

UNIVERSITY OF KWAZULU-NATAL

**Civil Society, Dams and Underdevelopment of the Democratic Republic of Congo: A
Study of Communities Affected by the Inga Hydropower Projects**

by

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**Submitted to the School of Built Environment and Development Studies for the
Fulfilment of the Requirements for the Degree of**

DOCTOR OF PHILOSOPHY

in the Subject

DEVELOPMENT STUDIES

at

**UNIVERSITY OF KWAZULU NATAL
HOWARD COLLEGE CAMPUS
DURBAN**

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March 2015

ABSTRACT

This research examines development aid, development agencies, international financial institutions, successive governments of the Democratic Republic of Congo, and Congolese civil society organisations as well as their transnational advocacy network allies in conflicts surrounding the Inga Hydropower Projects. The contradictory roles of these actors in the development of the DRC are considered through the lens of the Inga Hydropower Projects' impact on affected communities and Congolese citizens at large.

The study supports the argument that the failure of development initiatives in the DRC is caused by a combination of internal and external factors. The domestic factors consist of the incapacity of the state to build on the fragile economic foundations left by colonialism, and the attitudes of local post-independence elites and ordinary people who do not support or promote inclusive and sustainable development initiatives. The external factors consist of western powers and aid agencies which have provided military, economic, and ideological support to DRC governments, including dictatorships, thereby strengthening their patron-client relationships. This study contends that positive aid outcomes in mega-development projects depend on prevailing economic policies, donor agencies' political interests, the capacity and contribution of civil society to promote public accountability, and the ability of a state to efficiently allocate resources where they are needed. Sustainable solutions to failed development efforts are mainly emerging from within civil society.

This study makes three main contributions. It documents the impacts of the IHPs on affected communities and the DRC at large, the strengths and weaknesses of the IHPs as high-modernist projects, and the stakeholders' understanding of the IHPs. The study also explains why the increase of CSOs paradoxically sustained Mobutu Sese Seko's dictatorship, the role of CSOs in Inga 1 and Inga 2, and how civil society is addressing further developments of the IHPs. Lastly, this research reveals the responsibility of individuals, development aid, and multinational corporations involved in Inga 1 and Inga 2 to predict the outcomes of further development of the IHPs through Grand Inga in the DRC.

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COLLEGE OF HUMANITIES

DECLARATION - PLAGIARISM

I,, declare that

1. The research reported in this thesis, except where otherwise indicated, is my original research.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from such persons.
4. This thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from them. Where other written sources have been quoted:
 - a. their words have been re-written but the general information attributed to them has been referenced, and
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5. This thesis does not contain text, graphics, or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the thesis and in the References section.

Signed

DEDICATION

This thesis is dedicated to my children Maxwell Okito Yemba Nkoy Amisi, Fatuma Sarah Amisi, and Jean Clement David Amisi. It is also dedicated to my wife Yuma Bahande Amisi. I will always remember their unconditional love, support, sacrifice, and prayers during this research project and subsequent difficult times.

ACKNOWLEDGEMENTS

A number of individuals and organisations' support and assistance made the completion of this research project possible.

I am grateful to my supervisor, Professor Patrick Bond for his encouragement and support. His knowledge and experience has been invaluable throughout my period of study.

Thanks also to Professor Mike Morris for his insightful vision from the first day we met. He understood what many people had not yet observed in terms of my intellectual ability to successfully undertake an MA Degree in Development Studies and subsequently a Doctor of Philosophy. I also express my appreciation to Professors Imraan Valodia, William Munro, Richard Ballard, Julian May and James Fairburn, Dr Myriam Velia, Caroline Skinner, Hermien Kotzé, and Leslie Anderson from the University of KwaZulu-Natal for their diverse contributions to my studies and this thesis. I am appreciative to Helen Poonen, Amy Ramsamy and Lungile Keswa from the University of KwaZulu Natal Centre for Civil Society for their support.

I acknowledge the research funding received from the *Campagna per la Riforma della Banca Mondiale* (CRBM); International Rivers (IR); and the World Economy, Ecology and Development (WEED), for the field visit during the early phase of this research. I am also grateful to the University of Kwa-Zulu Natal National Research Foundation for the Travel Grant which was used for a return ticket to the DRC for fieldwork. Lastly but not least I appreciate the contribution of, among many others, Gail Teunissen, June Skinner, Stephen Saad, and Christopher Stefan Seabrooke, to my children's education during the most difficult time of my life.

I am thankful the facilitative role played by the *Administrateur Délégué Général* (Managing Director) of SNEL and all SNEL Departments and their personnel for their patience in answering my sometimes uncomfortable questions and for their contribution to this thesis. I could not have undertaken my field work in Kinshasa, Matadi, Boma, and the Inga Zone without their authorisation, answers to my questions, advice on the pilot study in 2008, and the full investigation in 2012.

I am very indebted to the personnel of *Groupe d'Etudes Environnementales du Congo* (Environmental Study Group of the Congo), the *Commission Nationale de l'Énergie* (National Commission for Energy), and the Ministry of Energy for their inside knowledge and advice on this research project.

I also thank the Reverend Pastor Jacques Bakulu and his family as well as the Centre for Promotion and Education of Community-Based Organisations (CEPECO), Simon Malanda – the chairperson of the representatives of the clans of the communities affected by the IHPs - as well as the five other representatives of the clans for their time, insight, life stories, and accounts of socio-environmental struggles for justice transmitted across generations. I extend my gratitude to members of the communities affected by the IHPs in the Inga Zone and the Congolese people at large in the Inga Zone, Boma, Matadi, and Kinshasa for freely participating in this research study.

I appreciate the contributions of other local civil society organisations based in Kinshasa and the Bas Congo – *Avocats Verts*, *Réseau des Partenaires pour l'Environnement au Congo* (REPEC), *le Conseil pour la Défense Environnementale par la Légalité et la Traçabilité* (CODELT), *Nouvelles Alternatives pour le Développement* (NAD) – Université de Kinshasa, CEPECO, et *le Collectif des ONG de la Province de Bas Congo* – and their transnational advocacy networks, including but not limited to the *Campagna per la Riforma della Banca Mondiale* (CRBM); Global Green Grant Fund (GGF), International Rivers (IR), and World Economy, Ecology and Development (WEED). The former internationalised the 55-year struggle of the affected communities, while the latter provided funding for my preliminary trip to the DRC which for the first time recorded and highlighted the impacts of Inga Dams and subsequent struggles for socio-environmental and economic justice around these mega development projects. Africa Rivers' Networks and Bryan Ashe, in particular, were very helpful in inviting me to their different meetings in South Africa, Botswana, and Mozambique where the negative impacts of megadams for water and hydroelectricity in many African countries were discussed.

Thanks also go to my brothers, sisters, brothers-in-law, family and friends including but not limited to the following: General Dr Okito Yemba Nkoy Amisi, Bally Amisi, Alimasi Mayanga, Kibangula Yuma, Michel Lwalaba, Elisabeth Idi, Nelly Bofosse Bekombe and their respective families for invaluable logistical support before, during, and after my

fieldwork in Kinshasa, Matadi, Boma, Inga, and Muanda. I hope that this modest contribution to the body of knowledge around controversial mega development projects will keep the flame of our name burning brighter than before across generations to come.

I extend my appreciation to the leadership of Durban Glenridge International Church: Rory and Melanie Dyer, Doug and Shena MacDonald, Nick and Anna Coutsooudis, Clint and Ellen Wolter, Goonga and Bronie Marcus, Daryll and Dene Thomson, Daryll and Sharn Dunnington, Shaun and Charlene Baxendale, and Michael Galilas in particular for their friendship and spiritual support. My appreciation also goes to Gavin and Rosanne Binder, Elaine, Emma and Megan for their generosity, friendship and support since I met them and throughout my stay in Durban and during this research project.

I am very indebted to my wife, Yuma Bahande Amisi, and our children Maxwell Okito Amisi, Fatuma Sarah Amisi, and Jean Clement David Amisi for their moral support, financial sacrifices and suffering during my period of study. I appreciate their patience and care during very difficult times. The completion of this research project is proof that they can achieve everything they want in life as long as they remain focused and prioritise their choices.

LIST OF ABBREVIATIONS

ADG	<i>Administrateur Délégué Général</i>
AfDB	African Development Bank
AFRODAD	African Forum and Network on Debt and Development
AHDP	Aswan High Dam Project
AHEP	Akosombo Hydroelectric Project
AIDS	Acquired Immuno Deficiency Syndrome
ARN	African Rivers Network
BBC	British Broadcasting Corporation
BDK	Bundu dia Kongo
BNA	Basic Needs Approach
CA	Capability Approach
CADs	Communities Affected by Dams
CCS	Centre for Civil Society
CEPECO	Centre for Promotion and Education of Community Based Organisations
CHP	Combined Heat and Power
CRBM	<i>Campagna per la Riforma della Banca Mondiale</i>
CRI-Project	Country of Return Information Project
CSO	Civil Society Organisation
DRC	Democratic Republic of Congo
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIS	Environment Impact Studies
EPA	Environmental Protection Act
ESIA	Environmental and Social Impact Assessment
EU	European Union
FAO	Food and Agriculture Organisation
GECAMINES	<i>La Générale des Carrières et des Mines</i>
GDP	Gross Domestic Product
<i>GEEC</i>	<i>Groupe d'Etudes Environnementales du Congo</i>
GGF	Global Green Grant Fund
GHG	Green House Gas
GNP	Gross National Product
GWP	Global Warming Potential
HIV	Human Immunodeficiency Virus
HOD	Head of Department
HRA	Human Rights Approach
IDA	International Development Association
ICD	Inter-Congolese Dialogue
IFI	international Financial Institutions
IGT	Inter Generational Transmission
IHPs	Inga Hydropower Projects
ILO	International Labour Organisation
INGO	International Non-Governmental Organisation
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IRD	Institut de Recherche pour le Développement.

IR	International Rivers
IPCC	International Panel on Climate Change
IRR	Impoverishment Risks and Reconstruction
ISPLP	Inga Shaba Power Line Project
IUCN	World Conservation Union
LHWP	Lesotho Highlands Water Project
LPA	Lusaka Peace Accord
MDG	Millennium Development Goals
MENCT	Ministry of Environment, Nature Conservation and Tourism
MNCs	Multinational Companies
MOU	Memorandum Of Understanding
MPR	Popular Movement of the Revolution
MT	Market Theory
NDP	Narmada Dam Project
NEPA	National Environmental Policy Act
NGO	Non-Government Organisations
OSFAC	<i>Observatoire Satellitaire des Forêts d'Afrique Centrale</i>
PMEDE	<i>Projet de développement des marchés d'électricité pour la consommation domestique et à l'export</i>
SADC	Southern African Development Community
SACU	Southern African Customs Union
SAP	Structural Adjustment Programmes
SIA	Social Impact Assessment
SICAI	<i>Société Italo-Congolaise de Développement Industriel</i>
SMME	Small, Medium and Micro Enterprises
SNEL	<i>Société Nationale d'Electricité</i>
TAN	Transnational Advocacy Networks
TB	Tuberculosis
TGDP	Three Gorges Dam Project
RBA	Rights-Based Approach
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme United Nations,
UNDESA	United Nations Department of Economic and Social Affairs
UNEP	United Nations Environment Programme
UNIKIN	University of Kinshasa
UNPD	United Nations Procurement Division
USA	United States of America
WB	World Bank
WCD	World Commission on Dams
WCED	World Commission on Environment and Development
WEC	World Energy Council
WEED	World Economy, Ecology and Development
WESTCOR	Western Power Corridor Company
WMO	World Meteorological Organisation
WTO	World Trade Organisation
WWF	World Wildlife Federation

CHAPTER 1. INTRODUCTION

1.1 INTRODUCTION TO THE RESEARCH

Who might tell us that these falls, which are now an obstacle to construction of railway of Bas-Congo, may not become one day, a force, a dynamic generator of electricity to distribute light and the driving force in the provinces bordering? (Alphonse-Jules Wauters¹, 1885: 215).

This research project explores the role of development aid and other stakeholders in the Democratic Republic of Congo (DRC)² through the lens of the impact of the Inga Hydropower Projects³ (IHPs) on dam-affected communities and the Congolese people at large. It investigates how successive DRC governments have addressed the contradictions between financial contracts with external actors and social contracts with the people of the DRC - who have been waiting for their share from the IHPs since its inception in the late 1960s. These two conflicting contracts can only be resolved through good governance of the IHPs, appropriate pricing of electricity for mass consumption, fair and mutually agreed compensation to adversely affected communities, and by taking the environmental impact of the IHPs seriously, including its long-term contribution to global warming and climate change. The lack of access to, and the affordability of, electricity is a pressing issue for ordinary DRC citizens. Only 11.1% of the country has been electrified (WB, 2012: 166) for reasons that will be explained later in this chapter. This is far below the average of less than 30% access in Sub-Saharan Africa (Eberhard *et al.*, 2011: 5). Climate change and the DRC government's lack of mitigation capacity and political will represent other challenges which call for urgent attention because climate change will negatively affect the ecosystems on

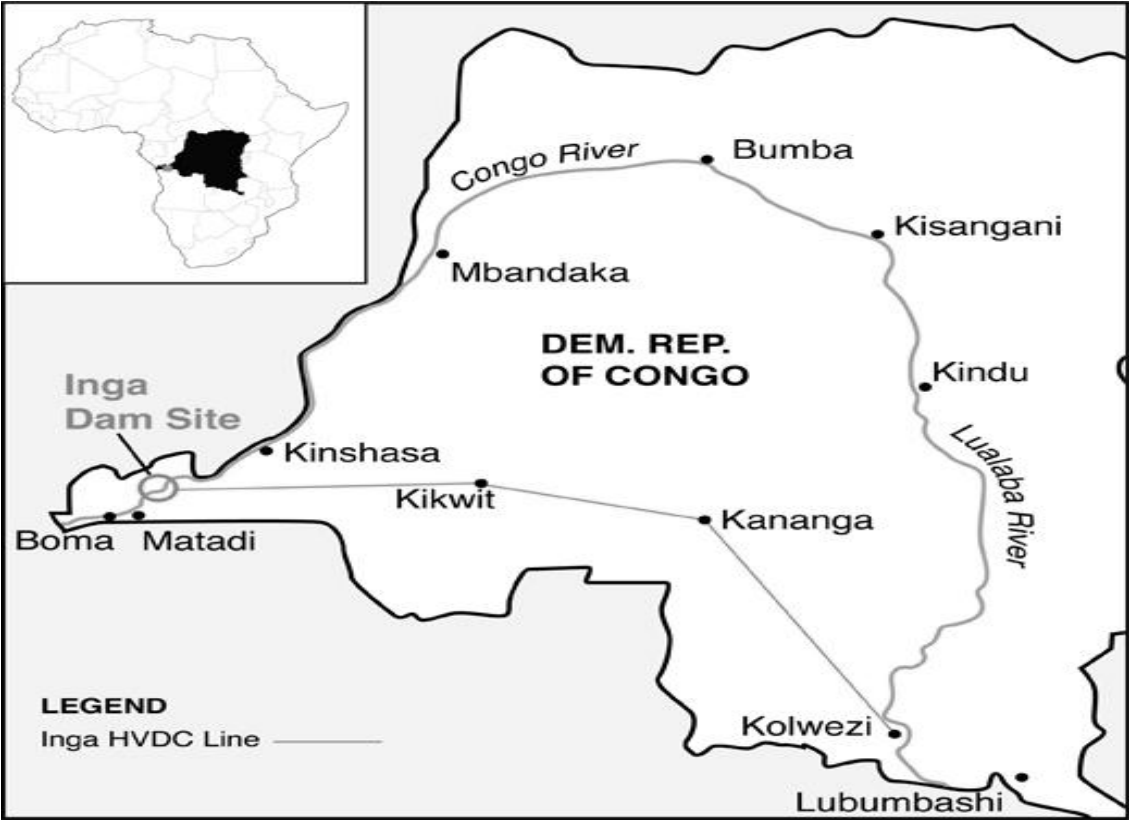
¹ Professor Alphonse-Jules Wauters was editor-in-chief of the “geographic movement”, deputy-secretary of the Belgian Geographical Society and the International Congress of Commercial Geography (1879), and corresponding member of the Geographical Society of Berne, Marseilles, Rio de Janeiro, Rouen and the Commercial Geographical Society of Paris. He was the first academic to acknowledge the importance of hydroelectric potential of the Inga Falls Site.

² The DRC refers to the Republic of Congo during the first republic at independence, renamed the DRC in 1964, as part of the Luluabourg Constitution; and later on Zaire by President Mobutu Sese Seko during the second republic, and the Democratic Republic of Congo by President Laurent Désiré Kabila during the third republic and thereafter. It was called the Congo Free State from 1885 to 1908. It had a Belgian King but its administration was multinational including, but not limited to Belgians, Italians, Scandinavians and people from other nationalities (Wauter, 1885). The DRC became a colony of Belgium from 1908 until 1960 when it obtained its independence.

³ The Inga Hydropower Projects consist of a series of large hydropower dams which will be built as the demand for electricity and funding of different phases comes available. The first dam of this series was completed in 1972 and the last dam is projected to be built around 2050.

which the 67.9% of the DRC population who live in rural areas (UNPD, 2006: 31) rely for their livelihoods.

The IHPs are located at the Inga Falls site, 150 km upstream before the mouth of the Congo River and 225 km downstream from Kinshasa, in the western part of the DRC.



Source: The Inga Falls Site - <http://www.internationalrivers.org/campaigns/grand-inga-dam-dr-congo>

The project has the potential to supply electricity to the entire African continent, the Middle East, and even the southern part of Europe (IR, 2013: 3). This study examines the tensions between technical strategies and the democratic solutions required for genuine poverty alleviation, and for inclusive and justly distributed development. This requires consideration of the role of civil society in the IHPs' first two phases. Inga 1 was commissioned in 1972 with a capacity of 351 MW at a cost of US\$16.50 million in 1965. In 1972, the cost rose to US\$34.5 million, double its initial cost. The construction of Inga 2 with a capacity of 1 424 MW began before the inauguration of Inga 1. It was completed in 1982 at three times the initial estimated cost. In 1972, it was estimated that Inga 2 would cost \$140 million. This rose

to US\$260 million and to US\$460 million in 1974 and in 1982, respectively (Willame, 1986: 22-24).

Various studies advised that Inga 3 could consist of tunnels and canals with the aim of avoiding river closure. One of these options involved 16 tunnels of 13 metre diameters with a total length of 50 to 70 km. This option had the risks of underground works, technical and financial risks which increase the possibility of delays and cost overruns (DRC, 2013: 8). Inga 3 was then estimated to cost US\$5 billion while Grand Inga or Inga 4 was estimated to cost US\$55 billion in 2005 (Hathaway, 2005: 6), but the cost rose to US\$80 billion in 2008 (Hathaway, 2008; Allo, 2008). Recent studies have investigated the development of the Inga Falls Site as a whole. They comprised an integrated view of Inga 3 and Inga 4 or Grand Inga with the intention of getting optimal solutions for both the DRC and the purchasers (DRC, 2013: 8). Inga 3 will become the first phase or Phase A of Grand Inga. Once completed Inga 1 and 2 together with Grand Inga will have a collective capacity of 50 000 MW⁴, making the IHPs the biggest hydropower installation in the world; three times larger than the second largest, the Three Gorges Dam in China. The IHPs have been identified by the DRC government, aid and development agencies, and civil society as one of the pillars of poverty alleviation. However, these stakeholders have different and sometimes conflicting views, depending on their analytical approach, interests and expertise.

River damming is justified for water supply, flood control, and navigation. River damming is also used for hydroelectric schemes which have been around for more than a century. In fact, the Akosombo Dam in Ghana contributes significantly to the development of Ghana through supplying 60% of the economy and households in both rural and urban areas, making it one of the most industrialised Western African countries (Alhassan, 2009: 153). The Lesotho Highlands Water Project provides water to Gauteng Province and 72 MW of electricity to Lesotho (Hoover, 2001: 1). The Narmada Development Projects include a series of dams which will irrigate 1.8 million hectares and provide drinking water to 8 000 villages and produce 1 450 MW of electricity (Mazumdar, Sarkar, and Sathe, 2000), and the Three Gorges Dam Project which was built to control flooding in the middle and lower reaches of the

⁴ Department of Study, Plannification, Norms, and Standards (2012) contends that SNEL will generate more than 50 000 MW through additional small phases above Inga 1 and Inga 2 as well as the different phases of Grand Inga as opposed to 44 275 MW initially projected.

Yangtze River, supply hydroelectricity to the region engaged in a market-oriented economy (Ponseti and Lopez-Pujol, 2006: 151-165).

Yet the opportunity costs of mega-dam construction are also important. The repayment of the debt incurred to complete the projects' early stages, namely Inga 1 and Inga 2, competes with state provision of social services and other infrastructures. In addition, these projects cause dispossession of natural resources such as water, land, and forest products, with little or no consultation or fair compensation for the loss incurred in the name of public good and development. The impacts of mega-projects on pollution, and subsequently global warming and climate change also, have the potential to worsen the vulnerability of the communities negatively affected by mega-dam projects as I will elaborate later on in this research. The contribution of IHPs to global warming deserves sustained attention.

1.2 RESEARCH PROBLEM

The World Bank (WB) and other financial institutions withdrew from funding large dams in the mid-1990s due to disappointing results i.e. cost overruns, corruption, imbalances between costs and benefits, lack of economic justification for these projects, impoverishment of the communities that the schemes were initially intended to serve, and optimum bias which motivated for transnational solidarity against such schemes. The WB therefore started to focus on funding mid-sized dams and the rehabilitation of existing hydropower projects until recently, when new hydropower dam entrepreneurs from China and Brazil entered the dam industry. These competitors persuaded the WB to shift its focus to mega-dams because “such projects could catalyse very large-scale benefits to improve access to infrastructure services and combat climate change at the same time” (Bosshard, 2013a). This promise has been made and reiterated despite the fact that previous multi-billion dollar investments in Africa and around the world to generate electricity have mainly benefited mining companies, middle-class consumers, and political elites through corrupt practices at the expense of domestic consumption and industrialisation.

The supporters of mega development projects use optimism bias to sell themselves – the hydropower projects included – to ordinary people and traditional leaders: “Optimism bias” refers to the attitudes of policy-makers, technicians, and other stakeholders who overlook the costs and also overestimate the benefits of projects (Mott MacDonald, 2002: 1). It is a key

characteristic of development aid through megaprojects because it sustains and perpetuates other weaknesses which often result in the following consequences. First, the cost-benefit analysis primarily benefits national economic interests and underplays the impact on local communities in the vicinity of megaprojects. Second, optimism bias overlooks the public interests of communities that will be affected by projects. Communities that suffer the socio-environmental effects of projects are therefore awarded little or no compensation for their disrupted livelihoods. Macamo (2005: 7) stresses that, in the African context, “development itself is one of the major unacknowledged sources of unpredictability in the everyday lives of citizens”. Development has indeed different meanings to different people, depending on whether they are “winners” or “losers” in development schemes. Development initiatives often have no community ownership because they are imposed from outside without consultation or fair distribution of costs and benefits; in fact development projects have the potential to produce unintended results, as Roger (Scott, 1998: 47) laments:

The cadastral map is an instrument of control which both reflects and consolidates the power of those who commission it... The cadastral map is partisan: where knowledge is power, it provides comprehensive information to be used to the advantage of some and the detriment of others, as rulers and ruled were well aware in the tax struggles of the 18th and 19th centuries. Finally, the cadastral map is active: in portraying one reality, as in the settlement of the new world or in India, it helps obliterate the old (Scott, 1998: 47).

Ferguson’s (1990: 252) study on the Thaba-Tseka livestock/range-management development project points in the same direction. He argues that the project failed to create a commercial cattle industry in Lesotho as initially planned, due to a misunderstanding of the intended beneficiaries’ needs and traditions. Their needs were defined without consultation and inclusion of the target population, or very minimal and insufficient consultation. As a result of this top-down approach, the Thaba-Tseka Livestock Project extended state bureaucracy and control through the following: newly built infrastructures such as roads to be used for logistical purposes in the export of livestock, and government services such as post offices, police stations, an immigration control office, and agricultural and health offices to list a few, all of which were run by state bureaucrats.

Third, optimism bias reflects a particular way of thinking about development which often excludes the poor from benefiting from “conventional development models and paths of modernity” (Wignaraja, 1993: 3) either through dispossession of natural resources that they use for their livelihoods and safety nets against vulnerability. There are also random negative events or priority given to cities and industrial sectors at the expense of poor households and rural areas. In contrast, political and economic elites enrich themselves through kickbacks and inflated invoicing. Indeed, wealth accumulation on the part of elites is often accompanied by deeper impoverishment of ordinary citizens. Finally, optimism bias forces countries involved in megaprojects to continue to spend money to maintain infrastructures, and to honour debt repayment without necessarily receiving the expected revenues. As a result, both academics and activists describe these projects as “white elephants” or burdensome possessions which cost more than they are worth (Rothenbühler and Mader, 2009: 71).

Megaprojects are often characterised by corruption, cost over-runs, schedule delays, and benefit shortfalls (Flyvbjerg, 2005: 2-10). Corruption may take different forms including but not limited to bid-rigging and inflated bills. These illegitimate payments are often hidden by channelling them through agents or subcontractors (Haas, 2008: 85-89). Flyvbjerg, Holm and Buhl (2003: 2-10) investigated 258 projects in 20 countries on different continents worth approximately US\$90 billion. They found that over the past 70 years the projects shared three common features: substantial costs over-runs, poor performance records, and delayed schedules. The average cost over-run was 45% for rail projects, 34% for tunnels and bridges, and 20% for roads. Furthermore, cost estimates used in decision-making are misleading and do not consider socio-economic welfare (Flyvbjerg, Holm, and Buhl, 2003: 71-80). For example, the cost of Boston’s Big Dig or the Central Artery/ Tunnel Project was 275 % higher than the initial estimates; Denver International Airport cost close to 200% more than estimated; and the Channel Tunnel between the United Kingdom and France came in at 80% over budget for construction and 140% for financing. The costs of megaprojects are often underestimated and their benefits overestimated in order to justify them economically, and are thus accepted by public officials, planners, consultants, and the communities they will affect. They are also negatively associated with inadequate safety standards and loss of human lives (Flyvbjerg, 2007: 14-16).

The IHPs are no exception. These projects remain controversial in terms of socio-economic justification and environmental costs. Indeed, the Grand Inga, which is part of the IHPs,

represents a massive project which will cost between US\$80 and US\$100 billion dollars (Grynberg, 2012). The projects will continue to drain much needed financial resources for development in order to repay loans which do not benefit all the different layers of the Congolese population. The first phases of the IHPs, Inga 1 and Inga 2, are already diverting monies away from social programmes of the war-torn country. The IHPs will destroy the ecosystems of the Inga Falls site, flood agricultural land, increase water-borne diseases and water pollution, raise GHG⁵ emissions, and exacerbate climate change. These negative effects will not only impact on the surrounding communities but on all Congolese whilst distant end-consumers outside the DRC are insulated from harm.

This research study examines the socio-economic, political, and environmental impacts of the IHPs on communities affected by dams as a vantage point to explore the roles and contributions of international financial institutions (IFIs) and development agencies in providing development aid in the DRC, Congolese CSOs and their transnational advocacy networks, Congolese political leaders, and ordinary citizens. Some individuals and organisations support the IHPs, either for fear of harassment from government officials or because of a lack of information on the true costs and benefits of the projects. Others are reluctant to endorse the project because of the negative legacy of Inga 1 and Inga 2. This study seeks to verify the affected communities' claims that there has been no consultation or compensation to disposed and forcibly displaced communities, and that the IHPs have impoverished them.

Despite these controversies, the IHPs' further development – i.e. Inga 3 as the first phase of Inga 4 or Grand Inga in the new design – is likely to continue at a cost of at least US\$12 billion (Bosshard, 2013b: 3). Additional phases will follow as planned under the auspices of the WB, International Monetary Fund (IMF), the African Development Bank (AfDB), the World Energy Council (WEC), electricity consumers such as BHP Billiton and others, and numerous African countries' state-owned utilities – especially South Africa's ESKOM. These

⁵ Greenhouse gases are gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wave lengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere, and clouds. This property causes the greenhouse effect. Water vapour, carbon dioxide, nitrous oxide, methane and ozone (O₃) are the primary greenhouse gases in the Earth's atmosphere. Moreover, there are number of entirely human-made greenhouse gases in the atmosphere, such as halocarbons and other chlorine – and bromine-containing substances, dealt with under the Montreal Protocol. Besides carbon dioxide, nitrous oxide, and methane, the Kyoto Protocol deals with the greenhouse gases sulphur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbon (PFCs) (Lee, Cheng, and Scheelar, 2012).

actors perceive that the main objective of Grand Inga is to provide cheap and “clean” energy to promote economic development and improve standards of life in different African countries (WEC, 2008: 7). As a result, a shift in responsibility from the DRC government which should produce electricity to improve the standard of living of its people to MNCs and multilateral funders which intend to maximise their profit from the IHPs. This creates two tensions. On the one hand, there is a trade-off between the economic accountability of the DRC government to external financial interests (the hallmark of a neoliberalised state) and its civic (domestic) accountability to its citizens. On the other, there is tension between promoting economic growth with the revenue from the project, and improving the Congolese people’s standard of living through the provision of social services, public good, and subsidised electricity which is prohibitive for most DRC citizens. This uncomfortable position leads to two diametrically opposed constituencies that African governments have to reconcile. They must cater to the interests of the international community to receive aid and obtain international legitimacy, and they must also satisfy their poor majorities to secure elections or re-elections which international donors expect to be free and fair. External constituencies bring aid and impose neoliberal economic policies (Abrahamsen, 2000: xiv).

It follows that if “populist” governments try to meet the demands of their internal constituencies at the expense of these economic contracts, they would lose much needed development aid. They are therefore caught between a rock and a hard place. More often than not governments resort to dictatorial practices to contain public discontent and to silence critical voices to meet the demands of external constituencies. External pressure for political and economic reforms consequently leads to “highly fragile” or “imperfect” democracies which do not meet the needs of the poor. The resultant perpetuation of socio-political discontent and unrest remains a permanent threat to peace, development, and international trade. Liberation wars in the DRC reflect how difficult it is for governments to satisfy the conflicting demands of these two constituencies. While aid agencies and even multilateral financiers have generated “pro-poor” rhetoric associated with loans and aid in the new millennium, this is often illusory.

The benefits of megaprojects typically exclude most Congolese. Notwithstanding decades of electric power from the IHPs, only 11.1% of the DRC had access to electricity in 2009 (WB, 2012: 166). The Congolese people have borne the risks and suffered the externalities of these massive projects even though they have so far been structurally excluded from the supply of

electricity. The role of CSOs in this context is to mobilise citizens to demand that the state is accountable to its constituencies. They have a duty to force MNCs to adhere to the international ethics and rules that govern the funding of megaprojects. Finally, CSOs should define and promote strategies which will ensure that the IHPs, although internationally conceived, deliver benefits to local communities in the immediate vicinity of the projects and beyond. The extremely unequal wealth, gender, and generational and ethnic relations that prevail in DRC society render this advocacy mandate much more difficult than at other sites. It is therefore important to determine how and whether CSOs actually speak and work for their constituencies.

1.3 RATIONALE FOR THE RESEARCH

I have chosen this topic for practical and theoretical reasons. Firstly, no major study of this important development project has been undertaken, and few questions have been posed or answered about the actual or potential role of development aid, the DRC government, and CSOs in the previous phases of the IHPs. Secondly, hydropower generation has different impacts on the rich who can afford, and on the poor who cannot afford, the cost of hydropower in the form of electricity for households or enterprises. Thirdly, the study explains why CSOs related to Mobutu's dictatorship the way they did, and the role of CSOs in any further developments of the IHPs. Fourth, the DRC's burden in servicing the debt incurred by Inga 1 and Inga 2, and the additional debt to be incurred for the different phases of Grand Inga could undermine the country's financial situation and in the process threaten the funding of other much-needed socio-economic projects in this war-torn country. Finally, this research study will also explore strategies for civil society to promote transparency, accountability, and fair redistribution of revenues earned from IHPs in the DRC.

1.4 RESEARCH QUESTIONS

This thesis intends to document (1) the impact of Inga 1 and Inga 2 on dam-affected communities; (2) the role played by civil society in the first two phases of the IHPs; and (3) the current development of the project. Thus the key research questions fall into two categories:

i) What can we learn from the history of the IHPs? To answer this question the study will examine the role of development aid and development agencies between the 1960s and 1980s as well as more recently, in the rehabilitation of the first two phases. For example, what kind of alliances existed between the state and business stakeholders that supported or challenged the IHPs? Which international and national laws were applied in the DRC regarding environmental impact assessments, regulations controlling the construction of mega-dams, safety regulations for the protection of communities living close to the dams, communal property rights that may accrue to these communities by reason of ownership through traditional leaders, and the need to compensate people who are displaced or deprived of their livelihoods by IHPs?

ii) What was the role of civil society in the DRC before, during, and after the construction of Inga 1 and Inga 2, and what is it likely to be in the development of Inga 3 and Inga 4⁶? What do the IHPs mean to local civil society groups? What challenges must these groups confront so that IHPs relations sever, rather than amplify poverty? Given their earlier experiences of Inga 1 and Inga 2, what are the attitudes of the dam-affected communities and Congolese civil society in general towards new hydropower projects?

1.5 RESEARCH OBJECTIVES

In order to fully answer the research questions above, this study seeks to achieve the following concrete objectives:

What can we learn from the history of the IHPs?

