



**Climate Change and
Development**

**CLIMATE CHANGE AND SUSTAINABLE
DEVELOPMENT STRATEGIES IN THE
MAKING: WHAT SHOULD WEST
AFRICAN COUNTRIES EXPECT?**

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August 2001

The ideas expressed in these case studies are those of the authors and do not necessarily represent views of the OECD or its Member countries.

FOREWORD

In January 2001, the OECD held an expert seminar as part of a pilot project to investigate interactions between the long term agenda for climate change and sustainable development strategies. Experts from both OECD and developing countries attended. Participants identified issues and approaches, based on their regional perspectives, relevant to an evolving, equitable regime for addressing climate change, given various national circumstances, political interests, institutions and capacities to achieve sustainable development objectives. They stressed the importance of both climate mitigation and adaptation policy within a sustainable development framework.

Discussions and presentations centred around two broad themes:

- synergies and trade-offs between sustainable development objectives and long-term strategies to limit climate change; and
- how to build analytical and implementation capacity in developing countries to maximise synergies at local, regional and global levels of decision-making.

To support seminar discussions, the OECD commissioned several papers (including this one) from non-OECD country experts; authors were asked to comment on key interactions between climate change and sustainable development from their own regional or national perspectives. This paper is being released as an informal working paper in the hope that it will continue to stimulate interest and discussions on these topics in other fora.

The paper expresses the opinions of the author(s), and does not necessarily represent the views of either the OECD or its Member countries. Comments on the paper may be provided directly to the author(s): Energy2@enda.sn

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TABLE OF CONTENTS

FOREWORD.....	2
EXECUTIVE SUMMARY	4
1. Introduction	5
2. The context.....	6
3. The sustainable development challenge	7
3.1 Economic dimensions	7
3.2 Social dimensions.....	9
3.3 Environmental dimensions	10
4. Responding to climate change today.....	11
4.1 Mitigation.....	12
4.2 Vulnerability to climate change	12
4.3 National communications.....	13
4.4 The clean development mechanism in West Africa	14
4.5 Governance and capacity issues.....	14
4.6 Regional co-operation on climate change	16
5. Equity and long term responses to climate change	17
5.1 What is meant by the principle of equity?.....	18
5.2 Equity in the short term.....	19
5.3 Equity in the long term.....	19
6. Integrated policies for sustainable development	21
7. Conclusion and next steps	22
BIBLIOGRAPHY	24
Internet sources.....	25
ANNEX I: ADDRESSING CLIMATE CHANGE IN UEMOA REGION -- SELECTED NATIONAL INSTITUTIONAL PROFILES	26
Tables	
Table 1. Social indicators	4
Table 2. Social indicators	10
Table 3. Short term: a first level of equity	19
Table 4. Long term: towards a second level of equity	21
Figures	
Figure 1. The UEMOA countries	7

EXECUTIVE SUMMARY

1. African countries in general, and the countries of the “Union Economique et Monétaire de l’Ouest Africaine – UEMOA” (West African Economic and Monetary Union) in particular, are undoubtedly among the most vulnerable of world regions to climate change. The two main reasons for this are already-existing environmental problems that are likely to be exacerbated through climate change (e.g. recurrent droughts) and low adaptive capacity to the impact of climate change.

2. Almost all UEMOA countries figure among the world’s “least developed countries” (see Table 1). The primary concern for LDCs is to be in a situation where they could choose their own patterns and paradigms of development. This would mean the ability to steer away from short-term economic goals that lean heavily on unsustainable practices and opt for a sustainable development program in which rewards could be enjoyed by people across different social groups. This requires the creation of systems of production and distribution that will meet the needs of burgeoning populations, lift the majority of people out of current conditions of poverty and deprivation, boost agricultural and economic growth and reduce the alarming pace of environmental degradation, particularly in the drought-stricken Sahelian countries.

3. Combining developmental and environmental goals in this way, however, continues to present huge challenges that require inputs and efforts from various stakeholders. For African countries in general the biggest environmental preoccupation is building resilience, reducing vulnerability of poorer and marginalised communities and adapting to the negative impacts of environmental degradation rather than climate mitigation per se. Generally, action is needed at the local, national, and regional levels in terms of increasing the ability of the public sector to assess, design and implement appropriate policies that satisfy sustainable development objectives by ensuring better governance frameworks. Ultimately, this will also prove useful for addressing climate change.

Table 1. Social indicators

	Life Expectancy (years)		Infant Mortality (per 1000 live births)		Safe Water (%)		Adult Literacy (%)		Hunger (%)		Hunger (millions)	
	1960	1995	1960	1996	1980	1995	1970	1995	1970	1995	1970	1995
Benin	37	54	179	84		50	10	37	36	18	1.0	1.0
Burkina Faso	36	46	186	82	35	78	8	19	66	37	3.6	3.8
Cote d'Ivoire	39	52	165	90	20	72	16	40	24	19	1.3	2.7
Mali	35	47	209	134		37	7	31	45	30	2.5	2.9
Niger	35	48	191	191		53	6	14	48	32	2.0	2.9
Senegal	37	50	172	74		50	15	33	24	30	1.0	2.5
Togo	39	50	182	78			23	52	30	27	0.6	1.1
UEMOA	37	49							41	28	12	17
Africa		55				51		55	35	34	128	247
Dev. Countries	46	62	149	65			48	70	35	20	940	873
World	50	63	129	60				78	25	16	940	898

Sources: Life expectancy, infant mortality and adult literacy from UNDP (1998); safe water from World Bank (1998); hunger FAO (1996b, 1997a); values for Africa and the world in 1995 from Raskin et al. (1998); except for hunger, values for developing countries from UNDP (1998); for hunger, value for developing countries in 1995 is from Raskin et al. (1998).

4. Regional co-operation, with a view to eventual economic integration, may be the optimal approach to sustainable development in West Africa, and to addressing issues such as climate change. In a region of great geographical and social diversity, geopolitical boundaries only rarely correspond to cultural

and ecological zones. The causes and consequences of environmental degradation tend to be common across West Africa's shared ecosystems: extensive farming, a loss of fallow areas, demographic pressure, water-management complications and farmer-herder conflicts. The nation-state has not yet succeeded in bringing either political stability or coherent economic development to the region. The re-conceptualisation of development as a region-wide challenge reveals enormous potential to bring about desired change. UEMOA countries, then (like all developing countries), must endeavour to incorporate environmental reflexes within their overall development objectives and come up with a clear vision on climate-development policy. They will need to develop a clear stance on climate issues depending on their degree of vulnerability and the short, medium and long-term effects of climate change. In particular, African governments should formulate coherent policies and speak with one voice on global issues such as climate change.

