OPPORTUNITIES AND BARRIERS FOR CLIMATE CHANGE POLICIES IN THE DEVELOPING COUNTRIES OF AFRICA AND THE CONTRIBUTION OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

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INTRODUCTION

Global climate change is today a matter of concern to every country in the world. The developing countries of the world are not immune to the impacts of climate change, and they can only ignore global discussions and decisions concerning climate change at their own peril. According to the Intergovernmental Panel on Climate Change (IPCC) Africa among the developing countries of the world stands out as the most vulnerable continent and region to the impacts of climate change (IPCC 2001), and therefore one of the world regions which deserves attention to alleviate such impacts. The African case is compounded by widespread poverty which add to the problems of vulnerability to climate change. The United Nations Framework Convention on Climate Change (UNFCCC) implied in its decisions that regions such as Africa will have to be assisted by the more fortunate advanced countries in the global effort to find solutions to climate change by reducing emissions of greenhouse gases while at the same time mitigating the impacts upon the various human societies. The main aim at the global level is to address anthropogenic climate change sufficiently enough to make a difference to what happens to the global climate in the next 50-100 years.

The most important decision to come out of Rio in 1992 was summarized in Article 2 of the Convention, which states , *inter alia*,

"The ultimate objective of the Convention is the stabilization of greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system."

Unfortunately this general resolve by the international community has been diluted by other considerations. For example, although there was general agreement on how to proceed to return global emissions of greenhouse gases to the 1990 levels, in the case of Annex1 countries, ultimately the responsibility for tangible action lies at the doorstep of each of the Annex 1 nations. For these

reasons it can be said that there are opportunities for meaningful policies at various levels, but at the same time there are obstacles and barriers to be surmounted before effective international action can be achieved.

In the case of the developing countries of the world, no clear cut ideas were initially put forward on how they were to participate in the climate change debate and action, other than to submit national communications. In this short presentation, an attempt will be made to summarize the roles played by the IPCC, the scientific and technical arm on the global effort on climate change, and by the Convention bodies, in particular, the Conference of the Parties (COP), in championing the climate agenda.

2. THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC).

The World Meteorological Organization (WMO), and the United Nations Environment Programme (UNEP) created the Intergovernmental Panel on Climate Change (IPCC) in 1988. Its terms of reference are to

> " Assess available information on science, the impacts and economics of and the options for mitigating and/or adapting to climate change,
>
> Provide on request, scientific, technical/socioeconomic advice to the United Nations Framework Convention on Climate Change (UNFCCC)."

In keeping with its mandate, the IPCC regularly issues scientific assessments as well as Special Reports. In fact one of the first assessments gave rise to the Intergovernmental Negotiating Committee, and the subsequent Framework Convention on Climate Change. The First Assessment was in 1990 followed by an interim statement in 1992. The second and third assessments respectively were issued in 1995 and 2001. The fourth Assessment Report is in process and should become available in 2006/2007. In addition the IPCC prepares Special reports on scientific and technical issues at the request of the UNFCCC. Finally, the IPCC working with governments of the world is responsible for the preparation of Methodologies and Good Practice reports on Inventories of greenhouse Gases

which are linked to global climate change. The most important provision in the work of the IPCC is that all IPCC Reports must be policy neutral and avoid conflicting with the work of the UNFCCC and its special body known as SBSTA both of which work in tandem with the COP.

In the second and third assessment reports of the IPCC, the special vulnerability of Africa was underlined and highlighted. The reports emphasized the fact that of all the major world regions Africa has contributed the least to potential climate change because of its low per capita fossil energy use and hence low greenhouse gas emissions. In spite of this Africa is the most vulnerable continent to climate change because widespread poverty limits capacity to adapt. The ultimate socioeconomic impacts will depend on the relative resilience and adaptation abilities of different social groups.

