Institutional challenges to developing a Nigerian climate policy

Peter Koblowsky+
*Chinwe Ifejika Speranza**

+ University of Bonn (Peter.Koblowsky@gmx.de)
*German Development Institute, Bonn (ifejika.speranza@die-gdi.de)

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For all further questions concerning this paper and its content, please contact Mr. Peter Koblowsky.

Peter.Koblowsky@gmx.de

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Abstract:

This paper discusses the structural basis and practice of creating a climate policy framework in Nigeria. The roles of existing and planned institutions and legal frameworks are discussed, as well as how they foster or hinder the design of policies and implementation of climate responses at the domestic and international levels. Data has been collected between autumn 2009 and spring 2010. The paper combines literature review with empirical data from interviews of various actors in the Nigerian climate policy process.

Various actors including the federal and state governments, civil society and private sector interest groups as well as the Nigerian oil sector are working conjointly on the elaboration of political frameworks and on the realisation of a multitude of individual projects focused on climate change. The paper examines the role of the institutional framework compassing this multitude of stakeholders for the creation of a sustainable climate policy in Nigeria, thereby discussing and referring to literature on institutional governance in the environment sector and institutional change for sustainability.

Currently, there is a lack of cohesion between political initiatives and institutions, and a weak implementation of environmental laws and directives. Although becoming a topic of increasing political interest, a policy framework on climate change is still nonexistent for Nigeria – caused not least by diverging lines of interest between participating institutions. The paper shows that once awareness about climate change has been created, there is a danger of the proliferation of institutions and actors addressing the various dimensions of climate change. This proliferation highlights the lack of coordination between various government entities and their struggle to gain/retain influence over the national climate policy, thereby slowing down the design and implementation of responses to mitigate and adapt to climate change. Suggestions are made on how the barriers to climate policy development and implementation in Nigeria can be overcome.

1 Introduction

Climate change as a policy problem is a challenge of its own: Its causes and implications are global, thus going beyond the domestic reach of national governments. Moreover, it is related to a myriad of other environmental, economic and social concerns. Therefore, the actors involved in finding solutions coming from a cross-sectoral and cross-institutional background are likely to have a widely different set of values and worldviews, thus making it necessary to have an extraordinary coordination framework to manage the overboarding stakeholder participation. Finding solutions becomes even more difficult as there is a lack of scientific certainty about causes and consequences of the problem. Thus, climate change does not give decision-makers the opportunity for 'trial and error learning' (Rayner and Okereke 2007, 117) as its consequences are long-term and unclear to predict. These specific characteristics make climate change a political problem which poses various policy coherence and institutional coordination problems, thus turning out to be a 'governance nightmare'.

Analysing national climate politics and governance is not possible without having a deeper look into the respective institutional framework of a country. As is the case for any problem affecting human society, institutions play a key role in finding solutions and shaping decision-making processes. Looking at the climate change problem in particular, it has to be recognised that its identification as a problem, causes, effects and possible solutions to combat or to adapt to it are all related to the workings of institutions. However, not only societal institutions as entities themselves, but also the interplay between them, are key research objectives to understand the whole picture.
These institutions and their relations have to adapt to handle a complex problem like climate change since their narrow mandates and experiences are not geared to govern cross-societal problems. Dealing with the increasing complexity of environmental problems, most countries are striving towards reaching a more cooperative form of government in which governmental bodies are working in closer cooperation. However, very often one tier of government does not know what the others are doing and even if they are aware there might be a lack of clarity about each other's institutional mandates (Goldblatt and Middleton 2007, 4). This is especially the case regarding climate change since the level of practical experience with instruments for policy coherence and coordination is still very low in most countries – especially in developing countries.
Hence, for development related research, paying attention to legal, procedural and institutional issues relevant to policy coherence and institutional coordination capacities is crucial for supporting developing countries' attempts to formulate a successful climate policy. For developing countries such as Nigeria, characterised by low adaptive capacities, weak political institutions (especially in the environment sector) and a multitude of other problems to solve, climate change represents an overall threat to its development.
The question then is, how can an African developing country like Nigeria deal with the challenge of climate change, when it already has many other development problems to address? Nigeria's political answer to the question of how to handle another cross-societal problem which constitutes a threat to its development is thus the main subject of investigation in this paper.

This paper examines the meanings of institutions and institutional change for the governance of complex (environmental) problems like climate change, referring to the particular case of Nigeria. It is meant to highlight the main characteristics of Nigeria's climate policy process, thereby describing its institutional features and the problems related to them. The meaning of institutional adaptation and integration as possible solutions to existing governance problems will be discussed.
The paper starts with a literature review on institutions and their meaning for sustainable development and governance of cross-sectoral policy issues. It provides a basic overview of Nigeria's already existing or emerging institutional and policy matters and discusses what kinds of institutional changes are necessary in order to address climate change and its implications more effectively and sustainably. It also provides a general understanding in how far a developing country like Nigeria tackles climate change on the legislative and executive level.
The study was conducted between autumn 2009 and summer 2010. It combines literature review with field data collection from interviews of various actors in the Nigerian as well as the international climate change policy process. Semi-structured and open interviews as well as participant observations were used to collect data during various climate change conferences in Poznan (2008), Bonn (2009) and Copenhagen (2009) as well as with Nigerian stakeholders of the process.

2 Institutions governing environmental change

This section provides a literature review on the meaning of institutions for the public governance process and their specific role in the governance of complex (environmental) problems like climate change. It will be discussed in how far institutions have to be adapted to govern complex problems like climate change more democratically and sustainably.

2.1 The role of institutions in governance processes:

The term *institution* is a very common sociological concept, but most of the time used very vaguely and imprecisely. In sociology one of the most important aspects on institutional relationships is the aspect of influence and dominance. Sociologists ask how predominant institutions affect and shape other institutions and what are the conditions and processes for exerting this kind of influence (Buttel 2000, 40). Institutions should however not be confused with organisations being just tangible expressions of institutional forms which have mandates, resources, staff and offices although the capacities of organisations to influence events are easier to observe and analyse. The concept of institutions goes further:
Institutions represent rules that govern values, beliefs and norms, thereby regulating behaviour through socially approved instruments and mechanisms. Thus, they are an expression of social habitualisation. Institutions have to be to a certain extent permanent and stable since they could not fulfil their function of defining the context within which individuals, public and private organisations operate and interact with one another. However, institutions are also subject to constant social change, making it necessary to reorganise and adapt them to the ever changing external conditions. This institutional change is possible because institutions represent the channels through which ideas are transformed into policy and where new problems are considered as being a social issue with the need for

political attention. Thus, they are a medium for ideas to become a policy issue which in the end might evoke enough political pressure to even affect the institution's own structures (O'Riordan's and Jordan's 1996, 68). This explanation is similar to Cortner et al.'s definition (1998, 159-160) of institutions as the expressions of the terms of collective human experience; they express how people interact with each other and their environment. Furthermore, they also represent a human-made vehicle for solving social problems. There are formal institutions such as public law and there are informal institutions, for example customs and practices.

Talking about public governance, according to Rayner and Okereke (2007, 120-129) institutions fulfil five criteria in this respect: The task of framing a problem, the task of defining policy commitments, the task of setting of levels and scales of governance, the task of choosing modes and instruments of governance and finally the task of implementation and enforcement.

