countries move towards sustainable development in the environmental dimension. (The analytical framework for the non-climate change elements of these country reviews will also be provided through WP1/EPC, and will draw on work by a number of other directorates.) The third phase, which will feed into the report for the 2001 Ministerial, will consist of drawing out the cross-country implications of the review of individual countries' progress and will be considered jointly by WP1/EPC/EDRC.
- ENV will consider climate change along two main lines: first, on the international dimension of climate change focusing on input into UNFCCC and the Kyoto Protocol and second on domestic policy options and strategies. Along the international dimension, ENV will contribute analysis on emission trading and other implementation mechanisms and help to advance monitoring and compliance under the Protocol, including support for the joint IPCC/OECD/IEA programme. The second line of work will concentrate on domestic policy options and strategies with an initial focus on environmentally sustainable transport. Beyond looking at transport, ENV will also assess government purchasing policies, domestic tradable permit systems and compensation policies to redress the distributive effects of climate change responses. The work will be undertaken by the Environment Policy Committee drawing on its subsidiary bodies and the Annex 1 Expert Group. The Forum on Climate Change, which is a horizontal activity, and provides for multi-stakeholder participation, is also an important means of identifying emerging issues and sharing experience on promising domestic policy options.

C(98)46

- DCD will lend its support to a review of the implications for development co-operation of the Climate Change Convention. This work, undertaken by the DAC Working Party on Development Co-operation and Environment, will seek to identify practical ways for donors to help developing countries meet their obligations under the Convention. Building on the existing body of work in the area of capacity development for cleaner production, emphasis will be placed on exploring new financial mechanisms and opportunities for public-private partnerships.
- AGR is examining the contribution of agriculture to greenhouse gas sinks and emissions (for which indicators are also being developed), and is planning to analyse the possible impacts of climate change on agriculture.
- The CCNM programmes include policy dialogue in relation to climate change, which is described in Annex IV.
- The Development Centre has recently produced a draft paper using the GREEN model to simulate various scenarios for the Kyoto Protocol. Further work in this area could be envisaged, as needed by the Organisation in preparation for COP4 and beyond. A comparative modelling project, involving Member countries and outside experts can also be envisaged.
- ECMT has completed a survey of policies adopted in OECD/ECMT countries to reduce CO₂ emissions from transport, and this will be followed up with work to assess their impact. Following the adoption of a joint declaration of Ministers and Industry Representatives on reducing CO₂ emissions from new passenger cars, work will be undertaken to monitor the implementation of the agreement.
- The IEA will contribute, inter alia, with an in-depth study of relationships between CO₂ emissions from energy and economic growth, using IEA data covering about 140 selected countries and region. The IEA is following a five-part approach to the energy aspects of Kyoto; explaining the Protocol; elaborating the new mechanisms; identifying the energy challenges and opportunities; designing policies and measures; and engaging non Annex 1 countries.
- The NEA will consider the implications of targets for emission reduction on nuclear energy use. Seventeen of the Annex 1 parties generate a fifth or more of their electricity from nuclear sources, with eight of them having a nuclear contribution of two-fifths. It is estimated that current use of nuclear energy avoids the addition of a further 8 per cent to the world's emissions of carbon dioxide from energy production and use. For many countries significantly relying on nuclear energy, meeting targets for emission cuts will probably require maintaining as many as possible of their current nuclear power plants in operation, for their full expected or licensed lives if not beyond. Two factors that will have a large influence on the availability of nuclear electricity in the next two decades are technology and economics of life extension, and public attitudes to nuclear energy if there continues to be a lack of satisfactory demonstration of spent fuel disposal. The NEA is working with its Members on the technological and economic aspects of plant life time extension, and spent fuel/highly radioactive waste management and disposal.

54. Work by the individual directorates will proceed based on co-ordination and collaboration. This will include exchanges of comments and ideas at the initial stage of designing individual pieces of work,

C(98)46

through the work process, and when outputs become available. To ensure that co-ordination and collaboration will proceed smoothly - and that intermediate outputs are consistent - the consultation group on Climate Change chaired by the Deputy Secretary-General, already established, will co-ordinate this activity. The group will report as appropriate to the Steering Group on Sustainable Development chaired by the Secretary-General. One will also aim at joint committee meetings as appropriate.

2. *Other Projects*

Environmental impact of economic subsidises

55. A second project under the sustainable development initiative would deal with the environmental impact of economic subsidies and resource pricing. "Getting the price right" was suggested as a crucial factor in the effective pursuit of sustainable development. The suggestion is for the OECD to launch a project under the sustainable development initiative that deals horizontally across the Organisation (for example, ECO, ENV, AGR, IEA, others) with the critical issue of subsidies, building upon, for example, the recent report on "Impacts of Economic Support Measures on the Environment" that will be submitted to the Council at the Ministerial level. There is much experience on measuring and analysing subsidies in the OECD. This topic is central not only to sustainable development and follow up to Kyoto, but also to the strategic goals of regulatory reform, market liberalisation and global investment. In doing so, it would have to be recognised that not all subsidies are inherently "bad", since they may be put in place to meet different types of policy objectives, and their removal may disproportionately affect some groups in society; indeed, new subsidies and incentives may be important elements of governments' policy packages to meet Kyoto targets and sustainable development goals.