3. THE UNFCCC

The UNFCCC came into effect at Rio in 1992, and has been instrumental in pushing the climate agenda working with its SBSTA and the COP. It sees to it that the Convention is implemented according to the agreements signed at Rio in 1992. In terms of policy obligations, all the nations of the world which have ratified the Convention are duty bound to work towards the stabilization of greenhouse gas concentrations at a level "that would prevent "dangerous anthropogenic interference with the earth's climate system". The responsibilities for dealing with these issues were clearly stated but overall response has been far from perfect. For example, although there was general agreement on how to proceed to return emissions of greenhouse gases to the 1990 levels (in the case of Annex 1 countries), the ultimate responsibility for action can only be judged at the national level of developed nations, such as those belonging to the OECD.

In matters concerning the Convention and later its Kyoto Protocol, there is a clear-cut division of labour between the IPCC and the UNFCCC. Thus whereas

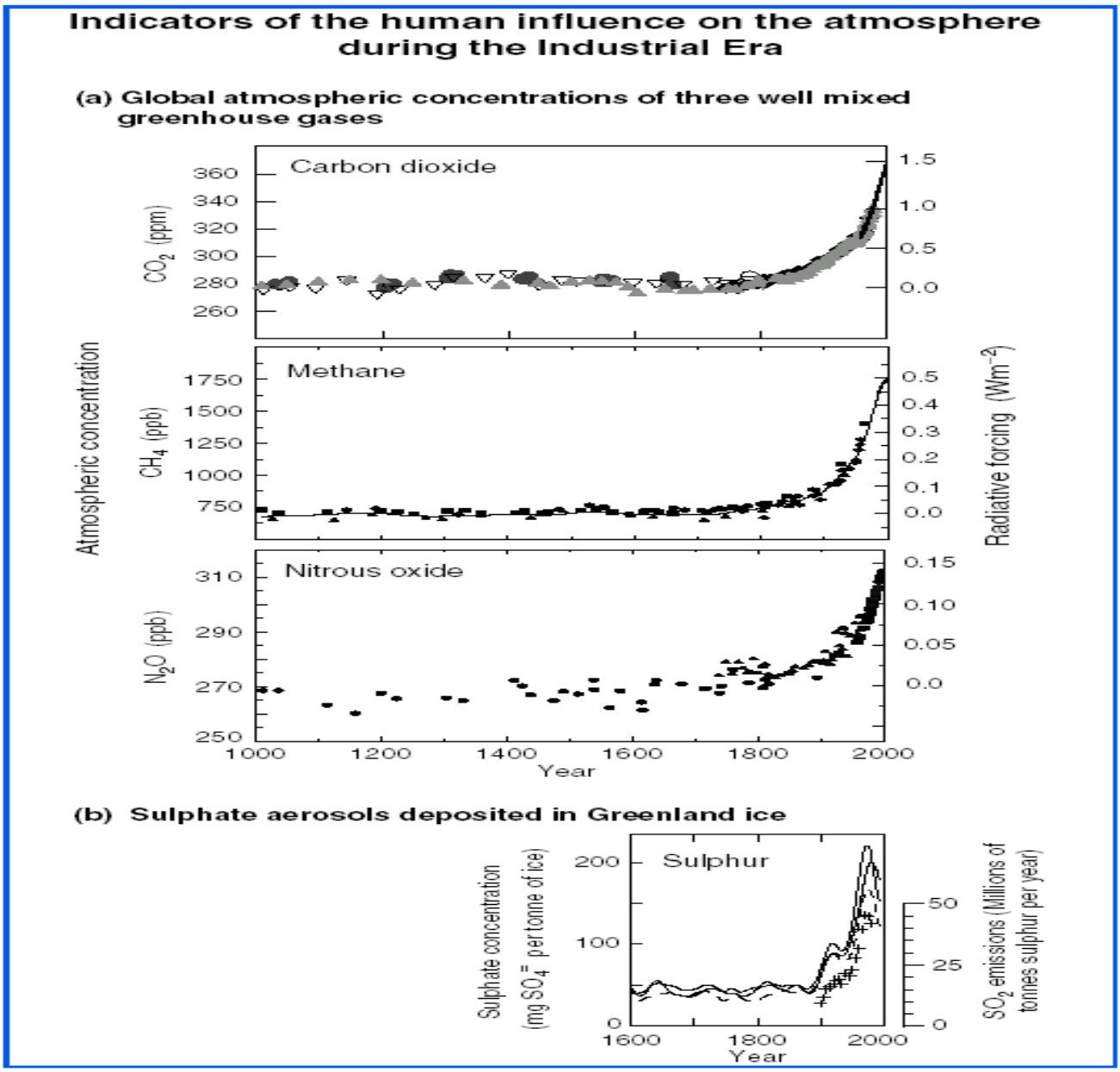

Fig. 1. Gives a summary of changes which have taken place in the global atmosphere since the industrial Revolution. Fig. 2 shows a summary of the temperature profiles for the period from 1860-2000, and Figure 3 contains projections of atmospheric emission paths for the most important greenhouse gases, namely, Carbon dioxide (CO2). Finally Figure 4 which represents model results contains various curves with projections of expected temperature changes and accompanying sea level values for the period from 2000-2100. The work of the IPCC has been outstanding in showing the current global position, and future

projections of what may be expected in terms of global climate change in the context of verifiable