This approach of Rayner and Okereke shows that institutions are the key to handle any societal problem: They represent the entity which determines whether a problem is an actual problem worth dealing with, how to tackle the problem and how to administer the chosen strategy. Thus, institutions are pivotal for structuring the governance process: Institutional constitutions and similar basic structures provide a system of rules, decision-making procedures and programmes which are the skeleton of any governance framework.

2.2 Institutional restrictions to governing complex (environmental) problems

The pivotal and constitutive role of institutions in governing societal issues as described above however is not completely unchallenged. Research has shown that the effectiveness of institutions is increasingly being questioned when it comes to managing complex environmental problems. Governments and their institutional frameworks seem to be increasingly helpless in shaping and coordinating international environmental agreements without the support and expertise of non-governmental actors from scientific institutions, the civil society and the economy. The same is true at the domestic level where governments deal with various structural and capacity deficits, making environmental governance a hard task to deal with (Berkhout, Leach and Scoones 2003).

The particularly complex and far-reaching problem of climate change, and its long-term character represents a special challenge to governance processes: Governments usually plan in mid-term or long-term visioning, ranging from three to five or at most 20 years respectively. Addressing climate change impacts thus has to be planned in a much longer timeframe. Furthermore, traditional economic planning methods cannot be applied in policy-making because of the uncertain scenarios climate change poses which go beyond any standard economic planning tools of any government agencies (Goldblatt and Middleton 2007, 5).

Carter (2007) observes that there is a historically manifested problem for environmental policy-making in general which also affects climate policy: Governments' administrative and polity structures are usually separated into different policy sectors. The problem is that the sectoral administration bodies are likely to follow their primary objectives without having too much attention for environmental implications. This system represents a policy style which is geared towards the fulfilment of individual sectoral interests where each department advocates for its key group within its individual policy sphere. This also forces environmental decision-making into a sectoral framework: Fearing the infiltration of established sectoral arrangements for policy-making by 'outsiders', ministries shy away

from coordinated strategies and cross-sectoral problem-solving to keep up their territories and to avoid conflicts with each other. In the end, this system leads to the marginalisation of environmental concerns in public decision-making. Environment has thus been considered as an own discrete policy area without recognising its special trans-sectoral character and the need to create a connection between ecosystems and political, economic, social and cultural systems. Carter basically sees no progress in overcoming this traditional sectoral approach. Referring to Rhodes (1997), Carter argues that the reason for this minimal progress can also be found in the nature of environmental decision-making itself: The increasing complexity of policy-making in this sector and the gradual weakening of the role of the state in this decision-making process make policy and polity coordination more difficult (Carter 2007, 180–188).

Carter's conclusions are shared by various other authors: Connor and Dovers (2004, 15) for example observe a mode of public management of societal issues being subdivided in distinct and separated sectors, based on the assumption of having discrete issue areas and a hierarchical administration and decision-making model. They advert to the fact that in scientific literature these modes of governance are said to be completely inadequate for addressing environmental issues due to their complexity, uncertainty and cross-sectoral character, referring also to the Brundtland Report of 1987.

Thus it becomes quite clear that existing societal institutions are unlikely to successfully cope with climate change since its cross-societal character is outside the range of experience of established societal institutions. This is especially the case in developing countries. In addition inadequate personnel and financial capacity of these administrative bodies, makes it difficult to extend their reach outside their narrow mandate scopes.

Referring to this problematic background, Goldblatt and Middleton (2007, 5) claim that climate change needs a cross-disciplinary approach that encompasses science, economic assessment and planning, organisational development and social planning, just to name the most important policy disciplines. Nevertheless, there is no single government department which has all these capacities making it necessary to coordinate across the various sectors and the society. This in return makes it important for government to open itself and to use societal resources.

2.3 Sustainable and participative institutional governance

The institutional problems and restrictions mentioned above have been a subject of serious discussion and wide spread attention during the Rio conference for sustainable development in 1992 which represents an important landmark in this respect. In the light of the failure of state governments to handle (global) environmental issues, the claim for more participative and inclusive decision-making and implementation in environmental governance is an important outcome of the conference. This has also been highlighted at the Johannesburg conference in 2002. In focus are the different levels of environmental policy-making, speaking especially of the international, national and sub-national levels, their institutional structures and the level of shared decision-making experienced there. The two conferences showed that there is a dire need for more flow of knowledge, capacity-building and increased communication between these levels of governance. The term 'governance' thus got a new connotation*:* The exercise of government functions without or alongside government structures. Boundaries between the public and private sector and the national and international level are thus becoming in-

creasingly blurred. Researchers speak of a development from government to governance[1] in the environmental sector (cf. Stoker 1998; Rhodes 1997; Vogler and Jordan 2003; Berkhout, Leach and Scoones 2003).

Participative governance in the sense of the principle of sustainable development is key for breaching the old sectoral policy paradigm which has manifested over the last decades. When the outside pressure and persuasion for change is strong enough, this might lead to the introduction of new measures, institutions and instruments. Policy sub-systems being formerly restricted to narrow scopes suddenly get involved conjointly in the new issue. Participants from various sectors gain interest in the upcoming issue and become stakeholders. This widening is crucial for actual change to happen. This however is not enough to attain a real paradigm change: The long-term application and compliance to these measures is crucial for sustaining the policy change (cf. also: Carter 2007, 190–192).

Thus, it becomes clear that institutions have to become more adaptive, inclusive and flexible in decision-making. They have to develop better relationships to the public and to other stakeholders. Instead of relying only on technocrats and experts to set management goals, decisions have to be made by a variety of people, including actors with different sectoral and professional backgrounds. Focuses have to be set more broadly and there has to be a learning and adaptation process while acting (Cortner et al. 1998, 161–164).

The application of the principle of sustainable development in public governance thus has consequences for the way governments work. Adding a sustainable-environmental component in governance implies that institutions and administrative processes are to be reworked and transformed. It is a necessity that environmental considerations have to be made at any stage of all decision-making processes in all sectors. The same is true for climate change as it is a cross-societal issue. Climate change has become an issue of multi-sectoral attention and participation (Schenkel 2000, 159). This however also represents a coordination problem; like Turnpenny et al. (2005, 9) observe:

> "[...] *climate change has moved from a simple 'policy question-research response' to a complex, political process of overlapping influences and conflicting objectives. The need for an integrated approach to climate change research is pressing, since almost all players in the policy process have to consider interacting issues of economics, social change, environment and planning outside their own particular interest.*"

Carter (2007, 292) defines three key words in this reformation process: integration, sustainable planning and democratic governance:

Integration of sustainable principles in governance happens mainly through institutional reforms and the use of respective administrative techniques. It must become clear which aspects of societal institutions need to be reformed or even abolished in order to achieve sustainable governance. A *sustainable planning* is bound to the idea that policy coordination is enhanced throughout all levels of governance, from the international down to the local level (vertical) and between the different public bodies as the various ministries and their implementation agencies (horizontal). The *democratic aspect of sustainable governance* implies that more participatory mechanisms and public inquiries in decision-making are introduced.