1. Investigate the role of multilateral financial institutions, transnational construction corporations, international development agencies, electricity purchasers (especially multi-national extractive industries), as well as the local Congolese state.
2. Understand the impoverishment risks due to IHP-induced forced displacements and the post-resettlement situation, as well as access to electricity.
3. Document the achievements and limitations of IHP-induced displacement and resettlement plans and policies (if any), especially relating to livelihood restoration.

⁶ The pre-feasibility study funded by the AfDB in 2012 for the Inga 3 Project advises the DRC government and investors to build Inga 3 as Phase A of Grand Inga rather than building Inga 3 as a run-of-the dam of 8 tunnels of 6.7 km length and 13.3 meters diameter each under the rock as initially recommended by the pre-feasibility study of SNC-LAVALIN in order to increase the value of Grand Inga.

What was the role of civil society in the DRC before, during, and after the construction of Inga 1 and Inga 2, and what is it likely to be in the development of Inga 3 and Inga 4?

4. Examine the socio-economic and environmental impacts of Inga 1 and Inga 2 on the dam-affected communities and vulnerable groups (women, the elderly, people with disabilities, and youth) and the Congolese people in general.
5. Explore the degree and nature of responses from local communities to the IHPs in the 1960s, 1980s, and at present and the reasons for these attitudes.
6. Explore possibilities for the dam-affected communities and DRC civil society in general, to benefit from the IHPs.

1.6 RESEARCH METHODOLOGY AND METHODS

My research methodology was designed to collect relevant but complex data from documents, interviews with stakeholders, life histories, and conflicting testimonies from people directly or indirectly affected by the IHPs in order to understand the meanings of these projects to, and the roles played by, different stakeholders.

The study therefore utilised a multi-method approach. It consists of qualitative method with the assistance of NVivo Qualitative Software (Bazeley, 2007: 2-5). A multi-method approach also uses descriptive research, policy document surveys, situational mapping, and data analysis through a hermeneutical approach even though this study is grounded in a qualitative epistemological position that “deals with the means of production of knowledge” (Soini, Kronqvist and Huber, 2011: 6).

This approach revealed the meaning of the IHPs, development, rights, electricity generation and further developments of the Inga Falls site from the perspective of different stakeholders.

1.6.1 Data collection

Data collection consisted of both qualitative and quantitative research.

1.6.1.1 Interviews with closed and open-ended questions

The study mainly relied on interviews, both structured and non-structured, with open-ended and close-ended questions (Bailey, 1982: 182-183). I conducted my interviews in French (official language), and Lingala, Kikongo and Swahili (three national languages relevant to this research). The interviews were recorded. I also took notes of key data during my discussions with the participants. Material was enough when the participants started to repeat themselves.

My questions in French, Lingala or Swahili were translated into Kikongo whenever necessary by the clan chiefs or one of the 3 research assistants who volunteered to assist me in this research. The answers were translated in one of the three languages for record purpose. The responses were translated into English which was also used for data collection. I transcribed the recordings afterwards for future use with NVivo. I consulted my field notes whenever necessary.

In this back and forth process, there was a possibility of miscommunication whilst using several languages simultaneously. This possibility was reduced to thanks to my own proficiency in French, Lingala and Swahili. Human error was also reduced thanks to 3 bilingual research assistants, clan chiefs and 1 employee of the development NGO which has hosted me during my fieldwork. Lastly, human error was decreased by the excitement that the affected community members had to see for the first time in the history of their struggles, a researcher coming from another country to talk to and learn from them their struggles for reparation.

As for interviews, their shortcomings such as time-consuming, interview bias and convenience response (Bailey, 1982: 182-183) were minimised by the trust that the researcher had established with potential respondents during a pilot project in 2008, and at different meetings he attended with representatives of the dam-affected communities, Congolese CSOs involved in natural resources, and their transnational advocacy networks (TAN,) in local and international workshops in Johannesburg, Gaborone and the DRC, as well as during subsequent interactions. These meetings minimised the possibility of getting misleading information from the interviewees around sensitive issues due to the mutual trust that the participants and I had established through continuous interaction.

One hundred and twenty-two persons participated in this research. I conducted 98 interviews of between 20 and 35 minutes each depending on the time of each participant had. The participants were purposively selected to shed light on my research questions. The criteria for inclusion were (1) to belong to one of the groups listed below and (2) accept to participate freely in the study. They were requested to sign a consent form. After that, each interviewee's bibliographical details were recorded and coded in a book. It was updated on regular basis and kept safe for security reasons. I was moving around with coded names. The breakdown of their contributions is as follows:

- 23 people from the dam-affected communities
- 6 *Ayant Droits* or clan chiefs
- 13 representatives from local CSOs (from Inga Zone, Boma, Matadi, and Kinshasa)
- 10 representatives from transnational CSOs (based outside the DRC)
- 12 DRC officials (National Electricity Company, Environmental Study Group, National Energy Council, Ministry of Energy and the Office of Management of Public Debt)
- 11 representatives from financial institutions and development agencies (the WB, the IMF, the AfDB, European Investment Bank, ESKOM-South Africa and the World Energy Council)
- 13 ordinary Congolese citizens and
- 10 ordinary citizens (civil society) from South Africa, the main destination for the electricity generated by the IHPs.

I also had six focus group discussions with a total of 24 individuals from different backgrounds in Kinshasa, Matadi, Boma, and the Inga Zone or Inga Falls Site. I selected the contributions of four participants in each group discussion for their originality with the aim of minimising repetition and efficiently controlling the discussion.

Within my population of interest, namely the individuals affected by the IHPs and ordinary people inside and outside the DRC, my exploration focused on gender, marital status, different roles that individuals play in the communities, and age differentials. Among the 122 participants, 41 were adult women and 41 were men, 20 were female youth and 20 male youth from various backgrounds. Half of the interviews were conducted in the 6 clans and

surrounding communities in order for me to get a deeper understanding of the issues under investigation.

This approach was adopted in order to ensure that the sampling was inclusive and that the results were representative according to the focus of the study. However, I did not conduct any interviews in Namibia, Botswana, or Angola as initially planned, due to financial constraints. All the interviews took place in the DRC and South Africa.

1.6.1.2 Focus group discussions

Focus groups discussions are relevant to this research study because the IHPs are very controversial. It is important to establish different views on the IHPs to identify the perceived and real winners and losers in the projects. This process is sometimes best achieved collectively (Mulcahy, 2006: 3; Redmond and Curtis, 2009: 61-65; Kress and Shoffner, 2007: 190; Flick, 2009: 194; Morgan, 1992a: 5).

I organised four focus groups of six people each from similar backgrounds in the Inga Falls site, Boma, Matadi, and Kinshasa, to obtain in-depth information on their perceptions of the IHPs. The participants were asked how the Inga projects affected their lives and what possibilities they see for a better future for themselves and future generations through current and further developments.

In the discussions, men appeared to be more talkative than women. When asked the reasons, I was reminded that in strictly traditional societies, women and young people have less to say in public meetings where mature men are present. I therefore encouraged all participants to participate by asking them to talk one after another. In doing so, all subjects had the opportunity to express their views on different issues.

1.6.1.3 Policy document survey

During the course of this research, I analysed the main policy documents, reports, official records, and statistics from the relevant DRC government departments related to land and water rights that I was able to get. The material covered energy-related issues, property rights, land ownership, indigenous communities' rights, and legal provisions in the case of land

dispossession for projects of national interest. I also scrutinised the international treaties and regulations to which the DRC is a signatory, as well as WB, IMF and AfDB's policies regarding mega-dam projects. It was interesting to juxtapose these documents to the day-to-day struggles for survival in the Inga Zone and the cities to see how people are either not aware of them or simply pretend to not know; and more important how they do not apply them due to a lack of freedom of expression in the country.

1.6.2 Data analysis

This research study relied on a multi-method approach to data collection to minimise the constraints presented by single data collection methods and to reduce human bias. A hermeneutical approach and NVivo qualitative software were used to analyse the data.

1.6.2.1 Hermeneutical approach

Hermeneutics is appropriate for this research project because it investigates and reveals different understandings of the IHPs on the part of different stakeholders. Hermeneutics is “the study of human cultural activity as texts with a view towards interpretation to find intended or expressed meanings” (Kvale, 1996, cited in Lavery, 2003: 9).

Hermeneutical analysis consists of looking at the meaning of a text (written or verbal communication, visual arts, and music) for people in the situation under investigation because knowledge is socially constructed, often by a politically and/or economically dominant group (Ratcliff, 2002; Bardick, 2003: 35; Wang, Feng, and Lin, 2008: 96). In addition, to quote Ricoeur (1981, cited in Atkins, 2006), “language belongs to, and is expressive of, extra-linguistic reality” since words have different meanings when used outside a dominant paradigm. The hermeneutical approach will therefore interrogate the meaning of poverty and development, electrification of the DRC, and autonomy in power supplies through the IHPs as articulated by the government and its allies.

1.6.2.2 NVivo qualitative software

NVivo software is relevant for this research study if one takes into account the volume and

complexity of responses that the researcher expects to obtain. It has the advantage of speeding up the process of locating coded themes, grouping data together in categories, and comparing passages in transcripts or incidents from notes (DeNardo and Levers, 2002: 3). However, NVivo is unable to fully present the themes and categories on the screen. In addition, Rath (2011: 64) notes that NVivo requires hand-coded text for each line after developing the model, and “proprietary file format limits archiving over the long term”.

1.7 RESEARCH LIMITATION

It is related to the researcher, who lives outside the DRC and was not always able to break through the culture of secrecy that prevails in the country. However, this challenge was reduced thanks to the contributions of the CSOs involved in natural resource issues in the DRC that I met in several meetings in South Africa and Botswana. These organisations set up meetings for different interviews and focus groups with key government officials, the opposition, and the voluntary sector. They brought in lower rank individuals and ordinary people. I also used my own contacts developed in the DRC during a two-month field visit in 2008 jointly funded by the *Campagna per la Riforma della Banca Mondiale* (CRBM); International Rivers (IR); and the World Economy, Ecology and Development (WEED).

1.8 OUTLINE OF THE PROPOSED RESEARCH

This thesis is divided into eight chapters, with the following seven consisting of:

Chapter 2 offers the theoretical perspectives on development theory. It investigates the origins, evolution, and application of modernisation theories through the trickle-down model, its critiques, and subsequent alternative approaches to mainstream development.

Chapter 3 investigates the origins and development of the aid industry. It explores the three schools of thought namely those who support it, those who oppose it, and individuals for whom aid is neither good nor bad since its outcomes depend on existing legal frameworks and the administrative and technical capacities to allocate aid in financially viable ways. The chapter also explores selected large dams from around the world and their initial development agendas compared to the actual results of these projects in aid receiving communities and countries.

Chapter 4 is dedicated to the contextualisation of mega development projects through the lens of the first phases of the IHPs (Inga 1 and Inga 2). It investigates the roles played by stakeholders and the allegations that the major institutions behind the IHPs did not consult or compensate the affected communities prior to, during, and after the construction of Inga 1 and Inga 2. It also investigates, among other issues, the claims that the IHPs did not bring any direct benefit to the affected clans and communities which received the evictees from the Inga Zone.

Chapter 5 explores the IHPs and the affected communities as well as the Congolese population at large about access to electricity generated by the existing phases of the IHPs. It also explores the DRC's environmental laws and the guidelines of development agencies, IFIs, and the DRC regarding mega development projects to understand whether these legislations have guided different stakeholders and shareholders' decisions during the construction of Inga 1 and Inga 2.

Chapter 6 deals with the impacts of the IHPs on the environment in the Lower Congo Region and the Congo River basin at large. It focuses on the debates concerning the sustainability of the IHPs in the context of GHG emissions, global warming, and climate change - to which these projects will contribute significantly and thus worsen the negative impacts of climate change on vulnerable local communities, the DRC, and the world even though the estimates remain difficult to predict. The chapter also contributes to the debates on whether hydropower is clean energy, on renewable and non-renewable energy, and on cheap and expensive energy.

Chapter 7 is dedicated to the roles that Congolese civil society organisations and their transnational networks played prior to, during, and after the construction of Inga 1 and Inga 2. It also discusses why the increased presence of CSOs and developmental NGOs unintentionally reinforced Mobutu's dictatorship. It identifies the weaknesses of civil society organisations and the dam affected communities which have the potential to undermine the struggles for socio-economic and environmental justice.

Chapter 8 offers conclusions.

CHAPTER 2. THEORETICAL PERSPECTIVES ON DEVELOPMENT THEORY

2.1 INTRODUCTION

Development theory and its variations are closely linked to the growth of capitalism and the collapse of feudalism or “pre-capitalist” relations (and other outmoded practices) that have persevered in all societies (Conteras, 1999; Reyes, 2001). This research project supports Walter Rodney’s contention that development should be understood at both individual level – a higher standard of living and household accumulation of capital but also increased skills, greater freedom and creativity – and collective levels; development entails “an increasing capacity to regulate both internal and external relationships” (Rodney, 1973: 1). However, as Rodney (1973: 1) observes, some of these elements are difficult to achieve or evaluate, depending on individual countries’ socio-political and historical backgrounds and specific cultures. “But the fulfilment of some of these elements is the key to the improvement of the standard of living of the under-developed countries and consequently engaging them in the development process” (Rodney 1973: 1). Development is also accompanied by unequal access to and unfair (re)distribution of resources. This chapter addresses the origins of development theory, and considers the way modernisation theory addresses mega-projects, followed by a survey of Marx’s and Foucault’s contributions to development debates, so that the critical approach to the DRC adopted in subsequent chapters is well rooted.

2.2 BRIEF ORIGINS AND EVOLUTION OF DEVELOPMENT THEORY

Modernisation as a development theory¹ was the consequence of three historical elements (Reyes, 2001):

- i) the rise of the United States of America (USA) as a superpower in the post-World War 2 era;
- ii) the spread of the communist movement to Eastern Europe, China and Korea, and
- iii) the disintegration of European colonial empires in Asia, Africa, and Latin America which created many new nation-states in the Third World.

¹ Development theory, according to Colin Leys, refers to “a field of critical enquiry about the contemporary dynamics of that order itself [an unquestioned capitalist order], with the imperative policy implications for the survival of civilised and decent life, and not just in the ex-colonial countries” (Leys, 1996: 43).

Washington was strengthened in the late 1940s with the implementation of the Marshall Plan to generate economic growth in Europe whose economies were weakened by World War 1 and World War 2. There was a fear in Washington that newly-independent African nations would search for a development model consistent with communist ideology. Modernisation theory was set in motion by the inaugural address of the President Harry S. Truman (Truman, 1949; Escobar, 1995: 3-4, 19) in which he argued that more than half of the people in the world live in misery because their food is inadequate, they are subject to diseases, and their lives are primitive and stagnant. Some would argue that the point made by Truman – “we must embark on a bold new programme for making the benefits of our scientific advances and industrial progress available for the improvement and growth underdeveloped areas ...” – announces the development age (Ullrich, 2010: 308). It could also be argued that although Truman may have introduced the development age, modernisation as a “theory” or a framework only emerged in the 1950s (Escobar, 1995: 3-4).

It is important to place development theories in their historical context to understand them. The historical timeline of capitalism follows the transition from feudalism to competitive capitalism from 1700 to 1800, and the age of classical imperialism from 1800 to 1945. Indeed, the transition from feudalism to capitalism led to the French Revolution which put emphasis on the concept of development as we know it today (Conteras, 1999). The age of competitive capitalism from 1700 to 1800 witnessed a shift in political and economic power from the feudal aristocracy to the capitalist bourgeoisie. This, in turn, created the need for a colonial system to expand both the market for manufactured goods and sources of raw materials. During the age of imperialism from 1800 to 1945, small enterprises lost ground to large and monopolistic cartels, and local industries in the Third World were systematically destroyed (Conteras, 1999). Development theory did not make substantial progress because of the disappointment of macro-economic policies introduced mainly in Latin America and India. Debates followed in the 1970s between the proponents of modernisation theory and its critics from the left, inspired by the general theory of capitalist development founded by Marx. The shortcomings of modernisation theory were worsened in the 1980s by the removal of state control over capital movements which undermined the power of the state in developing and poor countries to promote national development agendas during the era of structural adjustment programmes (SAPs). This period also witnessed the strengthening of market forces as the sole driver of development in these countries. Consequently, both the state and social movements in these countries could no longer effectively champion

development (Leys, 1996: 5-7), a condition that would last until the early 2000s rise of the ‘pink’ alternative development strategies in parts of Latin America.

2.3 MODERNISATION THEORIES

Modernisation theory posits a homogenisation process that leads toward a convergence of different approaches to development among societies. It is synonymous to Europeanisation or Americanisation because Europe and America have reached unmatched economic prosperity and democratic stability (Tipps, 1976: 14). For Huntington and Nelson (1976: 30-31; 45-52), modernisation is an irreversible process. Once started, it cannot be stopped. It is a progressive process which is inevitable and unavoidable as a lengthy evolutionary process, not a revolutionary process (Mallick, 2005: 5). There are, however, as many versions of modernisation theory as there are academics involved in this thinking. Early development theorists focused their efforts on the following:

- i) economic growth without social justice in developing countries, and
- ii) an increased relative share of growth allocated to the poor – as happened in Taiwan, South Korea, and Costa Rica, all of which showed fast economic growth and improved living standards for the poor (Harrison, 1980: 29).

The driving force behind modernisation is the desire to transfer Western development experiences into developing and poor countries through a “one size fits all” approach to development and the socio-economic problems of aid recipients. This model implies the application of development, the imposition of development models such as the Marshall Plan, World Bank loans, different forms of aid, and the recommendations of the World Trade Organisation. The model involves a “transfer of technology” from developed to developing countries and unsuccessfully tries to solve social problems by technical solutions, typically without taking into account the socio-economical, historical, and political backgrounds of developing and poor countries or individual countries’ specificities.

The Inga Hydropower Project (IHP) represents a version of high-modernist development theory for various reasons. Firstly, “it is a result of a faith that borrowed the legitimacy of science and technology” (Scott, 1998: 4), since the IHPs are perceived to represent technological solutions to endemic socio-economic problems in the DRC. The IHP also intends to integrate the DRC into the global system of production and exchange. Secondly,

the IHPs' supply of electricity would move the DRC from traditional (pre-capitalist) socio-economic relations towards a condition of modernity (Henshaw, 2005: 2-4; Cooper, 114; Ashcroft, 2009). However, the introduction of electricity in this manner is consistent with the "one size fits all" and "top down" approaches to development. These are often a recipe for failure and impoverishment of the weakest in society due to inadequate effective demand to purchase electricity, the lack of a safety net, a lack of community participation, and lack of ownership in the development initiatives.

Secondly, modernisation theory applies to the IHPs because such projects are "uncritical, unskeptical, and thus unscientifically optimistic" (Scott, 1998: 4). The IHPs are also based on "absolute faith in the ability of technology to promote progress and the efficient use of natural resources" (Tarlock, 2012: 1727) even though the outcomes of the first two stages – Inga 1 and Inga 2 – of the IHP do not sustain this faith (WB, 2007: 3-5, 33-34). It was nevertheless decided that Inga 3 as the first phase of Grand Inga, and additional phases which will follow, should take place without adequate economic justification. The World Bank's Project Appraisal Document for the IHPs revealed that Inga 1 and Inga 2 were functioning at just 39% of their capacity in 2007 due to poor financial management, a lack of skills to undertake repairs and maintenance, and a lack of administrative capacity to efficiently allocate funding, even where the return on investment was high and secured. In addition, *la Société Nationale d'Electricité* (SNEL) – the state utility dealing with production, transmission, distribution, and commercialisation of electricity in the DRC – loses 60% of its energy supply to consumers due to technical problems, and 50% of revenue collection in Kinshasa alone because of bad governance (WB, 2007: 3-5, 33-34). Despite this poor performance in the DRC, the World Bank is championing additional developments of the IHP.

High-modernist projects like the IHPs require a mixture of three vital ingredients including administrative ordering of the society and nature through power conferred to the state, untrammelled use of the power to implement technological solutions to socio-economic problems, and a weak civil society unable to resist high-modernist ideology and subsequent projects (Scott, 1998: 4, 88).

Thirdly, high-modernist projects continue because stakeholders such as the World Bank maintain faith in this approach to development. The IHP is seen as a technical solution to extreme poverty and underdevelopment. The approach overlooks "the complex and deeply

embedded political and economic factors which structure and entrench poverty and inequalities” (Moodley, 2005: iv). The imposition of modernisation also undermines the human ability to search for “appropriate alternative paths to development” (Moodley, 2005: 64). The result of such an approach, warns Ferguson (1990: 87, 256), is the depoliticisation of poverty – an ‘anti-politics machine’ – translating what are political problems into technical problems which inappropriately require technical solutions from development aid and a top-down approach to problem solving and capacity building.

In this context, strategies such as the IHP entail top-down projects with little or no consultation or compensation to negatively affected individuals. They consider poor countries as homogenous instead of looking at them as individual components of uneven geographical development. High modernist projects pay little heed to local communities whose challenges need to be individually assessed and addressed. In practice, political interference and nepotism in high modernist projects lead political leaders to appoint unskilled individuals over qualified individuals. Civil society organisations typically do not have the political space to advocate public accountability, transparency, and justice. As a result of these challenges, the projects that modernisation theory inspires have little or no community ownership and involvement even where this is required to secure successful implementation. Two sub-theories of modernisation theory illustrate these problems: Walter Rostow’s stages of economic growth and Joseph Schumpeter’s approach to innovation.

2.3.1 The stages of economic growth

Modernisation theory is most closely associated with Rostow’s five stages of economic growth. First, there is traditional society characterised by a stationary economic system dominated by agriculture with traditional cultivation practices. Second, at the point of the pre-condition for take-off – the transitional stage – the rates of investment are higher and these rates initiate a dynamic of development. Third, the ‘take-off’ is mainly characterised by an endogenous dynamic of growth. In practice, different models of economic growth are imposed by external actors (Nzongola-Ntalaja, 1986: 1-18) thereby undermining endogenous dynamics and perpetuating dependency across generations and governments of Third World countries. Fourth, the drive to maturity is characterised by continuous investments and the prevalence of economic and technical progress. In the fifth and last stage – the age of mass consumption – most parts of the society live in prosperity and the majority of people are

offered both abundance and a wide range of choices (Todaro, 1994: 70, 73; Mallick, 2005: 5-8).

Rostow's theory implies a top-down approach inspired by a capitalist trickle-down from the urban-industrial core to peripheral rural and backward areas (Mallick, 2005: 9). Its contribution to growth and developmental thinking is so important that it is taken as the benchmark in the assessment of other research studies in the field. The central categories are "basic growth, population and work force, investment and technology, business cycles (supply-side factors), stages and limits to growth, and non-economic factors" (Lodewijks, 1990: 52).

However, the five stages of economic growth do not always correlate to reality, because more savings and investments present a necessary but not sufficient condition for economic growth. The theory also neglects factors such as the competence of managers, labour skills, and the capacity of the state to efficiently plan and administer development initiatives. In addition, the theory fails to take into account external agencies whose interests have strong influences in the development of poor and developing countries (Todaro, 1994: 70). Mallick (2005: 11-12) argues that

- i) Rostow treated modernity as synonymous with the model of Western capitalist society;
- ii) this approach has a derogatory interpretation of traditional societies or non-modern communities, and
- iii) Rostow imposes top-down strategies instead of bottom-up approaches to development, thus rendering indigenous knowledge and organic strategies invisible in the development of backward countries. Rostow implies that ordinary citizens at the community level cannot break the cycle of underdevelopment and poverty.

In considering the success of the post-war Marshall Plan, one may argue that European countries possessed the necessary structural, institutional, and attitudinal capacities when they received development aid. This is so because these countries already possessed well-integrated commodity and money markets, highly developed transport facilities, well-trained and educated work forces, and the motivation to succeed (Todaro, 1994: 73). These preconditions are absent in much of Africa, Asia, and Latin America. Such critiques suggest

that modernisation theory requires more nuance and more categories if it is to offer a convincing way to understand and deliver inclusive development.

2.3.2 The diffusion of innovation

Joseph Alois Schumpeter's theory of how innovations are diffused is relevant to the IHP. As Dinopoulos and Şener (2007: 1) point out, the fundamental feature of the Schumpeterian growth model is the integration of technology with capital accumulation. There is little or no concern about individuals and communities negatively affected by the imposition of "technological progress generated by the endogenous commencement of new products and processes" Dinopoulos and Şener (2007: 2). The concept endogenous in this context refers to innovations that result from local rational economic agents' conscious actions which aim to maximise their objective functions (profit or utility).

The theory of innovation involves, first, the production of new types of goods or the qualitative change of properties of existing goods, such as electrification in the case of the DRC thanks to hydroelectricity generated by the IHP dams. Second, new methods of production are introduced which may be based on new scientific processes and procedures, under which mega-dam construction qualifies. Third, there is an opening of new markets into which a particular branch of manufacturing of the country in question had not previously entered, and indeed when the first two IHP dams were built, much of the then-Zaire was not yet commodified. In the context of the DRC, the expansion of colonial-era capitalism through the search for new markets was accompanied by conquest, violence, accumulation of natural resources by dispossession, and the subsequent impoverishment of local communities. The post-colonial era and the construction of the first two IHP dams did not alter that trajectory. Fourth, there is conquest and use of new sources of supply of raw materials or half-manufactured goods, again irrespective of whether the source already exists or whether it has first to be created; in the IHPs, the key supply input is the Congo River itself. Fifth, a new form of organisation in any industry is characterised by innovation, including the creation of a monopoly position (for example through trustification), such as applies to electricity in the DRC (Freeman, 2007: 7).

In addition, Schumpeter argues that economic growth is generated by the endogenous introduction of products and/or processes which are an innovation. He describes the evolution

of capitalism through a process of creative destruction insofar as innovative forms of accumulation crowd out and out-compete older less efficient forms, leading to both economic growth and social benefits (Dinopoulos, 2006: 1-2). The DRC has witnessed a particular form of creative destruction which is not followed by restructuring. As in many African countries, colonial-era infrastructures - including markets, were destabilised by political change during the 1960s and by indigenisation policy in the 1970s, followed by structural adjustment programmes (SAP) in the 1980s. This special type of creative destruction – in which older systems decayed but were not replaced by more efficient production processes – characterises societies with poor leadership and a lack of efficient state financial management.

Whereas the merits of a focus on innovation for analysing technological change can be great, Schumpeter does not draw a clear line between innovation and imitation. The introduction of new products in some countries or regions can be seen as innovation by genuine entrepreneurs, whereas in other countries or regions the same action is seen as imitation in more routine arrangements (such as the DRC when the IHPs were first introduced). In addition, Schumpeter does not explain the circumstances which determine, encourage, or hinder innovation. He argues that innovations are the product of individuals with special intellect and power. This conceptualisation of innovation downplays the contribution of technical and economic interdependence of numerous innovations and the spirit of entrepreneurship which are equally important in this development model (Freeman, 2007: 7). The theory of innovations is difficult to apply in the DRC since several pre-conditions such as freedom of expression in socio-economic and political arenas do not exist and the rule of law which could protect property right and innovations is absent.

Another idealised approach within modernisation theory is development planning, which should ideally assist in synchronising the abovementioned aspects. However, in contrast to the clean technicism in which modernisation views planning, there are serious ethical problems in many instances, given the strength of political decision-making within planning. According to Moroni (2005), planning is oriented toward optimisation, as planners expect “to achieve the best possible result, within given constraints, with regard to the objectives undertaken”. From this angle, different “forms of participative, collaborative, co-operative planning are not a new mode or kind of planning but, instead, they are procedures for viable forms of planning intended as a good decision process” (Moroni, 2005). Archibugi (2001, cited in Benli, 2005:5-6) argues that planning is a decision-making process because it is based

on “action-oriented analysis of doing, rather than on observation-oriented analysis. That is, planning involves prescriptive rather than descriptive analysis”.

As a result, planning theory constantly generates debates about relations between planning and power, domination, and freedom. Zhang (2006: 6) argues that “planning is essentially an institutional arrangement between the government, the marketplace, and society in response to social changes in a particular society and a particular period of time”. In the same pragmatic vein, Newman (1951: 15) concedes, “planning is deciding in advance what is to be done rather than being a careful assessment of the costs and benefits of the projects, and high-modernist projects in particular, to all stakeholders, who will be differently affected by the impact of the projects”. Hence a much richer contextual understanding of modernisation, innovation, technological change, and megaproject planning will be required to fully comprehend the role of the IHP dams in the DRC. As noted in the next section, two potentially convergent radical approaches draw on Marx’s theory of accumulation and class struggle, and Foucault’s theory of power.

Kabatu-Suila (2004a: 7, 16, 20–23) concludes that Rostow’s five stages of economic growth and Schumpeter’s theory of innovation have contributed significantly to our understanding of development models that remain relevant for North America and Western Europe. These theories are difficult to apply in Third World countries because some, if not all, of the fundamentals for development which may be taken for granted in Western countries do not exist, including “well-integrated commodity and money markets, highly developed transport facilities, a well-trained and educated work force, the motivation to succeed, and an efficient government bureaucracy” (Todaro, 1994: 73). Kabatu-Suila suggests a development model based on five priority conditions: political will, average level of education in the indigenous population, economic infrastructures, industrialisation of countries, and contribution of the agriculture sector to the economy. He also proposes the concepts of “preseance” or priority order and “concomitance” as conditions that must be realised in order of priority while the five conditions must occur concurrently in order to engage any Third World country in the process of development. Otherwise development at best remains a pipe dream.

2.4 MARXIST AND FOUCAULDIAN APPROACHES TO UNEVEN DEVELOPMENT AND POWER

Marx's theory of development argues that the accumulation of wealth by the bourgeoisie is coupled with the dispossession, exploitation, and impoverishment of the proletariat (Bond and Desai, 2006: 230). This in turn leads to class conflict. Marxist critique focuses on two important ways in which large projects produce uneven and combined development. Firstly, development mega projects typically cater for cities at the expense of rural areas, and favour industrial and extractive applications at the expense of domestic consumers. In addition, these projects lead to unequal sharing of costs and benefits between socio-political and economic elites in governments and the private sector on the one hand, and marginalised groups on the other. The projects enforce and perpetuate the process and practice of "accumulation by dispossession" of people's assets and rights and their subsequent impoverishment (Harvey, 2003: 137). Marxist theory also explains the backwardness of rural areas and, in the case of electricity produced by mega-hydropower (such as the first two IHP dams), how most of the energy is used for the benefit of mining projects or cities where wealthier consumers live.

In this spirit, Wright (1999: 1-3) argues that class structures reflecting inequality between the bourgeoisie and the proletariat are shaped by social relations as realised through exploitation and domination. Exploitation is based on the inter-dependence of the material interests of individual actors, in such a way that the material well-being of the exploiters causally depends on the material deprivation of the exploited. The inverse inter-dependence of the well-being of the bourgeoisie and that of the proletariat depends on the proletariat being denied access to certain productive functions. The exclusion of the proletariat produces material gain for the bourgeoisie because it allows this class to appropriate the labour power of the proletariat. In the context of the IHP, forcibly displaced clans are denied their rights to land, water, and forest resources. This structural exclusion leads in turn to a cycle of vulnerability and impoverishment across generations with children likely to be poorer than their parents.

Domination, on the other hand, refers to the position assumed by people by virtue of rights and powers over the productive functions of other people, i.e. control over their activities, and assumption of the right to direct, hire, and fire them (Wright, 1999: 12-13). In all these ways, accumulation by dispossession (Harvey, 2003: 137) is central to the way capitalism and non-

capitalist (including natural) processes interrelate in Africa and the DRC, and thus the theory of “uneven and combined development” is an appropriate way of understanding political economy in crucial African settings (see, e.g. for South Africa, Bond and Desai, 2006: 230). However, the focus in these approaches is structural – i.e., underdevelopment is created, maintained, and perpetuated by state institutions and private capital. Yet at the same time, mega-projects that contribute to exploitation and domination can create a platform for awareness and the conscientisation of people who are perceived to be excluded from organising and claiming citizenship.

Michel Foucault’s theory of power explains disciplinary power, biopower, regulatory power, pastoral power, and government power on the one hand, and domination on the other. All are relevant to interpreting the IHP dams, past and future. Foucault addresses the technologies of power to explain why individuals conform to society’s rules. For modernity, the imposition of order, rationality, and rationalisation creates order out of the disorder of pre-modernity (McGaha, 2000). However, in the real world, any attempt to generate order somewhere requires an equal amount of disorder elsewhere.

It is therefore important for us to consider forms of resistance against different forms of power as a catalyst to understanding power relations in a site as complicated as the IHP dams, because there is no power without resistance (Klages, 1997: 3-4). Foucault (1982: 780) argues that it is important to explore the manifestations of resistance in order to understand power relations. These forms of resistance include “anti-authority struggles and a series of oppositions such as opposition to the power of men over women, opposition of parents over children ... and opposition of administration over the ways people live in the 1980s” (Foucault, 1982: 780). Power relations lead to three types of struggles, namely against forms of domination (ethnic, social and religious); against forms of exploitation which separate individuals from what they produce; and against forms of agency which ties individuals to themselves and submit them to others. The struggles are against subjection, forms of subjectivity, and submission. These struggles share the following features: they are transversal struggles, their aim is to address the effects of power, and they are immediate struggles. People criticise the power of individuals who are close to them and whose actions have impacts on their lives, rather than looking at higher-scale opponents and subsequently making radical changes in their lives. Moreover, people do not expect to find change emanating from the actions of individual victims since laws are not made not for all members

of society but rather to serve the interests of political and economic elites. As a result, “...every action and every law is an exercise of power ... The society is a huge web, and much of the power tends to be concentrated toward the higher echelons ... [and] flows in different directions and volumes according to the various forms of power relations” (Foucault, 1975, cited in Koopman, 2007).