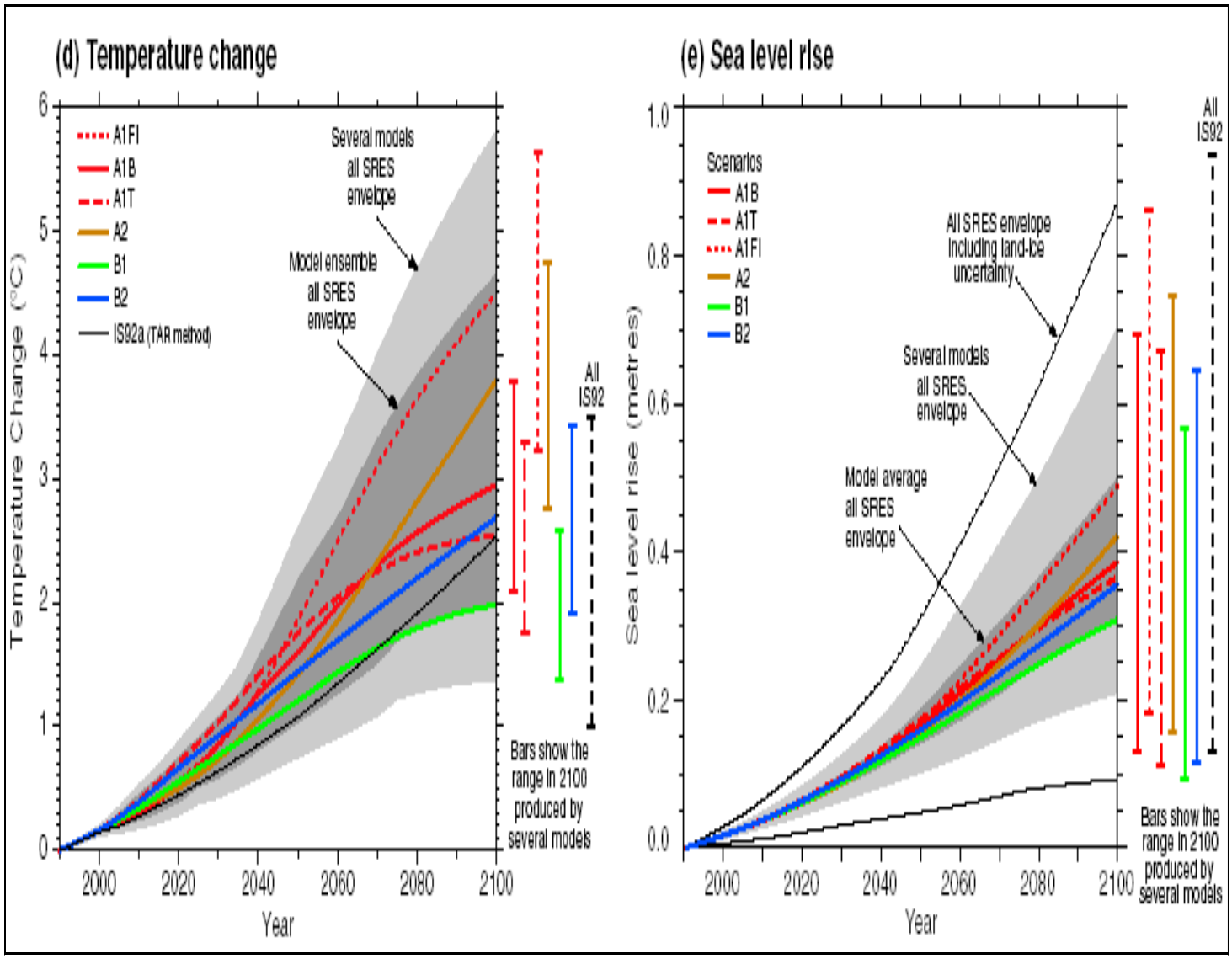

FIG. 2 GLOBAL PROJECTIONS OF TEMPERATURES AND SEA LEVELS-2000-2100

projections of temperatures and sea level rise. On the basis of the various projections it is possible to predict accompanying actual and potential impacts, and to suggest possible mitigation scenarios.