[1] Government can be described by the exercise of political steering through hierarchical decision-making structures and centrality of public actors while governance is characterised by less hierarchical decision-making structures and the inclusion of non-state actors (Benson and Jordan 2007, 88).

Jordan and Lenschow (2000) also refer to the issue of policy integration and coordination: Policies of the environmental sector have to be mainstreamed with other societal aspects, including for example welfare, economic development, energy, agriculture, transport, etc. Jordan and Lenschow call this principle of horizontal coordination between several policy sectors 'environmental policy integration'. On the vertical level of governance, meaning the interrelation of international, regional, national and local governance, Vogler and Jordan (2003) see a dire need for more coordination as well: Multi-level environmental governance targets the characteristics and responsibilities of institutions from local to global level and thus is important for the overall coordination of a policy framework.

*Finally, w*hen looking at the manifold ways in which deeper institutional structures affect social development and society's interaction with the environment, it becomes clear that societal institutions and their adaptation are pivotal for attaining sustainable development – in all policy sectors. For achieving a sustainable governance of the environment, there is a clear need for further reforms on the administrative level, including the strengthening and widening of the mandate of environment ministries. Furthermore, government processes have to become more participatory. It is only when the private sector and the citizens themselves can be convinced of the necessity of these changes, a real sustainable development will be possible. The state has to take the role of the facilitator of this participatory decision-making process. More importantly, the issue of implementation cannot be overemphasized: Societal and institutional change can only work if the planned ideas and policies are successfully implemented on the ground. Thus, implementation must always be part of the planning process. Part of implementation is the consideration how policies are realised top-down, from the national down to the local level (vertical coordination), as well as how the execution is arranged and applied within the institutional framework between the respective departments (horizontal coordination). Inter-ministerial or inter-sectoral consultative mechanisms are needed to make a legally binding policy possible. Managing these tasks also means re-educating all stakeholders involved, attaining a general mindset which accepts that environmental considerations (including implications for climate change) have to be included in all policy-making processes. The question then is how Nigerian institutions are responding to climate change. This will be matter of discussion in the next segments of this paper.

3 Climate change - The Nigerian context

Nigeria is a federal republic with a three tier administration level, the federal, the state and the local governments, respectively. The country is organised into 36 states and one federal capital territory. The country has 774 local government areas. Each state is sub-divided into local government areas. Legislative power at the national level lies with the executive government and with the House of Representatives and the Senate. The Senate and the House of Representatives comprise the House of Assembly which approves the laws of Nigeria and are as such interesting for research on climate policy. Laws are also made at the state level by the state executive and the state legislators.

Nigeria is located in West Africa. It has an area of approx. 923,768km2, about two times the size of France and almost three times the size of Germany. It is bordered by the Atlantic Ocean to the south, Benin to the west, Chad and Niger to the north and Cameroon to the east.

Nigeria is the most populous African country. Its population is estimated to grow at about 2.4% be-

tween 2002 to 2007 and is at about 148 million (UNDP 2008, World Bank 2008) with an estimate of 158 million in 2010.[2] About 64% of the population lives below the poverty line of 1.25 US$ per day (2000-2007). The country has a petroleum-based economy with earnings from oil providing about 90% of foreign exchange and used for 70% of budgetary revenues. In 2005, agriculture accounted for 33% of the GDP, industry 34%, services 33% (FAO 2005).

Despite oil revenue, Nigeria is still an agriculture-based economy as farming is the main livelihood for a major part of the population. Nigeria is technically unable to meet its food needs from its mainly smallholder rain-fed production at its low level of inputs and this status is expected to remain until about 2025 (FAO 2005). Domestic food staple production per capita in Nigeria decreased from 1994-2004.

Rainfall amounts and wet season duration decreases from the south (coast) to the north and generally lasts from April to October in the south and can be as short as three months in the north. The coastal areas receive an average of about 3800mm per year while the northern drier areas receive about 650mm per year. Periodic droughts and floods occur in Nigeria and are expected to change their characteristics with the advance of climate change. Shifts in rainfall patterns and temperature in Nigeria and the whole West African region have also been identified. In the northern Sahel region of Nigeria, temperatures increased during the months of July to September. From October to June decreases in temperature were identified. However, this does not show a specific trend in the changes in temperature as changes can be in both directions. A decline in annual rainfall has been reported in all climate zones of West Africa with major declines of up to 40 percent being observed in drier Sahel parts. However, towards the end of the 20th century, a slight increase in rainfall has been detected. Studies on climate change projections on Africa suggest that precipitation amounts will likely decrease for most parts of sub-Saharan Africa, while rainfall variability and extreme rainfall events are likely to increase.[3]

While bearing in mind the limitations of current projections, several impacts of climate change have been identified for Nigeria, including flooding of coastal areas (affecting mainly the Niger Delta where the oil industry is situated), as well as droughts and desertification mainly in the northern Sahel region. This means a threat to human security and livelihoods as agriculture and fishery are affected which are the means of livelihood for at least 60% of Nigerians. Water resources including groundwater, rivers and lakes are affected by these changes, considering that Nigeria's energy production is dependent on hydroelectric power generation to a large extent. Furthermore, climatic changes might have impacts on energy production and supply as well as industry and transport. These direct impacts and their secondary effects mean a threat to human health and the economic development of the country. Major economic damage can be expected in the Niger Delta region where all of Nigeria's oil sources are situated. A catastrophe scenario predicts that 75% of the Niger Delta population might have to be evacuated due to floods and sea level rise. Combining this with the increasing droughts and desertification in the North, a large migratory pressure towards the centre region of the country seems to be emerging which might lead to new societal conflicts.[4]

Having discussed the impacts of climate change, it is important to mention that in global dimensions,

[2] Cf. http://esa.un.org/unpp
[3] For more information cf. (Müller 2009); (Ifejika Speranza 2010)
[4] For more information cf. (FMEnv 2003); (Nzegbule 2008); (Nwajiuba 2008); (Okoh 2008); (Amadi 2008)

Nigeria is not a major emitter of greenhouse gases: Whole of Sub-Saharan-Africa just contributes 1.7% to the worldwide CO_2 emissions whereas Nigeria has a share of 29% of Africa's greenhouse gas emissions.[5] Looking at the sectoral greenhouse gas emissions, it becomes clear that Nigeria's energy sector is the biggest emitter: 54.9% of Nigeria's 2005 total emissions came from the energy sector, followed by the agricultural sector with 38.7% (Ajao 2009, 40). A major source of Nigeria's CO_2 emissions is *gas flaring*. There are no credible calculations on the exact amount of gas being flared but suggestions range from 40% up to 78% of the annually produced gas in Nigeria. The country is one of the biggest gas flaring nations worldwide, second only to Russia. It is estimated that Nigeria's share of flared gas worldwide represents about 25%.[6] There were several legal attempts to stop gas flaring since the 1970s, however no attempt by government or by the oil industry itself has been successful so far (compare chapter 6). In addition, Nigeria may also have to adapt to the adverse impacts of adaptation measures on it oil-based economy: International restrictions on emissions from the combustion of fossil fuels may adversely affect its economy.