Consistent with critiques by Jurgen Habermas, Michael Walzer, Steven Lukes, Charles Taylor, Fredric Jameson, and Clifford Geertz, Hoy (1986) argues that Foucault’s profoundly pessimistic view of society is a limiting factor in his understanding of the force of effective resistance. For instance, “in choosing particular sites of intensity, choices which we see from the evidence on all sides, always exist and are often successful in impeding, if not actually stopping, the progress of tyrannical power” (Said, 1986: 151). Furthermore, there is confusion between the power of institutions to subjugate individuals, and the fact that individual behaviour in society is frequently a matter of following rules or conventions.

Foucault’s other critical contribution to our understanding of development is his emphasis on the need for a critical perspective about language use. This requires “a careful analytic interrogation of the ideological categories, and the roles and institutions through which a society constitutes and maintains itself and the consciousness of its members” (Fowler, 1981,; cited in Jaworski and Coupland, 1999: 32). Van Dijk (2003: 1) emphasises the importance of critical discourse analysis for understanding “the way social power abuse, dominance, and inequality are enacted, reproduced, and resisted by text and talk in the social and political context”. Van Leeuwen (1993, cited in Jaworski and Coupland, 1999: 34) agrees, arguing that “critical discourse analysis is, or should be, concerned with ... discourse as the instrument of social construction of reality” because ideological structures deal “strongly with the analysis of power relations and social discrimination”. Critical discourse analysis thus sets out to identify with social change in the ideological exercise of language, in part because “the problematic of language and power is fundamentally a question of democracy; [consequently] those who are affected need to take it on board as a political issue” in order to make positive change in their lives and their communities (Fairclough, 1992, cited in Jaworsky and Coupland, 1999: 35).

The IHPs are an appropriate site to deploy the theory of power because we can learn how “social power abuse, dominance and inequality are enacted, reproduced and resisted by text

and talk in the social and political context” (van Dijk, 2008: 85) - if these conditions are allowed to shape the future of the DRC without accountability and transparency. This research project firstly defines social power as the ability of one group or organisation – powerful in one or several ways – or its members, to have control over the actions, knowledge and/or the minds of the members of another, less powerful, group – thus restraining the “freedom of action of others”, or shaping “their knowledge, attitudes or ideologies” (van Dijk, 2008: 65). Second, this research observes that there is a shift in the definition of social power from its traditional definition “in terms of preferential access to, or control over, specific material resources” i.e. capital or land, to its contemporary meaning “as a symbolic power defined in terms of preferential access to, or control over, public discourse which shapes and controls the public minds”. Social power reproduces “dominance and hegemony” (van Dijk, 2008: 13-14).

Whereas modernisation theory is based upon notions of development in Western Europe and North America and offers a subsequent “one size fits all” approach that developing countries should follow in order to move from traditional societies to modernity, these more radical theories emphasise the strong influence of external forces and especially core states and their institutions (including the World Bank) on peripheral countries including the DRC, in part because of the transmission belt of national elites (Ferraro, 1999; Vernengo, 2004: 1-12). For example, world systems theory, inspired by Marx, points to the domination and control of a vast underdeveloped region by core-country capitalism and its multilateral political institutions (Kardulias, 1999: 179-180). Domination occurs through dispossession of land and other resources. Adding nuance, the theory of uneven and combined development (Thachert, 1991; Trotsky, 1931; Novack, 2002; Bond and Desai, 2006: 230) holds that capital accumulation in historically backward societies like the DRC necessarily leads to a mixture of different phases in the historical process. This process comprises pre-capitalist and capitalist development and accumulation by dispossession (Novack, 2002).

In addition to these contextual power relations, Foucault’s (1982: 777) theory of power applied to the IHPs will assist in explaining the dynamics behind the conception, planning, and implication of these large projects. The power of the DRC government does not improve the lives of ordinary people through pro-poor socio-economic policies, capacity building, peace, and public participation. Its power reinforces the intermediary role that local elites play between the MNCs and the IFIs (Fanon, 1963: 152-153) on the one hand, and the

impoverishment of local communities in resource-rich areas and ordinary people at large. The power of the DRC government consequently perpetuates social and structural exclusion and the accumulation of wealth by socio-political elites and their international allies as well as social and political instability as permanent threats to peace, sustainable economic growth, fair distribution of revenues from development projects, and inclusive development.

2.5 UNFULFILLED PROMISES OF DEVELOPMENT

According to Gasper and Apthorpe (Gasper and Apthorpe, 1996: 2):

Development is used in variety of ways, for example, to mean talking rather [than] doing; diversory and deceptive language; a prescriptive rather than descriptive stance; or as expression of the type of modernisation approach that became derogatorily known as “*developmentalism*” originally from Latin.

The deconstruction of development discourse reveals that “development is discourse that orders and creates the problems that it seeks to address” (Escobar, 1995, cited in Kroessin, 2012: 15). It creates and perpetuates “poverty production agents” (Øyen, 2002: 4-8) even if the latter work in tandem with home made internal actors (Peeman, 1986: 78; Nzongola-Ntalaja, 1986: 1-18; Fanon, 1963: 152) and development which occurs, sustains, and perpetuates the “positive functions² of poverty” (Gans, 1972: 278-283) or uneven and combined development (Trotsky, 1931; Thacher, 1992: 237-239; Bond and Desai, 2006: 4-9). Likewise, mega development projects such as the IHPs can use poverty as a point of entry to reinforce and expand the bureaucratic power of the state (Ferguson, 1990: 255) which could exacerbate and perpetuate poverty across generations. Since its inception, development has remained a means that rational and socio-economic and political elites use to maximise profit and achieve individual goals around scarce resources within national boundaries and across countries. This is so because development was not designed to deal with “the material conditions of living, the upgrading of living standards and the modernisation of the productive apparatus” (Escobar, 2005: 140). The promotion of standards of living through the

² Functions are defined as those observed consequences which are positive as judged by the values of the group under analysis; dysfunctions, as those which are negative by these values [...] Frequently one group’s functions are another group’s dysfunction [...] It should be noted, however, that there are no absolute benefits and costs just as there are no absolute functions and dysfunctions; not only are one group’s benefits often another group’s costs, but every group defines benefits by its own manifest and latent values, and a social scientist or planner who has determined that certain phenomena provide beneficial consequences for a group may find that the group thinks otherwise (Gans: 1972: 277).

construction of and access to socio-economic infrastructures such as schools, hospitals, and roads as well as innovations in productive machinery, are consequences of an environment conducive to utility maximisation.

The contemporary idea of development “is not an innocent term, condition, or state of society. It firstly entails a relatively narrow geo-history of construction and contestation” (Sosale, 2002: 4), negotiation, and resistance through the meta-narrative of “power and invisibility” (Escobar, 1987: 428), “parent-conferring roles”, and children’s obligations (Sosale, 2002: 14). Key decision-makers in the development apparatus give themselves the power and privilege to interfere in the development strategies and policies of developing and poor countries in terms of what need to be done, how it should take place, and by whom in the same way that parents treat their children (Sosale, 2002: 14).

This is taking place at the expense of the real interests, priorities, and obligations of aid receiving countries and the most vulnerable through the manipulation of socio-political and economic elites. Fanon (1963: 152-153) predicted the roles of that the bourgeoisie would play in the perpetuation and protection of colonial agendas in the post-independent epoch and several decades thereafter:

The national middle class discovers its historic mission: that of intermediary ... its mission has nothing to do with transforming the nation; it consists, prosaically, of being the transmission line between the nation and a capitalism, rampant though camouflaged, which today puts on the mask of neo-colonialism. The national bourgeoisie will be quite content with the role of the Western bourgeoisie’s business agent, and it will play its part without any complexes in a most dignified manner. But this same lucrative role, this cheap-Jack’s function, this meanness of outlook and this absence of all ambition symbolize the incapability of the national middle class to fulfil its historic role of bourgeoisie. Here, the dynamic, pioneer aspect, the characteristics of the inventor and of the discoverer of new worlds which are found in all national bourgeoisies are lamentably absent (Fanon, 1963: 152).

Secondly, development is related to the power to influence the course of events and socio-economic policies of poor and developing countries, and the power to remain invisible and

deny any responsibility when, as is often the case, these policies fail to bring expected results. Similarly, power holders in their “parent-coffering roles” remain invisible but very active in their choices around what is good for their “children”, i.e. poor and developing countries, and how to define the means which should lead these countries to pre-defined objectives. The path consists of different stages of growth from childhood or traditional stage to adulthood or a westernised state (Sosale, 2002: 14). Development is also the result of establishing a system that brings together the needs of developed countries for overseas investment opportunities and markets for their goods as defined by the World Bank, the IMF, and the WTO and their practices – i.e. free market/ trade liberalisation under the auspices of big corporations and multilateral institutions (Escobar, 1987: 430-439).

Underdevelopment has different functions or consequences for different people and institutions. Whilst the negative functions of poverty increase the vulnerability of communities and individuals who are structurally excluded from the mainstream economy, there are institutions and individuals who benefit from these negative functions because

... poverty and the poor may well serve a number of functions for many non-poor groups ... [of which] economic, social, cultural, and political that seem to ... [be] most significant. [Indeed]

- i) the existence of poverty makes sure that “dirty work” is done. Every economy has such work: physically dirty or dangerous, temporary, dead-end and underpaid, undignified, and menial jobs.
- ii) The poor subsidize, directly and indirectly, many activities that benefit the affluent.
- iii) Poverty creates jobs for a number of occupations and professions which serve the poor, or shield the rest of the population from them.
- iv) The poor buy goods which others do not want and thus prolong their economic usefulness, such as day-old bread, fruit and vegetables which would otherwise have to be thrown out, second-hand clothes, and deteriorating automobiles and buildings.
- v) The poor can be identified and punished as alleged or real deviants in order to uphold the legitimacy of dominant norms.
- vi) Another group of poor, described as deserving because they are disabled or suffering from bad luck, provide the rest of the population with different

emotional satisfactions; they evoke compassion, pity, and charity, thus allowing those who help them to feel that they are altruistic, moral, and practicing the Judeo-Christian ethic ... (Gans, 1972: 277).

Poverty or rather impoverishment, and its functions are man-made issues. They are created, sustained, and perpetuated by both external and internal forces. De Swaan *et al.* (2000: 48-50) support the argument that elites shape development in a planned and coordinated way. It is therefore important to focus attention on the role of different groups of elites in setting standards, providing ideological arguments, and proposing solutions to the challenges that poor people face. With this focus, one can learn that elites in particular societies have much in common but also differ depending on their power and diverse interests. There are also nuances in the political resources that they command, as leaders of parties, movements, bureaucratic agencies, armies, unions, and so on. Similarly, symbolic resources controlled by leaders from different backgrounds vary with glaring contrasts between traditional leaders, religious leaders, intellectuals, and controllers of the media. In the case of the IHPs, all these require investigation and analysis.

Mainstream development focusing on economic growth failed to fulfill its own promises. It also failed to meet the expectations of Third World countries due to numerous shortcomings. First, development had to deal with how the economies of western countries could be transformed and become more productive in the post-colonial era. Development theory was initially intended to explore and explain the best way to serve the interests of colonial powers and then ex-colonial states, to speed up national economic growth in a globalised economy, in the western image (Leys, 1996: 5). Second, development theory emerged during the Cold War, at a time of fear in western countries that communism would attract the newly independent countries in the south. It was therefore imperative for western countries to provide assistance to these countries before the latter could receive assistance from communist countries. Furthermore, development theory advocated for a liberal economic system with the aim of counter-balancing communist ideologies which advocate for central planning of development initiatives including small, large, and mega projects.

Amongst the western tools for implementation of main development theory and its various adaptations were the Bretton Woods financial and trading regimes – especially the World Bank, the IMF, and the General Agreement on Tariffs and Trade (GATT) – designed in the

crucial period from 1944-48 to assist national governments in managing their economies (Leys, 1996: 7). GATT was then replaced by the World Trade Organisation (WTO) in 1995. Third, modernisation theorists were “mostly closely connected to the American state and accepted its purposes, including its intense preoccupation with combating Communism” (Gendzier, 1985, cited in Leys, 1996: 7). As a result of this political agenda and the quest for economic growth at all costs, social issues, the environment, and good governance were not a priority in modernisation theory. Instead, “modernised elites” acted as compradors – what Andre Gunder Frank termed the lumpen-bourgeoisie – serving their own interests, not those of the people they pretended to represent and serve (Leys, 1996: 7).

Fourth, the idea of development as modernisation was mainly inspired by a Eurocentric vision of development as a tool to solve the problems of “rapid urbanisation, poverty and unemployment, which arose as a result of the growth of capitalism” (Herath, 2009: 1450). Contemporary capitalism takes different forms through development theories and diverse development projects which often impoverish and divert the attention of its critics, i.e. individuals, civil society, and academics. Øyen (2002: 5) argues that poverty as we know it is not a neutral phenomenon. It is the result of poverty-production agents and processes such as inadequate schools, corporations that are responsible for work-related illnesses through unhealthy environment practices, weak systems of social security, and low and irregular wages. Examples of structured poverty include the apartheid system in South Africa and the caste system in India (Øyen, 2002: 5-7). Øyen (1996: 11-14) also warned in 1996 that there is a need to develop a pragmatic paradigm and a shift in poverty research to focus on the motives, attitudes, and practices of those with power who create the political, educational, and social institutions which perpetuate poverty.

Otherwise, researchers and policy makers’ efforts to alleviate poverty will fail. The broken promises of mainstream development theory require, in response, holistic alternative approaches which cater for both the non-poor and the poor with particular focus on the political projects purposively excluded from development agendas with clearly defined indicators and monitoring mechanisms for qualitative and quantitative achievements. A holistic approach to development should entail a fair share of the costs and benefits of development projects between rural and urban areas, the poor and rich in these areas, and men and women, given gender-specific challenges such as fetching water, cooking, and looking after the sick to list a few. Furthermore, and more importantly, alternative approaches to

development should focus on human capital development, and community ownership and participation, rather than relying solely on financial aid (McLennan, 2012: 1) which is often subject to corruption, mismanagement, and fraud, which impoverishes the beneficiaries, and consequently increases the vulnerability of the same communities that the aid is intended to empower. Lastly, impoverishment, environmental failure, unequal shares of resources, structural exclusion, and subsequent struggles for inclusion by all means – including social violence – are the negative consequences of mainstream development aid. All are evident when we look at the DRC and especially the IHP.

2.6 CONCLUSION

This chapter discussed the different approaches to development theory and their shortcomings. Development theorists focus mainly on growth without necessarily intending to achieve a fair (re)distribution of development outcomes in development initiatives. Individuals and communities should benefit from development through the trickle-down model.

Main stream development theories were inspired by the American Marshall Plan to Europe in the post-war epoch, designed as a “one size fill all” strategy regardless of the specificities of the beneficiaries of aid. The results of this approach to development and wellbeing are not only limited to unfulfilled promises which may provide an opportunity for civil society to challenge the *status quo* and the purpose of development. They also perpetuate socio-political instability which may in the long term undermine development initiatives across countries.

Rostow’s five stages of economic growth and Schumpeter’s theory of innovation are important to our understanding of development theories and the roads taken by North American and Western European industrialised countries to move from the traditional societies which they were centuries ago to the developed and rich countries that they are today. Yet, Kabatu-Suila (2004a: 7, 16, 20–23) argues that these models are not easily applicable to poor and developing countries because some, if not all, of the fundamentals for development which may be taken for granted in western countries do not exist. He suggests a development model based on five priority conditions, the concept of pre-seance and concomitance, and five conditions which must occur concurrently in order to engage any

Third World country in the process of development. Otherwise development at best remains a pipe dream.

Marxist theory of development and Foucault's approach to power are equally important to the IHPs. The former insists that accumulation of wealth by the rich goes hand in hand with dispossession, exploitation, and impoverishment of the poor. The accumulation and dispossession lead to uneven and combined development between cities which benefit from the IHPs and rural areas which have been impoverished by the same projects, and subsequent class conflicts between residents of the two geographical areas. The dispossession of wealth is critical to our interpretation of the IHP dams in time and space since the technologies of power shed light to why individuals conform to society's rules.

CHAPTER 3. LARGE DAMS, DEVELOPMENT AND UNDERDEVELOPMENT

3.1 INTRODUCTION

To understand the way the IHPs are unfolding requires not only a sense of changing development theory and practice, but also a critique of the aid industry whose approach to economic infrastructure is ultimately crucial to our comprehension of how energy is produced, transmitted, and distributed in Africa and the DRC in particular. Furthermore we need to access critically how contracts and investments in the IHPs are negotiated, renegotiated, and cancelled to comprehend the political economy of aid and the roles of internal in this countr. This chapter explores the debates on aid industry through the lens of mega-dam projects. These discussions led to three schools of thought - the individuals and institutions which support aid, those who could resit it if they given the opportunity to do so and the people and organisations for whom aid is neutral. Its outcomes depend on pre-existing conditions in aid recipient countries that create conducive environments for inclusive improvement of the beneficiary communities' standard of life as I will elaborate later in this chapter. I agree with the last school with the last school of thought as I will elaborate latr in this chapter. This investigation provides an opportunity to discover successful models, if any, which could be applied to additional phases of the IHPs to inclusively benefit people and protect the environment in a sustainable way. This is so because aid mixed with geopolitical interests and ideological motives may become a breeding space for socio-political instability and a hidrence for democracy, good governance and diversification of exports in the DRC.

3.2 ORIGINS OF AID AND ITS DEVELOPMENT OVER TIME

According to Moyo (2010: 10), the “tale of aid-infused development” begins at a meeting held in July 1944 at the Mount Washington Hotel in Bretton Woods, New Hampshire, in the USA. This meeting intended to restructure international finance, establish a multilateral trading system, and construct a framework for economic cooperation that would avoid a repeat of the Great Depression of the 1930s”.

The Bretton Woods Agreements were mainly discussed between the USA and the UK despite their opposing views during the initial negotiations. In fact whilst USA officials wanted “to

reconstruct an open trading system; British officials wanted to ensure full employment and economic stability and were thus complementing the continuation of imperial preference system and bilateral trading” (Ikenberry, 1993: 156). The Bretton Woods agreements were signed by 44 nations in 1944 (Ikenberry, 1993: 155). Helleiner (2006: 944-958) disagrees with Moyo (2010: 10) about the origins and significance of the Bretton Woods Agreements. He argues that the liberal vision of the first draft of the proposals was developed in the 1940s as a USA-Latin American initiative to create an Inter-American Bank due to their similarities and put into practice by the two regions during the negotiations. British colonies that became the USA among others, and Latin American countries were emerging from the 19th century economic decline and political conflicts. The two regions had similar per capita income and followed similar economic growth due to a decreased economic activity in the USA in the post-independence and the disruption of trade and decline in mining in Latin American countries decades. These regions had also witnessed uneven political instability, violence and persistent civil wars, which led to their independence despite Latin American countries being more negatively affected in the struggles than the USA (Przeworski and Curvale, 2006: 4-6).

The beginning of large-scale aid transfers dates as far back as the 1890s, with US assistance in food aid correlated to Washington’s growing influence as a regional and then global geopolitical power player. Under the Colonial Development Act of 1929, the British government provided aid for socio-economic infrastructure projects to its colonies. The British Colonial Development and Welfare Act expanded aid to social sector activities. In the post-second world war period, aid shifted from the stabilising role envisaged in macro-economic management at the Bretton Woods Summit in the 1940s, to decades of semi-peripheral world industrialisation during the 1960s. Aid was inspired by the success of the Marshall Plan in Europe in the 1940s-50s. It then became an answer to poverty and basic-needs deprivation in the 1970s, a tool of structural adjustment in the 1980s, a pillar for democracy and good governance in the 1990s, “culminating in the present day obsession with aid as the only solution to Africa’s myriad of problems” (Moyo, 2010: 10).

Browne (2006: 34-30) summarises this process and the various roles that aid has played during different epochs under the auspices of development theory to meet the specific demands of capitalism in three phases. First, from the 1950s to the 1970s, development was conceived as “a do-as-we-did process” through modernisation theories. Aid was considered a source of capital, for “aid replaced, rather than supplemented, the domestic savings or private

foreign capital that might have funded the investment” (Browne, 2006: 24). In numerous developing and poor countries, aid was diverted to non-productive uses and projects, often under the auspices of the donors. This aid then became a limiting factor to the improvement of fiscal and monetary disciplines, and consequently to private investment and public and private savings performance (Browne, 2006: 24-30). There was also aid in the form of imports, playing the role of temporary security valve for countries with external payments gaps via “tied aid”. Here, aid sustained imports instead of stimulating the expansion of trade. The orthodox perspective contends that aid in such forms is unhelpful to recipient governments. Finally, aid also came in the form of technical assistance, to improve recipient “human capital” (Browne, 2006: 24-30). Former WB President Eugene Black confirmed that, at least in the case of the USA, Washington’s foreign aid policies were beneficial to the donor, and became an important market for US goods and services (WB President, Eugene Black, 1950, cited in Hancock, 1989: 70).

In the second phase, from the late 1970s through the 1980s, development aid was correlated to Structural Adjustment Programmes (SAP), and became a power lever in the imposition of conditionalities such as fiscal austerity, social services cuts, privatisation of state enterprises, and the policy of cost recovery. There were severely negative effects on aid beneficiaries and particularly the poor, women, and rural villagers. Aid-supported neoliberal development therefore amplified the “uneven and combined development” in poor countries, with limited benefits for the majority of the poor (Browne, 2006: 24). The idea of development as a synonym for the well-being of individuals – including but limited to their need for well-balanced food, health, education, shelter, and clothing – had been replaced by austerity. The resulting slide in living standards was sufficiently extreme for the UN to react by declaring an era of sustainability of natural resources with increased the attention paid to the environment and the natural resources that support it (Browne, 2006: 31-33).

In the third phase, from the 1990s to the present, there was a shift in donors’ rhetoric, from the “make-them-like-we-did” inspired by the modernisation theory, to a “do-as-we-say” approach (Browne, 2006: 24). There was also a revival of civil society organisations (CSOs) as central to development through donors’ advocacy for a new institutional agenda of good governance and respect for human rights. The aim of this approach was to correct the weaknesses of the previous two approaches to the aid industry namely “a relative ineffectiveness of aid; frustrations with the lack of commitment by many developing

countries to reform processes; and endemic corruption” (Kaufmann *et al.*, 2005, cited in Browne, 2006: 36-37). This research considers good governance as a concept that includes freedom of expression, public accountability, government effectiveness, and control of corruption to list a few. The common feature of these successive phases is the evolution of “how development is perceived to work” (Browne, 2006: 24) – or is advertised partially for the objective of donor and project legitimacy – rather than “how development actually works” (Browne, 2006: 24), which requires a much deeper enquiry into gap-filling, quality of growth, and good governance (Kaufmann *et al.*, 2005; cited Browne, 2006: 36-37).

As will be shown in subsequent chapters, different phases of development aid were experienced in the DRC (and “Zaire”) in different ways. The over-arching characteristic of the 1960s-90s era, however, was the abuse of aid by the Mobutu regime, as discussed below. Because aid was a feature of the first stages of the IHPs, it is important to assess how practitioners and theorists analysed the linkage between a major aid projects and broader socio-economic development.

3.3 DEBATES ON AID AND SOCIO-ECONOMIC DEVELOPMENT

The impact of foreign aid, a key component of the new globalisation (Stiglitz, 2002: 3) on economic growth and development has been, and continues to be, a hotly disputed subject, especially in the DRC (McGillivray *et al.*, 2006: 1031). In analysing its potential for economic growth, development of socio-economic infrastructure, poverty alleviation, and overall role in the southern hemisphere and eastern Europe, there are three schools of thought, namely individuals who support aid, those who oppose it, and those who see aid as neutral.

The first school of thought consists of individuals from all walks of life (academics, government officials, activists, and ordinary people) who believe that aid stimulates economic growth through increasing domestic resources such as savings and consequently boosting investment and accumulation of capital stock (Hansen and Tarp, 2000: 13-14). There are a number of mechanisms through which aid can contribute to economic growth:

- i) “Aid increases investment, in physical and human capital;
- ii) aid increases the capacity to import capital goods or technology;
- iii) aid does not have indirect effects that reduce investment or savings rates, and
- iv) aid is associated with technology transfer that augment the output of capital and

supports endogenous technological change” (Morrissey, 2001, cited in Ekanayake and Chatma, 2010: 2).

In addition, aid is important for economic growth and poverty alleviation (Radelet, 2006: 6). A study on aid and education finds that there is a link between education and aid (Rogers, 2008: 6-7). Gyimah-Brempong and Asiedu (2008: 18) and Rogers (2008: 6-7) argue that aid, infant mortality, and primary school completion rates are positively correlated:

- i) aid has a significantly positive effect on primary school enrolment and completion rates;
- ii) aid to the health sector significantly decreases child mortality rates in poor and developing countries;
- iii) aid to the primary education and health sectors are different from the effects of aggregate aid on outcomes in these sectors, and
- iv) there is no evidence of the fungibility of aid to primary education and health sectors in their study.

Michaelowa and Weber (2007: 14) argue that “the impact of disaggregated educational aid on outcomes in primary, secondary and tertiary education [points to] some evidence for a positive effect of aid at all three levels. However, the estimated effects are rather low”. There are other supporters of aid who contend that it promotes economic development through multiplier effects.

The second school of thought points to opposing evidence that aid may do more harm than good in the Third World. This group comprises academics, government officials, activists, and ordinary people who concede that aid was crucially important in Europe through the 1948 Marshall Plan even though foreign aid has negative implications for balanced economic growth and the utilisation of natural resources. Nzongola-Ntalaja (1986: 4-10), Leslie (1986: 247), Harford and Klein (2005: 1) and Moyo (2010: 28-47) belong to this school of thought, with ideologies ranging across the full spectrum of political belief.

A study by Nzongola-Ntalaja’s (1986: 1-18) on “Crisis and change in Zaire, 1960-1985” concludes that the Congolese crisis is a result of the interplay between external and domestic actors who mutually support one another. The external actors consist of western powers and aid agencies (often linked to imperialism) which provide military, economic, and ideological

support to Third World dictatorships in the DRC and elsewhere. These dictators strongly rely on patron-client relations with their masters from both western and eastern bloc countries, must remain in power at all costs and against the will of their people, and must serve the interests of the former colonisers and newly formed political allies. The external actors are consequently considered not development assistants, but channels for the acquisition of more resources to perpetuate the *status quo* (Nzongola-Ntalaja, 1986: 17-18). These actors have transformed the DRC through their local networks and agents since the end of the 1970s, into “a typical case of a country under multilateral dependency” where multilateral organisations, western powers, and eastern bloc countries have defined and imposed direct norms of management of export resources in the interests of “transnational accumulation with a complete loss of a national space of autonomy” (Peemans, 1986: 78).

Nzongola-Ntalaja (1986: 17-18) laments the fact that the domestic actors consist of a complex mix of the legacy of colonialism: the inability of the state to build on the economic foundation left by colonialism, the attitudes of local post-independence elites and ordinary people, and economic policies which could be summarised into three main categories. First, there was an acute crisis in the post-colonial state of 1960-1965 caused by political independence without any control over the economy or tax instruments which remain under the auspices of the Belgian Kingdom. Secondly, the newly independent state was incapable of mobilising “agriculture surplus” whilst it was able to regain control of the “mining surplus” through the bureaucratic petty bourgeoisie. This crisis occurred when the commercial petty bourgeoisie took advantage of the weakening and subsequent disappearance of the state as an agent for mobilisation of agriculture surplus and management of centralised transport. Traditional and semi-industrial farmers and their intermediaries benefited through the monopoly of the supply of agricultural products and price increases. The situation contributed to a sharply decreasing supply of agricultural products to processing agro-industries which reduced their activities to the transportation of their own agricultural products. Consequently industrial agriculture, exports, and the income derived from it decreased substantially and then disappeared completely. Although subsistence agriculture and income as well as the emergence of traders increased - with a subsequent significant impact on the GNP, which rose from 9% to 13% – exports in the mining sector were channelled to the MNC networks.

The last attempt by the state to regain and maintain control over agricultural products and their commercialisation through the creation of numerous bodies including, but not limited to,

the National Textile and Fiber Bureau in 1976 (Cotton Rehabilitation Project), National Cereals Bureau, and the National Fisheries Office among others, and the notorious Zairianisation¹ operation in 1973, was followed by equally unsuccessful radicalisation² in 1974 (Peemans, 1986), and partial retrocession³ to the original owners in 1975 (Ulloa , Kast and Kekeh, 2009: 10-11).

Domestic actors give different meanings to “people” when they make and implement policies and when they speak in public about their political manifestos. Indeed, the rhetoric and practice of indigenisation and its subsequent contradictions between people’s interests and different levels of discomfort at the core and on the periphery, are common in the political economy and populist movements of independent states. In fact, whereas socio-political elites use the notion of “people” as a stepping stone to get to power through democratic or dictatorial means and thereafter habitually reinforce exploitation and domination, the oppressed, exploited, and “authentic popular” use the same notion to refer to “political and ideological expression” in their struggles for self-inclusion and socio-economic and environmental justice (LaClau, 1981: 121-123; Laclau and Mouffe, 1985). Fanon (1963: 152) predicted this situation in the late 1950s whilst national elites and their followers were celebrating independence in several African countries:

Yet the national middle class constantly demands the nationalization of the economy and of the trading sectors. This is because, from their point of view, nationalization does not mean placing the whole economy at the service of the nation and deciding to satisfy the needs of the nation. For them, nationalization does not mean governing the state with regard to the new social relations whose growth it has been decided to encourage. To them, nationalization quite simply

¹ Zairianisation, an infamous indigenisation programme, as it is currently taking place in the Republics of Zimbabwe and South Africa, was the radical policy whose intention was to confiscate private properties and SMMEs and thereafter distribute them to the indigenous Congolese population. However, in practice the beneficiaries were actually the elite membership of Mobutu’s political party – PMR – and their ethnic networks. They monopolised the core of benefits especially in Kinshasa and the main cities of different provinces.

² Radicalisation progressed into the zairianisation of large industrial enterprises that were not directly affected by the initial phase of the nationalisation. Zairianisation and radicalisation signalled the beginning of the downward spiral of the Congolese economy accompanied by its currency as follows: from 1 Zaire = 2 US\$ in 1967 and 1971 to 1 Zaire = 0.0334 in 1983 (Willame, 1986: 7).

³ Retrocession was induced only three years after zairianisation. It consisted of returning formally nationalised private enterprises back to their foreign former proprietors because Congolese political elites were unsuccessful in their entrepreneurial endeavours. As a result, they failed to operate these enterprises and properties in viable environments. Retrocession also obliged foreign investors to engage indigenous partners who become empowered economically in new business ventures. Yet, very few owners of zairianised businesses were willing to return to Zaire.

means the transfer into native hands of those unfair advantages which are a legacy of the colonial period (Fanon, 1963: 152).

The DRC became independent in 1960 but was not an exception to this trend of newly independent countries of the time, or today in terms of populism and the looting of natural resources. The DRC was among the pioneers of different forms of indigenisation policies as already discussed, “in the name of the people” but in practice these policies enriched socio-economic and political elites at the expense of ordinary citizens. The policies continue to be implemented in several other African countries despite their failure and negative impacts on local and foreign investments, job creation, and the economy in general. The DRC has also received and continues to get development aid in different forms including but not limited to technical, military, financial, and humanitarian aid across time. However, this aid has not yet met the expectations of different groups of people outside the bureaucracy (Critique, 1843, cited in Held, 1996: 133) of the DRC government due to the complex web of geopolitical, ideological, and economic interests of the donors and different governments of the DRC.

In fact, several billion dollars have been injected in the DRC with little or no positive impacts. I will list a few examples to support this claim of many lost opportunities for economic development in the country. The 1.5 billion US\$ Inga-Shaba Power Highway Project invested to build a 1 770 km high-tension-transmission-line explicitly designed to exclude all the cities and rural areas crossed by this transmission line (Hancock, 1989: 172). This project was a result of a combination of political reasons and poor development planning. There were also the under-performing and neglected Inga 1 commissioned in 1972 with a capacity of 351 MW at a cost of US\$16.50 million in 1965 but completed at a price tag of US\$34.5 million, and Inga 2 commissioned in 1982 with a capacity of 1 424 MW at a cost of \$140 million, but completed at a cost of \$460 million in 1982 (Willame, 1986: 22-24). Inga 1 and Inga 2 do not have any real impacts on the ground in terms of provision of electricity to domestic consumers or (re)distribution of revenues. Furthermore, the 5 billion US\$ foreign debt to the DRC but looted by Mobutu and kept in Swiss private banks the repayment of which now affects several generations of Congolese. Lastly, there was the 1978 IMF largest loan of US\$700 million to an African country just after the resignation of Irwin Blumenthal from a post in the Central Bank of then Zaire because of a “corruptive system and its wicked manifestation” (Blumenthal, 1978, cited in Moyo, 2010: 53), and (5) in 2003 over US\$1 billion for debt relief (Browne, 2006: 104). This is the paradox of aid through mega

development projects. They tend to impoverish the same communities that they intend to benefit. Aid provided mainly by the USA, WB, IMF, EIB and several other bilateral and multilateral donors does not promote democracy but encourages theft and corruption and remains a breeding ground for socio-political instability, war economies, and ethnic conflicts in the DRC.

The common feature of the two schools of thought – namely the individuals who support and those who oppose development aid thanks to diverging individual and institutional interests – is a lack of interest in development which could empower the beneficiaries in rural and urban areas, speed up economic growth with fair distribution of resources through megaprojects, and promote public welfare. These conflicting interests in several African countries and the DRC in particular, have led to a crisis of functionality in the state which needs to be understood in a broader conceptual framework that closely links “political crisis” and “economic crisis”. Nzongola-Ntalaja (1986: 5) defines a political crisis as a “functional breakdown in the equilibrium of social structure whose peak is reached in an impasse as the group which holds this structure is falling apart, [and] no other political force is viable enough to take it over”. In Gramscian terms, an economic crisis “has to do with economic imbalance in the production structure, one that has repercussions in the political sphere and at the societal level” (Nzongola-Ntalaja, 1986: 5).