5. Moreover, when addressing climate change, governmental officials and institutions alike should endeavour to find linkages between sustainable development and climate change and thus determine ways and means of exploiting current mechanisms (GEF, CDM) to their best advantage. Yet major challenges to achieving such an integrated approach to climate change and sustainable development remain, including:

- the compartmentalisation at the international level of debates on the various Conventions thus resulting in missed opportunities among policy makers and researchers alike to explore synergies between the Conventions;
- the strong dependence by developing countries on external resources, including financial, technical and scientific, to cope with the various and constantly changing issues over time;
- the lack of useful information and targeted awareness-raising on the potential benefits among inter-linkages of the various Conventions and sustainable development;

6. The paper argues for an increased dialogue among stakeholders to explore new visions of development and decision-making. In addition, the paper makes a number of specific recommendations to industrialized nations on how they might assist UEMOA nations to address climate change in the context of sustainability issues. These include increased focus on institutional capacity building; more emphasis on vulnerability and adaptation studies to be conducted in the region; and better mobilization of funds to support these activities.

1. Introduction

7. The past two centuries of development worldwide, and, in particular in industrialized countries, have taken place at tremendous cost to the environment - locally, regionally and globally. The United Nations Conference on Environment and Development (UNCED) was a historical landmark. It marked the recognition by the global community that the environmental problems facing humanity - including climate change, declining biodiversity, desertification and ozone depletion - challenge us to change our development patterns. The Brundtland commission articulated this challenge as a need to achieve what it termed as "sustainable development," i.e., "development which meets the needs of the present generation without compromising the ability of future generations to meet their own needs."

8. Whether or not the challenge of sustainable development can be transformed from concept to practice on a global scale remains to be seen. However, one thing is clear: the challenge nonetheless has

different implications for industrialized countries as compared to developing countries (and even among these groups, challenges are likely to differ). In the long run, industrialized countries must change their patterns of consumption especially when that consumption has significant long-term environmental implications for ecosystems and the quality of life of many of the world's poor. The developing countries, depending on their level of development, must be masters of their own destinies and forge ahead to balance issues of quality of life, cultural preservation, and economic development. The need for both the industrialized and developing countries alike to achieve sustainable development drives the international community to negotiate global agreements (such as the United Nations Framework Convention on Climate Change, UNFCCC, and the related Kyoto Protocol).

9. The process of negotiating and implementing such global environmental agreements has exposed the urgent need for increased dialogue to explore new visions of development and decision-making. Are African countries in general, and in particular the member countries of the West African Economic and Monetary Union (UEMOA), fully involved in this dialogue? How do they integrate their short-, mid- and long-term concerns with the emerging global environmental constraints? What pragmatic steps are being taken in these countries to help set (rather than merely follow) the global agenda? What are these countries doing to support the elaboration and implementation of local, national, and regional strategies for achieving sustainable development? What are the key sectors? What are the relevant institutional issues? What prospects for regional co-operation?

10. This paper will address some of these questions and explore the possible climate change and sustainable development strategies that fit in the UEMOA context.

2. The context

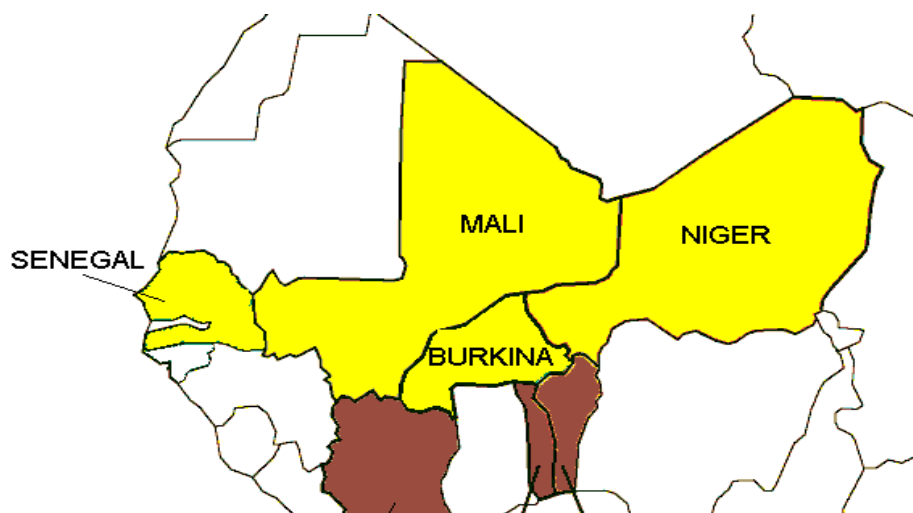
11. The UEMOA was created in 1994 from the UMOA (Union Monétaire Ouest Africain) and the CEAO (Communauté Economique des Etats de l'Afrique de l'Ouest), uniting the west African countries of the CFA Franc monetary zone. The UEMOA is a regional governmental organization whose membership includes the Francophone West African states — Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo. These countries are situated in the northwestern part of Sub-Saharan Africa. The UEMOA region covers a wide range of ecological zones, from the humid south to the arid north. The northern parts of Mali and Niger extend into the Sahara, while large areas in Burkina Faso, Mali, Niger and Senegal are in the Sahel — the transitional region between the desert to the north and the wetter areas to the south. Because of the special constraints imposed by the drier climate, it is useful to distinguish these four *Sahelian* countries from the wetter *humid* countries of the south — Benin, Côte d'Ivoire, Guinea Bissau and Togo.

12. Areas with erratic rainfall and fragile soils dominate the Sahelian region. Moving from the south to the north, the land becomes progressively less suitable for settled agriculture, and in the drier part of the countries, agricultural production is dominated by pastoralist livestock production. The humid region along the southern coast is relatively favorable for agricultural production, although the soils are low in phosphorus (World Bank, 1996).

13. Three of the four Sahelian countries — Burkina Faso, Mali and Niger — are landlocked, while Senegal has access to the coast on its western border. For the landlocked countries the restricted access to international markets is a shared constraint on development. The decline of the inter-state road networks and the deterioration of the railway lines between Dakar (Senegal) and Bamako (Mali) and between Abidjan (Côte d'Ivoire) and Ouagadougou (Burkina Faso) complicates the development challenge for these three countries. Before 1990, in addition to those two railway lines, Togo had a well-developed roads

network that connected the Sahelian countries to the coast. But this important road network has deteriorated in the last decade as a result of overall economic and political crisis during the last few years.

Figure 1. The UEMOA countries



3. The sustainable development challenge

3.1 Economic dimensions

14. Average income across the UEMOA region varies considerably, from from 1 to 2, from around \$740 per capita in Mali and Niger to over \$1,500 per capita in Cote d'Ivoire.¹ In every case, the average income is considerably below the world average (US\$ 6,870)² Accordingly, a large proportion of private consumption is devoted to basic necessities — in Benin, Côte d'Ivoire, Mali and Senegal, between 35% and 50% of private consumption expenditure is for food (World Bank, 1998). The large fraction of income spent on food increases the region's vulnerability to fluctuations in commodity prices.