On the other hand, Nigeria as a country with a population of almost 150 million contributes less than 1% to the worldwide greenhouse gas emissions and thus cannot be seen as a major emitting country. However, as already mentioned, it has to bear severe negative consequences of the worldwide emissions of greenhouse gases. This is mainly caused due to high rates of poverty, deficient technological capacities and a high degree of dependence of its people on their natural environment, which is affected heavily by the consequences of climate change (Nwajiuba 2008, 3).

Besides the climatic hazards mentioned here, it is important to mention that Nigeria is prone to various environmental problems such as soil degradation/desertification, large scale erosion, oil and water pollution and a high deforestation rate which might lead to the total disappearance of Nigerian forests in the year 2020, just to name a few. These environmental problems can exacerbate the impacts of climate change or themselves be exacerbated by climate change. How Nigeria deals with environmental change (including climate change) is the focus of the following sections.

4 Institutional governance of climate change in Nigeria

The following chapter provides a detailed view of the institutional substance of Nigeria's climate policy, focusing on the respective administrative bodies, laws and regulations which cover climate and environment related matters. The first subchapter focuses on administrative bodies dealing with environment and climate change. The second subchapter focuses on initiatives and legal directives on climate change.

4.1 Governmental institutions responsible for environment and climate policy

In 1988, Nigeria's supreme environmental authority, the **Federal Environmental Protection Agency (FEPA)** was founded. FEPA due to its wide scope of responsibilities, can be regarded as the initial

[5] Included in this calculation are also the consequences of changes in land use in agriculture and forestry, e.g. clearance of forest areas to create arable land, thus reducing CO_2 storage capacities (UNFCCC 2005, 7).

[6] For further information cf. (Nwajiuba 2008); (Pat-Mbano 2008); (Asonye et al. 2008); (Amadi 2001); (Osuntokun 2002)

point for all successive governmental institutions and agencies in the environmental sector, including climate change related matters. The main duty of FEPA was the formation of national directives, standards and criteria within a wide scope of environment related matters. FEPA also had monitoring and implementing tasks and the authority to impose punishment fees in case of non-compliance with respective laws and directives (Olatubosun 2002, 50; Chokor 1993, 24).

The formation of FEPA and the enactment of the "National Policy on the Environment" one year later which represents Nigeria's first comprehensive body of rules and regulations for environmental matters, are perceived as a milestone in Nigeria's environmental policy, if not as its starting point: From 1988 onwards, Nigeria introduced for the first time in its history political administrative instruments with the sole aim of environmental protection. These measures are the basis for all following environment related directives and institutional innovations including the upgrade of FEPA to the **Federal Ministry of Environment (FMEnv)** in 1999. They also represent the basis for Nigeria's politics on climate change.

However, researchers also see a continuous problem existing since 1988: a dangerous underfunding of respective governmental authorities. They depend on financial allocation from the national development plans which traditionally regard environmental matters as a side issue. Maybe even more obstructive for its effectiveness is the fact that Nigeria's environmental policy is highly dependent on foreign funding, provided predominantly by the funding agencies of the international development cooperation (Okeke 2004, 199–200).

Another important structural problem is described by Okeke (2004) and other researchers: Even after FEPA was established and seemingly took the sole responsibility for all environmental matters, a rest of responsibility was left to the ministries and departments, which in earlier times handled environmental matters as a side issue included in their political mandate. Thus, FEPA (or today's FMEnv respectively) has to cooperate with a multitude of other governmental and parastatal agencies which have exclusive rights related to some environmental matters. This especially concerns the oil sector, leading to institutional clashes and to a doubling of political mandates in many cases. Some researchers see the entanglement of existing institutions turning out as an efficiency and implementation problem of Nigeria's whole environmental policy (Obi 2003, 44–49; Chokor 1993, 27; Umeh 2004, 243–247). Okeke (2004, 199) sees problems arising mainly from the formation of more and more new institutions. These new institutions automatically pose a problem to the existing ones by "threatening" their spheres of influence. In the history of Nigeria's environmental policy, this particular problem has led to a delay in the implementation of directives. Due to such struggles for political competence, new institutions were prevented from taking up their work or were cut off from necessary funding.

We will see in the following that the problems mentioned for Nigeria's environment politics are also of particular importance for Nigeria's climate policy whose institutional landscape has been constantly growing over the last years, thus creating various coordination and integration problems:

The so far most important governmental body dealing directly with the issue of climate change is the **Special Climate Change Unit (SCCU).** Established in 2006 as a coordinating department of FMEnv for all climate change related matters, the SCCU is the designated governmental authority for cooperation with UNFCCC. The unit's broad mandate is the development of a short to long term national plan on climate change. SCCU coordinates and manages the financing of the preparation of Nigeria's National Communication to UNFCCC. Additionally, it has a coordinating function for Nigeria's national,

regional and international climate change projects and initiatives. SCCU has a coordinating role in Nigeria's Inter-Ministerial Committee on Climate Change (see below).
SCCU has identified several obstacles to an effective implementation of its aims:
There is low public awareness about climate change, low public funding for climate change related projects and research, as well as inadequate human and technical capacities and training concerning respective governmental authorities. More importantly, the existing institutional framework is regarded as inadequate for governing climate change. SCCU thus requests the consolidation of the national institutional and legislative framework on climate change through the formation of a practically oriented legislative directive on climate change to act as a planning and implementation guideline for all respective programmes and initiatives. Most importantly, SCCU demands that Nigeria has to incorporate all these claims into its national development plans to create a solid foundation for accomplishing the manifold and cross-sectoral consequences of climate change.[7]
Referring to the requests of SCCU to consolidate the national institutional framework on climate change, it has to be mentioned that already in 1993, long before SCCU was created, a coordinating body for climate change related issues had been established – the **Inter Ministerial Committee on Climate Change (ICCC)**. It comprises representatives of (almost) all ministries and since recently also non-governmental representatives. The ICCC acts as a technical and advisory network to the federal government. It is supposed to support government as a multi-sectoral expert panel to make the right decisions in climate change related matters. The ministries are supposed to develop common decisions by mutual agreement. Furthermore, ICCC's tasks are concentrated on the elaboration and discussion of climate change related technical documents with the aim to implement them in practice, including the National Communication to UNFCCC (FMEnv 2003).
However, at the end of July 2009, another coordinating body on climate change, the **National Climate Change Round Table (NCCR)** has been established. The SCCU supported and initiated this process officially. The main function of NCCR is to pool all relevant climate change stakeholders at one platform. The ICCC has been incorporated into the new body as its technical arm. NCCR shall strengthen the incorporation of civil society and private sector into decision-making to emphasise climate change's cross-societal character.[8] It is emphasised that business can use the opportunity of this round table to showcase its (low carbon) products to a wide audience. Integrated political and economical concepts shall be developed. A special focus is laid on the implementation of CDM projects. Another aim of NCCR is to develop inputs for a national policy framework on climate change.