In a similar vein, but expanding this theoretical discussion to incorporate revenues from natural resources, Harford and Klein (2005: 1) argue that “countries with primary large exports often, though not always, grow more slowly than their peers” because natural resources negatively affect the economies of the recipient countries in three ways. Firstly, they create instability in government revenues that, if poorly managed, may lead to inflation and a “boom-and-bust” cycle in government spending. Secondly, natural resources produce strong currency earnings which, if not neutralised by monetary policy, will raise the value of the currency which in turn will weaken the competitiveness of other exports. Thirdly, natural resources can directly or indirectly damage much needed institutions in developing countries, not only because of straight corruption. Revenues from natural resources may directly become a breeding ground for ethnic and other forms of wars to control rents. These revenues may also remove the incentive for reform to improve infrastructures and / or establish a competent bureaucracy to recover tax revenues and by so doing diversify the sources of income. This is a perfect description of resource curse.

Leslie's (1986: 247) research findings on the World Bank and Zaire point in the same direction, namely that the WB's support as a catalyst to development through loans and the IMF's contribution to policy change in the DRC have contributed to a number of cycles of crises because of their own recommendations - e.g. conditionality and macro-policy requirements - of loans and sometimes non-economically justified projects. The Inga-Shaba Power Highway Project, *Domaine Agricole Presidential de la Nsele*, Radio and Television Tower, Sozacom Tower project, and Project Maluka Steel, also known as *White Elephant Projects* (AFRODAD, 2005: 24-25), are good examples of the World Bank and International Monetary Fund's contribution to the socio-economic and political crises in the DRC.

The third school of thought consists of academics, human rights activists, and concerned citizens who argue that foreign aid is neither good nor bad *per se*. The outcome of aid depends on certain preconditions - economic policies, donor agencies' political interests in time and space, type of governance, democracy, capacity and contribution of civil society organisations, capacity of government to efficiently allocate resources where they are much needed, the ability of the government to meet its economic contract with the international community, the government's social contract with its citizens - and how aid is managed in the receiving countries. The world should therefore not throw the baby out with the bath water. Development aid has some benefits that need to be recognised, retained, and protected (Cassen and Associates, 1994; McGillivray *et al.*, 2006: 1031). This research project belongs to the school of thought which strongly believes that local civil society organisations and individuals and their transnational networks have the potential to transform aid into an inclusive tool for development- as will be discussed in detail in Chapter 4. In addition, conditionality should not only impose tough economic policies such as cost recovery, cutting down state spending in social services, and privatisation of state assets to list a few, but also good governance, transparency, and public accountability at all levels of aid, i.e. from the donor institutions and countries to the beneficiaries including, in this instance, the DRC.

Davenport (2001) sorts the wheat from the chaff in the aid rhetoric. He contends that development aid has produced different and sometimes contradictory results. Development has been successful in humanitarian relief efforts such as improved child immunisation rates, has supported agricultural advancements that have fed millions, and has improved access to schools, clean water, sanitation, energy, and healthcare clinics. Development aid has,

however, failed under different conditions and countries, including failing to organise successful responses to growing drought conditions in Somalia in 1987. The second example is that food aid donated in some countries undermined the prices of domestic farm produce and harmed local producers in countries such as Zimbabwe (Ndlovu, 2011: 13-20); Egypt, Colombia, and Nigeria (Watkins, 2003, cited in Levingsonh and McMillan, 2007: 561). However, food aid remained neutral i.e. did not positively or otherwise influence local produce in Swaziland Tanzania (Mabuza *et al.*, 2009: 86-87, 90). According to Moyo (2010: 103), aid has been disbursed repeatedly in Tanzania, Zambia, and the DRC but there is little evidence that it has made a difference in the plight of the citizens of these nations. In addition, she estimates that more than US\$2 trillion worth of aid in the last fifty years has not lived up to expectations in terms of improving the living standards of the poor through development projects.

The WB's researchers Dollar and Pritchett (1998) argue that aid would work better if donor institutions imposed clear incentives which promote good governance. Yet development aid is often directed at large, corruption-riddled, socio-ecologically damaging projects with little or no economic justification - because of the geopolitical and economic interests of the donor countries and their local allies. Politically-motivated high modernist large projects are habitually subject to social discontent and generate a wide range of civil society activisms against both megaprojects and neoliberal economic policies which, ironically, is recommended by donor agencies to promote community ownership, good governance, and public accountability. However, in the spirit of neoliberalism, Petras (1997: 10, 13, 17, 18) argues that some donor funding institutions began to finance local and international non-governmental organisations (NGOs) to promote strategies which undermine the role of the state in service delivery. There is consequently an inherent (or at least potential) tension in aid strategies between the disempowerment of citizens through the design and constitution of aid protocols and the rhetorical empowerment of citizens through the effacement of state powers and the strengthening of NGOs. How does this tension play out in the development of megadam projects and the IHPs?

3.4 DEVELOPMENT AID AND MEGA-DAM PROJECTS IN SELECTED COUNTRIES

This section considers the Akosombo Hydropower Project in Ghana, the Aswan High Dam Project in Egypt, the Lesotho Highlands Water Project in Lesotho, the Three Gorges Dam Project in China, and the Narmada Multipurpose Dam Projects in India. These dams were selected because of their geographic dispersion across the world, the number of people displaced, and their total capacity. All of these projects are at least as large as the Inga 1 and Inga 2, the first phases of the IHPs. The main objective is to find common trends, if any, among the dams in search of a model for fair distribution of both the costs and benefits of the dams, and for financial sustainability which could be suggested in the IHPs.

A dam refers to a structure that obstructs river or stream flow to form an artificial lake or reservoir. The international dam industry associations consist of

- i) the International Commission on Large Dams (WCD);
- ii) the International Hydropower Association, and
- iii) the International Commission on irrigation and Drainage (McCully, 2001: iii).

The international dam industry distinguishes small and large dams according to the size of the structure and reservoirs and their capacity to generate electricity. They also classify dams according to their actual sizes during the operational phase because a dam can start small during the initial planning phase but end up being a large project due to further planning:

Small dams are normally less than 15 meters in height from the lowest general foundation to the crest. Large dams are “those having a height of 15 meters from the foundation or, if the height is between 5 to 15 metres, having a reservoir capacity of more than 3 million cubic meters. [Yet,] dams under 10 meters in height are treated as large dams if they are expected to become large dams during the operational phase⁴ or satisfy at least any one of the following criteria: crest length more than 500 metres, reservoir capacity more than 1 million cubic metres maximum flood discharge more than 2 000 cubic metres, it has difficult foundation problem, and it is of unusual design (Rangachari *et al.*, 2000: 2).

⁴International Commission on Large Dams [Online], available: <http://www.adb.org/Water/Topics/Dams/dams0120.asp>. Accessed on 2/06/2006.

A major dam has either a height of at least 150 metres, a volume of at least 15 million cubic metres, reservoir storage of at least 25 cubic metres, and electric generation capacity of at least 1000 megawatts (McCully, 2001: 5-6). A mega-dam refers to any dam which is roughly ten times bigger than a large dam with a benchmark of around 150 metres in wall height (Magee, 2015: 216). This research project will therefore use large dam and mega-dam interchangeably with preference given to mega-dam.

The construction of numerous dams for water and electricity pre-dates the advent of modernisation theory. Yet, this theory - coupled with national pride, corrupt practices, and high modernism - strongly influenced the dam industry in terms of reproducing the successes of developed countries in hydropower generation. To many writers, leaders, bureaucrats, and revolutionaries the mega-dam projects arise for two sets of reasons. First, they are motivated by “patriotic pride and conquest of nature by humans as well as to signify greatness, power, and domination” (McCully, 2001: 1). In this sense, the mega-dam projects are associated with high modernism and are inspired by the theories of modernisation already discussed in the previous sections. Mega-dam projects consequently provide the developing countries with a space to join the global market in the exchange for commodities, money, and services. According to Adorno (2005: 218):

Modernity is a qualitative, not a chronological, category. Just as it cannot be reduced to abstract form, with equal necessity it must turn its back on conventional surface coherence [of Enlightenment thinking], the appearance of harmony, the order corroborated merely by replication.

High modernism is associated with Scott (1998: 4-5) who argues that:

It was fundamentally, as the term “ideology” implies, a faith that borrowed, as it were, the legitimacy of science and technology. It was, accordingly, uncritical, unskeptical, and thus unscientifically optimistic about the possibilities for the comprehensive planning of human settlement and production. The carriers [and exponents] of high modernism [include engineers, planners, technocrats, high-level administrators, architects, scientists, and visionaries] tended to see rational order in remarkably visual aesthetic terms. For them, an efficient, rationally organized city, village, or farm was a city that looked regimented and orderly in a

geometrical sense ... High modernism was about “interests” as well as faith. Its carriers, even when they were capitalist entrepreneurs, required state action to realize their plans. In most cases, they were powerful officials and heads of state. They tended to prefer certain forms of planning and social organization (such as huge dams, centralized communication and transportation hubs, large factories and farms, and grid cities), because these forms fit snugly into a high-modernist view and also answered their political interests as state officials. There was, to put it mildly, an elective affinity between high modernism and the interests of many state officials (Scott, 1998: 4-5).

High modernism projects originate in a particularly destructive combination of three elements:

- i) a strong desire for administrative order in nature and society,
- ii) excessive use of state power as a tool for realising the latter, and
- iii) a powerless civil society unable to resist these plans (Scott, 1998: 88-89).

Mega-dam projects arise to express “icons of economic development and scientific progress” (McCully, 2001: 1-3). In fact, small, medium, and large dam projects all intend to generate electricity and supply water for domestic and industrial use, or both. These projects contributed in the 1990s to world food production and socio-economic development through irrigation, and the production of 18% of the world’s energy supply (McCully, 2001: 1-3). In Africa, hydropower generation represents between 18% and 32% of the total potential of the continent. Mega-dams are built for hydropower generation, recreational purposes and to control floods (Blomfield, 2008: 1).

The advantages of mega-dam projects make this industry attractive for hydroelectricity and irrigation. Hydroelectricity brings many opportunities which can be used as a tool for development. Firstly, hydropower presents a well-established, proven, and simple technology with low operation and maintenance costs, at least in the beginning, despite high upfront construction costs. Secondly, hydropower has technical attributes which allow it to be stored in large quantities behind dams and make it immediately available for use when needed. Thirdly, “hydropower performs well at the so called ancillary services including spinning reserve, operating reserve, regulation and frequency response, voltage support, and black start stability, which means it can interface well with transmission grids” (Blomfield, 2008: 2).

The role that river damming plays for irrigation cannot be overemphasised if one looks at countries which use extensive irrigation in agriculture: India (663,340 km² in 2008), China (629, 380 km² in 2006), the USA (266, 440 km² in 2007), and Egypt (34,220 km² in 2003) (CIA, n.d.). Egypt has the least irrigated land among the four countries. The survival and development of Egypt has depended strongly on irrigation more than anything else since time immemorial. Elsewhere, rainfall and autocratic state power remain instrumental in the expansion of industrial farming, the extension of capitalism and “landlordism”, and subsequently “a bureaucratic landlordism, bureaucratic capitalism and bureaucratic gentry in hydraulic societies⁵ that change nature profoundly wherever man profoundly changes his technical equipment, his social organization, and his world outlook” (Wittfogel, 1967: 4, 11).

In practice, however, the people who need dams the most, namely subsistence farmers, women, and the poor in rural and urban areas, dam-affected communities, anti-dam activists, and academics often disagree about their negative impacts. First, there is unequal sharing of costs and benefits of the dam projects between domestic consumption (water, electricity, water for irrigation, and land use) and industrial needs; between local communities in the villages and urban residents; and between poor people and wealthy individuals in the cities. Second, the dam projects have negative impacts on community health, livelihoods and social capital, economic returns, greenhouse gas emission, and the environment. Indeed, dam reservoirs create habitats in which insects such as snails, mosquitoes, and black flies that serve as vectors for water-borne diseases including *schistosomiasis*, malaria, and *onchocerciasis*, flourish. Third, communities’ livelihoods and social capital are destroyed through dispossession of much needed water and land and the forced displacement of between 30-60 million and 40-80 million people around the world with little or no consultation or compensation. Fourth, contrary to general belief and the rhetoric of proponents of mega-dam projects, greenhouse gasses are emitted by the decomposition of vegetation, aquatic plants and algae, and organic matter is washed into reservoirs. In addition, the dam reservoirs emit methane and carbon dioxide from water passing through the turbines over the spillways and downstream of the dams. Mega-dam projects are always subjects of cost overruns and corruption (McCully, 2001: xxvii-xxxvi, 89-94, 135).

⁵ Put briefly, the thesis is that the hydraulic society, based on large scale irrigation with its demand for larger-scale managerial organisation, of their nature produced a despotism in which the state is stronger than society (Spate, 1959: 90).

Three groups of people are involved in dam related controversies. The first group comprises individuals – academics, politicians, human rights activists, investors, and ordinary citizens – who support mega-dams. The second group opposes mega-dams. Between the pro- and anti-dam groups, there is a third group of people who have mixed feelings about mega-dams. They are “optimistic pessimists” who believe that “(1) [the] tools exist to solve humans’ most pressing issues [caused by mega-dams for hydropower and irrigation]” and (2) “some form of apocalypse is likely to occur before humans get around to using them” (Leslie, 2005: 109). There are also people who argue that large dams have the potential to contribute to both economic growth and inclusive development where two conditions exist. One, there must be appropriate policies and these policies need to be fully implemented. Two, as Suced argues, it is vital that individuals involved in the construction of mega-dams “have a legal responsibility to follow whatever contractual conditionalities are necessary to implement the projects as intended. [But] those requirements do not exist at the moment” (Scudder, 2006: 296).

3.4.1 The Akosombo Hydroelectric Project in Ghana

The Akosombo Hydroelectric Project (AHEP) was built between 1961 and 1964 and funded by the WB. This scheme was adopted by President Kwame Nkrumah to drive “the newly independent country into industrial and economic development” (Hathaway and Pottinger, 2009: 154) with an integrated aluminium sector. This industrial development should have occurred through the supply of cheap electricity to Volta Aluminium Company (VALCO) which needed 350 MW of Akosombo’s capacity of 1020 MW at the time. VALCO was originally 90% owned by a US-based Kaiser Aluminium Company. The project intended to supply electricity to the industrial sector and households both in rural and urban areas (Hathaway, 2007).

The structure of AHEP is 134 metres high. It subsequently created the 8 480 km² Lake Volta which is the world’s largest man-made lake in terms of surface area (Skinner, Niasse and Haas, 2009: 11) and represents major infrastructural investment in contemporary Ghana. The AHEP was one of the components of the “Ten Great Years” (1951-1960) of national development, “designed to modernise and transform an agrarian economy to an industrial-based economy in order to abolish poverty, ignorance and disease in modern Ghana within a generation” (Alhassan, 2009: 151).

The AHEP was part of Kwame Nkrumah's "belief in the power of endless scientific and technological advancement to transform society to make up, perhaps, for the time lost under the yoke of colonialism, exploitation, plunder, degradation and humiliation" (Zachary, 2003: 136). This vision could be fulfilled through investment in education and technological innovation of which AHEP is a prime example. Indeed, Nkrumah confidently invested so many resources in this venture that he confidently declared: "We shall achieve in a decade what took others a century" (Zachary, 2003: 136-137). As a result of this vision, Nkrumah perceived the resettlement of the dam-affected communities by the Akosombo dam as a special project for agricultural modernisation, with the affected populations acting as "spearheads" for positive change. However, Busia, who was the Prime Minister in the Second Republic of Ghana (1 October 1969 – 13 January 1972), opted for a different path for the post-independent country with different priorities. He "favoured reorganizing his country's farming rather than targeting state interventions in the Volta project" (Skinner, Niasse and Haas, 2009: 11). The overall positive socio-economic contribution of AHEP is obvious. The dam provides electricity to 60% of the Ghanaian economy which is strongly dependent on mining, manufacturing, and commerce. In addition, electricity has made Ghana one of the most industrialised West African countries, with coverage of 50% (Alhassan, 2009: 152). The financial performance of the dam is considered to be successful because the operating profit was positively maintained from 1985 to 1999. Lastly, fish yield and fisheries-related activities increased in the dam reservoir, representing 90% of all fish harvested in 2003 (Sarpong *et al.*, 2005: 11). Pittaluga *et al.* (2003, cited in Alhassan, 2009: 152) point to a "general state of well-being as far as employment related aspects of poverty is concerned" (*ibid.*). This contribution of AHEP to Ghana could have made the project a model to follow.

But some dam-affected communities disagree. They point to two important challenges of AHEP. They argue that project outcomes and projections occur at the expense of socio-economic and environmental costs to communities living up- and downstream. Seven hundred and forty villages were submerged by Lake Volta; 80 000 people were forcibly displaced of whom 70 000 were resettled into 52 locations in standardised houses – regardless of family size, traditions, or livelihood activities. The remaining 10 000 people received inadequate compensation. There was an increase in malaria, intestinal and urinary bilharzia cases (Peter and Baumgrtel, 2005: 6-10). The dam-affected communities also insist that AHEP was accompanied by unequal sharing of benefits from the dam. Electricity was mainly

supplied to cities and industrial zones at the expense of rural areas where the displaced communities live as they try to re-build their shattered lives. The dam-affected communities were only connected to electricity supply thirty-five years later, in 2000/2001 (Alhassan, 2009: 153). Expanding the criticism to resettlement and compensation, Skinner, Niasse, and Haas (2009: 11) contend that the relocation and resettlement of dam-affected communities were mainly characterised by mixed results from the two phases of this operation. The first phase was successfully implemented whereas the second phase had challenges because the AHEP was not paradoxically perceived as a developmental project.

As a result of this approach to AHEP, the second phase was characterised by financial, human, and time constraints which led to inadequate assistance for and the deterioration of people's living conditions in the affected communities. This was the opposite of President Nkrumah's initial plan which envisioned the resettlement of the dam-affected communities "as a special project with communities acting as 'spearheads' of agricultural modernisation" (Skinner, Niasse and Haas, 2009: 11). The general assessment of the AHEP points to short-term benefits, including access to drinking water, health facilities, and education, all of which have distinctly improved. Tsikata (2006: 2-3) argues that AHEP was from the start characterised by (1) a growing unhappiness within a portion of the population towards the agreements governing the project between the Ghanaian government and mining companies such as Volta Aluminium Company and (2) the expressed, but ignored, preoccupations of the dam-affected communities, consisting of about 90 000 people. They include the communities forcibly displaced by the AHEP, and the host communities in the resettlement areas who have been negatively affected by the project, just like the Egyptians by the Aswan High Dam Project.

3.4.2 The Aswan High Dam Project in Egypt

The Aswan High Dam Project (AHDP) was meant to materialise and perpetuate the prophecy of Herodotus who lived thousands of years ago. In around 450 BC, the Greek historian described Egypt as "the gift of the Nile" (Ahmed, 1999: 1). Almost two and half thousand years later, Egypt is still the gift of the Nile, but the Nile has been reshaped due to the interventions of multiple generations of Egyptians in their never-ending efforts to harness the river flow (Ahmed, 1999: 1).

The AHDP is a multi-purpose dam project built between 1959 and 1970 with many objectives: to control the Nile flow at Aswan in the far south of Egypt, to regulate the discharge downstream of the dam in order to match the actual water needs for different requirements, and to protect the Nile Valley and Delta from high floods and drought hazards that could persist for consecutive years (Scudder, 2003: 1-2). The AHD which is 175 metres high, has 12 turbines, a capacity of 2.1 million MW, and can generate power of 10 000 MkWh per year (Abu-Zeid and El-Shibini, 1997: 212). Others describe the AHD as a dam which has a reservoir of 5 250 km². A water mass behind the dam forms the Lake Nasser; the formation of this lake caused the displacement of between 50 000 and 70 000 Egyptians and Sudanese Nubian nomads (Scudder, 2003: 2). According to Strzepek *et al.* (2006: 2), the AHDP intended “to convert a variable and uncertain flow of river water into a predictable and controllable flow”, to increase production of rice and cotton through irrigation, to facilitate navigation up and down the Nile for tourism and transportation of goods and people, and to generate electricity for all the towns and villages in Egypt.

Tortajada (2007: 7) and Biswas (2002) argue that the AHDP successfully met its objectives for three reasons. Firstly, it provided 53% of Egypt’s electricity needs in 1974, 30% in 1986, and 16% in 1998. The decreasing contribution to the electrification of Egypt from 1974 to 1998 was due to industrialisation and development in the country which goes hand in hand with increased demand for electricity. Additional capacity of 270 MW was added to the original production capacity to bring the contribution of the hydropower plant to 22% of the total output of the country’s electricity system (Shenouda 1999: 312; Scudder, 2003: 3). Furthermore, AHDP has made a significant contribution to a successful programme of rural electrification (Tortajada, 2007: 7; Biswas, 2002; Scudder, 2003: 3). The AHDP water has been used to protect Egypt from drought for nine years (1979-1988), and for the perennial irrigation of about 850 thousand feddans: it has considerably increased rice and sugar cane production and has resulted in the electrification of all towns and 4 500 villages in Egypt. The AHDP has also facilitated navigation up and down the Nile all year round (Strzepek *et al.*, 2006: 2). Secondly, the AHDP protected Egypt from 9 years of droughts, from 1979 to 1988, and the high flood of 1988.

Broadening the objectives of the AHDP, Abu-Zeid and El-Shibini (1997: 2009-2011) indicate that this project should;

- i) have full control of the Nile flow at Aswan in the far south of Egypt;

- ii) regulate the discharge downstream of the dam to match the actual water needs for different requirements;
- iii) protect the Nile Valley and Delta from high floods and drought hazards that could persist for many consecutive years;
- iv) generate cheap and clean hydro-electric power;
- v) realise horizontal land expansion by reclaiming new lands;
- vi) change the system of basin irrigation (one crop per year) to perennial irrigation (two or more crops per year);
- vii) expand rice and sugarcane cultivation to limit imports;
- viii) improve navigation through the Nile and navigable canals, and
- ix) realise great flexibility in agricultural planning, crop patterns and intensified agriculture.

As a result, according to Hansen (1991, cited in Strzepek *et al.*, 2006: 7-8), investment in agriculture and transport has increased by 50% and 120% respectively.

In addition, the “New Pyramid”, as Nasser called the Aswan Dam (Biswas, 2002), did not emerge without challenges to the communities that the project initially intended to serve. The negative impacts were reflected in a wide range of areas. Firstly, the AHDP caused serious erosion because of the flow of silt-free water⁶ given that silt is deposited behind the dam (Scudder, 2003:2). This in turn reduced soil fertility downstream because of the loss of nitrogenous components in the silt which are needed for crop production. As a result, thousands of tons of commercial fertilisers were needed to replace what the silt had naturally provided (Scudder, 2003: 2). There is also an annual deposit of 134 million tons of sediment in the AHDP reservoir, Lake Nasser, decreasing its storage capacity and life span each year (Shalsh, 1982: 623). Finally, there was unequal allocation of compensation as the Egyptian government gave more compensation in cash and in kind to Nubians than to other communities in the resettlement process (Scudder, 2003: 17).

The dam increased *schistosomiasis* and malaria cases in the surrounding areas (Biswas, 2002; Scudder, 2003: 10) and there was a rise of groundwater levels due to continuous applications of irrigation to increase cropping. The increase in groundwater levels was further exacerbated

⁶ Water flow carries fine sand, clay, and other small particles rich in organic materials (silt or sediment) which drop behind the dam, at the bent in a river or at a river mouth. In this process, silt deposit deprives the downstream area of organic materials necessary for aquatic life and agriculture.

by a lack of effective drainage in some areas of the Nile Valley and Delta (Ahmed, 1999). The inflow of silt-free water, the use of fertilisers, and the intensification of agriculture caused widespread growth of weeds in waterway channels. This in turn compromised the safety and effectiveness of irrigation and drainage networks (Ahmed, 1999). Lastly, the construction of the dam has changed the hydraulic regime of the river downstream because the canalisation of the river was controlled by a series of dams and barrages that reduced its length (Shalash, 1980: 244).

3.4.3 The Lesotho Highlands Water Project

The Lesotho Highlands Water Project (LHWP) is a multi-purpose massive infrastructure in a small country of 2.1 million habitants. These mega-dam projects are characterised by the impoverishment of affected communities through dispossession with little or no compensation. They are also known for the transmission of poverty and vulnerability across generations. The LHWP is not an exception to this rule as this section elaborates.

Lesotho is one of the poorest countries in the world and the LHWP consists of six large dams, of which two, namely the 186 metre high Katse and the 146 metre high Mohale dams, are already operational. A third dam is the 55 metre high Muela hydro-power plant. The LHWP floods watersheds that represent 40% of the country total area (Hoover, 2001: 1). Placed into context, the LHWP accounted for 13.6% of Lesotho's gross domestic product (GDP) in 1998. The LHWP-related activities represents over one third of all construction in the country. Royalties from the project make up 27.8% of state revenue. In addition, some 4 000 Basotho got temporary jobs at the LHWP and may still be working at the LHWP. Another large number of Basotho benefit from the LHWP through economic activities such as food vending and sex work, services provided to construction workers (Hoover, 2001: 2).

Pamela Cox (cited in Hervey, 2008), the WB country director, argues that the LHWP provides the only resource for the Kingdom of Lesotho and the Republic of South Africa. It represents the cheapest water supply to Gauteng through regional collaboration for mutually beneficial projects to achieve a win-win solution to the challenges of the two countries. The LHWP has generated "almost \$85 million in revenues as royalty and SACU revenue payments to Lesotho, of which \$40 million has been allocated to community-based infrastructure projects, creating about 15 000 jobs" (Pamela Cox, cited in Hervey, 2008).

Scudder (2006: 41) shares the same view, and argues that the LHWP's objectives include providing water to South Africa, electricity to Lesotho, and improving the living standards of the dam-affected communities through access to clinics, electricity, and roads.

However, as Horta and Pottinger (2006: 23) suggest, the political context in which the contracts were signed combined repressive regimes in both South Africa and Lesotho. Indeed, the idea of and cooperation around the LHWP started in secrecy during Apartheid era at the peak of the international economic sanctions against Pretoria. It behind doors since it could embarrassing to realise that Lesotho, the WB and the UK trade with and had signed bilateral agreements with South Africa. As a result, the WB had played a catalyst role between the Kingdom of Lesotho and South Africa, on the one hand, and offshore investors on the other to avoid direct interactions among the three structures. The WB had established a development fund with specific rules of transparency for financial management in the United Kingdom (UK) to address political sensitivities linked to the project. The agreement between the two countries was signed in 1986 under the auspices of the apartheid government in South Africa and a military dictatorship in Lesotho which came to power through a military coup in that year. There was neither consultation with, nor compensation to, the dam-affected-communities (Horta and Pottinger, 2006: 23). As a result the LHWP-induced resettlements exacerbated the precarious living standards of the impoverished majority of displaced people in a number of ways.

Firstly, Sets'abi and Mashinini (2006: 115-120) reveal that the resettlement destroyed the social and physical capital of the displaced. Indeed, 71.6% of respondents to a study on "the livelihood patterns of the people relocated from the Mohale Dam area: Data analysis and interpretation" claim that forced resettlement has led to the high cost of living, food scarcity, the lack of firewood, joblessness, the lack of water and the loss of subsistence agriculture(ibid). Also 69.1% contend that they were not compensated for their gardens, trees, and natural resources and they were given no explanation for this omission. This in turn reduced community bonds and resilience against shock and vulnerability. Only 27.1% cent of the surveyed households indicated that they benefited from skills empowerment training, of which 77.6% said that the training was inadequate. The participants indicated that they lost 50% of their sources of income (Sets'abi and Mashinini, 2006: 115-120). In fact, as the quote below from one of the resettlees illustrates, the dam-affected communities were impoverished and became worse off than before the LHWP:

There is nothing worse than working hard at something and then having something come and destroy it. We were satisfied with the way we were working. We were sowing maize and beans. We were eating fresh maize. We had trees. We had firewood, and people were buying it from us. We were getting money, and we were able to go to school The dam took our fields and our trees. That was the end of our money. Now, when I look at the dam, I still get very angry (Standard 7 participant, cited in Hoover, 2001: 7).

In addition to material resources and physical assets, non-material resources were also negatively affected by the LHWP. In fact, family bonds and relations were pulled to breaking point; traditions and belief systems were neglected, and the people's sense of community was placed under severe threat due to the influx of a large number of people who did not belong to the community. These individuals were either construction workers or job seekers (Hoover, 2001:1-13). A 12-year-girl residing near the Katse Dam, states:

Our sisters are out of control. They are pregnant. My mother left my father alone and stayed at Katse with another man. My father went to Katse Lodge, and he did not give us any money. He married and stayed there. We lived a difficult life after that. My mother came to see us and went back. Even today, the LHWP is still bad. Our brothers are drinking beer and making young ladies pregnant, and other girls sleep where their parents don't know. Women are falling in love with boys. Girls are killing their babies. They throw them in tins and in toilets. The LHWP is bad because girls were drinking beer and they were going in cars of the foreign engineers and contractors, especially my sister (Hoover, 2001: 12).

Secondly, there has been a lack of transparency in the planning process, a lack of environmental impact assessment studies, and widespread corruption since the inception of the LHWP. Thirdly, the forced re-settlement caused conflicts between the host communities which were not included in the compensation plans. In addition, there is competition over natural resources including land for agriculture and burials, grazing space, and other natural resources (Horta and Pottinger, 2006: 23-30). The affected communities became poorer than they were before the project despite, all the promises and symbolic but inefficient compensations characterised by massive corruption and other forms of irregularities.

3.4.4 The Three Gorges Dam Project in China

The Three Gorges Dam Project (TGDP) is a showcase of the divergence between technical strategies and democratic solutions for poverty alleviation and inclusive development due to its socio-economic and environmental costs to aid recipient communities. The TGDP was built between 1994 (Allin, 2004: 15) and 2010 (Xinhua News Agency, 2010) in a stretch of the Yangtze River named the Three Gorges because of the canyons formed by enormous limestone cliffs. Indeed, these gorges - including the Xiling, Wu, and Qutang - offer some of the most magnificent scenery in the world and have long been a choice destination for tourists from around the globe (Gleick, 2008: 145). “The beauty of the region has inspired Chinese poets and artists for centuries, including much of the work of Li Bai (701-762 AD), Chinese world’s greatest poet” (Fearnside 1988, cited in Gleick, 2008: 140).

The idea of building a gigantic dam on the Yangtze River in the Three Gorges area is not new. In fact, it was first proposed by Sun Yat-sen more than 80 years ago. The severe flooding along the river before and after 1950 put the idea on the table once again. Indeed, Mao Tse Tung promised to speed up construction of a massive dam but nothing significant happened for many decades. In 1986, the Chinese Ministry of Water Resources and Electric Power made a request to the Canadian government to finance a feasibility study which should be conducted by a consortium of Canadian firms. The consortium, known as CIPM Yangtze Joint Venture, comprised three private companies (Acres International, SNC, and Lavelin International), and two state-owned utilities (Hydro-Quebec International and British Columbia Hydro International). The Bank was asked to supervise the feasibility study to ensure that it would provide ground for securing assistance from the IFIs (Fearnside, 1993). On 3 April 1992, the National People’s Congress officially approved the construction of the project. On 14 December 1994, the Chinese government formally began construction. The first electricity was produced in 2003, and the physical dam was completed in 2006 (Gleick, 2008: 140).

The TGDP, the world’s largest hydropower project, was then built to control flooding in the middle and lower reaches of the Yangtze River which killed 240 000 people in 1870, 142 000 in 1935, 30 000 in 1954, and 3 000 in 1991, at an estimated cost of between \$25 and \$60 billion (Dai 1994, China 1996, JPN 1996, McCully 1996, Reuters 1997, cited in Gleick,

2008: 141). The TGDP was built to provide enough energy to the region as the country embarked on market-oriented economic policies, and improved the Yangtze River's navigability (Ponseti and Lopez-Pujol, 2006: 151-165). Opponents to this massive project did not consider the benefits of the project as expressed by government officials and funding institutions. The critics of the TGDP have identified several problems. This research will only explore four of the problems which are relevant to the IHPs because of similarities with other large dam projects around the world. Indeed, anti-large dam activists and academics argue that the TGDP was not economically justifiable from its inception because of:

- i) a lack of electricity demand in the region due to the closure of some state-owned industries;
- ii) the fact that that sediment accumulation will reduce the general capacity after decades of operation;
- iii) the fact that navigation will be obstructed by the sedimentation process after construction of the dam;
- iv) the fact that the dam reservoir will modify the scenery of the area and destroy distinctive archaeological features of the area thus undermine tourism, and
- v) the fact that the project will forcibly remove 1 200 000 people with little or no compensation (Ponseti and Lopez-Pujol, 2006: 151-165).

In support of this view, Jing (1997: 65-68) argues that the Three Gorges has been an economic, political, and environmental disaster since its inception because of the lack of consultation with, and insufficient compensation to, the affected communities - in addition to a lack of transparency in compensation, cost overruns, destruction of people's livelihoods, and the displacement of a large number of people.

Secondly, Gleick (2008: 141) argued that the TGDP would be likely to worsen the reservoir-induced seismicity and geological instability. Large reservoirs can cause seismic events as they fill and as the pressure on local burdens increases. The TGDP's reservoir is an exception to the general rule in that large reservoirs have the potential to induce earthquakes. Reservoir-induced seismicity was predicted for the Three Gorges region which was previously seismically active and there has in fact been an increase in reported seismic activity following construction of the project and the filling of the dam reservoir. Official statements minimise the significance of this, saying that "no unusual phenomena which could disrupt the stability of TGDP have occurred" (People's Daily Online, 2007). This statement indicates that the

seismic activities did not cause any significant damages to individuals, homes, or businesses, but very little is known about what may happen in the future.