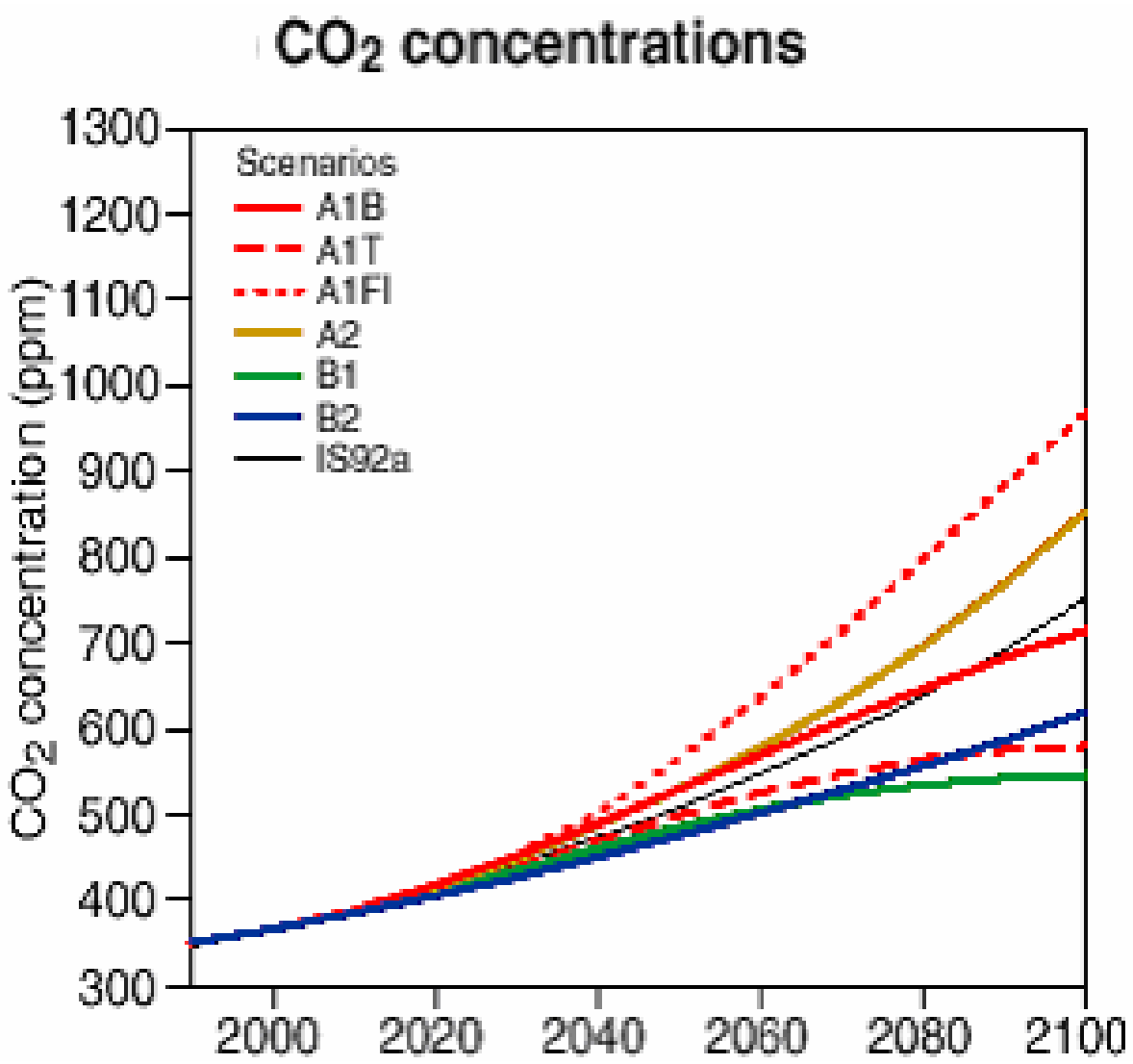

FIG. 3 GLOBAL PROJECTIONS OF CO2 CONCENTRATIONS

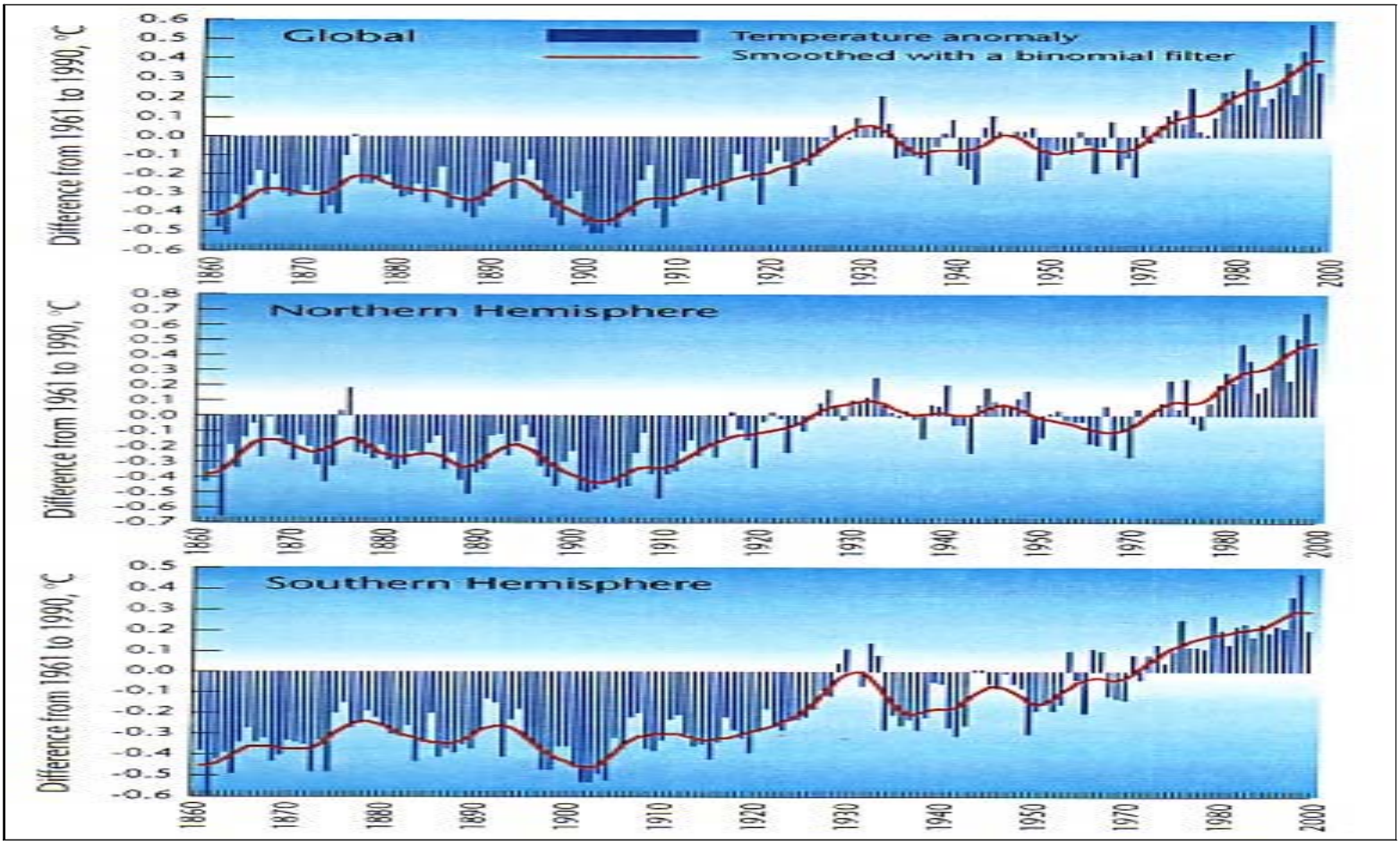

FIG. 4 GLOBAL TEMPERATURES FROM 1860-2000

5. QUESTIONS FOR IPCC THIRD ASSESSMENT

The issue of climate change is of great concern to all the nations of the world, and in turn they wish to understand the scientific evidence as well as any uncertainties which may be there. During the last assessment by the IPCC (Third Assessment), the UNFCCC through the SBSTA put forward several questions for more detailed response by the IPCC. The nine questions are summarized below for record:

1. **What constitutes dangerous anthropogenic interference with the climate system? (Article 2).**
2. **What is the evidence for, causes and consequence of changes in the earth's climate since the pre-industrial era?**
3. **What is known about the regional and global climatic, environmental, and socio-economic consequences in the next 25, 50, 100 years?**
4. **What is known about the influence of increasing atmospheric concentrations of greenhouse gases and aerosols, and the projected human induced change in climate regionally and globally?**
5. **What is known about the inertia and time scales associated with changes in the climate systems, ecological systems, and socio-economic sectors and their interactions?**
6. **How does the extent and timing of the introduction of a range of emission reduction actions determine and affect the rate and impact and magnitude of climate change?**