15. Agriculture plays an important role in regional economies, reflecting the low level of development in the region. Between 60% and 90% of the economically active population is engaged in agriculture, significantly higher than the roughly 50% average for the world as a whole. The contribution of agriculture to GDP is also much higher than the world average. Approximately 31% of GDP is derived from agriculture in the UEMOA countries compared to 11% worldwide, and significantly higher than the 21% for Africa as a whole. In contrast, industry contributes only about 20% to the total GDP from the region, compared to around 30% both for Africa and for the world as a whole. West African economies largely depend on agricultural production for both domestic food needs and export revenue. This, combined with the fact that desertification threatens the productivity of the agricultural sector in the region,

1. Currencies are expressed in common units adjusted for purchasing power parity (PPP). The PPP approach, in which prices of a common “basket of goods” are compared across countries, gives a more realistic picture of relative incomes than the more commonly used market exchange rates (MER) (WRI, 1998).

2. Worldview data 1999 – worldbank.org

makes the UEMOA countries highly vulnerable to further negative impacts on the agricultural sector, be they brought about by climate change impacts or other factors.

16. The UEMOA countries are all at or near the bottom of the scale for most development indicators. Niger, Mali, Guinea Bissau and Burkina Faso have some of the lowest per capita incomes in the world. In addition, West Africa has experienced considerable political turmoil, further undermining regional economies. Stability is becoming a key concern in UEMOA countries for various reasons. Côte d'Ivoire and Guinea Bissau have recently experienced serious political unrest, which is affecting the whole region and threatens the overall stability and developmental objectives of the region. In this context long-term prospects for stability in the region are difficult to predict.

17. Nevertheless, the UEMOA region is rich in energy, minerals and natural resources, although current levels of exploitation are low and large parts of the profits are remitted abroad. Yet the region's institutional and administrative capacity is weak, as are its transport, communications and other infrastructures. To take one example, there is less than one telephone line for one hundred people and access to electricity is less than 15%. Finally, the population in the region is expanding at an annual rate of about 3%. While growing in recent years, GDP has not kept pace with population growth. Standards of living in the region are falling as a result.

18. Underdevelopment and stagnation of the region, though likely, are not inevitable. There is great scope for improving and accelerating the development process in ways that take environmental concerns into consideration. This should happen especially in light of the fact that, while regional energy consumption is the lowest in the world and air pollution levels are not high, they both will rise as the economy grows. The challenge is to fashion a region-specific strategy towards sustainability that avoids the environmental degradation and resource depletion that has accompanied past industrial development, while addressing those environmental problems first that are most important to the local population rather than to allow the environmental issues of industrialized countries to dominate the shared agenda. After all, much of the West African population experiences forms of environmental degradation such as desertification that are different from the concerns dominating the debate in the industrialized countries. One other example of this is indoor pollution resulting from cooking with biomass fuel in confined spaces, increasing the risks of acute respiratory infections. Indoor air pollution also is an example of a developing country-specific environmental issue with severe public health impacts that is well known but not well-documented. This reflects the low priority accorded to these issues by both West African governments and industrialized nations.

19. In 1998, the UEMOA countries, with the support of the Bretton Woods Institutions, continued their economic reforms. In Benin, Burkina, Mali and Niger, three-year programmes were initiated in 1996 with resources from the Strengthened Structural Adjustment Fund (Facilité d'Ajustement Structurel Renforcée, FASR). The agreements between the FASR and Côte d'Ivoire and Senegal are still being implemented. However, the discussions on new agreements with Togo and Guinea Bissau were aborted because of the political situation in those countries.

20. All these structural adjustment programmes were adopted with a view to encouraging private investment; progressively reducing UEMOA dependence on ODA and creating the conditions for a sustained and viable growth that is capable of alleviating poverty. The main macroeconomic objectives of these programmes are to attain a real GDP increase of between 4% and 6% per annum. To meet these objectives, the programs targeted the reinforcement of public finance by improving the recovery of receipts and the control of expenses, as well as the deepening and acceleration of the structural reforms, namely through the reform and privatisation of public enterprises. Nevertheless, the economic growth of UEMOA

countries in 1997-98 was hampered by low agricultural yields due to both low rainfall and the energy crisis experienced by some of the countries.

21. The UEMOA exercises some regulatory authority in regional issues (e.g. on fiscal matters), and is expected eventually to assume greater regulatory powers akin to its counterpart in Europe, the European Union. The UEMOA is potentially the most significant entity for promoting trans-regional action for sustainable development, although the body does not focus explicitly on this goal at present. Its constitutional treaty of 1994 emphasizes the principle of subsidiarity, establishes a supranational commission modeled on that of the EU and outlines five major objectives:

- encourage competition in an open and competitive market within a reasoned juridical environment;
- achieve convergence between sectoral policies and macro-economic policy indicators;
- create a common market;
- co-ordinate sectoral policies;
- align budgetary policies.

22. In addition, a number of governments have agreed on a prohibition on the introduction of new protectionist trade barriers between member states and measures for surveillance of the alignment of economic policy with a provision for sanctions.

23. UEMOA's concern with monetary and economic matters to date — an orientation which reflects the notion that economic integration is the key to regional integration — will support regional investment in industry, agriculture, transport, communications and energy infrastructure. In the future, it is critical that the principles of sustainability become explicit in the UEMOA, just as it is essential that other regional bodies working in sustainable development align themselves with the UEMOA.

24. As in most of the countries in Africa, it's becoming more and more opportune to rethink the developmental paradigm in the UEMOA states. The so-called wave of democratization and economic liberalization in Africa in the 1990s – purposely crafted to meet IFIs conditionalities – could have provided a context for building environmental considerations into economic growth and social development in the region. Although environmental issues were not historically a high priority for IFIs and by extension for African governments, the Earth Summit of 1992 in Rio de Janeiro set the tone and underscored the seriousness of environmental problems facing Africa in the near future, particularly desertification (UNCED, 1992). These issues continue to capture the attention of the global community.

3.2 Social dimensions

25. The *problematique* of sustainable development in the UEMOA countries is quite different and considerably more challenging than in other more developed parts of the world.

26. All countries in the region suffer from dire poverty and the inadequate provision for basic needs. This is reflected in the social indicators shown in the table below. The table shows average life span, infant mortality rates, the percentage of the population with access to safe water, the literate percentage of the adult population, and the incidence of chronic malnutrition.

Table 2. Social indicators

	Life Expectancy (years)		Infant Mortality (per 1000 live births)		Safe Water (%)		Adult Literacy (%)		Hunger (%)		Hunger (millions)	
	1960	1995	1960	1996	1980	1995	1970	1995	1970	1995	1970	1995
Benin	37	54	179	84		50	10	37	36	18	1.0	1.0
Burkina Faso	36	46	186	82	35	78	8	19	66	37	3.6	3.8
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Senegal	37	50	172	74		50	15	33	24	30	1.0	2.5
Togo	39	50	182	78			23	52	30	27	0.6	1.1
UEMOA	37	49							41	28	12	17
Africa		55				51		55	35	34	128	247
Dev. Countries	46	62	149	65			48	70	35	20	940	873
World	50	63	129	60				78	25	16	940	898

Note: Hunger in 1970 for the world set to the value for developing countries.

Sources: Life expectancy, infant mortality and adult literacy from UNDP (1998); safe water from World Bank (1998); hunger FAO (1996b, 1997a); values for Africa and the world in 1995 from Raskin et al. (1998); except for hunger, values for developing countries from UNDP (1998); for hunger, value for developing countries in 1995 is from Raskin et al. (1998).