Impact of technology progress

56. Provided the signals delivered by incentives built into the system are right, the potential for solutions which will enhance resource productivity arising from new knowledge, from product and process innovation, from advances in technology, and from social innovation is considerable. This would involve technologies for more efficient conversion of energy, more efficient processes for product manufacture, redesign of product composition to use less material and energy, re-conceptualisation of the service (product) being offered to seek radical reductions in materials consumed both during production and over the entire lifetime of use. At the same time, the potential implications for the sustainable use of resources resulting from developments in biotechnology, GMOs, and the use of hormones in agriculture, fisheries and human health, present challenges to policy makers. Two dimensions of OECD work in this area will be important: how to get the signals right; and how to maximise international sharing of relevant knowledge, transfer of key innovations, and co-operation in the development and application of suitable advanced technologies.

57. A coherent effort is needed to ensure that incentives delivered by framework conditions (taxes, subsidies, resource pricing), and national innovation systems are conducive to increasing resource productivity. This will stimulate much-needed technological developments to improve the efficiency of energy transformation and of natural resource use in the full range of human activities. Progress on these fronts will be essential if we are to meet global targets for reducing greenhouse gas emissions while

C(98)46

bringing about the targeted reductions in poverty and general improvements in quality of life⁴. Initiatives to stimulate technology developments will, however, succeed only if the social and cultural context in which they take place are properly understood and factored into policy-making. The Climate Technology Initiative (CTI) offers particular opportunities for international collaboration.

58. The importance of the link between technology and sustainable development was recognised as one of the top priorities for further work at an informal OECD workshop of experts in October 1997 on the subject, *Economics of Sustainable Development: A Next Generation Work Programme for OECD*. Participants agreed that new innovations are likely to be among the most important mechanisms to de-link economic growth from environmental degradation and should thus be one of the areas to which OECD should give highest priority.

59. A horizontal project could investigate the impact of technology progress, international R&D collaboration and market diffusion of new technologies conducive to enhancing resource productivity, against a backdrop of new global environmental challenges and changing concerns on energy security. This may include: identifying best policy practices in innovation strategies in support of sustainable development, encompassing the effects of different environmental policy instruments on technology progress; identifying and assessing the potential environmental contribution of new technologies; advancing the use of new technologies (such as bio-technology) for cleaner industrial products and processes. A possible IEA contribution on the role of energy technology could focus on the clean and efficient use of fossil fuels; renewable energy sources; and improved efficiency at all stages of the energy cycle, from production to consumption.

Work on indicators of sustainable development

60. A large number of indicators is already available in the OECD -- or in the course of being developed -- which are relevant for an assessment of progress towards sustainable development. These include standard economic indicators and indicators of structural reform, used in the context of EDRC reviews; social indicators, first introduced in the late 1970s and early 1980s, and more recently indicators of education and human capital; environmental indicators, used in Environmental Performance Reviews, and agri-environmental indicators; indicators on energy use, undertaken by the IEA; development indicators undertaken by DAC; and, more generally, indicators on subsidies and taxes, including PSEs in agriculture, relevant to framework conditions for sustainable development. Some of these are described in Annex III.

61. Although the OECD has been in the forefront in developing indicators of performance in the economic, environmental, and social domains, a concerted effort will be needed to improve analytical soundness, relevance and timeliness of indicators in several areas. Indicators are particularly needed to link, at the sectoral level, economic activities and environmental and natural resources; to link the environment and social factors (e.g. pollution and health, income and other social indicators); to improve the quantitative understanding of issues of particular concern, such as biodiversity, waste, toxic contamination, water use and quality, and soil erosion; and to measure the implementation and results of policies. In this process, the OECD would aim at developing, in an integrated and manageable way,

4. The transport sector is responsible for 25 per cent of global CO₂ emissions from fossil fuel use, and emissions are expected to double by 2020 in the absence of new mitigation measures. Innovation to reduce vehicle energy intensity and to switch to alternative fuels could dramatically reduce emissions; only 10-40 per cent of emission reductions are estimated to be achievable without increasing the overall cost of transport. [Michaelis, 1997, Sustainable Transport Policies: CO₂ Emissions From Road Vehicles].

C(98)46

indicators of performance; these indicators would be used to improve policy analysis of key aspects of sustainable development in OECD countries and contribute to better integrated policies. While the selection of an appropriate set of indicators requires an improved analytical framework and understanding, an iterative process where work on indicators inspires work on the analytic framework, and vice versa, seems a good approach.

62. An OECD in-house task-force should be established with the mandate to agree on a limited and manageable set of indicators covering key aspects of the three dimension of sustainable development, to recommend on their integration, and to advise on their use in the context of country reviews to monitor progress towards sustainable development. This body should build on existing OECD work, as well as on national and international work being developed in this field (e.g. in the UNCSO and the World Bank). A synthesis of this work should be presented in the context of the above mentioned OECD Report on Sustainable Development to the Ministerial Council Meeting in 2001.