7. **What is known about the potential for, and costs and benefits of, and time frame for reducing greenhouse gas emissions?**
8. **What is known about interactions between projected human-induced change in climate and other environmental issues (e.g. urban air pollution, regional acid deposition, and loss of biological diversity, stratospheric ozone depletion, and desertification and land degradation?**

9. **What are the most robust findings and key uncertainties, regarding attribution of climate change and regarding model projections of**
    - **Future emissions of greenhouse gases and aerosols?**
    - **Future concentrations of greenhouse gases and aerosols?**
    - **Regional and global impacts of climate change?**

For an attempt at answering the nine questions, there is no better place to refer than the Synthesis Report which was produced by the IPC C as part of the Third Assessment Report which was crafted together by the three IPCC Working Groups (IPCC2001 Synthesis Report). The issues covered ranged from the simple scientific questions to issues bordering on policy, and the IPCC in its characteristic manner succeeded in discussing all the issues without being policy prescriptive. For that reason the last Synthesis Report is a valuable reference document for all the Governments of the world keen on following closely climate change issues.

7. CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT

Most countries of the world have come to realize and appreciate the intimate link between climate change and economic development, and more particularly, sustainable development. Consequently informed climate change policies will naturally impact the development process. For example policies to deal adequately with limiting net greenhouse gas emissions will naturally affect the direction of economic development. According to IPCC sources, such policies work well if they are consistent with the broader societal goals (UNEP 2002-Aimplified Guide to the Ipecac's Climate Change 2001- Mitigations). The roles to be played by developed and developing countries may initially differ, but ultimately the direction to be taken is complimentary.

8. CLIMATE CHANGE MITIGATION

The provisions in the Climate Change Convention are very clear on what should be done by the various regional development groups. In the case of Annex 1 countries the policy actions required were to reduce emissions to 1990 level i.e. to return emissions to what they were in 1990. It was easier to agree to this initially, but after Rio, there has been obvious reluctance on the part of some Annex 1 countries. But even under the Kyoto Protocol, the emphasis on mitigation is loud and clear. In the case of developing countries such as those in Africa any serious action to deal with problems of climate change must take a backseat whilst these countries are still dealing with poverty eradication, and disease, and the basic lack of economic growth.