27. While there is considerable spread across the region, on all indicators the UEMOA country are below the world average, and in general below those for Africa and for developing countries as a whole. This is reflected in the composite UNDP Human Development Indicator, where the UEMOA countries are ranked between 144 and 173 out of 174 countries reported (UNDP, 1998).

28. Rapid population growth, poverty and disease, inappropriate services and poor infrastructures, inadequate health services and growing food insecurity all contribute to the risk of social unrest. As the West African population (currently at 260 million) grows rapidly, both new conflicts are springing up and old ones re-emerging, thus creating increasing numbers of environmental refugees and economic migrants throughout the region. Nevertheless, this cannot lead to the neglect of environmental issues, since for social development to continue, the environmental base on which it rests must be protected in the long-term. In other words, neglecting environmental issues due to seemingly more pressing social problems may in fact worsen the latter. Environmental issues are of secondary importance today, however if social goals are identified and met, environmental goals may also increase in importance and urgency.

3.3 *Environmental dimensions*

29. Environmental sustainability and development must be mutually reinforcing objectives. This is especially true in Africa, and in its poorest region, West Africa. Some UEMOA countries have established a national institutional framework to implement the recommendations from the Rio process. For instance, National Councils for Sustainable Development were established in Benin, Burkina Faso, Niger and Senegal. In other countries, the environmental dimension of sustainable development is being addressed through existing institutional arrangements. In the region as a whole, the continuous decline in natural resources is becoming more and more alarming with clear negative implications for sustainable economic growth in the region.

30. Heightened awareness and understanding of environmental issues in the last twenty years has significantly influenced development efforts in the region. In particular, the long and severe series of droughts at the end of the 1960s and early 1970s were important in raising awareness concerning desertification in Sahelian countries. In addition, during the last decade, many in the region began to recognize that improving the quality of life would require both "natural capital" as well as financial capital. This recognition helped Sahelian countries to minimize potential conflicts between development and environmental goals. Furthermore, changes in national environmental policies have gradually shifted

national strategies from a focus on large-capital intensive, single-sector projects toward a new emphasis on bottom-up, participatory and multi-sectoral approaches. Indeed, since end of eighties, most of the development policies and strategies in Sahelian countries were essentially focused on sectoral policies (agriculture, energy, water, forestry, etc.). Policies concerning the combat against desertification were developed more as emergency measures in order to reduce the impacts of drought and related issues. Gradually, due to the persistence and intensity of drought, the governments gave greater priority to the management of the environment and natural resources, integrating it into their policy for social and economic development. In addition, a large spectrum of stakeholders has been associated to the various steps of this process. This new approach is a good fit for the recently increased emphasis in the region on the fight against desertification.

31. Since Rio, all the UEMOA states have embarked on a process of elaborating National Environmental Action Plans (NEAPs). An important aspect of these plans is a National Action Plan (NAP) to combat desertification, as required by the United Nations Convention to Combat Desertification (UNCCD). A number of states have completed their NEAPs and have moved into the implementation phase. The NEAPs and NAPs constitute statements by these countries of their intent to pursue an ecologically balanced strategy of development. While the general trend is towards an acceptance of sustainable development objectives, problems arise at the national administrative level. For example, responsibility for NEAPs and NAPs generally lies with the Ministries of Environment rather than Ministries in charge of the sectoral development agenda, and co-ordination between the different departments is often incomplete. Without co-operation of sectoral departments, implementation of national plans may be unachievable.

32. Desertification is a major environmental issue in the UEMOA countries, four of which are Sahelian, and ultimately measures taken to combat it will alter the agricultural, land-use and energy-use systems of the area, which will in turn affect the systems of food production and wealth distribution. In the UEMOA countries, attempts to integrate environmental issues such as desertification into the development plans, policies and programs have been underway since 1974. The member countries of this region were key advocates for a convention on desertification during the United Nations Conference on Environment and Development (UNCED) process. The Convention to Combat Desertification encourages local participation. Ideally, the implementing bodies will provide a framework for the co-ordination of local actions and the exchange of relevant information.

33. Contingency planning, from early warning and prediction to the strengthening of food security reserves, has been adopted by the Permanent Interstate Committee for Drought Control in the Sahel (CILSS). This committee has put in place an operational structure, "Noyau Central," that is responsible for the plan and jointly financed by member contributions and external donors. CILSS has been at the forefront of efforts to combat desertification and mitigate the effects of drought. In this regard, the organization has accumulated an extensive experience which has been a valuable input to the United Nations Convention to Combat Desertification and particularly its urgent action for Africa. In addition, the CILSS has facilitated the co-operation among the member states and more importantly among the various donors. Thus, e.g. in 1973-1976 CILSS was able to mobilize important quantity of cereals for the benefit of drought-afflicted people in the Sahel.

4. Responding to climate change today

34. Climate change presents both constraints and opportunities for UEMOA countries. The current debates could result in new forms and approaches of North-South co-operation and strategic short-, medium- and long-term vision. Climate change mitigation can offer the opportunity to revisit development

strategies from a new perspective with renewed urgency, to better understand the connections to other environmental problems, improve integration of environment and development issues and address other issues such as income distribution. The challenge is to ensure that actions to address these issues will contribute to, rather than obstruct, local and regional development.

35. As in the majority of the African countries, no analysis of the social and environmental conditions of the UEMOA countries can overlook the fact that they have been in the throes of a profound and relentless crisis for the past two decades. Structural adjustment programs have at times led to a further slimming of budgets for social policies, including education, health, and sanitation. With the introduction of Structural Adjustment Programs, the governments and the regional entities have no choice but to concentrate on immediate, short-term issues, and planning for the future is marginalized or ignored. Of course, the immediacy of such development challenges as poverty alleviation, debt servicing, unfavorable terms of trade, the need for basic infrastructures and political stability, all tend to compete with longer term environmental issues such as climate change, even though they could affect the resilience of the economy over the long term.

36. Climate change per se is not considered a key policy priority by governments in the region. Senior government officials and most members of civil society do not understand the climate issue very well. Formulation of a sound response strategy on climate change can only occur when the stakeholders foresee potential consequences that could jeopardize national efforts to achieve sustainable development. Indeed, in most UEMOA countries, climate change is perceived as an alien concept with little urgency compared to other economic, social, and political matters – even more so given the increasing urgency of dealing with poverty alleviation, debt servicing, unfavorable terms of trade, the need for basic infrastructures and political stability. Even where climate change is recognized as a crucial concern, it is viewed as a much more long term issue than these.