C(98)46

ANNEX III

MEASURING PERFORMANCE: ON-GOING OECD WORK ON INDICATORS

63. Indicators have three basic functions: simplification, quantification, and communication (policy influence). They simplify complex phenomena to make them quantifiable, so that information can be easily communicated. In the context of work on sustainable development, indicators aim at measuring socio-economic and environmental variables in a way so as to allow an integrated approach to policy. How to best achieve this integration is an open issue. Attempts to integrate the environmental impact of economic activities within the traditional system of economic accounts raise difficult and controversial problems for the monetary valuation of environmental resources which command no market values. More broadly, development goals of equity, cultural aspiration or political stability are difficult to quantify and impossible to value in monetary terms. While synthetic indexes of 'human' developments have been developed outside the OECD, the loss of transparency due to arbitrary assumptions and aggregation of these various dimension of sustainable development makes such approaches impractical. An alternative route is that of developing a manageable set of indicators, covering the most important dimensions of sustainable development, and using it to assess progress towards sustainable development.

64. Indicators currently available in the OECD -- or in the course of being developed -- which are relevant for the assessment of progress towards sustainability are presented below for specific types of resources, such as the environment and natural resources; and human capital, including knowledge, skills and health status of the population. Some of these indicators are developed at both national and sub-national level. Indicators of progress towards sustainability for developing countries, agreed by DAC, are also presented.

Environment

65. A programme on environmental indicators was initiated at the OECD in 1990, following a request at the 1989 G-7 Summit. This programme has led to the definition of a conceptual framework, to the selection and measurement (for a number of countries) of a selected set of indicators and to their regular use in the OECD analytical work and environmental performance reviews. Indicators that measure progress in environmental conditions and trends, i.e. the OECD Core Set of environmental indicators, are shown in Annex III, Table 1, grouped according to the environmental issue they address. These indicators may be separated into indicators measuring *pressure* on the environment due to human activities; indicators of *environmental conditions*, relating to the quality and quantity of the environment and of natural resources; and indicators of *societal responses* to environmental changes and concerns. While experience has shown that environmental indicators are cost-effective and powerful tools, data quality and timeliness remain insufficient, calling for further progress in this area.

66. In addition to indicators of environmental performance, other sets of indicators have been, or are in the process of being, developed to allow the integration of environmental concerns into sectoral policies, such as agriculture, energy and transport. Work is underway to identify and quantify the environmental impacts -- both harmful and beneficial -- of *agriculture* and agricultural policies. This is currently directed at establishing an analytical framework for defining consistent definitions and

C(98)46

measurement of agri-environmental indicators (AEIs)⁵. Indicators for the integration of environmental concerns have also been developed for *transport* and *energy policies*.

67. A third set of environmental indicators aim at integration of environmental concerns into economic policies more generally, through environmental accounting. Satellite accounts, aimed at complementing the economic information of national accounts with a valuation of stocks of natural resources and of non-market services of the environment, have led to the development of the UN System of Integrated Environmental and Economic Accounting (SEEA) and to the elaboration of indicators of environmentally adjusted net domestic product (EDP). Natural Resource accounts, providing information on physical flows and stocks of natural resources, have been developed in several OECD countries, and used to calculate indicators of sustainable use of specific resources.

68. Also in the context of indicators of environmental conditions, a specific role should be attributed to the energy system. The IEA has developed a well defined set of macro energy indicators, e.g., energy intensity, CO₂ intensities (CO₂/TPES, CO₂/GDP, CO₂/population), and different elasticities used for international comparisons and for a number of IEA products (Country Studies, WEO). The IEA is also developing new indicators at the micro level that deal with energy intensities of specific processes, activities and technologies. These are fully compatible with the present set of indicators published by the OECD Environment Directorate in its biannual compendium of environmental data and in related environmental indicators publications.

Human capital and the social dimension

69. The OECD has played a pioneering role in the development of educational indicators. More recently, in response to a request by the OECD Ministerial Council, the OECD prepared an analytical report on *Indicators of human capital*, to be presented to the April 1998 Ministerial Meeting of the Council. Available OECD indicators cover human capital stocks and investment; and returns to education. Most of these indicators relate to formal education attained in youth, while measures of how skills and competencies are gained and lost throughout life, and how effectively they are used, are more limited. A first step in measuring some types of skills is represented by the International Adult Literacy Survey (IALS). Data limitation in this area contrast with the policy recognition that rapid change causes current knowledge to depreciate faster than before; this recognition is reflected in the adoption by the OECD of the "lifelong learning" concept to ensure that human capital is regularly renewed. The OECD contribution to the analysis of human capital is partly about maintaining its existing indicators, and partly in addressing the data bias towards initial schooling and tertiary education.