Africa is a low emitter of greenhouse gases, and in theory is not supposed to take any action beyond the mandatory national communications. As of now Africa is not important, before the next commitment period. Rather than trying to mitigate Africa should be busy attracting Clean Development Mechanism (CDM) projects provided for under the Kyoto Protocol. Such investments will make it possible for Africa to participate in emissions reduction in close cooperation with Annex 1 countries. Emphasis should thus be placed on the transfer of low emission, hence climate-friendly technologies. In order to achieve full participation by Africa in the climate change agenda, there is need for the removal of barriers to the transfer of climate-friendly technologies. For example energy efficiency technologies which can be pursued at minimum cost are particularly suitable for the envisaged exchange. Similarly emphasis can be place on renewable energy strategies and technologies.

9. TECHNOLOGY CHOICES FOR THE WORLD

The global community is free to choose the energy pathways least destructive to the world's climate system. For example:

- A fossil fuel intensive path
- Non-fossil energy paths
- A balance across all energy sources

The African region in its stage of development does not have such clear choices because there are many obstacles to be overcome in trying to find suitable technologies to propel its economy forward. The reasons for this include current heavy reliance on biomass energy for the bulk of its population, a poorly developed renewable energy base, and heavy reliance on fossil fuel energy to propel its transport and others sectors. Last but not least is poverty. The IPCC has repeatedly underlined the fact that the African Region is the most vulnerable to the impacts of anthropogenic climate change. Poverty reduction in the region is hindered by Africa's large and fast growing population. It is because of this that many people think the answer to African problems is adaptation to anthropogenic climate change rather than mitigation.

10. OPPORTUNITIES FOR CLIMATE CHANGE ADAPTATION IN AFRICA

Opportunities for climate change adaptation are numerous and address climate variability climate extremes and climate change. Even more important there are opportunities for employing traditional adaptation techniques to contribute to the overall effort. Secondly adaptation measures should be regarded as providing a "no regrets option" for dealing with anthropogenic climate change., and this is a justification for financing adaptation from UNFCCC sources as well as bilateral sources. For adaptation procedures to be effective, affected African countries will need to build capacity and institutions to handle attendant risks. The idea is to build the resilience of local communities with the aim of reducing vulnerability to impacts of climate change, which include droughts, floods, and famines.

11. ADAPTATION STUDIES AND ADAPTATION POLICIES

The Kyoto Protocol naturally gives more prominence to mitigation measures as opposed to the more passive methods of dealing with climate change, such as adaptation. Nevertheless the Protocol did make provisions for an Adaptation Fund. The Kyoto Protocol is expected to come into operation on 16 February 2005. It will the become a legally binding document for all the 128 countries which have so far ratified the Protocol.

One provision which will come alive will thus be the Adaptation Fund which was set up in 2001. This Fund should provide the basis for the greater study of adaptation, and to provide funds for regions like Africa where adaptation procedures are being recommended. The funding of adaptation will not be as expensive as mitigation, and it will ensure the participation of many African countries in the global climate change mitigation effort. Among the global risks to be addressed under adaptation will be the following:

- Serious water shortage problems
- Risk of spread of diseases such as Malaria, and Dengue Fever
  Risks to agricultural communities in Africa who frequently lose their crops to droughts and floods.

12. CONCLUSIONS

In this short presentation an attempt has been made to look at opportunities and barriers to climate change policies in Africa with special emphasis on the roles that can be played by the IPCC and the UNFCCC. It was made quite clear that as a scientific and technical body the IPCC cannot be directly involved in suggesting policies and solutions to the African predicament beyond showing the vulnerability of most of the continent to impacts of climate change. On the other hand the UNFCCC has responsibility for seeing to it that globally, emissions of greenhouse gases are reduced to meaningful levels, and to assist developing countries participate in the global mitigation and reduction efforts through schemes included initially in the Framework Convention on Climate Change, and more recently provided for in the Kyoto Protocol. The developed countries such as those within the European Union have it in their power to enter into mutual reduction arrangements under the old joint implementation (JI), and the newly provided for Clean Development Mechanism of the Kyoto Protocol.