4.1 Mitigation

37. The reduction of greenhouse gas emissions or the enhancement of those sinks that absorb greenhouse gases is a crucial part of the overall climate change debate. Climate change mitigation has received considerable attention since the adoption of the UNFCCC Convention. However, as a first step towards the implementation of the Kyoto Protocol, a great deal of effort has been directed toward emissions reduction opportunities. Current UEMOA countries' emissions of greenhouse gases are negligible in global terms, due to the low level of development and industrialization. As a result, emission reduction opportunities remain few, and are mainly to be found in lessening the negative impact on the climate from land use change and deforestation. However, climate change mitigation offers a unique opportunity to revisit development strategies from a fresh perspective. The challenge is to ensure that actions taken within the climate change framework will help and not hinder local and regional development but will seek out a new dynamic in which the synergies between environmental and development issues can be properly understood and exploited.

4.2 Vulnerability to climate change

38. Vulnerability and adaptation to the adverse impacts of climate change are among the most crucial concerns of many developing countries, especially the Sahelian countries. The countries of West Africa are among the most vulnerable areas to climate change, given the existing propensity for drought and desertification, and the region's dependence on subsistence agriculture. The region is likely to experience increases in extreme events, along with increasing average rainfall in the humid regions. Nonetheless, it is

not yet possible to predict the timing or severity of these effects with accuracy (IPCC, 1996; Hulme *et al.*, 1995). Vulnerability to poor rainfall is certainly the most striking feature of the Sahelian countries among the UEMOA. Vulnerability³ *per se* reaches beyond any social and economic impact into the very basis of sustainable livelihoods, given that people depend on their ecosystems to provide food, medicine, energy, water, shelter and fodder and to renew fertility in soil and purity in water.

39. Climate change is also set to exacerbate the negative effects from currently widespread unsustainable ecological processes such as extension of arable land, deteriorating soils, and declining runoff from major catchments areas. Countries within the Sahel region would be hugely affected by further desertification and desiccation resulting from climate change. In particular the agricultural sector is highly vulnerable, since 85% of its water is used for agricultural purposes. (Naudet J.D., 2000).

40. It is envisaged that the impacts of climate change will affect wildlife habitats, along with terrestrial and aquatic ecosystems. Consequently, this will lead to severe adverse changes in soils, arid-lands, coastal zones, tropical and boreal forests⁴. In addition, wetlands and vulnerable species would be under severe threat. Developing countries currently bear the brunt of climate variability such as droughts and floods and climate change is expected to increase the occurrence of such events. The vulnerability of developing countries is likely to increase as food and water become scarce due to climate change.

4.3 National communications

41. Under the Convention, all Parties have to report on the steps they are taking to implement the treaty (see further Articles 4.1 and 12). In accordance with the Convention's principle of "common but differentiated responsibilities", the required contents of these reports, known as "national communications", and the schedule for their submission varies for Annex I and non-Annex I Parties. In addition, non-Annex I Parties are entitled to financial and technical assistance to prepare their national communications. This assistance is provided by the GEF, acting as the financial mechanism of the Convention, through its implementing agencies (UNDP, UNEP and the World Bank). With regard to the timetable for submission, non-Annex I Parties have to submit their initial national communications within three years of the entry into force of the Convention for that Party, or of the availability of financial resources. Least developed country Parties are free to develop their initial national communications at their discretion.

42. All the UEMOA countries have been able to acquire the necessary funds to produce national communications from the GEF. The institutional arrangements for such work have raised the profile of the climate issue to a limited extent. For example, the capacity building project funded by GEF/UNDP in sub-Saharan Africa comprised, in the first instance, the formation of an interdisciplinary team (consisting of officials/representatives of the administration and other experts from other academic institutions, NGOs).

3. The IPCC Second Assessment Report on Climate Change (1995) defines vulnerability as follows: '...the extent to which climate change may damage or harm a system. It depends not only on a system's sensitivity but also on its ability to adapt to new climatic conditions' p 28. For more details on vulnerability see '*Promoting Development while Limiting Greenhouse Gas Emissions*' in Trends & Baselines, United Nations Development Programme and World Resource Institute, 1999. Climate Change Vulnerability: Towards a Framework for Understanding Adaptability to Climate Change Impacts, Report to the U.N. Environment programme from the environmental Change Institute, University of Oxford, U.K., May 2000.

4. Downing T.E., Sokona Y and Smith J.B., Action on Adaptation to Climate Change, Presentation to the UNFCCC Workshop on Article 4.8 and 4.9 of the Convention: Adverse Effects of climate Change 9-11 March 2000, Bonn, Germany, Oxford Environmental Change Institute, University of Oxford, 2000.

A number of enquiries on inventories, mitigation, adaptation and vulnerability studies were then addressed. These enquiries lead to the preparation of the national communication and the definition of national priorities for the implementation of the Convention. Technical expertise and assistance were drawn from a regional centre's expertise or from other international institutions, rather than from within the country under study. Preparation of the national communications usually falls within the jurisdiction of a central government department (e.g. the Department of Environment or the national meteorological department). However, most national communications have never been presented in cabinet. Failure to use the national communication as a means to gain wider government recognition of the climate issue reduces its importance as a basis for future action.

43. In addition to the national communications, a number of studies and projects have been carried out in the UEMOA countries in conjunction with the implementation of enabling activities and the development of analytical tools for climate change issues. The first such activities focused on GHG inventories and mitigation options (see Initial National Communication under the UNFCCC). Simultaneously, a regional project was launched in Côte d'Ivoire and Senegal on energy efficiency in buildings⁵. This project sought to enhance technical and institutional capacities, demonstrate the feasibility of energy efficiency in the housing sector, prepare the post-project phase and disseminate the results to other countries in the region. Among results are the elaboration of an energy efficiency code for commercial buildings and a thermal comfort code for housing and the rehabilitation of older buildings.

4.4 *The clean development mechanism in West Africa*

44. Since the 1997 signing of the Kyoto Protocol, the Clean Development Mechanism (CDM) has attracted considerable interest in the climate change debates within the UEMOA region. The CDM allows Annex I countries to offset emissions by investing in emissions reduction projects in non-Annex-I countries. Most of the participants in these debates argue that implementation of the Clean Development Mechanism creates an opportunity to ensure long-term sustainable and equitable development for African countries. Several NGOs⁶ in the region have been involved in this debate at the international level but there has been only a very limited interaction with the national officials in charge of the Climate Change Convention in the region. Similar to the situation in other African countries, very few of the national research and academic institutions in the region have become engaged on climate change issues.

45. The CDM, along with GEF funded projects, is intended to contribute to sustainable development while mitigating greenhouse gas emissions. They could, if properly designed and implemented, be important sources of support for the region. African countries are just now timidly exploring how best to engage in the CDM, but the uncertainty surrounding its design and the rules for its implementation prevent a definitive determination at this time of its potential contribution to regional development.

4.5 *Governance and capacity issues*

46. All the UEMOA member countries have ratified the United Nations Framework Convention on Climate Change. But unlike the United Nations Convention to Combat Desertification, which has stimulated the preparation of National Action Plans throughout the region, the UNFCCC has not yet been

5. Project RAF 93/G32 UNDP/GEF "Reduction des Emissions de GES grace a l'amelioration de l'efficacite energetique des batiments en Afrique de l'Ouest, Cote d'Ivoire et Senegal"

6. See <http://www.enda.sn/energie>; <http://www.energetic.uct.ac.za>; <http://www.igc.org/can/can.html>

able to mobilize regional and/or sub-regional organizations such as UEMOA. In order to implement regional mitigation options in the context of the UNFCCC, there is a need to mobilize entities such as UEMOA, following the model used by the Convention on Desertification with CILSS. These types of regional actions offer the best options for meeting the challenges of global climate change and increase the portfolio of available actions, or reduce the costs of existing actions, or permit more equitable outcomes to be realized.