70. Work on *social indicators* dates back to 1970, motivated by an appreciation that economic indicators alone were an inadequate measure of the welfare of countries. In 1982 the OECD published a list of thirty-three Social Indicators, to assess improvements in the well-being of the population over a broad range of areas including health; education and learning; employment and the quality of working life; time and leisure; income and wealth; the physical environment; the social environment; and personal safety (this list of Social Indicators is included as Annex III, Table 2). While the regular measurement of this set of indicators requires comprehensive population surveys which were at that time rarely available, these data are now available for a greater number of countries. In fact, except for data derived from time-use surveys (which were reviewed in a study on non-market activity carried out for the Statistics Directorate) and survey data on fear of crime, all indicators in the 1982 list are published on a regular or

5. OECD (1996), *Environmental Indicators for Agriculture*, identifies thirteen agri-environment issues for which indicators are being developed.

C(98)46

occasional basis by DEELSA. In the light of the stronger rationale for, and increased availability of, social indicators, work is underway in ELSA to prepare a new list of Social Indicators for the June meeting of the Social Policy Ministers.

71. In recent years, the perception that traditional health outcome measures such as mortality and life expectancy, are becoming inadequate has led OECD countries to identify more accurate *health outcomes* indicators, such as disability-free and health-adjusted life expectancies and years of remaining life. Progress with the development of comprehensive summary indicators of health status was discussed by an experts' group in December 1997. In response to this need, the OECD has focused on both the methodological challenges and requirements for the development of summary measures of health status; and explored the development and use of performance and quality-of-care indicators, as available in several OECD countries, which are often considered as suitable proxies for health outcomes

Indicators for sub-national areas of OECD countries

72. Most of the indicators reviewed refer to the national level. Sustainable development has however an important spatial dimension, and its requirements apply to communities and areas within national economies. As part of the "Activity on Territorial Data and Rural Indicators", TDS has launched a project on Rural Environment and Amenity Indicators (RENVi)⁶. This has led to the construction of a territorial data base covering the entire OECD area and distinguishing over 2000 sub-national units that can be aggregated according to different typologies. Indicators covering demographic settlements and migration; economic structure and performance; well-being and cohesion; ecology and amenity, were first published in 1994, with more comprehensive report in preparation by the end of 1998.

Indicators for non-Member countries

73. A coherent and synthetic set of "Indicators of Development Progress" was agreed by DAC Members and other multilateral agencies in early-1998. These indicators will be used for monitoring development progress in meeting key goals as formulated in *Shaping the 21st Century - The Contribution of Development Assistance*. While limits in statistical information and differences in policy priorities account for the specific selection of indicators, these indicators cover the three dimensions (economic, environmental, and social) that were identified as main elements of sustainable development. The 22 indicators should allow monitoring progress in reducing extreme poverty (economic well-being); in extending primary education, improve gender equality, reduce infant-, child- and maternal mortality, and extend reproductive health services (social development); and ensuring that current trends to a loss of environmental resources are effectively reversed (environmental sustainability and regeneration). A list of such indicators is provided in Annex III, Table 3. While work is underway on a publication on this core set of indicators, efforts continue to improve data coverage and comparability (in the area of good governance and participatory development, as well as on indicators for land use, marine environment and air quality), and to address remaining conceptual issues (as in the case of the indicator of "extreme poverty").

6. The Project on Rural Environment and Amenity Indicators (RENVi) has two main aims: Provide a territorial breakdown of existing environmental indicators on soil, water, air, flora and fauna, and developing conceptual bases for missing indicators concerning more complex eco-systems such as topography, settlements, habitats, natural and cultural landscapes. The project is undertaken in consultation with other OECD indicator activities like the Agro-environment Indicators project, which focuses on an important, but specific sectoral policy aspect concerning the rural environment.