The Nigerian government, in some cases influenced by several NGOs working on climate change is in the process of planning a multitude of new governmental and parastatal agencies and forums whose sole aim is focused at elaborating and discussing climate policies. Since these institutions are novel and not completely implemented yet, there are some uncertainties about their jurisdiction. There are still discussions about their political direction and the scope of their mandates. Nevertheless, they will be introduced in this paper since they could determine the future direction of Nigeria's climate policy:
A recent innovation is the **Secretariat for Adaptation Strategy Development**. A transitional office has been set up within the SCCU facilities. Its tasks will be centred on the development of a National Adaptation Plan of Action (NASPA) and its implementation. The civil society initiative "Building

[7] Cf. http://www.specialclimatechangeunit-nigeria.org/index_files/about_us.htm
[8] Cf. http://www.nnccrc.com

Nigeria's Response to Climate Change" (BNRCC) is supporting the negotiations for the formation of the new secretariat.[9]

In Spring 2009, the Nigerian House of Representatives passed a law on the formation of a **National Climate Change Agency**. This new agency shall serve as an executive sub-branch of FMEnv. It is not clear yet which specific functions its mandate will include. An exact determination of rights and duties of the new agency is put on hold at the moment due to a new institutional clash:

End of July 2009, the Nigerian Senate passed another law on the formation of a new institution dealing with climate change, the **National Commission on Climate Change.** The commission's patron is Nigeria's president. Thus, the commission stands on a higher administrative level compared to the National Climate Change Agency. Since the new commission is planned as inter-ministerial board, it captures climate change's character as a phenomenon with cross-societal impacts.[10] As Nigeria's (new) designated national authority, the commission will have the right to set directives for the application of CDM projects, as well as to approve or reject respective project applications. The commission shall be the country's single negotiating agency to UNFCCC for all CDM related matters. Thus, the new commission will take over this responsibility from the SCCU. Furthermore, it is important to mention that the new commission is likely to have a mechanism to integrate representatives from civil society and private sector as board members or in a consultative function. Several interest groups from outside the government actively participated in the elaboration of the bill.[11]

Since there are some clashes over the scope of National Climate Change Agency's mandate, neither the agency nor the commission can take up their work. There is an urgent need for harmonisation of their spheres of influence since only one entity can take up its work. A harmonisation committee of the National Assembly has thus been set up to deal with this problem.[12]

If the harmonisation decides for the commission option, this will mean some cutbacks for the SCCU or even its dissolution over time since the commission takes over a lot of its responsibilities. Also the Inter-Ministerial Committee on Climate Change would be affected by the decision of the Assembly: If the agency concept prevailed, ICCC would have to remain and be endowed with more political power since the National Agency concept does not include a mechanism for inter-ministerial engagement. Also the SCCU would probably be strengthened if this decision was made. If the National Commission concept prevailed, each ministry will have to sort out internally how it relates to the new commission. The same questions about spheres of influence come up, regarding the new National Round Table on Climate Change (NCCR): Next to the concept of a new national commission, being under the patronage of the presidency and operating with inter-ministerial functions, NCCR will shrink in importance.[13]

Thus many open questions concerning the quite confusing coordination of this multitude of institutions focusing on climate change remain. At this point Okeke's (2004) conclusion about Nigeria's environmental policy (see above) has to be recalled: In Nigeria, one rule to deal with environmental problems in the past seemed to be the continuous formation of new institutions without dissolving or

[9] Personal correspondence between Peter Koblowsky and John van Mossel, Canadian Marbek Resource Consultants company, November 2009.
[10] Cf. http://nigeriacan.wordpress.com; cf. also: Ajao et al. (2009, 16)
[11] Interview of Peter Koblowsky with *Mr. Surveyor Efik*, COP15 conference in Copenhagen, 11 Dec. 2009.
[12] Personal correspondence between Peter Koblowsky and Prof. David Okali, NEST, August 2009.
[13] Personal correspondence between Peter Koblowsky and John van Mossel , Canadian "Marbek Resource Consultants" company, November 2009.

successfully adapting the existing ones. This quickly becomes a problem because of a dilatoriness in giving these institutions a legal framework and exact scopes of influence. This has led in the past and is leading in the present to institutional clashes from time to time. These clashes generally slowdown the fulfilment of political tasks. Thus, time is lost – time which is a crucial variable in the context climate change.

4.2 Governmental initiatives and directives related to climate change

The issue of **gas flaring** represents a major environmental problem in Nigeria and simultaneously a threat to the climate. There were various governmental initiatives to deal with the problem beginning in the late 1960s, but in the end all of the attempts to regulate gas flaring failed so far:
The first legal measure was the 1969 "Petroleum Decree" which called for feasibility studies prior to oil extraction activities including strategies on how to use the gas extracted as a by-product. The decree was succeeded by various other legal directives including the imposition to re-inject gas back into the ground to store it for further use. In 1984 for the first time, all gas flaring activities had to end as imposed by a decree of the Obasanjo military government. In the end, none of the oil companies followed the orders of the Nigerian government. Punishment measures were introduced by the government as consequence. These however were so excessively low that they did not represent an economic threat or respectively incentive to stop gas flaring. Punishment fees exist up till this day; gas flaring in Nigeria is practically "legalised" by paying a comparatively small amount of money (Okorodudu-Fubara 2001).
Nevertheless, the unfulfilled affirmations to stop gas flaring promised both by government and oil companies continued over the last few years. The most recent unfulfilled promises by the multinational oil companies to stop gas flaring in Nigeria were targeting the year 2008. Since none of the oil companies could or wanted to fulfil its promises, the Nigerian legislation again elaborated a directive which is meant stop gas flaring in the near future: In May 2009, Nigeria's Senate adopted the "Gas Flaring Prohibition and Punishment Bill 2009" which sets a new deadline for the phasing out of all gas flaring activities in Nigeria: 31 December 2010. It has yet to be seen if the Bill joins the long list of failed governmental directives and voluntary self obligations by the oil sector to stop gas flaring: The last promises targeted the years 2001, 2002, 2003, 2004 and 2008 respectively. But novel is indeed that the new bill obviously declares gas flaring as officially prohibited. The Bill still has to pass Nigeria's House of Representatives to become *res judicata*. It will have to prove its effectiveness compared to its failed predecessors (Nayar, 21 May 2009; Hassan, 13 Aug. 2009).
The weak directives with the ineffective compliance mechanisms thus far, makes it doubtful whether the government can really deal with the problem of gas-flaring.

Referring to other recent government activities directly related to climate change, it can be mentioned that Nigeria's environment minister John Odey (2009) emphasised the willingness of Nigeria to be part of those countries which are willing to mitigate climate change, even if Nigeria itself belongs to those who contributed the least to it. Concerning these intentions, Odey listed a set of mitigation projects recently initiated by FMEnv and SCCU, including predominantly CDM projects. Among these are two projects for the utilisation of oil gases which would otherwise be flared unused, a project for integrated waste management which includes the utilisation of accumulated methane, several refores-

tation and forest management projects. Dr. Victor Fodeke, chair of SCCU, estimates that consistent implementation of Nigerian CDM projects could reduce Nigeria's deforestation rate (which currently represents 3.5%) by at least 80%. Moreover, he emphasised that these projects will attract investments representing several hundreds of millions of US$. Fodeke said, Nigeria now occupies 40% of all African Certified Emission Reductions (CERs). Thus, Nigeria took Africa's leading position as CDM nation, currently also holding Africa's largest CDM project worth US$ 600 million (Uwaegbulam 11 May 2009; Ajao 2009, 24).