47. All **UEMOA** countries have set up new institutional frameworks and/or co-ordination or consultation mechanisms to address climate change and specifically to take action to implement their obligations under the UNFCCC. These national frameworks are supported by various project implementation structures including multi-disciplinary and multi-sectoral teams, for example to prepare national inventories or national communications, the management of which often necessitates delicate institutional arrangements. Among the UEMOA countries, Mali, Niger and Senegal have already submitted their first national communication to the secretariat of the Convention and the other countries are preparing to do so.

48. Institutions entrusted with national co-ordination on climate change aim to improve national participation in international climate change negotiations as well as to integrate climate change issues with national development priorities. The dominant issue in consideration remains the national communication. There is still very little support for climate change actions perhaps because the issue is not yet well understood by policy makers and because they see it as an industrialised country issue. As a result, official attitudes toward climate change issues tend to be reactive and limited to procedural action rather than assessment of options for prospective action.

49. In exploring the best way forward on climate change issues, ENDA, in collaboration with UNITAR, recently initiated a country-driven assessment of capacity building needs relevant to the Kyoto Protocol in sixteen African countries⁷. Burkina Faso, Mali and Senegal were among the surveyed countries. From the analysis of the survey results, it appears that climate change is neither yet a top priority policy issue for most of the region's public or private sector decision-makers, nor is it closely tied to national development strategies. Nonetheless, a majority of the respondents to the survey express their willingness to participate in the CDM if it becomes operational.

50. From an institutional perspective, capacity building is mainly the preserve of government institutions and the slow pace of government bureaucracy in Africa means that capacity building on issues such as the CDM may not be given the necessary priority it deserves. Only a few countries are actively involved in the preparation of CDM projects. This mirrors the general lack of capacity on climate change issues and suggests the very remoteness of the climate debate *vis-à-vis* African countries.

51. Whilst the preparation of national communications and fact sheets have each contributed to building climate awareness, lack of human resources and local technical experts puts the continent in an unfavorable situation. As a result, Africa, in general, and the UEMOA region in particular, is ill-equipped to deal with, understand and counter the potential impacts of climate change. One of the key findings of the capacity building survey was the need to raise awareness about climate change among policy makers, business, industries and academia in Africa.

7. UNITAR, "Who needs what to implement the Kyoto Protocol" An assessment of capacity building needs in 33 developing countries" UNITAR with the Consortium for North-South Dialogue on Climate Change, October 2001

52. Successful implementation of an awareness-raising program can only occur if the right groups of people are targeted. Efforts to raise awareness among top officials within the relevant ministries in Africa are hampered by institutional and structural difficulties. Indeed, the climate change debate is so far mainly conducted by the Ministry of Environment and/or the Department of Meteorology in each country with little involvement from academic experts and NGOs.

53. In the UNFCCC negotiations, African delegates tend to co-ordinate their approaches with the caucuses of the G77 as well as among representatives of African countries themselves. Yet, in these negotiations there remains an imbalance between Annex I countries and Developing Countries with regard to the expertise mobilised to support the negotiators. Various policy dialogues and capacity building experiences have been offered to African negotiators, do not necessarily correspond to the needs of delegations nor do they build on information from “needs assessments” such as the survey mentioned above.

54. In all the UEMOA countries, the Ministries of Environment and Energy are involved in the climate issue but these agencies have no in-house climate policy experts and the few people assigned to climate-related research are required to fill several different roles. There is a real and continuing need to build capacity in this area so that relevant information will be shared with other ministries and consensus can be built across the governments so as to facilitate effective implementation. As of August 2001, key sectoral departments such as finance, energy or agriculture are not yet fully engaged in the domestic climate policy debates around the region.

55. With regard to Agenda 21, a number of studies have been conducted on the linkages between climate change and sustainable development (e.g. "Sustainable Senegal") and on the general environmental situation in Africa (see UNEP Global Environmental Outlook reports). But in the absence of a coherent, national vision on what constitutes sustainable development, the climate policy and sustainable development debate remains fragmented. As a result, each Convention is treated in its own compartment without any concerted effort to formulate a more holistic view which articulates the unavoidable linkages among environmental problems.

4.6 Regional co-operation on climate change

56. A large and growing body of opinion suggests that regional co-operation, with a view to eventual economic and political integration, is the optimal approach to sustainable development in West Africa. [could add in a sentence referring to positive experience on desertification using regional approach] In a region of great geographical and social diversity, geopolitical boundaries only rarely correspond to cultural and ecological zones. The causes and consequences of environmental degradation tend to be common across West Africa's various shared ecosystems: extensive farming, a loss of fallow area, demographic pressure, water-management complications and farmer-herder conflicts. Re-conceptualizing development as a region-wide challenge reveals enormous potential for market expansion, infrastructure integration and resource exploitation. Until now, regional co-ordinating groups, in spite of their theoretical benefits, have not yet generated real and concrete economic growth or measurable positive social development in Africa (with the possible exception of the Southern Africa Development Communities, SADC).

57. Within the current global context, a wide range of future options can be envisaged for the UEMOA region. The region's future is still open to a range of possible development patterns, as there are few investments that need to be protected. The trajectory of future development of the Union will depend on a complex set of external economic and political factors. But it will also depend on critical policies,

actions and choices of people within the region as they respond to changing global, technological and institutional conditions.

58. In an attempt to provide a baseline for regional transition to sustainability, ENDA and the Stockholm Environment Institute – Boston Centre conducted a study on sustainable development in the UEMOA (Heaps et al, 1999). The project traced a conventional development scenario with a time period of 30 years, from 1995 to 2025. Examination of this conventional development scenario and a preliminary scan of policy priorities led to the identification of first steps on the long road to sustainable development for UEMOA.

59. The main conclusions of the report are include the following:

- A transition to a more prosperous and environmentally resilient mode of development in the region will require sustained efforts at national and regional levels.
- This will require significant regional efforts to build the human, institutional and scientific capacity needed in the region to support discussions and decision-making with analysis, information and solutions.
- Fundamental changes will be required in policy-making both within the region and among the international community [give some examples if possible]
- [These conclusions are redundant with the text.]

5. Equity and long term responses to climate change

60. The United Nations Framework Convention on Climate Change divides the world into two main groups – Annex I countries (western market economies and eastern countries with economies in transition to a market system) and non-Annex I countries (developing countries). Within Annex I, there are different groupings but all are focused on maximizing opportunities to advance their national interests.