C(98)46

Table 1. Summary of OECD Core Set Indicators¹ by Environmental Issue

Issues	Indicators of environmental pressure	Indicators of environmental conditions	Indicators of societal responses
Climate change	<ul style="list-style-type: none"> ♦ Index of greenhouse gas emissions ** ♦ CO₂ emissions ♦ CH₄ emissions ♦ N₂O emissions ♦ CFC emissions 	<ul style="list-style-type: none"> ♦ Atmospheric concentrations of greenhouse gases (CO₂, CH₄, N₂O) ** ♦ Global mean temperature ** 	<ul style="list-style-type: none"> ♦ Energy efficiency ♦ Energy intensity (i.e. total primary energy supply per unit of GDP or per capita) ♦ Economic and fiscal instruments (e.g. prices and taxes, expenditures)
Ozone layer depletion	<ul style="list-style-type: none"> ♦ Index of apparent consumption of ozone depleting substances ** ♦ Apparent consumption of CFCs and halons 	<ul style="list-style-type: none"> ♦ Atmospheric concentrations of ozone depleting substances ** ♦ Ground level UV-B radiation ** ♦ Stratospheric ozone levels 	<ul style="list-style-type: none"> ♦ CFC recovery rate **
Eutrophication	<ul style="list-style-type: none"> ♦ Emissions of N and P in water and soil (nutrient balance) ** ♦ N and P from fertiliser use and from livestock 	<ul style="list-style-type: none"> ♦ BOD/DO, concentration of N and P in inland waters ** ♦ and in marine waters ** 	<ul style="list-style-type: none"> ♦ Population connected to biological and/or chemical sewage treatment plants ** ♦ Population connected to sewage treatment plants ♦ User charges for waste water treatment ♦ Market share of phosphate-free detergents
Acidification	<ul style="list-style-type: none"> ♦ Index of acidifying substances ** ♦ Emissions of NO_x and SO_x 	<ul style="list-style-type: none"> ♦ Exceedence of critical loads of pH in water and soil ** ♦ Concentrations in acid precipitation 	<ul style="list-style-type: none"> ♦ % of car fleet equipped with catalytic converters ** ♦ Capacity of SO_x and NO_x abatement equipment of stationary sources **
Toxic contamination	<ul style="list-style-type: none"> ♦ Emissions of heavy metals ** ♦ Emissions of organic compounds ** ♦ Consumption of pesticides 	<ul style="list-style-type: none"> ♦ Concentration of heavy metals & organic compounds in env. media and in living species ** ♦ Concentration of heavy metals in rivers 	<ul style="list-style-type: none"> ♦ Changes of toxic contents in products and production processes ** ♦ Market share of unleaded petrol
Urban environmental quality	<ul style="list-style-type: none"> ♦ Urban air emissions: SO_x, NO_x, VOC ** ♦ Urban traffic density ♦ Urban car ownership ♦ Degree of urbanisation 	<ul style="list-style-type: none"> ♦ Population exposure to air pollution **, to noise ** ♦ Concentrations of air pollutants ♦ Ambient water conditions in urban areas ** 	<ul style="list-style-type: none"> ♦ Green space ** (Areas protected from urban development) ♦ Economic, fiscal and regulatory instruments ** ♦ Water treatment and noise abatement expenditures
Biodiversity	<ul style="list-style-type: none"> ♦ Habitat alteration and land conversion from natural state ** To be further developed 	<ul style="list-style-type: none"> ♦ Threatened or extinct species as a share in total species known ** ♦ Key ecosystems 	<ul style="list-style-type: none"> ♦ Protected areas as % of national territory **, and by type of ecosystem ** ♦ Protected species
Cultural landscapes	Indicators to be further developed.		
Waste	<ul style="list-style-type: none"> ♦ Generation of waste: <ul style="list-style-type: none"> ♦ municipal waste ** ♦ industrial waste ** ♦ nuclear waste ** ♦ hazardous waste ** ♦ Movements of hazardous waste 	<ul style="list-style-type: none"> S S/M S S/M S 	<ul style="list-style-type: none"> ♦ Waste minimisation ** (to be further developed) ♦ Recycling rates ♦ Economic and fiscal instruments, expenditures
Water resources	<ul style="list-style-type: none"> ♦ Intensity of use of water resources ** 	<ul style="list-style-type: none"> ♦ Frequency, duration and extent of water shortages ** 	<ul style="list-style-type: none"> ♦ Water prices and user charges, water supply **

C(98)46

Forest resources	◆ Intensity of use of forest resources (Actual harvest / productive capacity) **	M	◆ Area, volume and structure of forests **	S/M	◆ Forest area management and protection **	M/L
Fish resources	◆ Fish catches **	S	◆ Size of spawning stocks **	M	◆ Regulation of stocks (quotas)	M
Soil degradation (desertification and erosion)	◆ Erosion risks ** ◆ Change in land use	M/L S	◆ Degree of top soil losses **	M	◆ Rehabilitated areas **	M
General indicators not attributable to specific issues	◆ Population growth & density ** ◆ Growth of GDP ** ◆ Private & government final consumption expenditure ** ◆ Industrial production ** ◆ Structure of energy supply ** ◆ Road traffic volumes ** ◆ Road vehicle stocks ** ◆ Agricultural production **				◆ Environmental expenditures ** ◆ Pollution control & abatement expenditures ◆ Public opinion **	

Notes:

- a) Indicators of the core set proposed by the OECD Group on the State of the Environment. It presents "main core" indicators (pointed out by a double asterisk), complementary indicators to accompany the message conveyed by "main" indicators, and proxy indicators when the "main" indicator is currently not measurable. The indicators included in the 1994 publication are printed in *italics*. Each indicator is followed by a character specifying its availability:
- S = short term, basic data currently available for a majority of OECD countries;
- M = medium term, basic data partially available, but calling for a supplementary effort to improve their quality (consistency, comparability) and their geographical coverage (number of countries covered);
- L = long term, basic data not available for a majority of OECD countries, calling for a sustained data collection and conceptual efforts.