Thirdly, there is a series of relocations and resettlements. The TGDP has displaced and will continue to forcibly remove between 1.13 million and 1.2 million and the project will displace (and hopefully resettle) around 6 million people in the long term – given the scale of the project and the reservoir-induced seismicity, geological instability, and multiple displacements. More than 100 towns are ultimately to be or already are submerged, including the major population centres of Fuling and Wanxian which have cultural histories dating back more than 1 000 years, and parts of Chongqing. The latter city is the central municipality in the Three Gorges reservoir area and it has recently received approval to become a centrally administered municipality; only the fourth in the country after Beijing, Shanghai, and Tianjin. The Three Gorges reservoir will also submerge fourteen thousand hectares of agricultural land, and more than 100 archaeological sites some of which date back over 12 000 years (Gleick, 2008: 145). There is no guarantee that future re-settlements will be successful because the previous ones were characterised by a lack of consultation with and compensation to the dam-affected communities. There was also poor planning for resettlement making those resettled poorer than they were before (Gleick, 2008: 145).

Lastly, the TGDP has unpredicted consequences which may undermine financial sustainability of the project in addition to projected socio-environmental impacts on the affected communities. The magnitude of the project is so big that it may present economic and military risks in a region already dominated by fear and competition around military capabilities and conflicts between countries such as Taiwan, Hong Kong, and Tibetan rebellion attempts. The TGDP may become a target for terrorists and foreign armies. Allin (2004: 3-4, 18, 28, 38) shares the view that although the project has brought considerable economic benefits such as reducing floods and increasing trade, the project will produce energy at a very high cost to local communities because it was planned as top-down and non-participatory, and motivated by politics rather than socio-economic considerations. The project also violated the seven strategic priorities and five key decision points of the WCD. As a result the costs of the project are borne by the poorest and most marginalised communities.

3.4.5 The Narmada Dam Projects of India

The Narmada Development Projects (NDP), also called the Narmada Valley Projects, was planned as far back as 1946. They represent a large development scheme which, once completed, will irrigate 1.8 million hectares (Mazumdar, Sarkar, and Sathe: 2000) or 2 million hectares of land (Hemandri *et al.*, 2000: 26), provide drinking water to 8 000 villages, and produce 145 MW of electricity (Hemandri *et al.*, 1999: 26). It will consist of 2 megadams, 30 large dams, 135 medium dams, and 3 000 small reservoirs and will displace 4 million people from 245 villages (Mazumdar, Sarkar, and Sathe: 2000). From its inception, the NDP paradoxically led to the formation of two diametrically opposed groups with diverging interpretations of, and expectations, from the scheme. These are expressed where political opportunities create space to mobilise civil society. The groups voice their concerns through social movements as “a sustained challenge to power-holders in the name of a population living under the jurisdiction of those power-holders by means of public displays of that population’s worthiness, unity, numbers and commitment” (Boix and Stokes, 2007: 2-27).

The first group supports the NDP. Pro-dam supporters in India include political and economic elites and some traditional and religious leaders, intellectuals, and controllers of the media who shape such development projects, set standards, provide ideological arguments, and propose technical solutions to social and psychological needs. The pro-dam group largely benefited from the large dam projects at the expense of the poor and destitute in both rural and urban areas (Mehta, 2008: 2-17). The dam industry was part of this group; its members were involved and have vested interests either in the design, construction, or commercialisation of water and electricity. They believed that the NDP “held out hope for posterity and lasting drought relief” (Mehta, 2008: 2).

The second group consisted of anti-dam protestors. Their activities occurred locally and internationally at two stages. After unsuccessful opposition to various components of the NDP in the late 1970s and early 1980s due to authoritarianism, the federal government of India introduced democracy which allowed local activists to express their views and to build transnational alliances. The first transnational advocacy network (TAN) campaigns focused on the human rights of people who could be negatively affected by the Sardar Sarovar Dam. These campaigns led the WB and the Indian government to reform social and resettlement

policies (Mehta, 2008: 17; Khagram, 2004: 65). The second series of TAN campaigns focused on environmental issues (Khagram, 2004: 69-71). The opponents of large dam projects argue that river damming and the subsequent provision of water negatively affect farmers who are forced to change cropping patterns for water-intensive crops like sugar. In addition, the construction of dams increases water shortages for irrigation which these facilities use initially intended to address. In the agricultural sector, the loss of forest land due to dam reservoirs has negative impacts on rainfall and ground water, particularly in Mediterranean and semi-arid climates, while in humid climates the influence is negligible, as large reservoirs contribute more moisture than the surroundings covered by vegetation, which generate clear spatial ascents of water vapour (Avisar and Liu, 1996).

Lastly, there is an unequal share of water between people living upstream of the dams who may have access to water for irrigation and people downstream of the dams who are deprived of the same resource. There is also unequal sharing of the costs and benefits of the NDP between people in the vicinity of the dams who were dispossessed of their land and water, forced to move out of their ancestral land, and subjected to a wide range of diseases, and people who live in the cities and have access to water and electricity. River damming for hydropower and irrigation also gives a disproportionate advantage to urban industries and consumers (Duflo and Pande, 2005: 3). In fact river damming for irrigation provides, everything else remaining the same, easy access to water, and fishery to people who live upstream of the dams. Those who live downstream are deprived of these resources; both groups are equally affected by the dispossession of land and forest products.

This review of selected dams revealed the challenges and opportunities that mega-dams built for electricity generation or irrigation present to the environments, the affected communities and aid recipient countries at large. These plants are different and have dissimilar stories to tell. They were built in different times and spaces. Yet, they all share their negative impacts such as dispossession of natural resources with little or no consultation with the communities, inadequate or no compensation; forced removal and resettlement; destruction of social capital and a sense of belonging, increase of waterborn diseases and unfulfilled promises of development and unequal share of the costs and benefits of these projects. Mega-dams have lot of opportunities including these infrastructures which support the projects and economic growth. It is therefore difficult to recommend any of them as a model for different phases of

Grand Inga. Rather each new hydropower dam will require the involvement of civil society organisations and their transnational advocacy networks to advocate for:

- i) transparency;
- ii) professionalism in the schemes;
- iii) accountability to both the citizens and shareholders, and
- iv) community ownership of development initiatives.

3.5 CONCLUSION

This chapter investigated the roles of development aid on recipient countries through its outcomes from mega development dams in selected countries with the intention of identifying good plants that could be used as models for the further development of hydropower dams.

The findings reveal that the debates on aid started with the 1944 Bretton Woods meeting representing diverging interests between the USA and the UK, and subsequent strategies to achieve these interests. Aid has played different and sometimes conflicting roles across three main phases of capitalist development: in the 1950s-1970s development was conceived as “a do-as-we-did-process”, in the 1970s-1980s aid was correlated to SAP and the imposition of conditionalities, and in the 1990s-present there has been a shift in donor rhetoric from “make-them-like-we-did” to inspired modernisation; a “do-as-we-say” approach.

The debates on aid and development point to three schools of thought: individuals who support aid because it has the potential for economic growth and is critically important to the health sector, those who oppose it due to harmful impacts on the receiving countries, and those who see aid as neutral because the outcomes of aid depend on local actors’ willingness and capacity to direct aid to economically justified projects. The last school argues that the benefits of aid depend on existing aid and development policies in aid receiving countries. This research endorses the third school of thought.

Aid invested in hydropower projects has produced numerous positive results. However, these advantages are generally accompanied by unequal shares of costs and benefits between cities and rural areas, rich and poor. Aid is also associated with the impoverishment of local communities through dispossession of their natural and manmade resources, corruption, cost overruns, lack of access to the outcomes of mega development projects, and the burden of

debt repayment which do not equally benefit different groupings in the aid-receiving countries. Mega-dam projects are also responsible for water-borne diseases.

Discussions around aid through mega hydropower projects have split stakeholders into two groups. First, there are pro-dam supporters. They include socio-economic and political elites, traditional leaders, intellectuals, and controllers of the media. These individuals and institutions gain from mega projects in different ways. The second group consists of anti-dam protestors. They contend that large dams forcefully displace local communities and destroy their livelihoods. Mega hydropower projects also have negative impacts on the ecosystem, biodiversity, GHG, and cause climate changes.

CHAPTER 4. INGA HYDROPOWER 1 AND INGA HYDROPOWER 2

4.1 INTRODUCTION

This chapter contextualises the roles of development aid discussed in the previous chapter by investigating contributions of aid to post-independence DRC with reference to Inga 1 and Inga 2. It draws attention to the contradictions between the interests of aid recipient countries including the DRC, and the interests of selected international financial institutions and development agencies involved in mega development projects. The chapter also exposes the conflict between the social contract that the DRC has with its citizens and the contract that the country has with the international community (international development agencies and international financial institutions), in its efforts to generate and sustain international credibility in a globalised economy. Mega development projects came with promises around the promotion of high living standards through the improvement of socio-economic conditions for the people of aid recipient countries such as the DRC. This research uses Inga 1 and Inga 2 as a vantage point to identify the roles of both internal and external agents in the day-to-challenges of the DRC regarding unequal shares in the outcomes of development initiatives between cities and rural areas, and between rich and poor people. This chapter investigates various claims articulated by the affected communities.

4.2 DEBATES ON INGA 1 AND INGA 2 AND LAWSUIT OUTCOMES

My fieldwork through the interviews, participant observations, and court case documents revealed that the project developers did not conduct proper consultations with the six clans of the affected communities which were later negatively affected by Inga 1 and Inga 2. The fieldwork also exposed the lack of compensation to these communities for the dispossession of natural resources (land, water, and forest resources) and the socio-economic, political, and psychological impacts caused by these projects. It also confirmed the claims of the affected communities and human rights activists that Inga 1 and Inga 2 were built without complying with any international regulations in terms of EIA or SIA during Mobutu's dictatorship.¹

¹ Interview 70, 26/03/2012, Village Lubwaku – Inga Zone; Interview 75, 04/04/2008, Village Kilenga – Inga Zone; Interview 86, 13/04/2008, Camp Kinshasa – Inga Zone; and Interview 71, 26/05/2012, Village Manzi – Inga Zone.

In addition, the first two phases of the IHPs have triggered several problems including but not limited to the following:

- i) Dispossession of natural resources without consultation or compensation;
- ii) Forced removal from home land and resettlement in other people's land;
- iii) Destruction of individuals' sense of belonging and social capital;
- iv) Perceived and real competition over scarce resources in the new locations;
- v) Impoverishment of the affected communities across generations;
- vi) Radical change in households' livelihood strategies (e.g. fishermen became farmers; some individuals who were farming were transformed into traders, other individuals were forced to learn craft, art work ... and
- vii) Increased occurrence of water-borne diseases, endemic unemployment, sustained lack of access to electricity and impoverishment².

Yet, as already mentioned, aid allocated to Inga 1 and Inga 2 was neither good nor bad per se. Its outcomes depended on how different governments of the DRC have managed development aid and the IHPs in particular. The outcomes of these mega hydropower dams on local communities which were forcibly removed from the Inga Zone in the name of development depend on the roles that civil society organisations played in these projects in terms of advocacy and lobbying for transparency, good governance, and fair distribution of benefits to communities, let alone the geopolitical interests of the donors, all need to be understood.

The Department of Energy and the projects have never been willing to openly discuss the impacts of the IHPs on local communities. These institutions also neglected the plights of the communities which are negatively affected by hosting the displaced communities. The two communities live together today with a lot friction and contestations over natural resources,

Camp Kinshasa is 8 Ha big. It was built in the Inga Zone close to Inga 1 and Inga 2 to host temporary workers from different companies involved in the first two phases of the IHPs. At the completion of the first two phases of the IHPs, the former temporary workers from these companies remained in the Camp Kinshasa with hope of getting jobs in Inga 3 and Inga 4. The projects were delayed and in the meantime, former temporary workers' families increased with children and grand-children. Today, it is estimated that 9 000 people live in overcrowded wooden houses with a single communal tap installed by politicians during the 2012 election campaigns and without sanitation. Residents of Camp Kinshasa are not allowed to bury the dead, build pit latrines, improve or extend their houses, or freely organise meetings in the Camp Kinshasa. SNEL has failed to successfully close Camp Kinshasa due to the residents' resistance and the residents have nowhere to go (Amisi, 2008; Interview 71, 26/05/2012, Camp Kinshasa – Inga Zone; IR, 2013: 5).

² Interview 70, 26/03/2012, Interview 75, 04/04/2008, Village Manzi – Inga Zone; Interview 86, 13/04/2008, Village Vunda Nkinseka – Inga Zone; Interview 71, 26/05/2012, Camp Kinshasa – Inga Zone.

man-made resources, and socio-economic and political resources. The host communities argue that their guests are putting too much pressure on the land because they reproduce quickly with the objective to outnumber the indigenous communities and take over their areas, as a participant below explains:

I was not born as yet when these communities arrived in our area. I was told by my grand-father that it was a disaster... We have two burning issues at the moment. These communities [guests] do not recognise our leaders since they arrived here. They are current fighting to have their own villages in these regions with traditional and religious leaders. In addition, the number increased so quickly that they now competing with our people over space for construction of houses, land for agriculture, and forest resources for the day-to-day activities which are necessary to keep them and us alive. Land does not multiply. Even Jesus he did not succeed that [to increase the available land]. He multiplied fish and bread but land The worst part of their presence here is that they are becoming difficult to distinguish from our people in some villages. They are marrying our daughters and sisters; and they are doing the same. They are moving all the time! (Interview 84, 05/04/2012, Village Boa, outside Inga-Zone).

This lack of open dialogue has pushed the six clans and other communities affected by the IHPs to launch a court case against SNEL and the government of the DRC for socio-economic and environmental damage and losses incurred due the IHPs (Appendix A.5). This, however, has not brought about expected results because the judiciary is not independent; there is political interference in the system.

4.3 EXISTING ALLIANCES DURING CONSTRUCTION OF INGA 1 AND INGA 2

Inga 1 and Inga 2 were established at the height of the Cold War shortly after the independence of the DRC. At the time there were no organised and focused grassroots movements or transnational advocacy groups. As a result, the only alliances which existed were between the IFIs, the development agencies, private financial institutions, the government of the DRC, and the architects of the Cold War – each one trying to get his share of the newly independent DRC. The allegation that Emery Patrice Lumumba had strong political ties with Moscow coupled with his fierce anti-colonialism sentiments, unnerved

Brussels and several other industrialised countries which agreed, despite their differences and sometimes conflicting approaches, to re-colonise or at least appoint their own agents in the government of the DRC. They all agreed that Lumumba was not the right candidate for the job and replaced him with Joseph Mobutu. This alliance neglected the recommendations of a pre-feasibility study which advised the government to prioritise domestic consumption of the electricity generated by Inga 1 and Inga 2 in order to industrialise the country. Export could only happen once the local market's demands were met (SICAI, 1964: ix, 374-410).

The rise of Mobutu to power was incidentally characterised by an increase in development aid from western countries to the DRC for politically motivated projects such as Inga 1 and Inga 2 and several others including but not limited to the Maluku Steel Mill which was built far from iron ore without roads or railway lines to supply the mill; the Presidential Farming Project of Nsele (*le Domaine Agricole Presidential de la Nsele*) which was built on soil unsuitable for agricultural activities; and the Radio Tower Project which was built without air conditioning or windows for ventilation, even though these projects increased the value of local currency to unexpected levels. The projects were used as conduits for revenues that Mobutu could use for political patronage, as a means to strengthen his dictatorship, and as a resource for his multiple tasks as an agent of imperialism in Africa. Aid had a positive impact on the Zaire, the local currency which replaced the Congolese franc in 1967. It was priced at 1.00 Zaire to 2.00 US dollars from 1967 to 1971 (Willame, 1986: 7; Emizet, 1997: 9) without sustaining improved standards of life of Congolese.

Hanlon (2002: 40) claims that for the same political reasons, Mobutu continued to receive foreign aid for the following 15 years despite Irwin Blumenthal's report against additional loans and his subsequent resignation as representative of the IMF in the Zaire in 1978. He stated that "the corruptive system in Zaire, with all its wicked manifestations, is so serious that there is no prospect for Zaire's creditors to get their money back" (Moyo, 2010: 53). Yet, shortly after the resignation of Irwin Blumenthal, "the IMF gave Zaire the largest loan it had ever given to an African country and over the next ten years, President Mobutu's kleptocracy received additional 700 million US dollars from the Fund" (Moyo, 2010: 53). In the 1960s and 1970s and ironically still today, aid in the DRC goes hand in hand with dictatorship and massive human rights violations in efforts to prevent or at best reduce political mobilisation around contentious mega development projects and IHPs in particular.

4.4 SIGNIFICANCE OF INGA 1 AND INGA 2 TO INDIVIDUALS, CIVIL SOCIETY AND TRANSNATIONAL ADVOCACY NETWORKS

4.4.1 Inga 1 and Inga 2 are bad for the Democratic Republic of Congo

In general, the Congolese believe that the IHPs do not contribute to development as promised and thus expected. The IHPs generate hydroelectricity for export to several neighbouring countries rather than supplying this resource to domestic consumers, industry, and rural consumers, even though the last two sectors have the potential to create employment and in doing so improve the living standards of ordinary people. The IHPs are also bad for socio-economic and political stability in the DRC since there is no transparency on the revenues that they produce, and this does not appear in the annual budgets of the DRC. This in turn remains a breeding ground for socio-political instability and secession attempts. Furthermore, the IHPs are subject to corruption. There is a lack of sound financial management which undermines revenue collection and fundraising for repairs, improving the distribution networks, and replacing electricity meters and transformers. Also, there is a shortage and lack of technical expertise to undertake repairs and maintenance which could increase electricity generation from the two plants. Lastly, the repayments of the loans incurred for the construction of Inga 1 and Inga 2 negatively affect the socio-economic and political elites as well as ordinary people who do not get much from the projects (Interview 9, 25/02/2012, Kinshasa; Interview 3, 14/03/2012, Kinshasa; Interview 27, 17/03/2007, Interview 23, 30/03/2012, Kinshasa). A consumer from Kinshasa shares this view with previous participants. She states:

SNEL has serious problems of corrupt practices and a lack of new equipment. They take different forms at different levels of management of SNEL. For example, we can bribe SNEL agents with US\$5 to modify our consumption and so to pay less. If we increase the bribe from US\$5 to US\$20, a SNEL agent can open the meter box and reverses the wires and thus the meter reading for the next three months. This operation can help us to save money which could be spent for the duration of the operation. Corruption also takes form of a lack of transparency around the revenues generated by the IHPs. Nobody knows how much revenue the IHPs have generated since their inception. The lack of capacity to repair or generate money for repairs leads to a lots

of load shedding which destroys our appliances without compensation. We therefore pushed to “buy load shedding”³... (Interview 2, 24/02/2012, Kinshasa).

Another consumer discussing the same issue has a slightly different view of the IHPs. He cautiously praises Mobutu’s vision and creativity for the first two phases of the IHPs to benefit Congolese citizens through access to abundant and cheap energy, industrialisation of the DRC, and provision of employment. However, he is worried about the lack of political will and professionalism among officials to translate Mobutu’s vision into a reality that Congolese citizens could enjoy across generations. His concerns support the view of the previous respondent:

The Inga Dams and SNEL are excellent initiatives. They were created by what we called at the time “Mobutu’s madness”. Some people continue to believe until now that it was a bad idea to engage so much funding on Inga Falls Site to produce electricity. I wonder where we could be today if the Inga Dams did not exist. I am, however concerned, with political manipulation/ interference around the appointments of top officials and financial management of the officials at both SNEL and the Inga Dams. I am also concerned about the shortage of skills at the plants and SNEL offices which result in poor revenue collection rates, parallel billing and inability of SNEL to know the number of consumers and accurately project for the future. People are recruited not based on their skills and technical capabilities but rather through political recommendations and interferences. As a result, good candidates lack the opportunities to contribute to these companies whereas the wrong people are getting employed where they should not (Interview 12b, 14/04/2008, Kinshasa).

There was no active citizenship during the construction and earlier days of Inga 1 and Inga 2 because social mobilising was in its infancy. But today despite life threats, kidnapping, and the killing of most militant activists, civil society organisations voice their concerns around socio-economic and environmental justice and the rights of communities affected by the IHPs. These CSOs and their TANs are labelled “anti-development” in DRC organisations due to the watchdog roles they play where different forms of abuse are practised. They remain

³ To buy load shedding refers to an illegal practice which common in Kinshasa and other major cities of the DRC. It consists of paying corrupt SNEL agents to reduce the duration of load shedding in a specific area at the expense of another area which was supposed to receive electricity.

watchful with regard to Inga 1 and Inga 2 and view further developments of the IHPs with skepticism. Another participant from a TAN based at the University of Kinshasa offers the same opinion - without his statement representing the position of the University of Kinshasa:

We [our organisation and its members] consider the IHPs to be white elephants. The investments allocated to the IHPs could be more efficiently used in other financially and economically justifiable projects for the socio-economical and human development of the DRC. In addition, the IHPs as a development project should therefore contribute to poverty eradication and not poverty creation and impoverishment of Congolese citizens through the repayment of loans which did not fairly benefit all Congolese, massive human rights violation and destruction of environments and social capital of the affected communities. The main challenges for these projects include a lack of good governance, transparency and public accountability in the revenues from natural resources. There is also a lack of synergy in different activities on the IHPs (Interview 51, 22/03/2012, University of Kinshasa – Kinshasa).

Several other participants contend that the IHPs represent a series of white elephant projects from which the return on investment at local and national levels does not match the investment and subsequent costs incurred. They would like the government DRC to address the legacy of the existing phases before moving to additional developments of the IHPs through to broader public participation of the affected communities, Congolese civil society and people at large, as well as transnational advocacy networks (Interview 58, 13/03/2012, Camp Kinshasa – Inga Zone; and Interview 64, 18/03/2012, Village Lubuaku – Inga Zone).

4.4.2 Agent for poverty production and corruption

Poverty has different meanings to diverse groups of people depending on the interests at stake and whether or not they are concerned with poverty as a research topic or are actually poor people themselves living in poverty. Each meaning is associated with a specific cause. In the context of the Congolese IHPs, poverty is mainly the result of a lack of political will to develop the country and a lack of determination of the population to demand accountability and fair redistribution of resources from the governments. The delayed industrial development and lack of maintenance in Inga 1 and Inga 2 is caused by the twin challenges of

lack of political will and technical expertise. Poverty can also be explained and understood through structural theories and expansions of the conditions – including impoverishment through unemployment, dispossession of natural resources, and lack of education for the children of the communities affected by the IHPs – under which poor communities live.

The individualistic theory of poverty which blames the poor for their condition because they are not working hard enough (Bradshaw, 2006: 5-16) may not have any persuasive response to the survival of the majority of people in a fragile state (AfDB and OECD, 2007: 29) like the DRC, or to the upward mobility of selected individuals who break the cycle of poverty and vulnerability with little or no financial assets. These individuals moved from informal economies which supported 80% of economic activity in the DRC in 2009 (AfDB, 2009: 16) to the mainstream economy which caters for a minority. Structural theories (Bradshaw, 2006: 16) best explain poverty in the DRC because, according to Zongola-Ntalaja (1986: 1-18), the crisis of the country is mainly the product of internal conditions in which external factors play a secondary role.

Aid allocated to Inga 1 and Inga 2 then and in its current form is harmful to local communities because they are dispossessed of natural resources with little or no compensation; in direct opposition to the prescriptions of numerous IFIs and development agency guidelines. This research, however, endorses and continues to support people who argue aid is neither good nor bad *per se* as discussed in Chapter 3 (Nzongola-Ntalaja, 1986: 4-10; Leslie, 1986: 247; Harford and Klein, 2005: 1). For example, when Mobutu received aid of billions of dollars from industrialised countries (Scherer, 2010: 22) he had the option of investing aid in socio-economic development of the DRC or stealing it with his associates for individual gain. He chose the second option with negative consequences for the Congolese. In support of this line of thought, a participant argues that the legacy of these loans is so huge that the repayments are competing with investments in socio-economic infrastructures such as schools, hospitals, and roads. It is then important that additional developments in the IHPs should occur with public participation to prevent a repeat of Inga 1 and Inga 2 and other white elephant projects (Interview 38, 03/04/2012, University of Kinshasa – Kinshasa).

4.4.3 Inga 1 and Inga 2 induced conflicts over natural resources and divisions within and between the affected communities

Experiences from around the world show that a river has different and sometimes conflicting meanings to various groups of people “who live within, and are dependent upon, river basins within late-industrializing countries, in which the majority of dams will be built” (Scudder, 2006: 18). The conflicts which emerged over scarce resources during the forced removals and resettlement of the affected communities remain prevalent today according to the five categories of dam-affected communities defined by Scudder’s assessment (2006: 18-20) of mega-dams around the world:

- i) individuals who must be forcibly removed for future dam reservoirs;
- ii) host communities which will be forced to receive the first group;
- iii) people whose lifestyles will be negatively and sometimes irreversibly affected by the dams through irregular or insufficient flows of rivers and recharged aquifers;
- iv) immigrants who tend to be better skilled in a wide range of fields, and
- v) communities living in catchments upstream of the dams.

There are also conflicts along ethnic lines around the IHPs. As a result, even though the lines become blurred over time because of intermarriages and a sense of belonging to the same broader community, conflicts persist in initial host communities over leadership and political legitimacy of the affected communities on the one hand, and the host and guest communities over livelihoods and new class formations, on the other. These class formations and subsequent conflicts remain the Achilles’ heel of these communities in their search for socio-economic and political justice.

Conflicts also exist over political and religious power between descendants of the host and guest community leaders. The conflicts take the form of contestation over, and rejection of, common agendas and personal interests. Consequently, the vision and common objectives that the six clans initially had in their struggle for justice around the IHPs has begun to crack. The divide-and-rule strategies of the pre- and post-independence governments have weakened the abilities of these communities to efficiently express their concerns both locally and internationally, or to force SNEL and the government to meet their demands. This research reveals that the Clans of *Ayant Droits Fonciers* of the Inga Zone consist of two affected communities. The first group includes the communities which have been displaced from the

Inga Falls Site and is, in turn, divided into two sub-groups located on both sides of the IHPs, i.e. the northern side and southern sides.

The first sub-group consists of four clans – Makunku Futila, Benza, Numbu, and Ngimbi – and which are located in the northern section of Inga 1 and Inga 2. This group claims to have lost all the land, water, and forest resources currently included in the Inga Zone to the second sub-group which lost less and has successfully secured a good deal in terms of exposure, interactions with, and job opportunities from the government through the first director of SNEL (Interview 82, 01/04/2012, Village Nkuza Malanda – Inga Zone). A participant from the group states:

At his retirement, Sona, the former accountant of Bata (a multinational shoe company which branches around the world), brought his brother Kupenda Paka from the village to take over in 1972. And because of the politics of the time, which could not allow him to appoint or bring another person of his clan, both Sona and Kupenda Paka have stolen the most important documents related to the Inga Dams and handed them to Simon Malanda who keeps them as private property... The involvement of Sona in the “negotiation” and his employment at the company which became SNEL in 1970 and his appointment as its 1st Director (1970-1972) used divide and rule tactics entertained by the Belgian Administration. In addition, Sona was instructed to protect the interests of SNEL and Inga Dams at the expense of the dam-affected communities. What is more, in the best case scenario Sona was willing to advocate for and protect the interests of the dam-affected communities. He did this with a particular focus on the two clans, Mankunku Manzi and Mankunku Vunda. These clans were much closer to him, to the detriment of the other four which represent the majority of the clans, given their sizes and the percentage of the population they represent... (Interview 64, 18/03/2012, Village Lubuaku – Inga Zone).

The statements from two participants in the first group (Interview 58, 13/03/2012, Camp Kinshasa – Inga Zone; and Interview 64, 18/03/2012, Village Lubuaku – Inga Zone) reveal to a three-fold conflict, namely:

- i) within the communities affected by the IHPs around the perceptions that some clans gained more than others;

- ii) between the host and guest communities within the communities affected by the IHPs, and
- iii) between the NGOs which support the struggles of the clans and clan chiefs.

These conflicts represent a weakness in the clans' efforts to obtain inclusive benefits. They undermine the contributions of transnational advocacy networks in the struggles for socio-economic and environmental justice around Inga 1 and Inga 2, as well as compliance of the DRC government with international standards in further developments of the IHPs in mega development projects.

The second sub-group comprises two clans in one – the Mankunku Manzi Clan – which had one of its members (Ferdinand Sona) appointed by the DRC government as a mediator between them and the six clans - without the consent of the other clans. He then appointed himself as a representative of the six clans and became the first Congolese director of the Inga development scheme as well as a director at SNEL. He used his level of education and the documents containing the demands of the affected communities, which he received from his uncle, to impose himself on the clans as their representative. His nephew followed the same route. The second group is located in the southern part of the Inga Zone which incidentally is crossed by the Inga Kinshasa Power Highway that supplies electricity to Boma, Matadi, and Kinshasa. This unintentional planning and realisation of the power line is used by the first group as proof of unequal distribution of benefits from the IHPs. Rural electrification would in fact be easier in this section of the Inga Zone than in the other section which does not have a single line.

One of the respondents from the second sub-group questions the real motives of the Mankunku Futila clan chief in the struggles of the affected communities since the latter works for the DRC government. He is the city manager of Camp Kinshasa and his impartiality may be difficult to maintain. It is feared that the interests of this particular clan chief in city management may undermine the efforts of all the affected individuals and clan chiefs since he may be tempted to protect his job and current salary at the expense of the affected communities. He may also become a spy for the government and so discourage other clans' representatives to continue with their struggles for justice. Regarding the impacts of the IHPs on the affected clans, the suspected clan chief and city manager argues:

The Inga Dams, regardless of its controversies, have brought some socio-economic benefits to us [the dam-affected communities]. We have a school and a clinic in the area. These infrastructures were built for SNEL personnel but everyone is welcome as long as people can afford... However, we better have expensive infrastructures that we may not have access to, rather than not having any infrastructures at all. These infrastructures could not exist in the area in the absence of the Inga Dams... My clan refuses to move out of the Camp Kinshasa for the following reasons. We are tired of continuously staying on the move across generations and epochs. The move continues to break our community bonds and sense of belonging to place and community that we are busy reconstructing and sustaining for present and future generations. In addition, we are accustomed to high standard services provided by SNEL infrastructures... It could be very difficult for the members of my clan to adjust and living in another location and far from SNEL infrastructures. Furthermore, we work hard to create a peaceful space and live in harmony with all social and political structures and groupings at the Inga site, and so preparing a good atmosphere and environment for the next generations of the affected communities. We send our children to the school built by SNEL; and when we are sick, we sell our goats and chickens to pay for the clinic. These services will not be accessible outside the Inga site. My clan and I will stay if given a choice to do so ... All we need is a “Contrat d’Emphyteose” or “Convention Collective” which will explain the responsibilities of the two parties and the TOR which enforces these responsibilities (Interview 58, 13/03/2012, Camp Kinshasa – Inga Zone).

This position runs contrary to the demands of the six clans for socio-economic infrastructures including but not limited to a modern city, roads, free hospitals, and schools, and a Contract of Emphyteusis which is defined in Roman Law as “a contract whereby a landowner leases a tract of land to another, the *emphyteuta*, in perpetuity or for a long time, in return for a very low rent” (Rome, 2008: 1-3). This statement highlights the tensions and conflicting interests that different stakeholders have in the IHPs.

These interests and the expectation of the IHPs lead to diverging strategies on how to achieve immediate and long-term objectives. In addition, interviewee 58 may confuse the unintended consequences of mega development projects with socio-economic infrastructures that these

projects and with actual promises and programmes to improve the living standards of the communities affected by the IHPs. Indeed, the Inga-Kinshasa Power Highway which crosses the southern section of the Inga Zone, and the road built to carry heavy machinery for the IHPs were not planned to develop the area. And they do not. The Immigration Office and the presence of police stations in the Inga Zone in the DRC have nothing to do with the development of rural areas in the DRC. Their main objectives are the extension of government bureaucracies and control over rural areas.

My field work demonstrates that the second group will be adversely affected by further development of the IHPs which will totally flood the Bundi Valley and beyond. This will in turn force communities to move for a second or third time since the 1960s thereby breaking new ties and losing social capital reconstructed after the first move. The first group is far from endorsing further developments of the IHPs beyond Inga 1 and Inga 2 (Interview 83, 27/03/2012, Village Kulu III – Inga Zone) despite the relative advantages they have received since the inception of the IHPs.

4.4.4 SNEL and IHPs do not provide jobs to affected community members

The hydropower sector is a highly skilled industry which is usually established in rural areas. It requires skills which are in most cases absent in the villages. As a result, even though SNEL may be willing to employ the members of affected communities, most of them lack the skills to qualify for jobs unless the compensation packages also include skills development. Hydroelectricity is often too expensive for ordinary people. As a result, the CADs have neither jobs to support their families nor hydroelectricity for domestic consumption to improve their living standards. Participants in one of the focus groups (Focus Group Discussion 65, 18/03/2012, Inga Dams turn off, Road Kinshasa – Moanda, Inga Zone and surrounding villages) made the following comments:

Participant No. 1: Retired male nurse – Inga Zone and surrounding villages

... I am very concerned with our living conditions in the camp and villages located in the Inga Zone. We are not allowed to build normal house in this area. The SNEL personnel want us to remain in these cabins without drinking water or sanitation. The problem with these cabins is that the SNEL officials did not consider the size of the

family. The cabins were built on one size fit all principle for both single and married people. SNEL did not, and still has not brought development as promised. There is no school or clinic for the affected communities

Participant No. 2: Housewife and mother of 12 – Inga Zone and surrounding villages

The Inga Dam is bad for my father-in-law. It was also bad for my mother-in-law who passed away few years ago of malaria because we [the family] could not afford to pay her medical bills from a private clinic. Inga has been and continues to be bad for me too. Look I spend hours just to fetch water for this family of twenty people because we do not have water in our village. I also spend a lot of time to look for firewood for cooking for this big family. And you, men need food, a lot of food. Otherwise, I am in trouble ... I was planning to buy a stove but we do not have electricity generated next to us. We do not have road⁴ either. We use small paths to Camp Kinshasa for shopping or to sell our produces. Inga Dam creates more problems in our village than solutions that I was expecting to get when I got married and left my parents I cannot turn the clock back, it is too late. I must stay here with my husband, children, and in-laws.