61. Non-Annex I countries include a wide variety of nations with distinct differences in terms of their economic, political, social, and technological levels of development. At one end of the spectrum there are the Least Developing Countries (LDCs), which have very little basic infrastructure, while at the other there are the Newly Industrialized Countries (NICs), which have an economic structure close to that of the industrialized countries listed in Annex I of the Convention. Many other non-Annex I countries lie between these two extremes. Almost all developing countries have at present a relatively low level of per capita greenhouse gas emissions. Nonetheless, the larger of the developing countries will soon become relatively large contributors to annual global emissions. Thus, it is important to understand how these countries might participate in cost-effective global greenhouse gas mitigation policies.

62. Within the global climate change/sustainable development debate, equity is the most important issue for the UEMA countries, as well as for the rest of the African countries. The issue of equity focuses not only on how to enforce the “polluter pays principle” but also on how to ensure that vulnerable people in remote outposts of the world do not become imprisoned in endless cycles of poverty and abandoned to the mercy of climatic events. In our mind, equity requires a per capita approach to emissions entitlements,

as pointed out by the Centre for Science and Environment (New Delhi, India)⁸. The essence of equity is centred on a people-based paradigm, one that recognizes the importance of poverty alleviation, equitable distribution of income and intra-generational equity as necessary ingredients to enhance the human condition.

63. One could argue that the manner in which industrialised countries have tackled the long-term aspects of climate change are inherently inequitable, especially from the perspective of least developed countries (LDCs). Indeed, the arguments frequently advanced by some developed countries consist of introducing the notion of collective efforts in order to reach the **ultimate objective** of the Convention. Yet, according to the Convention, responsibilities are differentiated thus giving a special meaning to “collective efforts” between industrialised countries and LDCs distinguishing between the level and type of action that each should take.

5.1 What is meant by the principle of equity?

64. Equity remains a complex notion. Without wishing to pre-empt future debates on economic, legal and social definitions of equity, the position we have subscribed to in a number of publications is based on the belief that each person should have an equal right to use the sink capacity of the global atmosphere. Whereas currently 2/3 of CO₂ emissions come from the richest 20% of the world's population, the poorest 20% only emit 2% of the total CO₂ emissions. In other words, the actual distribution of emissions, or implied emission rights, only reflects the current state of disequilibria between the North and the South concerning Greenhouse Gas emissions.

65. Other definitions of equity include those suggested by the Pew Centre; focusing on criteria such as responsibility, opportunity and standard of living⁹. Such definitions have served as reference for some industrialised country negotiating groups on issues regarding commitments for non-Annex I countries. The issues addressed using such definitions of equity include how to design a market for emissions rights and discussions about whether or not to harmonise national policies and measures.

66. If we adopt these criteria we must revise their interpretation within an overall development perspective:

- responsibility is historic (ecological debt): so binding commitments should only be agreed for those countries that are historically responsible for emissions;
- opportunity drives to emission rights/capita for all countries and a global market to exchange;
- standard of living: consumers in northern countries must change their patterns of production and consumption in order to reduce emissions.

67. Equity is a concept that needs to be revisited as circumstances change. As with a country's development level. Below, equity is considered in two distinct time-frames: equity in the short term and equity in the long term. In each case, two main issues are considered: sustainable development generally

8. In particular : « The atmospheric rights of all people on earth ».- CSE Statement by Anil Agarwal and Sunita Narain, www.cseindia.org

9. « Equity and global climate change, the complex elements of global fairness ».- Eileen Claussen and Lisa McNeilly, Pew Center on Global Climate Change, october 29, 1998 (reprinted june 2000).

and the implementation of the Climate Change Convention (UNFCCC) more specifically. the CDM projects

5.2 *Equity in the short term*

68. In the short term, an equity on the sustainable development and climate change front should consider two main groups only: Annex I countries on the one hand and non-Annex I countries on the other hand. The table below outlines some of the main targets for both groups, first in the context of general progress towards general Sustainable Development objectives, then in the context of Climate Change Policy.

Table 3. Short term: a first level of equity

Scope/Countries	Annex I	Non Annex I
Sustainable Development	<ul style="list-style-type: none"> • Bridging of the North/South development divide, with ODA being a catalyst for FDI and domestic capital • Debt relief for Developing Countries 	<ul style="list-style-type: none"> • Raising living standards through improved access to multilateral trade. • Improved environmental and social policy frameworks • Social equity, institutional coherence.
UNFCCC	<ul style="list-style-type: none"> • Policies & Measures to reduce emissions • Any financial flows to developing countries in climate change context should be additional to ODA • Application of flexibility mechanisms only with strict emission limitation targets (“caps”). • CDM Investment via ‘Clearing House’. 	<ul style="list-style-type: none"> • Win-win emissions avoidance¹⁰ mitigation and sequestration options • Adaptation strategies to climate change • Redistribution of benefits from CDM.

5.3 *Equity in the long term*

69. In the longer term, a differentiation could be introduced within non-Annex I countries. The high income non-Annex I countries with economic conditions closer to Annex I countries may take binding

10. «Avoided emissions» was introduced as a concept by ENDA in the beginning of the climate change process to explain that in LDC’s the main issue is not to mitigate emissions but to avoid them in the first place.

*Climate Change and Sustainable Development Strategies in the Making:
What should West African Countries Expect?*

commitments whereas other remaining developing countries will not be able to commit themselves in the process of global greenhouse gas emissions reduction targets.

Table 4. Long term: towards a second level of equity

Scope / Countries	Annex I	High Income Non Annex I (new commitments)	Mid and Low Income Non Annex 1
Sustainable Development	<ul style="list-style-type: none"> • Bridging of the North/South development divide, with ODA being a catalyst for FDI and domestic capital • Debt relief for Developing Countries 	<ul style="list-style-type: none"> • Provision of ODA funds (as Annex I countries) 	<ul style="list-style-type: none"> • Raising living standards through improved access to multilateral trade. • Improved environmental and social policy frameworks • Social equity, institutional coherence.
UNFCCC	<ul style="list-style-type: none"> • Substantial reduction in GHG emissions • Tax on flexible mechanisms, proceeds to be used for LDC adaptation funds. • CDM Investment via 'Clearing House'. 	<ul style="list-style-type: none"> • Substantial reduction in GHG emissions. • Tax on flexible mechanisms, proceeds to be used for LDC adaptation funds. • CDM Investment via 'Clearing House'. 	<ul style="list-style-type: none"> • Limiting build-up of GHG emissions. • Effective adaptation through use of Annex I-financed adaptation fund. • Redistribution of benefits from CDM.

6. Integrated policies for sustainable development

70. The Rio process, in particular Agenda 21, outlined alternative development paths for developing countries. These would require the integration of local and global issues by building bridges between environment and development more systematically. Agenda 21 called upon the international community to provide assistance to developing countries to facilitate their effective participation "in the negotiation of new or revised agreements in the actual international operation of such instruments".