C(98)46

Table 2. The 1982 List of Social Indicators

Title	Current title	Where published or available	Population Survey data	
			Needed	Available
Life expectancy		Eco Santé		
Perinatal mortality		Eco Santé		
Short term disability		REVES	x	x
Long term disability		REVES	x	x
Regular educational experience	Years of schooling	Educational indicators	x	xx
Adult education	Education participation rate (adults)	Educational indicators	x	x
Literacy rate	Functional literacy rate	Literacy survey	x	x
Unemployment Rate		LFS Part III	x	xx
Involuntary Part time work		EmO 1997	x	x
Discouraged workers		EmO 1997	x	x
Average weekly working hours	Annual hours worked	EmO annex	x	x
Paid annual leave			x	
Atypical work schedule		EmO (?)	x	
Distribution of earnings	Quintile distribution	EmO 1996		
Fatal occupational injuries		EmO 1989(?)		
Free time			x (time use)	x
Free time activities			x (time use)	x
Distribution of income	Quintile distribution	LIS study; 1997 ECO-DEELSA project	x	xx
Low income	Share in lowest quintile	LIS study; 1997 ECO-DEELSA project	x	xx
Material deprivation	Relative Poverty Rate, using "old OECD" (sic) equivalence scale	LIS study; 1997 ECO-DEELSA project (but using "new" OECD equivalence scale)	x	xx
	Average Poverty Gap	ECO-DEELSA study		
Distribution of wealth	Quintile wealth distribution	Resources in retirement study		
Suicide rate		Eco santé		
Fatal injuries	Death rate from accidents	Eco santé (?)		
Serious injury	Incidence of injuries		x	?
Fear of personal safety	Percent expressing fear for personal safety at night	Netherlands social reports	x	
Work environment nuisances	Percent reporting exposure to specific nuisances		x	no
Indoor dwelling space	Distribution of persons per room			Housing census
Access to outdoor space	Per capita access to outdoor capita		x	
Basic amenities	Per capita access to housing amenities			Housing census
Proximity of selected services	Per capita access		x	no
Exposure to air pollutants	Population exposed (percent)			
Exposure to noise	Population exposed (percent)			

C(98)46

TABLE 3. Agreed Indicators of Development Progress

Goals	Agreed Indicators
Economic well-being	
Reducing extreme poverty The proportion of people living in extreme poverty in developing countries should be reduced by at least one-half by 2015. <i>(Copenhagen)</i>	1. Incidence of Extreme Poverty 2. Poverty Gap Ratio 3. Inequality of Consumption Distribution Child Malnutrition
Social development	
Universal primary education There should be universal primary education in all countries by 2015. <i>(Jomtien, Beijing, Copenhagen)</i>	2. Net Enrolment in Primary Education 3. Completion of 4th Grade of Primary Education Literacy Rate of 15 to 24 Year Olds
Gender equality Progress towards gender equality and the empowerment of women should be demonstrated by eliminating gender disparity in primary and secondary education by 2005. <i>(Cairo, Beijing, Copenhagen)</i>	2. Ratio of Girls to Boys in Primary & Secondary Education Ratio of Literate Females to Males (15-24 Year Olds)
Infant & child mortality The death rates for infants and children under the age of five years should be reduced in each developing country by two-thirds the 1990 level by 2015. <i>(Cairo)</i>	2. Infant Mortality Rate Under 5 Mortality Rate
Maternal mortality The rate of maternal mortality should be reduced by three-fourths between 1990 and 2015. <i>(Cairo, Beijing)</i>	2. Maternal Mortality Ratio 3. Births Attended by Skilled Health Personnel Total Fertility Rate
Reproductive health Access should be available through the primary health-care system to reproductive health services for all individuals of appropriate ages, no later than the year 2015. <i>(Cairo)</i>	2. Contraceptive Prevalence Rate HIV prevalence in 15-24 year old pregnant women
Environmental sustainability and regeneration	
Environment There should be a current national strategy for sustainable development, in the process of implementation, in every country by 2005, so as to ensure that current trends in the loss of environmental resources effectively reversed at both global and national levels by 2015. <i>(Rio)</i>	2. Countries with National Sustainable Development Strategies 3. Population with Access to Safe Water 4. Intensity of Freshwater Use 5. Biodiversity: Land Area Protected 6. Energy Efficiency: GDP per Unit of Energy Use Carbon Dioxide Emissions

C(98)46

ANNEX IV

ACTIVITIES IN RELATION TO NON-MEMBERS

74. In recognition of their global nature and importance, some dimensions of sustainable development have been a growing element of OECD's work in relation to non-Member economies. In particular, OECD's policy dialogues and analytical work through CCNM programmes and the Development Centre, and policy co-ordination through the DCD/DAC and the Club du Sahel have been addressing the economic, environmental and social dimensions of the development of non-Members, including the "Big Five" (Brazil, China, India, Indonesia and Russia).

Co-operative relations with non-Members

75. Co-operative relations with non-Members on the environment side has involved:
- environmental performance reviews of a number of transition economies (a review of Russia is underway);
 - policy dialogue with a wide range of emerging and transition economies, including through participation in the Climate Change Forum (the "Big Five", and some other Asian and Africa countries will attend the next Forum), as well as in sectoral meetings covering sustainable agriculture and rural development policies;
 - a series of DAC Guidelines on Aid and Environment has been designed to promote best practices in strengthening developing countries' capacity to address environment challenges and implement their national strategies for sustainable development;
 - since 1993, the OECD has served as the Secretariat to a Task Force to facilitate the implementation of an Environmental Action Programme for Central and Eastern Europe; and
 - research and modelling, including maintenance by the Development Centre of the OECD's "GREEN Model".