Participant No. 3: Male fisherman – Inga Zone and surrounding villages

... I came here [in the Inga Zone] to study. I came from one of the villages of Matamba. After my primary school, I got a job in the Inga Dam Project. I worked for SIEMENS from 1979 to 1982. I see myself as a person who is negatively affected by the Inga Dams because when Inga 1 and Inga 2 were completed, I could not go elsewhere due to my wish and expectations to work in Inga 3 and Inga 4. Unfortunately, the project did not continue with other two phases. I waited for so long that I was forced to change the profession. Now I am a fisherman. We need a modern a city with all necessary social and economic infrastructures. To be specific, we need a city with schools, hospitals, drinking, proper sanitation and so forth.

⁴ The roads that the communities affected by the IHPs refer to in this research are secondary roads which could link villages that these communities were promised by SNEL and the IHPs as one of components of compensation for the losses of their material resources (land, water, forest, houses ...) and non-material resources (political authority, social capital, a sense of belonging ...) during and after the construction of the dams. These roads should also link different villages to the main Kinshasa – Moanda road.

Participant No. 4: Unemployed engineer in electronics – Inga Zone and surrounding villages

I am a descendant of an ex-employee of SNEL. I graduated as electronic engineer since 1988 from ISTA/ Kinshasa. Since then, I never got any opportunity of getting any job at the Inga Dams even though I grew up here in the hand of SNEL. It hired and continues to recruit technicians and manual labour outside the area. The local people are neglected. With equal qualification, the local communities are not given equal opportunities for employment. Without any job, I cannot support my family and myself outside this camp which does not have water or sanitation. The Inga Projects claim on radio and TV that they provide jobs to 1500 people but in practice, only 20 people have been employed by the project. I therefore forced to stay next to Camp Kinshasa. We need a city for the reasons mentioned above, we absolutely need a modern city.

4.4.5 Inga 1 and Inga 2 do not cater for the needs of the affected communities and clan members

It is expected that each generation of the communities affected by the IHPs will be poorer than the generation before as the following participant confirms:

We had in the past [in the 1970s and 1980s] a few people who worked for different companies which had contracts for different components of the dams. These people were not employed because they belong to the affected communities. They were employed like any other individuals who came to the Inga Site to look for jobs. They worked as security guards, gardeners, drivers and other lower and unskilled jobs. These people are all unemployed without social security because they were temporary workers ... What is worse is that our demands of having priority for job opportunities and employment has fallen into deaf ears. We made a request to SNEL to recruit 2 people per *Clan des Aryans Droits Fonciers du Site d'Inga* and particularly from my clan of 150 people in which very few people may qualify for jobs and employment remain unsuccessful. Unemployment has driven away the younger generations from the clans in search for better economic opportunities in different cities of the province and other provinces of the DRC. This in turn is destroying our communities which

will disappear in a near future and with them dissipate our cultures. Demands for compensation of losses these communities suffer in the name of development will also not count in the future (Interview 61, 02/04/2012, Camp Kinshasa – Inga Zone).

Although unemployment in rural areas is not unique to the DRC and the Inga Zone in particular, the dispossession of land, forest resources, and water might prohibit older generations from sending their children to school in preparation for qualified and sustainable employment either as entrepreneurs or wage employees. As a result, the Inga Zone is mainly occupied by older generations and some young people who migrate from other rural areas to this area which has fewer socio-economic infrastructures such as schools and clinics built and run by religious organisations; and the Kinshasa-Moanda road built by the state prior to the construction of the IHPs. One of the consequences of the migration from remonte areas from to the Inga Zone to Camp Kinshasa and surrounding villages in search for scarce socio-economic opportunities is the absence of dynamic individuals in the migration sending areas to lead their struggles for socio-economic and environmental justice. As their parents are getting older or dying, there would be fewer people to continue to the struggles for reparations for losses and damages caused by the previous phases of the IHPs. Social capital and traditional values begin to disappear in these communities as the older generations are dying.

These challenges lead to various forms of conflicts and the need for balkanisation of the DRC. An official from a CSO (Interview 29, 09/03/2012, Matadi) states that his interactions with many Congolese from the Bas Congo Province revealed the need for the secession from the DRC and subsequent total autonomy from Kinshasa as an answer to unequal share of revenues from the IHPs and unequal distribution of costs and benefits from these projects. This position was echoed in other fieldwork interviews:

... if you look around, would you imagine that Joseph Kasa-Vubu, the first president of the DRC was born here? Would believe you believe that this province hosts the potential for the biggest hydropower in the world if I have to believe different people who visit this city and their claims around Inga Falls Site? Would you think that Boma where we stand now is at few kilometres from the Inga Falls Site but we are not connected to the power grip from Inga but the same electricity goes to Kinshasa and different other countries around the DRC? I do not need to know your answers to

these questions. I just wanted to highlight the urgent need for total autonomy or better independence of the Bas Congo province from Kinshasa to run its affairs efficiently and prioritise the needs of Ba Kongo people and by extension the DRC first; and thereafter to look after the outside this country to include Northern part of Angola and Zambia, and western section of Congo Brazzaville. We want to secede from the DRC to proclaim our own country with our government. It is a matter of days because we are waiting for our Moses after the disappointing results of Simon Kimbangu killed by Belgian army and BDK [Bundu dia Kongo] whose members were massacred by Kabila's mercenaries (Interview 30, 01/03/2012, Boma).

Another participant from the same province who works and lives in Kinshasa states:

Some individuals, among the communities affected by the Inga and others, from our province [Bas Congo] demand the Emphytheosis Contract in order to reap the benefits of Inga Dams and get reparation. I disagree with them because this contract would still keep us closer to Kinshasa. What we really need is a total independence from the DRC to reinforce our cultures and protect the interests of our people. I am working hard to mobilise people and get support for our cause from here [Kinshasa] and outside the country, I mean all supports including military to liberate our people from Kinshasa and its partners from Europe and America. Otherwise, there would be no future for both current and future generations from this province; one day Kinshasa would send people to take over our land and water as they did in Inga and elsewhere ... (Interview 37, 14/03/2012, Kinshasa).

The question then is whether or not secession will redress the existing socio-economic inequalities and fairly redistribute wealth to different groups of Congolese, or whether wealth will continue to accumulate in the hands of socio-political and economic elites as it did in both the pre- and post-independent DRC. If inequalities persist, they will remain the breeding ground for political revolutions and counter-revolutions. For example, the failure of the Kwilu Rebellion of 1963-1964, far from the Lower Congo region, was inspired by similar challenges that prevail in around the IHPs in the post-independence DRC and which have the potential to re-enforce secessionist agendas of the movements such as the BDK (Covington, 2008: 314). The Kwilu Rebellion emerged as a result of:

- i) its inability to bring about a new order to address the weaknesses of the old order;

- ii) disputes among leaders which resulted in a lack of trust between groups;
- iii) inability of the leaders to bring together ethnic conflict and class struggles, and
- iv) a gap between promises to be brought by the acquisition of international sovereignty/ independence and their fulfilment in the day-to-day challenges of the majority of the poor (Welch, 1975a: 117, 120-123).

4.4.6 Access to electricity and other resources denied to the poor in rural areas and the cities

The *Société Nationale d'Electricité* (SNEL) and the IHPs have not yet contributed to the industrialisation of the DRC and rural economic development as was initially promised by socio-political and economic elites during the election campaigns and other public meetings because these projects were not designed to do so. Promises were made even though the elites are aware that the IHPs were designed to prioritise export since their inception, despite the recommendations of the pre-feasibility study. A respondent had the same feeling and argues that the SNEL and IHPs also purposively neglected rural electrification which could have been used as an incentive for job creation and the improvement of living standards in the rural areas (Interview 19, 16/04/2008, Kinshasa).

Similarly, another respondent (Interview 1, 24/04/2008, Kinshasa) argues that “It is assumed by those in control in the DRC [government officials and other socio-economic elites] that rural electricity is economically unsustainable because local consumers cannot afford its cost”. The chairperson of the clan chiefs, who turned businessman in the hospitality industry, complained about the lack of access to electricity in his village and in his business even though he is willing and can afford to pay for this critical resource:

... what you see here [next to your room where you spent night in and out] is a Bed and Breakfast (B&B) facility in making. I am working hard to complete it before I die because, you know, I do not have much time to live anymore. Very soon, I will join our ancestors in the other world and continue the discussion around the 6 clans of the affected communities. I just hope that when you will come back, you will find me alive and that this business will be fully operational. There is no B&B in Manzi Village or Inga. The nearest B&Bs are in Matadi and Seke Banza at more than 50 Km toward Kinshasa and Boma respectively. SNEL

and IHPs denied me access to sand from the Congo River within the property of my ancestors. I must therefore buy sand far from here. This means high transport costs. I was also denied a connection to the electricity grid even though I am willing to pay, I am a representative of clans' representatives that have been and continue to be affected by the IHPs, and the power lines pass across my village. This is what makes us angry and ready to embark in action to make our demands heard (Interview 63, 19/04/2008, Village Manzi – Inga Zone).

The residents from Boma, Matadi, and Kinshasa share the same view. They are willing to pay for electricity but SNEL and the IHPs do not provide enough on a regular basis. The government of this country prioritises export, the mining sector, and other MNCs with hydroelectricity at the expense of ordinary Congolese (Interview 7, 25/02/2012, Kinshasa; Interview 8, 25/02/2012, Kinshasa; Interview 12b, 14/04/2008, Kinshasa). Experiences in other countries are no different as discussed in the Chapter 3. However, research findings in Zimbabwe on rural electrification indicate that rural electrification has proven to be economically viable when associated with SMMEs (Mapako and Prasad, 2007: 1-6).

4.4.7 No socio-economic infrastructures; inter-generational transmission poverty and impoverishment; socio-economic and political discontents

The contradictions between the promises of the IHPs and the reality on the ground remain a breeding ground for socio-economic and political discontent which may become a security risk in the long-run. In fact, since the 1960s, SNEL and the IHPs have not built any schools or clinics for the affected communities as promised. The latter have to send their children to paid schools either in the Inga Zone built for the children of SNEL personnel who attend for free, or to two other paid schools run by Roman Catholic priests and Protestant pastors. This comes with the risk of getting involved in accidents on the narrow and busy Matadi-Boma road which is a section of the notorious Kinshasa-Moanda road with many fatal accidents. As the schools are too expensive many parents keep their children at home where they become victims of teenage pregnancies, HIV/ AIDS, and drugs (Interview 63, 19/04/2008, Village Manzi – Inga). In separate interviews, two clan chiefs describe the same reality in terms of socio-economic infrastructures:

... We are very concerned with a lack of development in our villages. There is no road, school, clinic, electricity or running water in our villages. There is not any sign development brought by the projects here. Everything we need to buy is not here. We must walk 25 km to and from Camp Kinshasa to sell our agricultural produces and buy what we need. The absence of road is one of the main challenges in our villages (Interview 60, 27/03/2012, Village Lubuaku - Inga Zone).

A Benza clan chief echoes the same view and expands on it to include employment:

I am very concerned by the lack of access to job in a project which impoverished us and traps us in poverty without any opportunity to escape ... We presented officially our request to SNEL in terms of giving us priority over other candidates from outside the so called Inga Zone. We often update the lists of indigenous people from the area who would like to be employed by SNEL, but not a single one was given that opportunity. We saw workers coming from Boma, Matadi, Kinshasa and other provinces. And this is bad ... (Interview 80, 13/03/2012, Village Kulu III –Inga Zone).

The lack of infrastructures which could facilitate the movement of people and goods as well as trade, makes the lives of the affected communities very difficult. Access to basic necessities (soap, salt, sugar, and other items) from the markets far from the IHPs is a challenge. Climate change exacerbates the precarious living conditions since it does not allow community members to cultivate crops as they used to. This results in a lack of food variety and causes malnutrition. An inability to synchronise planting time with the rainy season, and harvest time with the dry season complicates food certainty (Interview 28, 31/03/2008, Village Ntulambaza – Inga Zone). In a female respondent from Mashelele Village states:

... we have already exchanged with you around our suffering due to a lack of socio-economic infrastructures. But these impacts are worsened by global warming and climate change which push away rainfall ... You have arrived at the peak of the harvest season for peanut, maize and beans. What do you see around? You see nothing because there was no rain for the last 4 months. The seeds were destroyed many times due to a lack of rain. This in turn means that food shortage is waiting for us in the bridging season – the period between this harvest and the

next one - without any coping strategy. The entire province is affected. So there is nobody to go to for assistance (Interview 54, 37/03/2012, Village Mapulu – Inga Zone).

The affected communities face multiple challenges. They have no access to jobs because they do not have the necessary skills to work on the IHP plants. They live far from Matadi and Boma, the nearest cities to the Inga Zone. A lack of tarred roads and means of transport is another problem. Residents, and female residents in particular, are forced to carry heavy loads on their backs. A female participant says:

Each problem that men mention affects women and girls many times more negatively than men and boys because we are at the bottom of everything. Our day starts at 4:00 am. We wake up and go to the farm for every current and future need of the family. We come back at 14:00 with firewood, cassava leaves or/ and roots or any other raw food for the day. When we arrive at home, we take containers and go to fetch water. We walk for one hour to reach there at the water source. We spend one hour waiting in the queue as individuals take turns to fill their containers. This is because the spring is drying up due to lack of rainfall that we cannot explain. We then walk back to our villages for one hour. We reach home at 17:00. We begin to cook for one hour and then we serve the meal to our family members. This is not the end of our day. We need to look after the house, the sick and everything else in our families... If we need soap or anything else that we do not produce in the villages, we do not go to the farms for that day. We pack our raw products from the farm in the evenings. We wake up at 3:00 am the following morning and begin a 25 km walk to the market in Camp Kinshasa in a very slippery and stony path with at least a 50 kg load to avoid doing numerous trips by month. It takes us 3 hours to go, at least 2 hours to sell our produces and 3 hours to come back to our villages. When we arrive, we take another journey to fetch water as we normally do and as explained few minutes ago. As a result of this hardship caused by a lack of socio-economic infrastructures and a lack of access to land and clean water, younger girls are running away from the villages and do not want to be married here. They prefer to go to small towns or city centres like Inga where life and the work load for women is less. The consequence is two-fold. The village is becoming smaller and smaller, and the clan will

disappear in a near future. Secondly, when these girls are sick with HIV/ AIDS or become less attractive to men in these areas, they come back to the villages where they face the challenge that there are many elderly men than young men to look after them (Interview 83, 27/03/2012, Village Vonda Nkinseka – Inga Zone).

People who have been impoverished by the IHPs have no salaried employment, land, water, or access to the Congo River. They must pay for the education of their children whilst those who are employed by SNEL and have salaries send their children to a school built by the company and get free education (Interview 83, 27/03/2012, Village Lumbu – Inga Zone). Another respondent elaborates:

Outside the Inga Zone, there are two schools. The primary school is owned by private business people. This school pays the teachers from the fees that it collects from the parents. This school is far from here and there is a high risk of accidents for small children walking alone along the Matadi-Boma road. The school is also very expensive for people like us who are dispossessed of our resources. The second school is a secondary school. It is based at the Vangu Mission and it functions under the auspices of *'les Ecoles Conventionnées Protestantes'*⁵. It is also very expensive for us. Due to a lack of socio-economic infrastructure in the area and very expensive school fees, we have never had a child at secondary school which could open doors to university qualification. We have no hospital around here. If someone is sick, he or she must be taken to Inga which is 27 km from here on bicycle or 'Kipoy' [a wicker chair mounted between two long bamboo poles with crossbars and carried by four men] without road (interview 65, 18/03/2012, Village Kilenga – Inga Zone).

The absence of free education to these impoverished communities has undermined the future of the present and next generations by trapping them in a vicious cycle of poverty and vulnerability. The host communities face the same challenges. Both the host and guest communities have witnessed their impoverishment and vulnerability transmitted across generations, with the second generations of the communities affected by the IHPs becoming even poorer than the first through persistent inequality and intergenerational transmission of

⁵ Public schools run under the auspices of the Protestant church.

poverty (Bird, 2007: v; Bird, 2010: 7). While the former generation was dispossessed of their resources, the latter has seen their resources decrease due to the competition of unexpected arrivals.

4.5 EXISTING LAWS ON MEGAPROJECTS DURING CONSTRUCTION OF INGA 1 AND INGA 2

The HOD of EIA and SEIA at SNEL (Interview 14, 14/02/2012, Kinshasa) states that during the establishment of Inga 1 and Inga 2, there were no environment laws or other guidelines on mega development projects which would ensure that the ecosystems of the Inga Falls Site would be preserved and protected, that the negative impacts of the projects would be minimised both on the environment and local communities, and that the affected communities would be fairly compensated after inclusive and active consultation. An official from GEEC agrees with the HOD of EIA and SEIA. He insists that these legislations are quite new in the DRC (Interview 20, 15/03/2012, Kinshasa).

In the same vein, an HOD from another department who preferred to remain anonymous because of fear for his safety and position at SNEL, states:

There was no legislation dealing with and enforcing compliance with ESIA prior to any activity related to the IHP when Inga 1 and Inga 2 were built. The affected communities were forcibly removed from their villages and their land/ water/ natural resources dispossessed in the name of development and public interests. This was so because these projects were and still are taking place under the auspices of the presidency of the Republic. There was no consultation with and compensation to the affected communities. I agree with those individuals and institutions which argue that the '*Ayant Droits Fonciers*' should be consulted and compensated for the losses that they went through in the name of development. In addition to the losses they went through; these are Congolese citizens who must be looked after and who should also benefit from the IHP as the political and economic elites do. As a country, we should not allow 'development project' which impoverish a section of our population to take place without consultation with and compensation to the affected communities ... (Interview 21, 30/03/2014, 2014)

The construction and management of Inga 1 and Inga 2 occurs with, and symbolises a conflict between, the social contract that the government of the DRC has with its citizens in terms of providing services and fair repartition of revenues from the IHPs, and the financial contract that the same government has with international communities through financial institutions and development agencies. The government chooses to satisfy the financial contract to get continued aid at the expense of its social contract. This tension and complicated relationship between the two contracts are, however, not unique to the IHPs or the DRC. In fact, many newly elected governments had and still have two irreconcilable constituencies to appease both external donors and creditors and their poor majorities. While governments are crucially dependent on one, they cannot satisfy both at the same time (Abrahamsen, 2000: 117).

Global Witness (2006: 36) agrees and sustains its position with the Joint Venture Contracts between GECAMINES and private companies. It argues that the contracts “provide huge benefits to the private companies involved but leave GECAMINES⁶ with such a low share that the state will be unable to generate profits from the deals” (Global Witness, 2006: 36). In addition, most of the recently signed contracts signed provide GECAMINES with a maximum share of 25%. In some cases, GECAMINES’ shares are even lower (Global Witness, 2006: 36). This, in turn, undermines the ability of the state to generate revenues for social and economic infrastructures which cause increased vulnerability, socio-political instability, and armed conflicts. As a result, the intervention of the WB is likely to promote corruption, and a lack of public accountability and transparency.

4.6 ROLES OF TRANSNATIONAL ADVOCACY NETWORKS IN INGA 1 AND INGA 2

Transnational advocacy networks (TAN) and local civil society did not play any significant roles in Inga 1 and Inga 2 as they were at infant stages. They still need to do more today as they are aware of the challenges that the projects present to local communities and the environment. Also, their support to the dam-affected communities’ struggle for justice should go beyond the intervention of CEPECO. In fact, this local CSO selected two representatives (a male and a female) and

⁶ *La Générale des Carrières de Mines* is a state mining company which was nationalised by Mobutu.

arranged their passports to attend one important meeting outside the country. In this initiative, International River (IR) financed trips to Johannesburg for the representatives to attend the 2006 International Roundtable on Inga 4 or Grand Inga. The IR also funded a representative from the same communities to attend the 2007 the World Energy Council (WEC) conference in Gaborone, Botswana.

The initiatives of taking representatives of the six clans to international meetings on dam development were good because they provided them the opportunities to mobilise likeminded individuals and communities around their struggles. The meetings also gave the representatives of the clans a space for networking across countries and continents with individuals and institutions who face similar challenges. These meetings created conflicts because the delegates were handpicked by officials from the CEPECO in 2006 and 2007 who abused the trust that the affected communities had placed in this organisation (Interview 70, 26/03/2012, Village Manzi – Inga Zone).

The chairperson of the clan chiefs confronted two officials from CEPECO and asked them how this organisation could decide who should travel to Johannesburg and Gaborone to represent and speak on behalf of others. The chairperson of CEPECO responded as follows:

I am deeply sorry for what happened. I recognised you as the chairperson but I made a terrible mistake of choosing and travelling with your colleague. I knew that he did not have any official mandate to represent you [clan chiefs] at the meetings and subsequently could not speak on your behalf. I am sorry and I will try my best to avoid the same mistake in the future ... Please forgive me and if you really let this unnecessary conflict go, please give me peanuts as a symbol of true forgiveness (Interview 70, 26/03/2012, Village Manzi – Inga Zone).

When the researcher asked same question to this CSO official, he responded:

These clan chiefs are not grateful. They also are very demanding on everything they want from our organisation. They do not understand that we do not have any funding their struggles for justice. We are forced to use the resources allocated to other projects in order to contribute to their struggles. If I call the chairperson of the clan chiefs for an urgent query, he will ask me to wait for a meeting with all

the clan chiefs. He will also ask me how much money we received for that particular meeting before we start working on anything. But the guy that I selected is very flexible, cooperative, and helpful. He does not ask any question. He does what I ask him to do and that is good for the service that we provide free of charge and without any funding (Interview 39, 26/03/2014, Boma).

These two responses to the same question illustrate the tensions and diverging views and interests that different people have on the IHPs and their interests in the struggles of the affected communities. The official from CEPECO apologised for his lack of professionalism and lack of respect for the existing structures of the affected communities in his first response, and in the second respondent praises the chairperson for democratic and inclusive leadership.

A representative from 11.11.11, a Belgian NGO, strongly believes that the TANs could have done better to support the struggles for justice around the IHPs even though they have begun to make positive contributions to these struggles. She states:

The dam-affected communities, like thousands of other victims of socio-economic and environmental injustice, will benefit when they have a strong civil society which will fight on their behalf [at both local and international levels]. We have not done much for the dam-affected communities but we hope they will benefit indirectly through a strong and competent civil society organisation that we are investing in [our resources in terms of money and efforts] (Interview 53, 11/05/2012, Kinshasa).

The roles of local CSOs and their TANs prior to, during, and after the construction of Inga 1 and Inga 2 were described as follows in a focus group discussion (Focus Group Discussion 89, 02/03/2012, Ngimbi Clan - Inga Zone):

- i) Local CSOs and TANs have been ineffective in framing the injustices around the IHPs, building the capacity for community mobilising around their struggles, and identifying sustainable solutions to their challenges;
- ii) the WB renewed its promises to the affected for compensation on the losses incurred to build Inga 1 and Inga 2. The reparation will take place through the WB's

negotiations with government officials and not direct dialogue with the affected communities or their clan chiefs;

- iii) respondents remain sceptical of both the promises and hope to achieve anything. They may die like their parents and grand-parents without getting anything despite endless meetings between government officials and the representatives from the WB;
- iv) the IHPs led to intergenerational transmission of poverty and its dire consequences on women and multiple functions they fulfil at home;
- v) the cracks begin to occur in the affected communities. These divisions are created by the same NGOs which pretend to support their struggles or political rhetoric of individuals in search for votes.

In other words, local CSOs and the TANs involved in dam-related issues have not done enough to meet the expectations of the clan chiefs and ordinary members of the communities. The latter are victims of the divide and rule tactics designed and applied by local and transnational activists as well as political elites at both provincial and national levels for personal gains.

4.7 SHARING THE BENEFITS AND COSTS OF INGA 1 AND INGA 2 TO DIFFERENT STAKEHOLDERS

The DRC has an ambitious energy policy. However, the country has neither the political will to implement the recommendations of the pre-feasibility study of the IHPs (SICAI, 1964: ix, 374-410), nor practical strategies to achieve it. Its energy policy is articulated around four main objectives: to alleviate poverty and illiteracy, to develop a market economy with projects that integrate rural areas – which hosted 65% of the population in 2010 (WB, 2012: 138), to implement major industrial projects that demand large amounts of electricity, and to construct hydroelectric plants at numerous sites country-wide to meet the electricity demands of the country, and the social needs of its population (Kasemuana, 2009: 9). However, the lack of political will to diversify sources of energy may weaken these good programmes and the recommendations of the pre-feasibility study (SICAI, 1964: ix, 374-410).

There is a lack of political will to provide electricity to the people of the DRC: only 5% of the estimated 70 million people had access to electricity in 2005 compared with 12% in Angola, 18% in Congo Brazzaville, 46% in Cameroon, and 47% in Gabon (Ulloa, Katz, and Kekeh,

2009: 41). This is the situation while the Inga-Shaba Power Highway Project supplies electricity to the mining industry of Katanga and southern African countries, and while the Inga-Kinshasa transmission line has been providing electricity to Congo Brazzaville since the 1960s. The lack of electricity supplies to domestic consumers and local industries was also mentioned as the most limiting constraint for 45% of firms in Kinshasa, 61% of firms in Lubumbashi, 69% of firms of Kisangani, and 36.4% of firms in Matadi – the closest big city to the IHPs. Lack of financial resources was the second constraint (Ulloa, Katz, and Kekeh, 2009: 41).

The participants (Interview 15, 29/02/2012, Inga Zone; Interview 2, 24/02/2012, Kinshasa) to this study identified five groups of consumers of electricity in the DRC according to their needs and willingness to pay electricity bills. The first group are people and institutions that have instant access to as much electricity as they need for domestic use and/or business. They (high rank officials from SNEL, the army and police, top government officials, and individuals who have ties in high spheres of government) are oversupplied to a point where they are trading surplus electricity to their neighbours and tenants for their own benefit. They receive electricity bills on an irregular basis but they do not pay. The second group comprises individuals who have applied for connections to the electricity grid for either domestic or industrial use or both, but their applications have either been unsuccessful or delayed because of corrupt processes which force consumers to bribe SNEL agents. These individuals are forced to connect illegally to the power grid with or without the assistance of corrupt SNEL agents. All the payments in these cases are made to syndicates at the expense of SNEL and the government of the DRC. The third group consists of low ranking government officials and entrepreneurs who have access to electricity but do not have enough to meet their present and future needs. This group is frustrated and excluded from continuous access to electricity (Interview 15, 29/02/2012, Inga Zone; Interview 2, 24/02/2012, Kinshasa). Another participant confirms this:

I am worrying because of numerous reasons of which I will mention three. First, Inga 1 and Inga 2 increase the cost of production of everything that we sell in this country because of regular load-shedding... Second, there is a sad reality that these institutions undermine the expansion of business opportunities in the DRC or new investments... My colleagues prefer to invest in Congo Brazzaville because the same electricity produced by the Inga Dams is permanently available there than

here [in the DRC]. Lastly, these institutions reduce consumption of services and goods which should have multiplied effects in manufacturing and trading ... (Interview 88, 13/03/2012, Kinshasa).

A businessman states:

The IHPs and SNEL do not work for the poor from the inception of these projects which costs the country a lot of money to build and as repayment of loans with high interest rates ... I would love to extend my business but I cannot because of a lack of electricity. The Inga Dams were designed to produce electricity for international markets and the mining of Katanga. The government and its allies are so cruel that they leave in the dark entire provinces such as Kasai and Bas Congo under the Power Highway (Interview 92, 05/04/2012, Boma).

The fourth group consists of the dispossessed communities who live in the vicinity of Inga 1 and Inga 2; although their villages are situated below the power highway there is no political will to connect them to electricity:

We [dam-affected communities] have nothing. We have no clean water, no free school, no free hospital, no tarred road and no single benefit from the Inga Dams. As a result, we need 35 modern houses with water, bathroom and electricity. We know that it is not enough for present and future generations. But these electrified houses will be a mark of the first step toward compensation and direct negotiations between the affected communities and SNEL and the government of the DRC. This step would be followed, we hope, by the signature of the “*Convention Collective*” and “*Contract d’Emphytheose*” between SNEL and the *Ayants Droits Fonciers des Rapides d’Inga*. The two documents will fill the gap left by the 35 modern and electrified houses in our communities (Interview 68, 15/03/2012, Village Kulu III – Inga Zone).

The last group represents individuals who need electricity but cannot afford to pay for it because of unemployment and poverty. Whatever the reasons, the members of this group connect themselves illegally or pay SNEL agents for unlawful connections to the power grid. One of the perpetrators of illegal connections justifies the practice:

We have been exploited by colonisation and new whites [socio-economic and political elites]. Zarianisation which intended to benefit Congolese and those from underprivileged background in particular like me and other people around here increased the divide between us [destitute] and them [local elites]. So what would you advise me to do? To sleep in the dark whilst other people have few minutes of electricity? I hope not. And if you would not, where can I get the money for to bribe SNEL for my application, electricity meter, cable, and their motivation? The only option which remains for me and for others in similar conditions to get electricity is to do “daulage” as we call it in Bukavu because our challenges remain the same in the country regardless of where we live ...⁷ (Interview 109, 26/02/2012, Kinshasa).

In the same vein and talking about electricity bills and illegal connections, a trader from Boma states:

... it is unfair for us to pay electricity because we have never been told where the money that other people and several companies pay to SNEL. Have you heard about Professor Evariste Boshab⁸, SNEL, and Congo Brazzaville? He is so bold and confident that he went to the government of Congo Brazzaville to recover US\$32 000 000.00 on the behalf of SNEL, Dartment of Energy, and the Department. He got the money. Nobody knows where the money went until today. Remember, these individuals are getting free food, accommodation, transport, clothes from the government of the DRC. Everything is free for them but they are still robbing us what was supposed to come to us in different forms. I cannot pay for electricity as long as some individuals are still stealing from us and do not show us a good example (Interview 118, 15/03/2012, Kinshasa).

⁷ “Daulage” consists of illegal connection to the power grid and trading or free distribution electricity to as many as individuals as possible until light bulbs produce no more electric light.

⁸ It is alleged that Evariste Boshab – Professor of Law was the Director to the Presidency of the Republic, and then after the Speaker of the Parliament – went to the government of Congo Brazzaville in 2004 to successfully recover a 20 year debt of US\$32 million for the consumption of electricity from the IHPs (Inga 1 and Inga 2) that Congo Brazzaville owed SNEL. He resigned from the National Parliament when a detailed report on the matter was made public by the opposition to the People’s Party for Reconstruction and Democracy in power in the DRC. Professor Evariste Boshab acknowledged having received the money but he claimed that he handed it to the Ministry of Finance which paid him his commission of 3,600 million out of 32 million as stipulated by law, 10% of the debts recovered it (*La Prosperité*, 2009).

4.8 CONCLUSION

This chapter investigated the contributions of aid through the lens of the outcomes of Inga 1 and Inga 2 to the people of the DRC and the claims of impoverishment of the communities affected by the IHPs. The two plants are characterised by unequal shares of costs and benefits of development initiatives between the Congolese people on the one hand, and domestic and industrial consumers on the other.

Development aid invested in IHPs is characterised by conflicting results to different people affected by them. These results have motivated the affected clans to take the government to court, without positive outcomes. The affected clans and communities rely on local CSOs and their transnational advocacy networks for socio-economic and environmental justice.

Inga 1 and Inga 2 emerged at the height of the Cold War and Mobutu's dictatorship. As a result, there was only one alliance which consisted of institutions and people who supported the two projects i.e. the IFIs, development agencies, the DRC government, and countries which have vested interests in Inga 1 and Inga 2. Local CSOs and their TAN have not done enough to meet the expectations of the affected communities.

Several participants argue that Inga 1 and Inga 2 are bad for socio-economic development because of poor administrative and financial management, a lack of expertise to undertake repairs and maintenance, corruption at all levels, and impoverishment of the affected communities and all Congolese citizens at large. The IHPs do not contribute to socio-economic development of the DRC. These challenges are transmitted from one generation to the next. Yet, the challenges that the IHPs face depend more on Congolese institutions and people than outside actors.

The IHPs have caused divisions within and between communities. They also divide Congolese people in terms of those who benefit from Inga 1 and Inga 2 and those who do not benefit from the revenues that these projects generate, and do not have access to electricity and other services which depend on electricity. The latter believe that Inga 1 and Inga 2 perpetuate impoverishment across generations of the affected communities. Yet as indicated, one participant disagrees and argues that the IHPs remain the best gift that Mobutu has left to the DRC.

CHAPTER 5. INGA HYDROPOWER PROJECTS AND AFFECTED COMMUNITIES

5.1 INTRODUCTION

For much of my life, I have been a supporter of large dams ... during the early years of my career, I believed that large dams could facilitate, even catalyse, equitable river basin development. By mid-1980s, however, I saw that this was not happening. On the contrary, unequal development and environmental degradation were occurring (Scudder, 2005: 1).