Looking at the renewable energy sector, Nigeria is trying to diversify its sources of power generation to become less oil dependent. Thus, government and consultants from civil society and the private sector are working on plans of how to extend the use of biofuels, solar energy, water, natural gas and wind energy (Ajao 2009, 30).

As mentioned earlier in this paper, government in cooperation with civil society organisations is preparing a **National Adaptation Strategy Plan of Action (NASPA)** at the moment. NASPA is being conducted in form of a multi-stakeholder process including cross-sectoral expertise. It is unclear yet when NASPA is to be set up and how it will be implemented. Probably NASPA will constitute a major part of a future Nigerian climate policy and is to be elaborated in a way which is consistent with the existing and upcoming development strategies. It is of particular importance to integrate NASPA into national development planning since the realisation and implementation of related projects might end up without any results otherwise.

It will be very interesting to see if the aimed integration of the National Adaptation Strategy process into national development planning and the increased multi-sectoral stakeholder inputs will help to manage the multitude of planned activities in a more efficient and coordinated manner. The need for more policy coordination and inclusion however has already been recognised by government: The elaboration of a comprehensive climate policy in order to consolidate all actions taken on climate change under one coordinating framework has been designated as most urgent post-COP15 project (Ajao 2009, 25).

5 Nigeria's climate politics at subnational level

The three tiers of government in Nigeria allow certain competences for the state governments to create their own laws which complement the national laws. In this sense some state governments have reformed their environmental policy sector to also take into consideration climate change issues. Various states and state governors are already active on climate change, be it in creating awareness on climate change or clamouring for better laws to deal with climate change that should also check environmental pollution and degradation.[14] As such the state executives and the legislative (State House of Assembly) are already playing a significant role in the climate change policy process, by proposing legal instruments to deal with climate change.

Stopping gas flaring is a major concern of the state governments, especially those producing oil. To reach this goal, these state governments have adopted various tactics, such as intensifying their cooperation and contact with the oil companies and encouraging them to stop gas flaring. They also net-

[14] Cf. http://www.deltastate.gov.ng/insidedelta.htm

work at the international levels and thereby solicit for support, for example from US politicians to help them convince US oil companies to stop gas flaring. A result of these activities is the announcement by the Delta state government that Chevron has agreed to stop gas flaring in the next 15 months.[15]
The state governments network at sub-national, national and international levels. Delta state for example has joined a new sub-regional body called "new coalition of sub-national leaders" in its determination to check environmental degradation. Through their activities, the state governments aim to take advantage of the various funding sources that support responses to climate change. As such the State governments see opportunities in low carbon economic growth. This role is also recognised by the national government and is being supported through cooperative actions.[16]
There is potential to mainstream climate change at state levels as states compete with one another for reputation for being the most environmentally friendly state. Climate change has become an issue of pride – those states that already deal with climate change issues portray themselves as being progressive. In response to climate change, some state governments have become active in creating or reforming state policies on environment to include climate change issues, mainstreaming climate change into their various portfolios, exploring opportunities for business ventures on reducing emissions and low carbon industries, and networking with other cities and states in the world on climate change issues.
It thus seems that the federal process on forming a climate change policy may not be able to provide the guidance that the Sates might currently need, thus forcing states to develop their own policy. While state level legislation should reflect national policies, it might turn out in the end that the national climate policy will have to take into account what has already been achieved at the state level. On the other hand it must be mentioned that only a few number of states has become active at all. The large majority of Nigeria's state governments still remain inactive on the issue of climate change, probably caused by a lack of general awareness. Thus, it seems that the awareness on climate change is still a critical factor for political action in Nigeria – be it at the federal or state level.

6 The roles of civil society, private sector and oil sector

Nigeria's **civil society** has been quite active regarding its participation in domestic climate politics: Various interest groups have been founded lately which regard climate change as one of their key activities. These NGOs have found their way into the policy process and are trying to guide government's attention to the various problems connected to climate change. Some of these NGOs are in close contact with government bodies, consulting them and conjointly elaborating political concepts. Civil society has provided government with various workshop programmes focusing on climate change to raise awareness among government officials. As earlier discussed in this paper, civil society actively participates in the elaboration of bills and concepts for parastatal bodies governing climate change, such as the new Secretariat for Adaptation Strategy Development.
Examining the actions implemented, it is becomes clear that civil society is a very active player in promoting the political process on climate change in Nigeria. The number of NGOs participating in creating a civil society network is growing. The way how Nigeria's civil society is participating and has participated in the elaboration of climate policy thus becomes clearly an issue for further research

[15] Cf. ibid.
[16] Cf. ibid.

as it seems to be a driving force behind the whole process.

In contrast, Nigeria's private sector stayed out of most activities related to climate change so far and showed little interest. However, since the COP15 conference, which was largely frequented by Nigerian businesses, it can be observed that Nigeria's economic sector is showing increasing interest in the issue. Parts of business sector have ambitions to become active on the policy level, supporting the creation of a climate change policy framework with the hope to generate stable conditions and incentives for business. In the end, this shall lead to a more sustainable economic development in Nigeria.

Furthermore, Nigeria's **oil sector** plays a distinctive role in the policy process on climate change. Being characterised by governmental and private interests and being organised in a form of joint venture entrepreneurship, the oil sector should be regarded separately from civil society and private sector influence-taking: Its possibilities to influence decision-making are more direct and have more political weight. Not least, this is due to the fact that Nigeria's oil industry represents a major source of national revenues: It has generated in the last few decades between 80 and 90 per cent of the country's foreign trade income and 80 per cent of the national expenditure. Moreover, it contributed 40 per cent to the national Gross Domestic Product (Ajao et al. 2009, 16). Thus, the oil sector plays a strategic role regarding capital allocation and the socio-economic stability of Nigeria's whole society.

Researchers identify an interwoven power structure of mutual influence-taking between Nigerian government authorities and the multi-national oil enterprises, following an economic logic with little or no attention to environmental implications. Another implication is the non-existence of credible control mechanisms which provides the oil sector with a lot of clearance (cp. Chokor 1992; Obi 2003; Amadi 2008). Nigeria's oil sector is also physically represented in the boards of several governmental and parastatal authorities working on climate change, like the ICCC, the NCCR and the upcoming National Commission on Climate Change. The oil sector, represented by the Nigeria National Petroleum Corporation (NNPC), has even a pivotal position in Nigeria's party to UNFCCC and thus exerts much influence on Nigeria's international level climate politics. The involvement of the oil sector at the international level climate change negotiations emphasises Nigeria's role as an oil exporting country: Government and the oil sector are interested in implementing respective measures, including carbon capture and similar technological development in combination with ongoing investment in renewables. This way, government and the oil sector want to reduce the overall emissions.[17] The Clean Development Mechanism (CDM) is thus regarded as a key instrument to reach this goal (Ajao 2009, 30).