76. Further OECD work on sustainable development, should involve increasing co-operation with non-Member countries. As discussed in "The World in 2020", the "Big Five", along with the United States, Japan and Germany, could disproportionately shape future global environmental trends. Together these countries already account for more than half the world's population, its economic output, its carbon emissions and its forests.

77. Looking ahead to 2020, a large shift in economic weight from the OECD area towards non-OECD economies is in prospect. This holds the potential of promoting sustainable development, as economic growth can be decoupled from pollution generation and resource consumption, for example through a shift of production from 'materials-based' manufacturing to 'knowledge-based' services; development and diffusion of cleaner technologies; alleviation of poverty and the associated environmental effects in non-OECD economies; the assurance of agricultural sustainability and the sound management of resources; and the generation of additional wealth to finance environmental improvement. Nevertheless, overall resource consumption and pollution may well increase due to increasing economic activity and population.

C(98)46

78. Thus, non-OECD countries will likely account for a growing share of the world's environmental challenges. For example, a high growth scenario could see a doubling of greenhouse gas emissions from 1992 to 2020. The "Big Five" could account for over 40 per cent, and the non-OECD area for over three-quarters of this increase in emissions unless action is taken to modify such a scenario. Non-OECD economies may also add to environmental pressures regionally, nationally and locally. This may occur through rising volumes of hazardous and other wastes, the concentration of populations in "mega-cities", more intensive agriculture, timber and fisheries exploitation, and growing demands for fresh water resources⁷. There are already indications that these pressures could intensify insecurity and conflict within and between countries.

79. These possible trends suggest that deepening the Organisation's co-operation with non-OECD economies in the sustainable development area, especially in relation to climate change, should be an important element of the OECD's future work. This could take the form of: i) strengthening the policy dialogue activities, particularly with the "Big Five" -- initial emphasis on their national sustainable development priorities can create the confidence required for deepening co-operation for the more difficult, global challenges, such as climate change; ii) continuing research and improving quantitative measures of sustainable development through use of the GREEN model (notably in the Development Centre); iii) examining specific mechanisms for facilitating the adoption and diffusion of cleaner technologies in non-OECD economies; and iv) strengthening co-operation and links with multilateral financial institutions and others working with non-OECD economies, drawing on OECD's accumulated experience and networks in environmental management co-operation in the "Big Five" and other transition and emerging economies.

Development co-operation

80. Policy co-ordination work in the development co-operation field is geared to OECD's Partnership Strategy for the 21st Century. Adopted by the Development Assistance Committee in May 1996, this is now the basic framework for the Organisation's work in development co-operation, incorporating long-range developmental goals for economic well-being, social development and environmental sustainability and regeneration. Thus, the work of DCD/DAC will continue to give a great deal of weight to economic, social, environmental and political sustainability, based on experience showing that developing countries have an even more unforgiving margin of error than OECD countries, in getting these balances right. There is room for more exchange of experience between these groups of countries on achieving this integrated balance.

81. In helping Members to implement the DAC *Shaping the 21st Century Strategy*, the OECD will make constructive contributions to helping developing countries play their part in responding to global sustainability problems, as well as building their own national capacities. The focus on capacity development (human, institutional and financial) is crucial to sustainable development. The political choice and public policy management needed to promote sustainable development put a premium on good governance, effective participation, and conflict management. OECD/DAC Members have helped highlight global strategic goals for sustainable development, and advancing these goals in practice will be the focus of the Organisation's development co-operation work. Monitoring of progress will build on a working set of core indicators for economic well-being, social development and environment recently worked out by OECD/DAC, the World Bank, UN and others. While many of this core set of indicators

7. Around 80 per cent of increased food demand over the next twenty years could originate from the non-OECD countries, with half of it coming from China and India alone.

C(98)46

applying to developing countries would be viewed as "threshold" indicators for developed countries, the processes of their selection, and use, may make useful contributions to wider indicators work in OECD.

82. The Club du Sahel brings strength to the OECD development co-operation approach by providing catalytic support for the formulation of coherent policies in a vulnerable sub-region. These efforts focus on the many dimensions of sustainable rural development, integrating natural resource management, food security issues and agricultural change, including the implementation of the Desertification Convention. Impact indicators, yet to be developed, are seen as important tools to address the regional concern for sustainability of natural resource use.