Aid oriented to mega hydropower projects has often various effects on different individuals in aid recipient countries depending on whether they win or lose from the outcomes of these infrastructures. This chapter therefore investigates aid agencies' guidelines on these facilities which, by nature and considering massive infrastructures they need, have the potential to dispossess local communities of their natural resources and keep them in a vicious circle of impoverishment and powerlessness. The chapter looks at the DRC own policies for the same motives because these regulations have the power to minimise, if not prevent, the negative consequences of these projects on local communities at the vicinity of the plants, poor people in rural areas and the cities, and women and girls who learn from a younger to carry the load of housework, the elderly and the sick. And if these laws did exist, this section looks at their implementation in different stages of Inga 1 and Inga 2 i.e. from the decision to select a site and erect an infrastructure to the negotiations of different agreements with other stakeholders; production; transportation; distribution and commercialisation of electricity; revenue collection and maintenance and repairs. This is critically important for two main reasons. First, mega hydropower could be used as engine for economic growth and fair distribution of revenue from hydropower and so inclusive development through cost-benefit sharing. Secondly, the promises of mega hydropower facilities do not materialise as suggested.

5.2 MEGA HYDROPOWER PROJECTS, INGA HYDROPOWER PROJECTS AND SOCIO-ENVIRONMENTAL GUIDELINES OF MEGA PROJECTS

Mega hydropower projects have the potential to alleviate poverty and support development which may benefit the majority of people depending on the political will and administrative

capacity of the state. But these development initiatives remain subject to controversies due to both their positive and negative contributions to the lives of ordinary people in different countries. Lowe-McConnell (1966, cited in Scudder, 2005: 11-12) criticises the preventable and detrimental socio-economic and environmental impacts of these massive projects. Similarly, the prime minister and fervent promoter of India's programme of giant multipurpose dams, Jawaharlal Nehru, became sceptical only four years after he had praised the "Modern Temples" of India (McCully, 2001: 20-21). The supporters of megaprojects and mega hydropower projects in particular, believe that these projects are often the only economical sources of electrical power available. They argue that mega hydropower projects represent a renewable source of electricity when compared to other means (Ledec and Quintero, 2003: 4-12; Gretz *et al.*, 1990: 419; Tshering and Tamang, 2004: 2; Alstom Power, 2010: 4, 7, 15; Kumar *et al.*, 2011: 441, 486, 490; Severnini, 2012: 29, 33; Stori, 2013: 2, 6).

The guidelines of funding institutions and local environment laws such as EIAs and SIA contain legal frameworks which recommend consultation with, and compensation, to affected communities. The laws and guidelines clarify land ownership and the rights and responsibilities of different parties involved in development projects, and conflict resolution mechanisms over land even if the existence of regulatory policies do not necessarily lead to their implementation and compliance mechanisms.

5.2.1 Guidelines of the World Bank, the European Investment Bank, and the African Development Bank on megaprojects and the Inga Hydropower Projects

The concept of environmental impact assessment (EIA) started in the USA in 1969 with the National Environmental Policy Act (NEPA) which set up clear environmental guidelines with which project proposals should comply with before implementation. The NEPA requires that all projects be accompanied by an EIA (Saidi, 2010: 2). It refers to "a clear description of all potential environmental impacts, a discussion of how any adverse impacts could be avoided or mitigated, and an evaluation of alternatives to the proposed project" (Mwalyosi, Hughes, and Howlett, 1999: 7).

To date numerous countries have formulated EIAs based on their own socio-political and historical realities with different enforcement mechanisms. In fact, whilst in some countries IEAs are mandatory regulations, they are not enforceable in other countries. In yet other

countries, EIAs impose obligations on the administering agency or are formulated in an ad hoc manner, frequently because they are included in the funding requirements for the agreement process.

The WB embraces EIA and includes it in its project funding assessment process. Several years after the WB initially adopted EIAs, other multinational and bilateral agencies include EIAs in the funding models (WB, 1997: 2-5). This research defines social impact assessment (SIA) which, if conducted efficiently and its recommendations implemented, may at least reduce, if not, prevent the negative impacts of mega development projects on people and their social interactions with their environment. SIA is the process of investigating – “predicting, evaluating and reflecting” – and controlling the intentional and unintentional impacts of interventions – “policies, plans, programs, projects and other social activities” on the human environment, and “social change processes so as to create a more sustainable biophysical and human environment” (Vanclay, 2002: 388).

The WB environmental classification system consists of three categories of projects: A, B, and C. The WB’s category A Project is likely to have major adverse impacts that may be “sensitive, diverse, comprehensive, broad or precedent-setting” (WB, 1997: 2-5). This category of project has impacts which are irreversible and both forced migration and resettlement can be easily redressed. The category B project is likely to have potential environmental impacts which are specific to the site but do not have significant effects on human populations, or do not environmentally change important areas (mangrove, wetlands, and other major natural habitat). The category C project may not have any negative environmental impacts. The environmental impacts might be negligible, minimal, or insignificant. An environmental assessment is therefore not required for such a project (Sadler, Verocai, and Vanclay, 2000: 3, 61; Abaza, Bisset, and Sadler, 2004: 44). Yet, these guidelines have no real meaning without proper implementation and monitoring mechanisms.

In addition to this classification of projects based on EIA and SIA, WB, and the World Conservation Union (IUCN), many other development agencies and governments have funded and supervised the dismantled World Commission on Dams (WCD) which intended to make recommendations – without enforcement mechanisms – that could address the impacts of mega hydropower projects on the environment and local communities. The first objective of the WCD was to review the developmental effectiveness of large dams and

assess alternatives for water resources and energy development. The second objective was to develop internationally acceptable criteria, guidelines, and standards where appropriate for planning, design, appraisal, construction, operation, monitoring, and decommissioning dams.

The findings of the WCD confirm the preoccupations of the authors previously mentioned and suggest five strategic priorities and seven guidelines which fundamentally change the way people are involved in mega-dam projects - and should consequently change how decisions are made to improve the development effectiveness of future constructions, wherever there is the political will to do so. The five strategic priorities are:

- i) undertaking a needs assessment study to validate the needs for water and energy services;
- ii) selecting alternatives and investigative studies to identify a preferred development plan;
- iii) verifying the commitments that are in place before tendering the construction contracts;
- iv) confirming compliance before commissioning, and
- v) adapting to changing contexts.

In addition, the project should be guided by the seven guidelines for good practice, which are:

- i) gaining public acceptance;
- ii) doing a comprehensive options assessment;
- iii) addressing existing dams;
- iv) sustaining rivers and livelihoods;
- v) recognising entitlements and sharing benefits;
- vi) ensuring compliance, and
- vii) sharing rivers for peace, development, and security (WCD, 2000: 249).

In addition to the recommendations and guidelines of the WCD, the WB (Davis, 1993: 1, 4, 11) issued a revised Operational Directive on Indigenous Peoples which recognises the danger that development projects bring to intended beneficiaries, namely social groupings with socio-cultural identities different from the leading society which puts them at risk of being disadvantaged in the development choice. Thus, “whenever tribal peoples may be affected, the design of projects should include measures or components necessary to safeguard their interests, and whenever feasible, to enhance their well-being” (Davis, 1993: 1). In addition, as a general policy, the WB will not assist development projects that

knowingly involve encroachment on traditional territories which are used or occupied by tribal people, unless adequate safeguards are provided. In cases where environmental and/or social changes promoted through development projects may create undesired effects for tribal people, the projects should be designed to prevent or mitigate such effects (Davis, 1993: 1, 4, 11).

The clan chiefs of the affected communities by Inga 1 and Inga 2 are doubtful of the promises from the WB and the government of the DRC regarding further developments of the IHPs. A representative of one of the six clans laments:

We heard about these projects [Inga 3 and Inga 4] from the delegates from the World Bank and another institution that I do not remember [African Development Bank]. But it was before 2011. We were told that the legacy of Inga 1 and Inga 2 [compensation to the affected communities, construction of socio-economic infrastructures, and prioritising the affected communities in employment and job opportunities around the Inga Dams] should be addressed before the construction of Inga 3 and Inga 4. Since then, we never hear from them. We do not really know if these promises would be realised after waiting for similar promises for several decades. Our grand-fathers have been waiting for these promises without seeing them realised until we bury them. We may also be buried by our children without any concrete result from these promises. You know? We do not oppose the construction of Inga 3 and Inga 4. But we want to see the legacy of Inga 1 and Inga 2 addressed before we endorse further developments of these projects in the Inga Falls Site (Interview 60, 27/03/2012, Village Kilenga – Inga Zone).

A government official and Head of Department (HOD) of ESIA at SNEL disagrees with this view (Interview 60, 27/03/2012, Village Kilenga – Inga Zone) of a of the clan chiefs from the Inga Zone. The HOD argues that the WB is actively involved in redressing the legacy of the IHPs and compliance with its own EIA and SIA. The WB prioritises new projects in terms of compliance with EIAs and SIAs through specialised state institutions such as SNEL, *Groupe d'Etudes Environnementales du Congo* (GEEC), the environmental studies group – (Interview 24, 12/03/2012, Kinshasa). The HOD argued that:

The Protection of Environment and Local Communities is a Department within SNEL ... It was created on recommendation of the World Bank as a necessary and sufficient condition, among other criteria, for any institution or country to receive funding from the World Bank... The main objective of my Department is to redress the so-called “abuses”, “critiques”, and “inefficiencies” attributed wrongly or otherwise to the World Bank by civil society organisations, local and international nongovernmental organisations. From 2011 onward, there will be no funding from the World Bank without (1) prior compliance with the environmental impact assessment at the level of the World Bank first and secondly in terms of local interests and standards, (2) the environmental and social impact assessment must be accompanied with the clear plan and schedule for consultation with and compensation of the communities which will be affected by the projects in order to address and restore the damage caused by the projects, and (3) the report of the World Bank representatives sent on the ground to verify if the consultation and compensation plans did reflect the reality on the ground (Interview 24, 12/03/2012, Kinshasa).

The contributions of interviewees 60 and 24 bring to light the contradictions, conflicts, and diverging interests that different people have around the IHPs and funding from the WB at large. For some SNEL and government officials the projects are good because they provide opportunities for funding and personal gain. The WB, and by extension all the IFIs and development agencies, do well as long as their individual interests are protected. This group of people deflects the accusations of CSOs and affected communities against the WB, even though visits to the IHPs are enough to demonstrate the lack of consultation and compensation and the intergenerational transmission of impoverishment in the Inga Zone. The people who live in the vicinity of the IHPs would like to see more community ownership in these projects, public accountability, and transparency of the revenues generated by the IHPs.

The HOD of ESIA at SNEL vehemently blames the affected communities, traditional leaders, politicians in power and in opposition, as well as CSOs for their bias and lack of collaboration around various components of the IHPs:

I will illustrate what I am telling now with a 273 Km “*Project de la Ligne Haute Tension*” between Tenke Fungurume and Kasumbalesa. It is part of the 773 km Power Highway Project funded by the World Bank. This power highway was initially planned to cross two villages according to experts. As a new policy of the World Bank [on consultation with and compensation to the affected communities], SNEL planned to build in one village some basic infrastructures including 7 schools of 6 classrooms each. Traditional and administrative authorities could use these classrooms for primary and high schools in both the morning and afternoon. Secondly, the plan included the construction of 7 health centres with equipment and medicines as well as personnel to provide free services to the people who could be affected by the project (Interview 24, 30/03/2012, Kinshasa).

He continues his advocacy on the behalf of the WB arguing:

In another village SNEL, at the recommendation of the World Bank, planned to build a small but modern city with all basic infrastructures as a benefit for this particular community which allowed power lines to cross their villages. The small city should have houses along the streets with public toilets, water wells and treatment infrastructures, and free Healthcare Centre to the communities which could be affected by and crossed by the power lines. But traditional leaders and their advisers in these villages have refused this offer. They contended the project was a political project aimed at mobilising people to vote for a particular political leader and not a SNEL-World Bank development project. This position was then taken to the World Bank which requested that the plan for a power highway should be redesigned to avoid these villages. When the plan for the transmission line was redesigned to avoid these villages and thereby respecting the will of the communities, the same leaders came to see us [SNEL] with some members of their villages and economic and political elites based in Kinshasa... But if SNEL and the World Bank did not have any plans for consultation with or compensation to the affected communities as a result these projects, civil society organisations could come out in full force and campaign against the projects. This is bad and one-sided approach to development and criticism (Interview 24, 30/03/2012, Kinshasa).

Time will test the HOD's statement as it does with several other promises brought to the Inga Zone and the DRC at large by development agencies and the IFIs.

A scholar and activist at the University of Kinshasa is equally sceptical:

Good governance and democracy have different meanings to different people. The International Financial Institutions and the World Bank talk about these concepts all the time. But in practice, they support dictators who perpetuate bad governance or close their eyes to corruption, financial mismanagement in different megaprojects that they often fund... The work of the International Monetary Fund and World Bank has radically changed from financial and development agencies to multinational corporations interest keepers. In addition, these institutions are used as imperialist tools for the dominance and control of developing and poor but sovereign countries' economies. They also encourage corruption and mismanagement of both funding and revenues from mega development projects like Inga Dams because it is almost impossible to deposit huge amounts of money destined for development projects in developing countries into Switzerland's banks without the complicity of the same institutions which lend money. In addition, these institutions are not prepared to organise and impose external audits of different projects because they may be exposed. Lastly, these institutions have a double standard approach to funding and accountability. They do not care about the outcomes of projects funded in poor and developing countries as much as they do in developed countries/ projects. They are doing so to perpetuate our dependency and poverty (Interview 91, 30/03/2012, Kinshasa).

As for EIB (EIB, 2013: 12, 52, 63, 85; Counter Balance¹, 2008: 5-6) and the AfDB (2001: ix, 5-6), their guidelines are also inspired by the 1969 USA's NEPA (Saidi, 2010: 2) already discussed in this chapter with slight adjustments.

¹ Counter Balance is a newly established coalition of development and environmental nongovernment organisations. It comprises members from the CEE Bankwatch Network (Central and Eastern Europe), France (*Les Amis de la Terre*), Germany (World, Economy, Ecology, and Development – WEED), Italy (*Campagna per la Riforma della Banca Mondiale* – CRBM), Netherlands (Both ENDS) and the United Kingdom (Bretton Woods Project).

The internal policies of the three institutions emerged when civil society organisations and their transnational advocacies began to question the outcomes of development initiatives across countries. Guidelines were not followed during the construction of Inga 1 and Inga 2 and are not likely to be followed during the refurbishment of these plants. The same neglect may apply in the different phases of Inga 4 or Grand Inga since the pre-feasibility study does not emphasise to the guidelines. Like the WB's guidelines on mega development projects, the EIB and AfDB's guidelines have no clear mechanisms to impose compliance in different borrowing countries. The three institutions rely on the good faith and governance of recipient countries to comply with their guidelines even though numerous aid countries do not have the necessary political will or administrative capacity to do so.

5.2.2 Congolese laws and the environment

Congolese environmental laws are flawed. They all suffer from legal contradictions and a lack of political will to allocate resources in environment related issues in both pre-and post-colonial epochs. They also reinforce the absence of individual land ownership.

Under colonial rule the Belgians were interested in the protection of the environment for their own exploitative purposes and had no interest in promoting the wellbeing of the Congolese people who were treated as individuals devoid of rights. For this reason, among others, the environment was managed through a number of treaties and royal decrees. The Institute of Natural Parks of Congo was created on 26 November 1934 by royal decree while other areas were protected to avoid the widespread destruction of biodiversity. However, the denial of the rights of indigenous people during colonisation was not unique to the DRC (Bindu, 2006: 21-24). Other African countries went through the same challenges (Dzidzornu, 2004: 148). This situation was supported by two contributing factors:

- i) indigenous people did not understand that the protection of the environment could be utilised to promote their wellbeing, and
- ii) political leaders and their followers prioritised political, social, and economic rather than environmental issues (Kennedy, 2011: 126-129).

In the post-colonial DRC, land tenure remains governed by two laws: the Bakajika Law of 1966 and the Land Tenure Law of 1973. The Bakajika Law – Ordinance No. 66/343 of 7th June 1966 – assures the government of the DRC full right of ownership of its domain and

complete sovereignty in the possession of land (i.e. soil and sub-soil), forests, and mining rights over its whole territory (Counsell, 2006, cited in Hoare *et al.*, 2008: 14). Salacuse (1985: 10) however, claims that the purpose of the Bakajika Law was not to cancel the rights of the holders of pre-independence grants and concessions. This piece of legislation gave the government an opportunity to review the status of these rights and to either (1) reaffirm them completely, (2) modify them, or (3) completely reassert government ownership of property. Broadly speaking and looking at land ownership across countries,

where states hold radical title to land (whether in whole countries, as in much of Africa...), rights may be notionally allocated for the wider public good through the granting of leases or concessions to foreign investors or transnational corporations (for mining, logging, tourism etc.), yet questions frequently arise about who actually benefits from these arrangements (Daley and Hobley, 2005, cited in Long, 2011: 5).

Similarly, Wilson (2007, cited in Long, 2011: 5) argues that these impediments limit the number of beneficiaries to African national political and economic elites. In the DRC, van Acker (2000: 6) explains that “the [Bakajika] law creates a space to transform economic opportunities into political opportunities and preferential treatments for a small group of people through nepotism, tribalism and clientelism [instead introducing inclusive land reform which caters for all citizens”.

The second law is the Land Tenure Law of 1973. It reinforced the exclusion of the poor and villagers from ownership of land and its natural resources, reasserted total state ownership with provision for “permanent private concession”, allowed for customary laws to be applied to user rights over “non-allocated lands in rural areas” (Counsell, 2006, cited in Hoare *et al.*, 2008: 14), and reinforced the Bakajika Law of 1966. However, this law, amended in 1980, does not formally recognise customary rights. Its only reference to customary rights was to advise that these rights could be applicable to land which occupied or cultivated by local communities – without giving any details of the rights.

Yet, the Bakajika Law of 1966, the Land Tenure Law of the 1973 and the Forest Code² of 2002 have one thing in common. They all suffer from a lack of trained government personnel and government records to establish the existence of relevant grants and concessions (Salacuse, 1985). In addition, actual control of land has remained in the hands of a very limited number of socio-political and economic elites despite the state regaining control and ownership over land (Debroux *et al.*, 2007: 19-25). Thirdly, state ownership of soil and sub-soil is purely a formality since citizens (and non-citizens as well as local and international institutions) first have to appeal to customary law and then to national services to occupy and exploit land for various reasons (CRI-Project, 2009: 45).

According to Walmsley and Patel (2012: 97), the Constitution of the Third Republic (which was adopted on 18 February 2006), has specific clauses dealing with environmental issues in terms of Articles 53, 123, and 203. Yet these clauses do not change the deprivation of the rights and land ownership of indigenous people and villagers; they have never been implemented. In Ministerial Ordinance No. 044/CAB/MIN/E CN-EF/2006 of 8 December 2006, the MENCT created an agency for EIA administration and approval, namely the Group for Environmental Studies of Congo (*Groupe d'Etudes Environnementales du Congo – GEEC*).

Nevertheless, the GEEC and the entire MENCT both suffer from three important challenges which undermine its activities and objectives. The first challenge consists of an acute lack of experienced and competent professionals in environment-related issues, political interference, and corruption among top officials, which compromise implementation of and compliance with EIAs. Indeed, whereas the MENCT unconditionally supports further developments of the IHPs, one of key officials from GEEC thinks otherwise:

We need a critical review of the entire Inga Dams to know where things started to go wrong in order to prevent the repeat of these inefficiencies in the future. My own assessment and experience of these projects reveals that the Inga Dams were not destined to serve and development the Democratic Republic of Congo. How could you, if you were in their shoes in the 1960s, design or endorse a developmental project

² This piece of legislation gives the government authority to examine any pre-existing rights to particular pieces of land before allocating new concessions to individuals and institutions, to modify the limits of future concessions, and to compensate those who would be deprived of their resources.

such as the IHPs which does cater for local people and the needs of the country? I think the issue here, like everywhere else, is incompetence, and extreme hatred of this country and its people ... We lost the battle and the war for hydroelectricity in this huge country, at least for Inga 1 and Inga 2. Let's focus on further developments of the Inga Zone to see how we could put the future of this country at the centre of innovation, development and promotion of standards of living. Of course, this statement can represent a death sentence for me, my relatives or my wife but, sometimes, we need to be bold enough to say what needs to be said at all costs (Interview 19, 16/04/2008, Kinshasa).

The second challenge is a lack of financial resources for sufficiently well-paid salaries and incentives for good performance. Financial resources could also allow GEEC officials to travel around Kinshasa and other provinces to inspect the construction sites of new projects and companies to assess their compliance with the 2006 Constitution and EIAs. With reference to the lack of finance allocated to GEEC, a respondent deploras:

Look around, my younger brother. Would you imagine that this is the head office of GEEC for the whole Democratic Republic of Congo? What you do not see is worse than this. We do not receive a single cent from the government and we are based in Kinshasa next to the all the departments and the presidency. I am married and father of 8 children. I work for US\$50 per month! I am here because I cannot stay at home or leave the country like you for personal and other reasons ... When multinational corporations come to apply for a permit of compliance on environmental impact assessment, social impact assessment and other regulations; they must provide the logistics for site visit - return ticket, arrange accommodation and food, pay stipend for the period we will spend outside our home - and cover any other expenses that this visit and subsequent work require because the government does fund this office despite high costs of these services. We are working in extremely difficult conditions which undermine the quality of our work. I hope that you understand what I would like to say and I cannot elaborate further. But as I said, some individuals must stay in the country to keep the country moving (Interview 26, 15/04/2013, Kinshasa).

Lastly, there is a lack of political will in the government of the DRC to address these challenges and provide access to electricity to everybody. A clear disjuncture between policies and practice around access to electricity exists in the DRC. Indeed, while the DRC's energy policy intends to alleviate poverty and illiteracy through developing an extrovert economy and major industrial projects that integrate rural areas and economically viable regions, only 11.1% of the population of the DRC had access to electricity in 2009 (WB, 2012: 166). Secondly, the electricity generated by Inga 1 and Inga 2 is exported to several African countries while energy remains the most important limiting factor for 45% of firms in Kinshasa, 61% of firms in Lubumbashi, and 69% of firms in Kisangani (Ulloa, Katz, and Kekeh, 2009: 41). At the country level, 46.8% of firms argue that access to electricity is a major challenge versus 37.2% in Africa in general (WB, 2006: 13).

5.2.3 Diverging views from different stakeholders on further developments of Inga Hydropower Projects

The HPs have the potential to significantly contribute to the development of the DRC through the supply of hydroelectricity which could be used for socio-economic development and industrialisation. Yet these benefits are far from becoming a reality in as an official from 11.11.11– a Flemish Organisation (Kingdom of Belgium) which has representations in the DRC, Burundi, and the Philippines, and Peru, states:

The Inga Dams represents a new issue for me even though our organisation is operational in the Democratic Republic of Congo since 1990s. I therefore need time to study and understand who our enemies are and their local international allies before I can constructively contribute to any debates around these massive projects. Inga 4 (Grand Inga) has the possibility of producing and supplying enough electricity to cover the needs of Africa and to sell some extra outside the continent. However, a careful analysis of the projects reveals that the interests of the Democratic Republic of Congo and Africa as a whole are not certainly guaranteed. Grand Inga should be replaced by smaller dams which are easy to run, which need less money, have less negative environmental impacts, and which could supply electricity to poor people, and villagers in particular, because mining could be less attracted by these small hydroelectricity dams. I am very sceptical,

drawing from own experience and a short stay in the Democratic Republic of Congo, with the miracles that Inga 4 could bring because their allegations that the legacies of Inga 1 and Inga 2 remain unaddressed (Interview 53, 11/05/2012, Kinshasa).

Another respondent who understands the value and implications of the IHPs at both local and international levels argues:

I think that civil society understands the importance of the Inga Dams but I will argue that they do not fully understand the comparative advantages that their country has because of the Inga Falls have the potential to be a source of conflict and opportunities for income generation; this is both a curse and a blessing depending on what people want to see and the interests at stake. Otherwise, they could have demanded equitable distribution of revenues from the Inga Dams. On further developments of the Inga Dams, the civil society believe that they will not benefit the people of the Democratic Republic of Congo because the first 2 phases did not and ordinary people and the poor are still waiting for their shares. In addition, the developments of the Inga Dams will benefit the multinational corporations, and mining companies to be specific, and many foreign countries. But the civil society organisations do not have the capacity and resources to break the cycle of resource curse and poverty production in the DRC (Interview 35, 24/04/2012, Kinshasa).

The members of the affected communities who participated in this research are either the children or grand-children of individuals who were forcibly removed from the Inga Zone or forced to accept individuals from the Inga Zone more than 50 years ago. Whilst the former were dispossessed of their resources, the latter has seen their resources decrease due to the unexpected arrival of and competition over resources with the former. Both the host and guest communities have been impoverished and have witnessed their impoverishment and vulnerability transmitted across generations (Bird, 2010: 7), with the second generations becoming poorer than the first. This research has used the theories of persistent inequality (TPI) and intergenerational transmission (IGT) of poverty (Bird, 2007: 7; Bird, 2010: v) to uncover the direct impacts of the different phases of the IHPs on the Congolese population. It

has also used the outcomes of Inga 1 and Inga 2 to predict the impacts of different phases of Inga 4.

The theories of persistent inequality include the theory of industrialisation and Marxist theory. The liberal theory of industrialisation holds that industrial society is mainly characterised by a permanent pledge to technical and economic rationality. It is also characterised by elevated and increasing rates of social mobility and equality of opportunity as procedures of social selection become more and more rational. In other words, liberals care about equality of opportunity rather than the transfer of power and wealth from one group to another. They do not believe in static society since individuals can move upward or downward, depending on the social policies of governments and the choices individuals make; they can be offered opportunities but make bad choices in the end (de Beaufort, 2010: 58, 65). The Marxist theory of persistent inequality points in the opposite direction. It states that capitalist societies are shaped by class reproduction and the exploitation of the proletariat by the bourgeoisie. The bourgeoisie reproduces itself from generation to generation; and this process is followed by the exploitation and impoverishment of the proletariat by the bourgeoisies which in turn leads to class³ conflict (Piketty, 1998: 3-6; Eldridge, 1979) and conflict over “life chances⁴” (Hagg, 2010: 136-137) in the liberal view.

This research took a Marxist approach to persistent inequality to explain the poverty of the current generations of affected communities. They are poor because their parents and grandparents were dispossessed of and forcibly removed from their ancestral land and water. It also uses the theory of IGT of poverty to explore the causal factors which produce, perpetuate, and transmit poverty from one generation to the next, with a focus on the socio-economic and educational backgrounds of parents. The involvement of IGT of poverty is two-fold. First, it can explain private transmission (or lack of transmission) of poverty linked to capital from older generations and households to younger generations, and particularly (but

³ “A class is defined by the ownership of property. Such ownership vests a person with the power to exclude others from the property and to use it for personal purposes ... Class thus is determined by property, not by income or status ... The social conditions of bourgeoisie production are defined by bourgeois property. Class is therefore a theoretical and formal relationship among individuals” (Rummel, 1977).

⁴ “Life chances are opportunities for individual growth, for the realisation of talents, wishes and hopes, and these opportunities are provided by social conditions. Life chances are a function of two elements, options and ligatures ... Options are possibilities of choice, or alternatives of action, opportunities, directions in which the individual can go ... Ligature is a complex concept. Ligatures are allegiances, bonds, linkages, forefathers, home country, community ... give *meaning* to the place which the individual occupies ... create bonds and thus the foundation of action; options require choices” (Hagg, 2010: 136-137).

not solely) from parents to their children. Second, IGT of poverty can explain public transfer (or lack of transfer) of resources from one generation to the next through the contribution of older generations to the capacity building of younger generations via education. Transfer can be both positive (e.g. cash assets, positive aspirations) and negative (bonded labour, poor nutrition, socio-economic positions among siblings, and others). This in turn shapes individuals' chances to experience poverty, either in the present or at a future stage in their lives (Bird, 2007: v; Bird, 2010: 7).

The children of affected communities are more likely to be poorer than their parents because the latter do not have enough socio-economic opportunities or welfare to transmit to their children. The process has created and maintained a cycle of impoverishment and vulnerability which can only be broken by means of the quality education promised to the affected communities but denied by both government and the IHPs. In Camp Kinshasa, for example, 80% of the children do not go to school and do not have access to quality health care because their parents cannot afford either. In addition, teenage pregnancies, HIV/ AIDS, child labour, teenage marriages, and the phenomena of sugar daddies and sugar mommies are prevalent. The latter are used as livelihood strategies by both the younger and older generations in Camp Kinshasa and other clan villages (Interview 58, 13/03/2012, Camp Kinshasa – Inga Zone).

Applied to the communities affected by the IHPs, the theories of persistent inequality and IGT of poverty imply that persistent inequality, destitution, and impoverishment are man-made. Individuals are and remain poor because of the institutions and individuals who have vested interests in poverty production and the perpetuation of poverty in political groups and countries (Øyen, 2002: 3, 7) including the DRC.

5.2.4 The challenges of SNEL and additional phases of the Inga Hydropower Projects

SNEL and the IHPs face several challenges which undermine repairs, fundraising, and efficient management.

5.2.4.1 Substandard financial management and administrative capacity

A participant (Interview 99a, 14/03/2012, Kinshasa) from the AfDB confirms that SNEL and the IHPs face challenges which undermine their profitability in the present and future if not

addressed. The first set of challenges is related to financial management. Financial management deals with “the acquisition, financing and management of assets with some overall goal in mind” (Interview 99a, 14/03/2012, Kinshasa). Van Horne and Wachowicz (2008: 2) argue that the responsibility of decision-making for financial management can be broken down into three major areas: investment, financing, and asset management decisions. The objectives of financial management include the following:

- i) to ensure a normal and ample supply of funding for the programme/ project;
- ii) to ensure adequate returns on investments to shareholders who rely on the earning capacity and market price of their shares;
- iii) to ensure optimal use of funds, i.e. funds must be used in ways that maximise returns and minimise costs;
- iv) to ensure security on investment, i.e. funds should be invested in secure projects for adequate rates of returns, and
- v) to plan a solid capital structure to balance debt and equity capital⁵.

In the context of the IHPs, the WB (2007: 69) states that the objectives of the project’s financial management system are:

- i) to ensure that project funds are used for their intended purposes efficiently and economically;
- ii) to enable rapid disbursement of project funds to implementing agencies;
- iii) to ascertain that funds are properly managed;
- iv) to enable the preparation of accurate and timely financial reports;
- v) to enable project management to monitor the efficient implementation of the project, and
- vi) (6) to safeguard the project’s assets and resources.

The financial management of SNEL and the IHPs meets neither standard objectives nor the abovementioned principles in the areas of investment, financing, and asset management. The reasons are corrupt practices, absence of and/ or faulty electricity meters, illegal connections, and weak collection of revenues. SNEL has managed to collect only 50% of the consumption billed in Kinshasa (WB, 2007: 3, 5, 33-34). An expert and senior electrical engineer from African Development states:

⁵ <http://www.managementstudyguide.com/financial-management.htm>. Accessed on 11/12/2012.

Inga 1 and Inga 2 should produce electricity for the entire DRC. But this is not the case and could not be in a near future - if not ever. In addition, Inga 1 and Inga 2 function at less than 50 per cent of their capacity and the revenues from Inga 1 and Inga 2 have never appeared on national budget or re-invested in any particular activity of Inga, let alone transparency, sound commercialisation mechanisms or revenue collection. Seventy-five per cent of domestic consumers have no electricity meters or use old and outdated meters. This encourages theft and corruption at all levels. I could be happy and proud of SNEL and Inga, if the government of the DRC could show the investors what they are doing with the revenues from electricity generated by the Inga Hydroelectricity and ask the investors to cover the balance. Otherwise, I would be reluctant to invest in this project. The two preoccupations are likely to remain for a very long future. This is unbelievable ... (Interview 99a, 14/03/2012, Kinshasa).

On SNEL's move from a public enterprise to a commercial enterprise, the same expert adds:

The idea is not bad but it is oversimplified as if it was so simple, so easy to do in a so short period of time with and in its current state. Let us think differently here. If you have a car or a house and you would like to sell it as a second hand item. What do you do first before you put the advert "On Sale"? I think that you must first fix it, do repairs, and put some painting to make it attractive to potential buyers. Then you advertise your intention to sell it. This logic should also be applied in SNEL and Inga. Not otherwise. In other words: first, SNEL should improve its financial management to become a professionally run company with its own assets (revenues, benefits, the state of its accounts must indicate whom it owes? how much? for how long and so forth). Its revenue collection techniques and any other details which could attract investors must be in place. And only then the government and other interested parties could talk about SNEL as commercial company. Otherwise, the new structure will remain a pipe dream. Second, SNEL should do all the repairs and increase the capacity from 20 per cent to at least 70 per cent in terms of production of electricity. Third, SNEL should improve its recovery mechanism of the revenues through sound financial management and meter reading. Points (1) and (2) should attract investors before SNEL and the

DRC government could call for investors. This is critically important because the investors are constantly looking for the opportunities to invest ... I am worrying about the state of the consumers and individual clients of SNEL. As a consumer and Congolese citizen, I am not happy with the service that SNEL provides to the people of this country. I am also worrying as an expert on electricity working for the most important financial institution in the continent, the African Development Bank ... (Interview 99a, 14/03/2012, Kinshasa).

To illustrate the point, below is a table of collection rates per SNEL customer category.