71. The UNFCCC could play a pivotal role in the implementation of the Agenda 21 because climate change issues are by nature global and require the mobilization of the entirety of the humanity. However, the UNFCCC and the Kyoto Protocol involve new and many complex issues that are not well understood by developing countries and in particular African countries such as those of the UEMOA zone. With regard to the whole gamut of issues that come into play in climate change debates – climate/economics/environment/politics and national interest - there is an obvious critical knowledge gap within the individual countries as well as within the various sub-regional organizations in West Africa. For instance, there exists an inadequate understanding of how the science should inform the negotiation stands they take. More than anywhere else, climate change issues in the context of UEMOA countries are related to common interests on issues such as desertification and biodiversity and the international agreements covering them. Land use and land use change are critical for the three conventions - biodiversity, desertification and climate change - as well as for overall development.

72. Among the UEMOA countries, Benin, Burkina Faso, Niger and Senegal have established National Councils for Sustainable Development as a mechanism for dealing with translating Agenda 21 and for the co-ordination of the various Multilateral Environmental Agreements. All these countries have encountered difficulties in achieving an integrated approach across these three conventions. Among the main difficulties are:

- the compartmentalization at the international level of debates on the various conventions;
- the strong dependence on external resources including financial, technical and scientific to cope adequately with the various and constantly changing issues over time;
- the lack of useful information and targeted awareness raising on the potential benefits of inter-linkages of the various Conventions and sustainable development.

73. Responsibility in the management of the global commons requires collective input from all the major stakeholders within the dynamics and the evolutionary process of climate change. Efforts should be made to remove structural and institutional barriers that continue to impede the progress toward an integrated climate development policy in the context of the UEMOA region. A number of key areas need attention:

Capacity building is the highest priority and specific areas for capacity building activities should be identified in each country. These areas include institutional strengthening, human resource development and public awareness. Institutional capacity building is chief among the most important needs of developing countries. It is a critical element in their struggle to incorporate climate policies within development strategies. Funding for regional research to support decision making is also essential.

Vulnerability and adaptation studies should be given more importance. It is vital to go beyond the semantic maze and talk more in terms of practical measures towards reducing vulnerability rather than emission reduction that is far from being an absolute necessity for African countries. How to put in place mechanisms that would build the capacity of people in marginalized regions and increase their resilience level in the event of climate change or extreme events? How do we ensure that poor people are not further impoverished by environmental hazards that are not entirely their own making?

Mobilization of funds – capacity building cannot take place without the political will from industrialized nations to disburse the relevant funds. Equally, developing countries must be encouraged to forge ahead in their development prerogatives and to determine appropriate linkages between sustainable development objectives and environmental imperatives such as climate change. The UEMOA countries, in particular, are exposed to severe drought and other environmental challenges, but the initial impetus on how they choose to manage these together with their development goals should be internally driven. In addition, the path to increased emissions for these countries is fundamental to their development and must be considered as a “rite of passage”.

7. Conclusion and next steps

74. Evaluating the potential adverse impacts of climate change and assessing the immediate priorities is an activity that is first and foremost incumbent on the leaders and decision makers of vulnerable people across the world. Africa and UEMOA countries are undoubtedly among the most vulnerable. While arguments about equity and the “polluter pays principle” will remain potent ingredients in the overall negotiating strategies of African decision makers, these arguments will lose their potency in the absence of

a well –constructed set of national policies. There is an urgent need to focus attention on a concrete set of issues that will help to place sustainability issues on the agenda of relevant international, regional and national organizations and other stakeholders. By focusing our attention on the medium to long-term future, climate change impacts could trigger a range of potential problems related to development in UEMOA countries and therefore climate change response strategies should become part of development strategy discussions in these countries today.

75. The challenge for Africa is to provide a starting point that will take into consideration the need and imperative to translate a regional vision of sustainable development into more concrete policies. This exercise will require good quality information and data, thorough analyses of key issues for the region. It can also provide a starting point for constructing alternative normative scenarios for the region, to help examine the prospects for innovative development strategies to move toward sustainable patterns of development. In practical terms:

- **A first phase of research** and analysis could focus on quantitative environmental-economic *analysis* in order to have a broader picture of current and future GHG and other environmental outcomes. Studies already conducted on the subject should be made available, and we could envisage building a website to enable easy and quick access to the relevant documents on the region for researchers.
- **A second phase** (which could be undertaken in parallel) should construct study grids on equity and help decision-makers to understand the long term impacts of climate change on development.

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ANNEX I: ADDRESSING CLIMATE CHANGE IN UEMOA REGION -- SELECTED NATIONAL INSTITUTIONAL PROFILES

Senegal

In Senegal, the institutional framework is structured as follows:

- The Ministry of Environment and Natural Resources is the competent ministry to represent the government in the Conference of Parties;
- The Department of Environment and Classified Settlements serves as the focal point for the implementation of the Convention;
- The National Committee on Climate Change is composed of wide range of institutions including the private sector, academia, NGOs, etc;
- The National Meteorological Department serves as focal point for the IPCC;
- The Department of Economy serves as the focal point for GEF;
- Technical partners: research institutes (ISRA, CRODT), university laboratories (Geology, ISE); NGOs (CONGAD, ENDA, etc) offer technical assistance in the implementation of various projects in a had-hoc manner.

From this standpoint, there is a clear distinction between scientific issues (IPCC) on the one hand and operational on the other (GEF) given that the focal points are different depending on the issues at hand.

The National Committee on Climate Change consultations is the place where synergies are sought; such was the case in the past with the different Conferences of Parties in order to define the position of Senegal concerning unresolved issues. The approach in Senegal fits in with a global approach of looking at environmental problems especially since the creation of the inter-ministerial unit in 1993, the Higher Council for the Environment and Natural Resources (CONSERE), which constitute a framework for dialogue between the different actors on the one hand and the harmonisation of different sectoral policies in terms of the management of the environment and its natural resources on the other hand. Unfortunately, after the completion of the NAP, the role of the council became vague.

Mali

In Mali, the structure of the institutional mechanism is almost akin to the Senegalese one. Since 1998, under the authority of the Ministry of Territory Management, Urban and Environment, an institutional framework responsible for the management of environmental problems was established in the form of an inter-ministerial committee in charge of the implementation of the conventions on the environment: climate, desertification and biodiversity. The Permanent Technical Secretariat of the Committee oversees

in principle the activities of the focal points of the convention. For issues relating to climate change, the national meteorological department is the focal point but in actual fact, it is the Ministry of Territory Management, Urban and Environment that acts as a co-ordinating body for the activities across the Permanent Technical Secretariat whereas technical details are provided by different national institutions, central public services (Hydraulic, Urbanism, National and Rural Development), the University, research centres, industries and NGOs. Operationally, to ensure greater efficiency, the first Malian national communication advocated a modification of the current institutional structure in particular to designate part of the existing inter-ministerial committee to become a “National Committee on Climate Change”. The task of this committee will be to incorporate implementing solutions of the UNFCCC by technical units into national policies.

Burkina Faso

In Burkina Faso, activities linked to the UNFCCC are part of the National Conference for Environmental Management. This institutional framework is relatively recent. The National Conference for Environmental Management regroups several ministerial departments has a permanent secretariat and relies also on a technical secretariat. From a more decentralised level (regional, departmental and community), provisions have been made to mobilise civil society in terms of thematic committees working on problems encountered with the implementation of the UNFCCC.