C(98)46

ANNEX V

**SOME RECENT OECD, ECMT AND IEA PUBLICATIONS
RELEVANT TO SUSTAINABLE DEVELOPMENT¹**

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|--|------------|
| • Global Warming. Economic Dimensions and Policy Responses. | OECD, 1996 |
| • Energy Technologies for the 21st Century | IEA, 1997 |
| • Towards Sustainable Fisheries: Economic Aspects of the Management of Living Marine Resources | OECD, 1997 |
| • Sustainable Development: OECD Policy Approaches for the 21st Century | OECD, 1997 |
| • Reforming Energy and Transport Subsidies Environmental and Economic Implications | OECD, 1997 |
| • CO ² Emissions from Transport | ECMT, 1997 |
| • Environmental Taxes and Green Tax Reform | OECD, 1997 |
| • Energy Policies of IEA Countries | IEA, 1997 |
| • Energy and Climate change: An IEA Source Book for Kyoto and Beyond. | IEA, 1997 |
| • The World in 2020. Towards a New Global Age | OECD, 1997 |
| • Cleaner Production and Waste Minimisation in OECD and Dynamic non-Member Countries | OECD, 1997 |
| • Applying Market-Based Instruments to Environmental Policies in China and OECD Countries | OECD, 1997 |
| • Agriculture and the Environment: Issues and Policies | OECD, 1998 |
| • Efficient Transport for Europe: Policies for Internalisation of External Costs | ECMT, 1998 |

1. The list indicates some recent publications pertaining to work relevant to sustainable development. More detailed overviews can be found in "Sustainable Development", June 1997 and "Climate Change Catalogue", November 1997.

MEMORANDUM

COUNCIL OF ECONOMIC ADVISERS

February 26, 1998

TO: Janet Yellen
FROM: Rebecca Blank *Rebecca Blank*
SUBJECT: OECD and Climate Change

A couple of key issues you'll want to know about prior to your OECD trip next month:

- 1) There is a proposal before the OECD from the environmental group to make "sustainable development" an overarching priority, meaning that every directorate and committee will need to find a way to address sustainable development issues in their working plan. Within the U.S. delegation, Bondurant has evidently heard from CEQ and EPA and is leaning toward support this proposal, while John Weeks is very hesitant about it. On Wednesday, Rubin was meeting with the OECD Secretary General Johnston. Weeks had just acquired Rubin's talking points the evening I left, and they essentially said, "I believe environmental issues are important, but they should be dealt with in their appropriate place within a broader context. They should also be dealt with inside of existing budget resources." I suspect you're sympathetic with Rubin's viewpoint here, and may want to reiterate that with Bondurant and others when you talk to them.
- 2) A key issue is budget -- in part because of U.S. budget cuts, the OECD has experienced what clearly feels like severe budget pressures recently, with significant cuts in staff. The ECO directorate is particularly concerned about the sustainable development initiative because they fear it will even further reduce the resources they have for the agenda they want to pursue, forcing them to put more expertise into environmental issues.

This is one reason why the U.S. proposal for more work on global warming by ECO has hit some resistance -- coming at the same time as this OECD-wide sustainable development initiative, it's getting caught up in the larger argument over that; in addition, in the midst of staff cuts in research groups, people are feeling stretched very thin and reluctant to take one big new projects.

Thorvald Moe clearly wants ECO more involved in environmental issues, and strongly supports having them do more work on global warming, along the lines you suggest. There was also general support among WP1 delegates for the proposals the U.S. (i.e., me) laid out for further research on global warming (and Moe suggests there's support by Ignazio Visco and others within ECO). His comment to me was "If Janet wants to see this happen, tell her she'll need to really make that clear and push for it next month. She'll get support from ECO and from the Chalet (i.e., Moe) and that should assure that it happens. But she's got to push for it."

The primary agenda I talked about (in the meeting, with Moe, and with Bondurant and U.S. staff): First, look at the instruments and mechanisms by which international emissions trading systems can be established, including monitoring and enforcement mechanisms (with clear attention to the non-OECD countries as well.) Second, evaluate the usefulness of various domestic mechanisms to reduce emissions (such as R&D policy, regulatory policies, voluntary policies, etc.) Third, look at how such domestic policy choices may interact with an international trading scheme. I think that's consistent with your letter to Moe and our conversations. The most enthusiasm is for taking on the first of these issues -- which I think is fine to start with, but you want to keep pushing for the second part of the agenda as well, I suspect. You will have to have at least some answer for the issue that I kept being asked about -- "If the U.S. want to expand the agenda, why are they cutting our budget?"

I think the delicate task you'll face when you visit the OECD next month will be to strongly support further work on global warming, without necessarily lending support to the broader sustainable development proposal which sounds like a not-very-good idea.

cc: JR

MEMORANDUM

COUNCIL OF ECONOMIC ADVISERS

17th February 1998

TO: JANET YELLEN
FROM: JEREMY RUDD *JR*
Subject: OECD Work on Climate Change

At next week's WP-1 meetings, Dr. Blank will be expected to communicate a sense of where the climate change work of the OECD should be headed. I wanted to sound out your preferences on the matter, so that these can be communicated to Dr. Blank.

For your reference, I have enclosed the relevant background papers for the WP-1 meeting. The "Issues for Discussion" paper and Annex Two are probably most relevant. I gave Randy and Joe copies of these last week; Dr. Blank also solicited their help in briefing her for WP-1. (Note that Dr. Blank has scheduled a delegation meeting for tomorrow afternoon.)