However, despite the fact that government and oil sector are interested in diversifying the country's energy household, it has also to be seen that the multinational petroleum corporations in Nigeria has found it difficult to abandon gas flaring although the government intervened several times with respective laws and directives. This fact reflects the oil sector's influence on national climate policy. Okorodudu-Fubara (2001) even states that the oil sector's political influence led to Nigeria's long standing non-ratification of the Kyoto Protocol. Since it is not possible to prove this statement or to conclude whether the oil industry rather represents an obstacle or a promoter to the attempts to create a Nigerian climate policy, it can merely be stated that the oil sector plays a crucial role in the process: It is represented in a multitude of governmental and parastatal authorities working on climate change and has uncontested economic and political influence capacities which seem to be beyond the capacities of Nigeria's organised civil society and private sector.

[17] Interviews between Peter Koblowsky and Huzi Mshelia, Nigerian "Clean Energy & Safe Environment Initiative", Ewah Eleri (NigeriaCAN), COP15 conference in Copenhagen, Dec. 2009; cf. also Ajao 2009, 54.

7 Conclusion

Looking at Nigeria's efforts to formulate a sustainable climate policy, it can be concluded that Nigeria has acknowledged the negative impacts caused by climate change and thus is ambitious to adapt its politics and institutional framework to it. Nigeria shows various efforts to establish institutions to govern climate change; institutions which have participatory mechanisms and the intention to coordinate measures on climate change cross-sectorally. External expert and interest groups are increasingly integrated into political decision-making, including also the oil sector. As discussed earlier, Nigeria seems to have acknowledged that a complex and cross-societal problem like climate change cannot be addressed by the traditional institutional framework being characterised by narrow sectoral scopes and mandates. However, there is a dire need for institutional and policy integration, including structured participatory mechanisms for non-governmental stakeholders and experts. The establishment of institutions like the NCCR or the upcoming Climate Change Commission which were formed in a common effort by government and non-governmental stakeholders are expressions of this new thinking – 'new' in the sense that Nigerian environmental politics were by far less inclusive and participatory before the climate change issue entered the political agenda.

It seems like the increasing participation from outside of government represents an initiator for change in the institutional landscape in Nigeria, making it more flexible and accessible to non-governmental stakeholders, in this case only with regard to the issue of climate change. However, if successful, the participatory model developed in this field could turn out to be a positive governance role model for other fields of (environmental) decision-making in Nigeria.

But there is also the danger that this widespread participation and involvement of several institutions can lead to duplication of efforts and opposing policy strategies among the players involved, thus evoking uncoordinated policy-making structures and finally ending up in a political deadlock. One can get the impression that the wave of institutional innovations in Nigeria has been released ad hoc and without a roadmap leading the way since there is no legal framework on climate change or any long-term policy integration plan yet. Thus, a problem for the Nigerian government seems to stem from inadequate and ineffective integration and coordination of such a multitude of activities and institutional innovations. The same coordination problem exists as well at the vertical level: Some Nigerian states have initiated own climate change measures which were not coordinated with national efforts and planning.

Ibeh (2003) reminds of the troubles which were caused already in earlier times concerning environmental governance in Nigeria:

> *„Consequently, it is not enough to organise conferences, establish and fund new institutions without really confronting a problem directly through an action plan. Inventory shows the formation and collapse of institutions without appreciable impact made in confronting the problems for which they were created"* (Ibeh 2003, 156).

Hence, it can be concluded for Nigeria that the institutional machinery might be (partly) in place, but in the end integration and coordination of climate governance still faces many difficulties. Furthermore, development planning has little or no awareness of climate change, thus paying low attention to the issue in national development plans. Horizontal integration of climate change into other governance areas through the incorporation into the overall development planning is a necessity for a sus-

tainable climate policy in Nigeria. The issue of vertical integration and implementation should not be forgotten as well: Climate change considerations have to be arranged from the national, down to the local level; the involved institutions must have a guideline on how to do their work and how to cooperate with other departments without getting into conflict with each other. Furthermore, the information flow between the executive agencies has to be increased to avoid doubling of activities. Speaking of information flow, there is a dire need to include experts with different backgrounds into these executive institutions. Ministries who participate at the inter-ministerial committee on climate change need to have a climate change desk to be informed about recent developments in other departments, and generally to recognise the importance of this issue for their own sectoral scope.

Finally, the need for sustainable implementation and coordination of all measures taken and of all future measures is the biggest problem so far in Nigeria's climate politics. For the further development of a Nigerian climate change policy, several questions remain to be answered:

(When) will there be a common political framework on climate change and will it be incorporated in the country's development planning to grant it adequate political relevance? What will this framework include? How inclusive will this framework be, speaking of multi-sectoral and non-governmental participation possibilities? What effect will this framework have on the coordination of the institutions involved? Will they work in a harmonised and inter-related manner to prevent further struggles for political responsibilities? How and with which means will they be funded? How will the specialists working there be trained and with which technical means will they be provided to fulfil their tasks? Will Nigeria keep up the political will to regard climate change and its various cross-societal implications as one of its priority problems to deal with in order to achieve sustainable development?

REFERENCES

Ajao, R. et al. (2009): Nigeria and Climate Change: Road to Cop15, Abuja: Federal Ministry of Environment

Amadi, A. (2001): Social, political and economic perspectives of air pollution control in Nigeria, in: A. Amadi (ed.): Proceedings of the National Seminar on Air Pollution and Industrialization in Nigeria, Lagos: Community Conservation and Development Initiatives (CCDI Ecology and Development Series 1), 9–15

— (2008): Environmental governance in African development, in: *Harvard Africa Policy Journal 5*, 75–84; online: http://www.hksafricapolicyjournal.com/sites/default/files/amadi.pdf (accessed 23 Nov. 2009)

Asonye, S. / C. Nwogwugwu (2008): Climate change: energy use and abuse perspective, in: C. Nwajiuba (ed.): Climate change and adaptation in Nigeria, Weikersheim: Margraf (Farming & Rural Systems Economics 95), 125–132

Benson, D. / A. Jordan (2007): Environmental politics in multi-level governance systems, in: C. Okereke (ed.): The politics of the environment: A survey, London: Routledge, 87–100

Berkhout, F. / M. Leach / I. Scoones (2003): Shifting perspectives in environmental social science, in: F. Berkhout / M. Leach / I. Scoones (eds.): Negotiating environmental change, Cheltenham / Northhampton: Edward Elgar, 1–31.

Buttel, F. H. (2000): Social institutions and environmental change, in: M. Redclift / G. Woodgate (eds): The international handbook of environmental sociology, Cheltenham / Northhampton: Edward Elgar, 57–65

Carter, N. (2007): The politics of the environment: Ideas, activism, policy, Cambridge: Cambridge University Press, 2nd edition (1st edition 2001)

Chokor, B. A. (1992): Environmental pressure groups and habitat protection in the developing world: the case of Nigeria, in: *The Environmentalist* 12 (3), 169–180

— (1993): Government policy and environmental protection in the developing world: the example of Nigeria, in: *Environmental Management* 17 (1), 15–30

Connor, R. and Dovers, S. (2004): Institutional change for sustainable development, Cheltenham / Northampton: Edward Elgar

Cortner, H. J. et al. (1998): Institutions matter: The need to address the institutional challenges of ecosystem management, in: Landscape and Urban Planning 40

FAO (Food and Agriculture Organisation of the United Nations) (2005): The state of Food and Agriculture 2005: Agricultural trade and poverty: can trade work for the poor?, Rome: FAO; online: http://www.fao.org/docrep/008/a0050e/a0050e00.htm (accessed 23 Oct. 2009)

FMEnv (Federal Ministry of Environment Housing and Urban Development) (2003): Nigeria's first National Communication under the United Nations Framework Convention on Climate Change, Abuja; online: http://unfccc.int/resource/docs/natc/niganc1.pdf (accessed 23 Oct. 2009)

Goldblatt, M. / J. Middleton (2007): Climate policy coherence and institutional coordination: Clarifying institutional responsibilities in South Africa (Basic 13)

Hassan, T. A. (2009): Nigeria: can the National Assembly finally stop gas flaring?, in: *AllAfrica* 13 Aug. 2009; online: http://allafrica.com/stories/200908130092.html (accessed 23 Oct. 2009)

Ibeh, M. J. U. (2003): Environmental ethics and politics in the developing countries: case study from Nigeria, Paderborn: Schoeningh (Paderborner Theologische Studien 35)

Ifejika Speranza, C. (2010): Resilient adaptation to climate change in African agriculture, Bonn: DIE, mimeo

Jordan, A. / A. Lenschow (2000): 'Greening' the EU: what can be learned from the leaders of EU environmental policy?, European Environment 10 (3), 109–120

Müller, C. (2009): Climate change impact on Sub-Saharan Africa: an overview and analysis of scenarios and models, Bonn: DIE (Discussion Paper 3/2009)

Nayar, A. (2009): An end to Nigerian gas flares?, in: *Nature Blog* 21 May 2009; online: http://blogs.nature.com/news/thegreatbeyond/2009/05/an_end_to_nigerian_gas_flares_1.html (accessed 23 Oct. 2009)

Nwajiuba, C. (2008): Adapting to climate change: challenges and opportunities, in: C. Nwajiuba (ed.): Climate change and adaptation in Nigeria, Weikersheim: Margraf (Farming & Rural Systems Economics 95), 1–6

Nzegbule, E. (2008): Forestry development and the challenge of climate change in Nigeria, in: C. Nwajiuba (ed.): Climate change and adaptation in Nigeria, Weikersheim: Margraf (Farming & Rural Systems Economics 95), 7–15

O'Riordan, T. / A. Jordan (1996): Social institutions and climate change, in: T. O'Riordan / J. Jäger (eds.): Politics of climate change: A European perspective, London: Routledge, 65–105

Obi, C. (2003): Political and social dimensions of environmental crisis in Nigeria, in: M. Darkoh / A. Rwomire (eds.): Human impact on environment and sustainable development in Africa, Aldershot, Burlington: Ashgate (Contemporary Perspectives on Developing Societies), 43–53

Odey, J. (2009): Efforts to combat climate change and save the planet, in: *Economic Confidential* 05 Jun. 2009; online: http://www.economicconfidential.com/july09featuresodey.htm (accessed 23 Oct. 2009)

Okeke, D. C. (2004): Government efforts in environmental management in Nigeria, in: H. C. Mba et al. (eds.): Management of environmental problems and hazards in Nigeria, Aldershot, Burlington: Ashgate, 189–203

Okoh, R. (2008): Mainstreaming gender in climate change impact mitigation and policy regimes, in: C. Nwajiuba (ed.): Climate change and adaptation in Nigeria, Weikersheim: Margraf (Farming & Rural Systems Economics 95), 89–94

Okorodudu-Fubara, M. (2001): Refocusing regulatory regime on atmospheric pollution control in Nigeria, in: A. Amadi (ed.): Proceedings of the National Seminar on Air Pollution and Industrialization in Nigeria, Lagos: Community Conservation and Development Initiatives (CCDI Ecology and Development Series 1), 45–60

Olatubosun, A. (2002): An overview of criminal liability in environmental pollution, in: A. Osuntokun (ed.): Democracy and sustainable development in Nigeria, Lagos: Friedrich Ebert Stiftung, Frankad, 45–64

Osuntokun, A. (ed.) (2002): Democracy and sustainable development in Nigeria, Lagos: Friedrich Ebert Stiftung, Frankad

Pat-Mbano, E. (2008): Climate change and oil exploration in the Niger Delta: implications for renewable resource development, in: C. Nwajiuba (ed.): Climate change and adaptation in Nigeria, Weikersheim: Margraf (Farming & Rural Systems Economics 95), 113–124

Rayner, T. / C. Okereke (2007): The politics of climate change, in: C. Okereke (ed.): The politics of the environment: A survey, London: Routledge, 116–135

Rhodes, R. (1997): Understanding governance, Milton Keynes: Open University Press

Schenkel, W. (2000): From clean air to climate policy in the Netherlands and Switzerland: How two states deal with a global problem, Swiss Political Science Review 6 (1)

Stoker, G. (1998): Governance as theory, in: International Social Science Journal 155, 17–28

Turnpenny, J. et al. (2005): Mapping actors involved in climate change policy networks in the UK, Norwich: University of East Anglia – Tyndall Centre for Climate Change Research (Working Paper 66)

Umeh, L. C. (2004): Official mechanism for implementing environmental impact assessment (EIA) in Nigeria, in: H. C. Mba et. al. (eds.): Management of environmental problems and hazards in Nigeria, Aldershot, Burlington: Ashgate, 237–247

UNDP (United Nations Development Programme) (2008): Human Development Report 2007/2008: Fighting climate change: human solidarity in a divided world, Nairobi: UNDP; online: http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf (accessed 23 Oct. 2009)

UNFCCC (United Nations Framework Convention on Climate Change) (2005): Sixth compilation and synthesis of initial national communications from parties not included in annex I to the convention; online: http://maindb.unfccc.int/library/view_pdf.pl?url=http://unfccc.int/resource/docs/2005/sbi/eng/18a02.pdf (accessed 23 Oct. 2009)

Uwaegbulam, C. (2009): Govt gets UNFCCC approval for two new CDM projects, in: *The Guardian* 11 May 2009; online: http://www.ngrguardiannews.com/homes_property/article01//indexn3_html?pdate=110509&ptitle=Govt%20gets%20UNFCCC%20approval%20for%20two%20new%20CDM%20projects&cpdate=170509 (accessed 23 Oct. 2009)

Vogler, J. / A. Jordan (2003): Governance and the environment, in: F. Berkhout / M. Leach / I. Scoones (eds.): Negotiating environmental change, Cheltenham / Northhampton: Edward Elgar, 137–158

World Bank (2008): World Development Report 2009: Reshaping Economic Geography, Washington> World Bank; online: http://siteresources.worldbank.org/INTWDR2009/Resources/4231006-1225840759068/WDR09_bookweb_1.pdf (accessed 23 Oct. 2009)

Additional internet sources:

http://cdm.unfccc.int/Statistics/index.html (accessed 23 Oct. 2009)

http://nigeriacan.wordpress.com (accessed 23 Oct. 2009)

http://www.deltastate.gov.ng/insidedelta.htm (accessed 1 Feb. 2010)

http://www.nestinteractive.org/climate_change.htm (accessed 23 Oct. 2009)

http://www.nnccrc.com (accessed 1 Feb. 2010)

http://www.specialclimatechangeunit-nigeria.org/index_files/about_us.htm (accessed 23 Oct. 2009)