Table 5.1 Collection rate per consumer category

Consumer Category	Collection Rate (Revenues collected as per cent of sales)
Government and parastatals	23%
Residential	32%
Low-voltage private sector	61%
Export	84%
Medium-voltage private sector	93%
High-voltage private sector	98%
Average (weighted by sales)	53%

Source: World Bank Report No: 39645 - ZR⁶

Table 5.1 shows that in 2005 SNEL had serious problems in recovering money from different categories of consumers. Only 53% of what was owed to SNEL was paid. Government institutions and parastatals were the least likely to pay with a 23% collection rate (WB, 2007: 3-5, 33-34). My fieldwork supports these figures and interrogates the statistics because institutions, namely the military camps and army bases, the army, and the police do not pay for their consumptions of electricity at all. In addition, some high ranking officials in the army and the police sell electricity to their tenants and neighbours (Interview 15, 29/02/2012, Inga Zone).

⁶ Project Appraisal Document on a proposed grant in the amount of SDR 196.1 million (US\$296.7 million equivalent) to the Democratic Republic of Congo for a regional and domestic power markets development project in support of the Southern African Power Market Programme (Phase AF'L-Ib). May 2, 2007.

An employee from the IHPs cautiously disagrees with the WB and the comments from the AfDB officials:

I am proud of the Inga Dams. I am also proud of being Congolese and part of a country that hosts this massive project. However, I am very concerned about the following. My first worry consists of mismanagement of the Inga Dams, poor revenue collection, corruption at all levels, and many consumers have no meters. This in turn has two consequences. First, these consumers do not pay for their consumptions and so SNEL is losing money and SNEL will remain unable to predict the need for electricity for present and future generations. Second, the consumers pay to SNEL individual agents and syndicates receive the money that SNEL should reinvest in the rehabilitation of the dams, transmission and distribution of electricity. In addition, the syndicates do not report their connections to SNEL and this theft increased consumption beyond the capacity of the machines and subsequent load shedding. My second worry is a culture of non-payment from some groups of Congolese. High rank military and police (for example generals, colonels, majors, lieutenants and adjutants) do not pay their electricity bills. Some of them trade electricity that they receive for free to civilians and businesses at higher rates. These military officials receive each month income from selling electricity. All military camps do not pay electricity even though they host businesses that use a lot of electricity such as cassava and maize mills, garages, taverns and so forth. Big companies and state companies pay electricity at a low rate because it is assumed that they consume more electricity and should pay more. But it is difficult to verify whether or not the claim of consuming more is accurate. Government Departments and Institutions do not pay electricity either, even though they have the budget for these expenses. My third worry is related to some high rank SNEL officials who steal electricity and sell it to businesses and residential areas. This theft is so well organised that individuals involved print two or more copies for each receipt number to be handed to consumer at the cashier. When the syndicates distribute the electricity bills, they know which ones belong to the syndicates and which ones go to SNEL. The electricity which is used freely or for which some SNEL officials are getting illegally paid for could substantially contribute to the much financial resource that

SNEL needs to rehabilitate Inga 1 and Inga 2 and pay a good salary for its personnel (Interview 15, 29/02/2012, Inga Zone).

A 23% revenue collection rate (WB, 2007: 34) is far too low. It confirms SNEL’s inability to raise funds for repairs and rehabilitation of existing plants. This organisation needs to improve revenue collection from all consumers. Table 5.2 illustrates the tentative costs and proposed sources of financing for SNEL, IDA and AfDB.

Table 5.2 Tentative costs and proposed sources of financing (figures include price and physical contingencies).

Component	Estimated Total Cost –US\$M	SNEL	IDA	AfDB
Generation Rehabilitation – Inga	226.7	0.0	198.3	28.4
Transmission Inga – Kinshasa	93.8	0.0	0.0	93.8
Distribution – Kinshasa	88.5	0.0	26.2	62.3
Capacity Building	41.2	1.5	34.7	5.0
Project Execution	48.8	11.3	37.5	0.0
Total	499.0	12.8	296.7	189.5

Source: World Bank Report No: 39645 - ZR

Table 5.2 confirms that SNEL and the government of the DRC do not have money to re-invest in rehabilitation and further development of the IHPs partly due to financial management problems. They were only able to contribute 2.5% of the estimate total cost for the rehabilitation of Inga 1 (351 MW) and Inga 2 (1 424 MW), commissioned in 1972 and 1982, respectively, despite an urgent need to rehabilitate the plants, an increased demand for electricity both locally and internationally, and technical challenges which reduced the capacity of the plants to produce electricity and generate revenues for investors and the people of the DRC. If these programmes go ahead, the DRC will have even less power in the decisions which affect SNEL and the IHPs, compared to other investors.

5.2.4.2 Lack of technical skills to efficiently negotiate contracts and do repairs

This set of challenges is related to technical management. It includes a lack of “skills upgrading, and the loss of qualified personnel during conflicts” (WB, 2007: 34). There is also a lack of skilled personnel. Technical skills would allow SNEL to negotiate contracts,

maintain the plants, do much needed repairs, and function at full capacity. High standards are required to professionally run diverse equipments with different specifications previously run by the six private companies which led to the creation of the SNEL by Ordinance-Law No. 70/033 of 05 May 1978. High standards are also important to generate, transmit, distribute, and commercialise electricity in the DRC (Kalowa, 1997: 20). Poor revenue collection deprives SNEL of substantial amounts of money which could allow them to purchase equipment for repairs, improve salaries and working conditions, and prevent qualified individuals from looking for better opportunities in other countries. The first two sets of challenges explain the poor negotiation in the contracts below with MagEnergy, WESTCOR, and BHP Billiton.

a) Inga Hydropower Projects and WESTCOR

According to Grynberg (2012), the Western Corridor (WESTCOR) was a Southern African Development Community (SADC) initiative that consisted of power utilities from the DRC, Angola, Namibia, Botswana, and South Africa.. It was created in 2003 with the objective of funding the different stages – pre-feasibility and feasibility studies, production, transport, distribution, and commercialisation of hydroelectricity – of Inga 3 to WESTCOR member and non-member countries and BHP Billiton’s aluminium smelter in the DRC. WESTCOR was supposed to ensure equal distribution of hydroelectricity. Eight years later in 2010, the government of the DRC realised that its delegation did not secure a good deal in WESTCOR due to corrupt practices and poor managerial capacity. As a host country of the project and considering that the Inga Falls Site is located in the DRC, the government of the DRC believed that after signing the agreement through its representatives it should have had a bigger share of the revenue than any of the four other countries.

A participant (Interview 21, 30/03/2012, Kinshasa) argues that after several unsuccessful attempts at re-negotiating the deal, the DRC withdrew its participation in WESTCOR and the institution collapsed. Pat Naidoo, chief executive of WESTCOR, disagrees with this version of the history. He argues that the collapse of WESTOR was due to

... different political aspirations among the DRC’s politicians had contributed to the collapse of the five country partnership ... Inga Three represented such a vision but political mandates, changed political agendas and individual greed have

undoubtedly contributed to the collapse of the Inga Three project for Westcor ... This project was supposed to be the foundation for economic growth and prosperity for the whole region and we had made sure that it was a project for Africa, conceptualised by Africans for the greater good of the continent as a whole. The DRC has, through its devious political manoeuvring, hijacked this project entirely and, if it goes ahead, the Westcor partners will probably refuse to negotiate with the DRC or buy any of the power it may, at some time in the future, offer to sell the partners (Hartdegen, 2009: 28).

Pat Naidoo deplores the poor decision-making of the government of the DRC. He believes that a lack of professionalism remains the root cause of the challenges that the DRC is facing and explains its withdrawal from WESTCOR. He laments:

It's very sad, they [DRC] made the wrong choice ... Westcor was looking for alternative sites for its much larger \$8-10 billion project, which would have supplied 3,000 MW of much-needed power to South Africa's Eskom and 1,000 MW to Angola, Botswana and Namibia by 2015. It [the project] gives Eskom more problems than 3,000 MW has now dropped off their radar. It [project] could probably be relocated to another site on the Congo River closer to Kinshasa if the family gets together again ... Hopefully sanity will prevail [this time] (Manson, 2010).

SNEL, through the former CEO of WESTCOR and its current technical adviser, ironically replaced by Pat Naidoo as CEO of the same institution, disagrees with the latter's emotional comments. He argues that the WESTCOR MOU signed between the five governments and their respective utilities specified that Inga 3 would be dedicated to WESTCOR but there was no timetable or any schedule of milestones to be reached. In addition, ESKOM failed to take a leading role in taking the project forward because "WESTCOR was not a priority project for ESKOM". Other utilities were too small to take the project forward. He is therefore disappointed to see that ESKOM has never allocated any financial resources or expertise to the project to enable WESTCOR to start its own organisational structure, to negotiate concession contracts with each country, to conduct feasibility studies of more than 500km transmission lines necessary for the Inga 3 Project, and to "produce a bankable document". In

the meantime, the DRC was approached by the BHP Billiton for the same project with the option of exporting surplus electricity to WESTCOR (Watt's Happening, 2009).

b) Inga Hydropower Projects and MagEnergy

MagEnergy, a subsidiary of Canadian-based MagIndustries, signed a contract in 2006 (SADC CSOs, 2010) with SNEL to refurbish four of the eight turbines of Inga 2 to supply electricity to MagAlloy, its sister company and also a subsidiary of MagIndustries, for a potash plant and magnesium smelter at Kouilou and Pointe-Noire (Congo Brazzaville). In this venture, MagEnergy could own 70% of the necessary investment, and South Africa's Independent Development Corporation would contribute 15% of the total costs. In 2007, the WB joined the party with an undisclosed loan for 50,000 new connections representing 1% of Kinshasa's population estimated at 5 million. The loan provided support for "unbundling and privatisation of SNEL and further developments at Inga" (Hathaway and Pottinger, 2009: 168-169).

The contract between the DRC and MagEnergy was not intended to deal with some of the root causes of the IHPs' failures. It only dealt with the refurbishment of different turbines to increase the amount of electricity generated by the IHPs despite the existence of a parallel billing system introduced and maintained by the syndicates (Interview 12a, 24/02/2012, Kinshasa). Suddenly, the contract was cancelled. A government official explains what happened to MagEnergy in the DRC:

MagEnergy has funding [for its operations] but it needs a substantial amount of energy that it can only have at a cheaper price from the IHPs because of a short distance between the IHPs and Pointe Noire. SNEL and the government of the DRC have the potential to generate hydroelectricity beyond the need of MagEnergy. This capacity depends on the refurbishment of the existing Inga 1 and Inga 2 but the DRC does not have funding for repairs. MagEnergy and the DRC brought their assets for a mutual benefit. MagEnergy signed a contract with the DRC for funding the rehabilitation of Inga 1 and Inga 2 in exchange of much needed hydroelectricity from these plants. Secondly, it was agreed that MagEnergy would deal with the commercialisation of the surplus of electricity generated. The payment in kind – i.e. hydroelectricity – should be delivered at

Pointe Noire. However, the contract did not specify how hydroelectricity should be transported from the Inga Dams to Pointe Noire or which institution should pay for the cost of this transportation. After signing the contract, the government of the DRC asked MagEnergy to cover the costs of transportation. The latter refused, arguing that it was not stipulated in the contract. As electricity could not be delivered without transportation facilities and subsequent costs, and considering that MagEnergy refused to cover the costs of transportation or to allow the government of the DRC to deduct these costs from the amount of electricity to be delivered, the DRC government was left with no other option than to cancel its contract with MagEnergy and pay the penalty (Interview 21, 30/03/2012, Kinshasa).

The question that one must ask is why a contract of this nature which did not include transportation-related details was signed by the two parties? Was anybody from the DRC side accountable, and to whom? Are future negotiations around the same projects going to be any different? Answers to these questions are likely to be negative.

c) Inga Hydropower Projects and BHP Billiton

BHP Billiton wanted to build a \$3 billion “world’s most modern aluminium smelter in the DRC and operate it according to international best practice” to supply 2 000 MW to its smelter and produce 800 000 tons per year (Creamer, 2007). Pat Naidoo attributes the DRC’s decision and subsequent collapse of WESTCOR’s plan to own Inga 3 to two main factors. He firstly argues that in addition to the diverging political interests of Congolese politicians, BHP Billiton which was one of the most important consumers of hydropower from Inga 3 “had circumvented the WESTCOR partnership and entered into direct negotiations with the DRC, despite an earlier undertaking that it would not do so” (Watt’s Happening, 2009), to cut commission costs. Secondly, the hydropower plant that BHP Billiton was planning to build could indeed replace a 5 000 MW project which was initially planned at the same location by WESTCOR, but rejected by the government (Manson, 2010), as discussed in section 4.3.2. Two years later BHP Billiton realised after reviewing the cost of the smelter that the construction costs would be high. This made MNC pull out of the smelter projects and consequently lose interest in the construction of Inga 3 (BBC News, 2012). This decision has left the government of the DRC with no other option but to go back to WESTCOR for a

possible review of the initial agreement among the five founding members even though building trust would remain one of the biggest challenges for WESTCOR members.

5.2.4.3 Political risks and interference

Political risks may occur following general instability and a lack of continuity, ownership, operation, transfer, and confiscation of assets. The highest political risk is expropriation. Interference consists of laws that point to a “minimum of percentage of national and social projects, and restrictions on the convertibility of currencies” (Van Horne and Wachowicz, 2008: 650). There is also a wide range of discriminatory practices and laws such as higher taxes, higher utility charges, and a requirement to pay higher wages than a national company (Van Horne and Wachowicz, 2008: 650-655).

In the context of the DRC, political risk and interference occur through inefficient socio-economic policies which have led to a total collapse of the economy of the country. It also takes place through the allocation of resources in less or non-economically justified projects. In fact, the series of mega development projects –Inga 1 and Inga 2, the Inga-Shaba Power Highway, *Domaine Agricole Presidential de la Nsele*, the Radio and Television Tower, the Sozacom Tower project, and the Project Maluka Steel Mill (AFRODAD, 2005: 24-25) – have been, and some of them still remain, politically motivated in various ways. In fact, the people involved have been appointed either on ethnic grounds or through clientelism which excludes competent people from taking up positions.

The indigenisation policy, called Zariniasation, occurred in 1973 in Zaire (today the DRC) and contributed substantially to the collapse of the Zairian economy. It was another ultimate form of political risk and political interference in the market as explained earlier. It was accompanied by an expropriation of assets, property, and companies owned by foreign investors. Interference can take the form of political intervention in the appointment of key officials in the private and public sectors as is happening on a regular basis in the mega development projects of which the appointment of Mr. Sonar Ferdinand and the replacement by his brother when he retired (Interview 64, 18/03/2012, Clan Nimbi – Inga Zone), would be the basic example. Interference can also occur in the form of clientelism defined as:

Instrumental friendship, in which an individual of higher socio-economic status (patron) uses his own influence and resources to provide protection or benefits, or both, for a person of lower status (client) who, for his part, reciprocates by offering general support and assistance, including personal services, to the patron (Scott, 1972, cited in Munoz, 2010: 3).

Political weakness and unwillingness to deal with internal issues and the social contract which the government has with the people of the DRC is another challenge. This in turn increases political risk in terms of socio-political and economic discontent and subsequent instability. As a top SNEL official explains below, further development of the IHPs will be disastrous without learning from, and improving on, past mistakes in Inga 1 and Inga 2:

I strongly believe that we need to start from ground zero with everything at both the SNEL and the IHPs. We need to rethink SNEL from the production, transmission, distribution and commercialisation of electricity to reducing the claims of “white elephant” projects. I have two main worries around this project. The first worry is related to our political authority and leadership who are unable or unwilling to understand the critical role that SNEL should be playing now and in the future in the economy and thus development of the country. As a result of this weakness, political authority does take decisions which protect and promote the interests of the country in the short, medium and long terms. The second worry is a consequence of the first. If the government of the DRC does not resist external pressure which is in conflict with internal pressure and the interests of the people of the DRC in terms of the tender processes around generation, transmission, distribution and commercialisation of hydroelectricity (Interview 18, 30/03/2012, Kinshasa).

5.3 MIXED ROLES PLAYED BY THE INTERNATIONAL FINANCIAL INSTITUTIONS AND DEVELOPMENT AGENCIES IN THE DEMOCRATIC REPUBLIC OF CONGO

International financial institutions (IFIs) and development agencies have played various and sometimes conflicting roles during the construction of Inga 1 and Inga 2. Some institutions played positive roles through investment and skills transfer, the transport sector, in policy making, and by giving advice. Others, and sometimes the same institutions, have negatively contributed to development in the DRC through the imposition of different forms of market-

oriented policies and the provision of funding to politically motivated projects with little or no financial justification thus displaying total neglect of their own guidelines. In the same vein, a respondent from an international non-governmental organisation and the University of Kinshasa argues:

The IFIs and development agencies provide funding for the projects which do not contribute to socio-economic and human development in the DRC. The work of the IMF and World Bank in particular had radically changed from financial and development agencies to multinational corporations' interest keepers. In addition, these institutions are used as imperialist tools for the dominance and control of developing and poor but sovereign countries' economies. They also encourage corruption and mismanagement of both funding and revenues from mega development projects like Inga because it is almost impossible to deposit huge amounts of money destined to development projects in developing countries into Switzerland's banks without the complicity of the same institutions which lend money. Lastly, these institutions have a double standard approach to funding and accountability. They do not care about the outcomes of projects funded in poor and developing countries as much as they do in developed countries' projects. They are doing so to perpetuate our dependency and poverty (Interview 46, 15/03/2012, University of Kinshasa – Kinshasa).

A researcher from the Johannesburg International Rivers office argues:

The IFIs and development agencies have been instrumental in fundraising for Inga 1 and Inga 2. In addition, they have been active in the mismanagement of the revenues from the first two phases because they did not advocate for public accountability, transparency and public participation. The IFIs and development agencies also put pressure on the DRC to repay the loan incurred to build the two projects. As there is no cash in the SNEL coffers, and by extension the Department of Finance, the IFIs and development agencies lent money to the DRC in order to repay the debts, thereby worsening the loan of the DRC which seem to only benefit the socio-political and economical elites (Interview 49, 29/05/2012, Johannesburg).

Nzongola-Ntalaja's (1986: 1-18) research findings and the work of Harford and Klein (2005:1) support the view that aid has different impacts in different recipient countries. It has the potential to increase the currency of aid recipient countries which in turn weakens the competitiveness of other exports. The repayment of development aid, which often benefits a small group of socio-political and economic elites at the expense of the majority, undermines the allocation of resources to the projects which have the potential to benefit the majority of the population.

5.4 PEOPLE'S ATTITUDES TOWARD FURTHER DEVELOPMENTS OF THE INGA FALLS SITE

Different groups have various expectations from the IHPs and their further development. Civil society organisations and ordinary people express their concern about the projects and the WB as CSOs suggestions to the WB illustrate in A7.

5.4.1 Clan chiefs and communities directly affected by the projects

The communities affected by the IHPs are divided around the current IHPs and further developments at the Inga Falls Site. One clan chief believes that the IHPs, have brought infrastructures which could not have happened without the IHPs even though there is room for improvement (Interview 58, 13/03/2012, Clan Representative, Mankuku Futila, Inga Zone). Others claim that the projects do not benefit them at all (Interview 77, 27/03/2012, Village Lubuaku – Inga Zone; Interview 68, 15/03/2012, Village Vunda – Inga Zone). However, they all strongly agree that further developments at the Inga Falls Site should begin by addressing the legacies of Inga 1 and Inga 2 (in terms of consultation with, and compensation to, the affected communities, and the signing of a Collective Agreement and Emphyteusis Lease between the *Ayant Droits Fonciers du Site d'Inga* and SNEL) as the respondent below insists:

Inga 3 and Inga 4 should only begin if and when the legacies of Inga 1 and Inga 2 are addressed. We sign a "Contrat d'Emphyteuse" and a "Convention Collective" which explain the rights and responsibilities of the conflicting parties... We are following the footsteps of our ancestors. They did not receive any compensation for the losses imposed to them in the name of development. People think that we

are powerless... If SNEL and the government continue to reject our offer for formal discussion around the IHPs, we [the dam-affected communities] will use one of the two strategies or both to push these institutions to deal with our demands. We ask our ancestors to bring more sand and big rocks in the dam reservoir to reduce the volume of the dam and so reduce water intake. This will in turn reduce the capacity of dam reservoir and so the generation of electricity. The financial consequence would be less revenue from both export and domestic consumption. Alternatively, we can call for our ancestors to break the machines and the dams. We cannot tell you that we have not begun to do that! Look only 6 out of 14 turbines are working. And they are not working in full capacity ...There is no legislation which predetermines people to be born in such or such land and so own it. There will be no document which will deprive us of our rights to our land and its natural resources (Interview 77, 27/03/2012, Village Lubuaku – Inga Zone).

Another clan chief endorses the above claim:

The IHPs in all its forms is bad for us. Look, we are suffering as if we [our ancestors] did not have or leave any inheritance or anything of value such as land for cultivation, water for fishing or forest for hunting and firewood in order to have a normal live. Before the construction of the Inga Dams, our ancestors were living fishing with spears, collecting fire wood, mushrooms and other important resources. But now we nothing left to us. We have been impoverished from one generation to the next because Inga Zone became a property of the state. And worse, Inga officials, and the government of the DRC have not assisted us with anything as the affected communities. We have no free and easy access to hospitals or clinics. Our children are not going to school because we cannot afford it. We do not even have the right to bury our relatives where we live. Communication with them whenever necessary is impossible We have no idea how much revenue the IHPs brings to the DRC's coffers. In addition, they [SNEL, government officials and the IHPs] promised compensation in cash and in kind, free houses, free schools and free hospitals, to the affected communities but we have never seen anything happening (Interview 68, 15/03/2012, Village Vunda – Inga Zone).

The IHPs brought hope and promises to the communities based in the Inga Zone but none of the promises have been realised in more than 50 years since the inception of the IHPs.

5.4.2 Ordinary Congolese in Kinshasa, Matadi and Boma

Ordinary Congolese (different from government officials and CSO representatives) from Kinshasa, Matadi, and Boma also have mixed feelings about Grand Inga. Some are proud of the project which makes their communities part of a wider international community given its potential to electrify the DRC, Africa, and southern parts of Europe, and the Middle East. This potential could be used as an engine for industrialisation, job creation, and socio-economic development of the Bas Congo Province and the DRC at large (Interview 12b, 14/04/2008, Kinshasa; Interview 58, 13/03/2012, Clan Representative, Mankuku Futula - Inga Zone). Other participants in this research including an AfDB senior official, students, and CSOs representatives are very concerned about the absence of direct dialogue between the affected communities and the government of the DRC. They are also concerned about the lack of political will to supply electricity to the domestic market which has existed since 1972. Drawing from the lessons learnt from Inga 1 and Inga 2, they are reluctant to endorse future phases of Inga 4 (Interview 12a, 24/02/2012, Kinshasa; Interview 49, 29/05/2012, Johannesburg; Interview 99a, 14/03/2012, Kinshasa). Reservation on the promises on further developments of the Inga Falls Site is also present in the declarations of CSOs in appendices A.5 and A.6. A female student from Kinshasa states:

I am worrying that the Inga Dams and SNEL do not focus on local markets and the needs of Congolese citizens even though these institutions are public entities with the obligations of serving and satisfying the interests of Congolese citizens. The recruitment of personnel is based on ethnic lines and ties or/ and political membership rather than experience and academic qualifications ... I know these challenges because they are part of political and populist propaganda from SNEL officials. They say that there is load-shedding because the turbines and transmission lines are too old and need maintenance. If the machines and transmission line work at 100%, there will be enough electricity for Kinshasa and its surrounding places. These infrastructures function at 25 per cent at the moment. If you include losses, we may be receiving 10 per cent of electricity

produced at the plant. Another critical point is salaries. Inga Dams and SNEL must pay their employees good salaries. This may reduce the temptations of being bribed by the consumers and so increasing losses to the companies (Interview 12a, 24/02/2012, Kinshasa).

A housewife and mother of six children agrees with the law student:

SNEL does not perform to our expectations as a public entity with a clear mandate to provide electricity and other related services to the people of the DRC. We pay our consumption of electricity to SNEL on regular basis and without delay. When the cable is stolen or cut off by SNEL agents – and again the question is who can steal high voltage cable and to sell it to who and where whilst there is only one state utility which deals with electricity? – SNEL obliges us to pay for the cable. When the cable is burnt because of overcharge compared to the amount of power that cable should supply for a specified number of customers, SNEL obliges us to buy a new cable at the market rate from SNEL. Otherwise, we can wait for electricity for up to 5 years before SNEL will “buy” and replace the stolen or burnt cable. The same applies to transformers. SNEL sends the bills of consumed electricity to us even when it did not supply electricity for the same period. We are therefore forced to go to SNEL’s offices to discuss the matter to cancel the bills or at least pay a small amount. Otherwise, SNEL will send its agents to disconnect our compound on the ground that their meter box is still here and consequently there must be some charges to pay (Interview 10, 24/02/2012, Kinshasa).

These opposing views around the IHPs may undermine the struggles of the affected communities and support from individuals and organisation in this cause. Internal conflicts over resources may increase the divide-and-rule strategy of the government to structurally exclude these communities from the redistribution of the IHPs’ revenues.

5.4.3 Transnational advocacy networks

The TANs are worried about the idea of the different phases of Grand Inga since SNEL and the government of the DRC have not learnt from their past mistakes. The TANs are worried

about further developments given that only 11.1% of the country has access to electricity (WB, 2012: 166), with negative consequences on education in rural areas where many girls have to do domestic chores. The TANs blame the government of the DRC and investors who do not seem to care about what their monies are doing in the DRC. Secondly, the investors continue to contribute more financial resources even though they are aware of the corruption, mismanagement, and lack of technical capabilities for sound financial management since the 1960s until today (Interview 53, 11/05/2012, Johannesburg). Another respondent from an international civil society organisation based in Kinshasa states:

Our organisation is very concerned with the fact that the Inga Hydropower Dams did not contribute to the socio-economic and human development of the DRC, even though these projects supply electricity to African countries since their inception. We are consequently worrying that further development of the projects will continue in the same pattern, making the poor of the DRC even poorer. And this is continuing to make socio-economic and political elites outside the country also richer. We are worrying because of two main reasons. First, the repayment of loans incurred to building these projects affects all Congolese people, both rich and poor, inside and outside the country. In addition, the resources used to repay the loans could be invested in more productive sectors such as road, schools and hospitals, to list just a few. Secondly, the plants never function at their full capacity because of the poor quality of the machines and corruption (Interview 41, 11/05/2012, University of Kinshasa, Kinshasa).

5.4.4 Government officials

Government officials from SNEL and other services have the same feeling as ordinary people. After all, they are part of the Congolese population and in different ways interact with people who are not part of this institution. These officials are concerned about further developments in the IHPs from different perspectives including the weaknesses of SNEL and the IHPs already discussed, and as the quote below supports:

The Inga Dams have the potential to produce enough energy to develop the country, improve the lives of Congolese families through the provision of energy and its multiplier effects such as industrialisation of the country and subsequent

job creation and generation of much needed revenue for reconstruction of the DRC. The Inga Dams also affect my life through the repayment of loans which do not benefit the country as a whole. All Congolese citizens contribute directly or otherwise to the repayment of these loans through sacrifice of their rights and expectations from the government ... I am very frustrated to know what we should be done in the Inga Dams but I am not given the opportunities to voice my concerns, let alone advice. Indeed, when someone looks at the Inga Dams from an outsider's point of view, he or she may have the impression that we are all incompetent since we leave the situation to rot. The truth of the matter is that the lack of real and participatory democracy, coupled with massive human rights violations and killings, do not allow us to do differently from a line drawn by the super powers of the world that I cannot name. It is sad to see sons and daughters of this country remain impoverished by the same project which was created to empower them and improve their conditions of life. Second and more importantly, when we stay powerless due to a total lack of willingness of the state to engage in constructive discussions with affected communities, it is painful and disappointing. I am therefore hesitant to support Inga 3 and Inga 4 before I see positive changes in management of Inga 1 and Inga 2 which are already operational for at least 40 years (Interview 21, 30/03/2012, Kinshasa).

This respondent blames industrialised countries although he does not list them, for all the problems that the IHPs experience. But the projects are run by Congolese. They should be blamed for the challenges that the IHPs have been facing since their inception, and not industrialised countries. An official from GEEC states:

I am very worried about SNEL and Inga Hydropower Plants in their current state and further developments of the Inga Falls Site in the future. There is no maintenance of the machines even though they generate money. I would expect to see SNEL functioning and producing enough revenue after 40 years of exploitation to fund repairs and further developments or at best expecting less investment from foreign donors. I am equally worrying about the concept of the Inga Hydropower Plants since their inception and further development of the site. This is so because the plants do not include enough domestic consumption and so the development of the DRC. The plants focus instead on export and selling

electricity to the mining industries. Lastly, we should, as a country, look for funding to build small dams in all the provinces rather than putting all our eggs in one basket. This could help us to shine from inside out, starting with domestic consumers and local development and thereafter begin to think about electricity for export. Additionally, I am disappointed because SNEL and its bosses, including both the Ministries of Energy and Environment, do not care about what is good for the people of the DRC (Interview 25, 15/03/2012, Kinshasa).

The HOD for rural electrification at SNEL explains:

I have nothing to think about the Inga Hydropower Plants because it is too big for us. Rural electricity advocates for small hydropower stations which should be spread across the provinces of the country and particularly in rural areas for two reasons. Our rural areas have never been taken into account in terms of electrification and this leaves our country behind countries like Algeria and Senegal, as well as countries which buy electricity from the DRC (e.g., Rwanda, Burundi, Congo Brazzaville and others). Secondly, small hydropower stations are cheaper to build compared to big and large ones. Third, small hydropower stations have minimised negative impacts on the environment and local communities. I am glad that the government is able at the moment to realise that SNEL as it stands today is costly and too heavy for the government to handle ... (Interview 13, 24/03/2012, Kinshasa).

This view from an insider and an HOD illustrates the challenges that SNEL and the IHPs face, and the need for the government of the DRC to reconsider the recommendations of the pre-feasibility study which advised the country to prioritise the domestic market (SICAI, 1964: ix, 374-410).

5.5 WINNERS AND LOSERS IN FURTHER DEVELOPMENTS OF THE INGA HYDROPOWER PROJECTS

This section uses situational analysis and mapping to highlight the complexity, contradictions, old and new conflicts, competition, cooperation, and power relations in and between groups of stakeholders involved in the IHPs.

5.5.1 Winners of the Inga Hydropower Projects

The winners of the IHPs are not ordinary Congolese citizens or the communities affected by these massive projects, as selected participants declared in Chapter 4.

5.5.1.1 International financial institutions and development agencies

There are two groups of IFIs and development agencies that benefit from Inga 1 and Inga 2 and will continue to gain in Inga 4. Sometimes the institutions which borrow are different from those which purchase defaulted loans; at times they are the same but work in tandem. The first group consists of the IFIs and development agencies that gain by design because they exist to make money (sometimes a lot of money depending on specific situations) even though aid has the potential to alleviate poverty and positively contribute to the development of aid receiving countries. They lend money with conditionality and high interest rates often without complying with their own guidelines (transparency, public participation, clear monitoring mechanisms, to list just a few) and without considering the inability of countries to repay their loans. They lend and continue to lend money to pay their employees and make profit. They often use the ambiguity of concepts such as corruption, public participation, good governance and accountability, as a smoke screen to continue to lend money. They also combine their own financial gain with their geopolitical interests (Moyo, 2010: 53).

The second group includes the IFIs and development agencies which help weak and collapsed states to repay the loans for either ‘white elephant projects’ or ones which are purposively funded to become opportunities for corruption, mismanagement, and self-enrichment to the detriment of the majority. Vulture Fund FG Hemisphere Associates or FH Hemisphere is a good example of such a company. Private institutions buy debt at a discount when indebted countries are in default of payment, and then attempt to get as much of the funds as possible through negotiation or litigation. Vulture Fund sues the countries for the total value of the debt in addition to interest which can be 10 or 100 times what they paid for it in courts around the world, and force them to pay the money to Vulture Fund instead of the creditor countries. Critics state that this company holds poor countries to ransom and prevents them from getting out of impoverishment and reliance on development aid. That is why numerous countries do not recognise the legality of Vulture Fund’s claims (Kavanagh, 2010; Jones, 2012).

Indeed, in 2004 FG Hemisphere bought a US\$18 million debt that SNEL owed to a creditor, Bosnian Energoinvest, for 10% of its value. The initial amount was a loan for just over US\$3 million in the 1970s as part of fundraising for the construction of the Inga Dams and subsequent Inga-Shaba Power Highway Project. But in 2009, potential investors for the IHPs experienced an unexpected shock via a court ruling in South Africa which allowed FG Hemisphere to get up to 15 years of payments from the revenues that South Africa owes SNEL from its consumption of electricity generated by the IHPs. The total amount of money that SNEL must pay back FG Hemisphere was equivalent of USD \$105 million in principle, plus interest (IR, 2011).

5.5.1.2 Multinational corporations and regional bodies which import and trade electricity

The MNCs win through access to cheap electricity, price liberalisation, cost over-runs, projects, and various corrupt practices. Regional bodies and state utilities such as ESKOM from South Africa and ZimPower from Zimbabwe buy cheap electricity from the IHPs and sell it to both domestic and international markets at higher prices. In 2003, the standard selling price of electricity to business consumers was 2.2 US cents/kWh whilst residential customers were charged 5.6 US cents/kWh (Clark *et al.*, 2005: 20; Eberhard, 2004: 226).

5.5.1.3 Socio-economic and political elites

The elites represent a “small fraction of the total community or organisation” also called the “oligarchy,” the ruling class,” or “active citizenry”. These individuals differ from the rest of the communities since “they are particularly occupied with the political process-with varying success, out of varying motives, and in different ways” (de Grazia, 1962). The elites in many cases undermine resource allocations to most viable projects in terms of return on investments. In the context of this research, the elites are a wide range of individuals: – leaders of political parties in power and in opposition, key representatives of NGOs and CSO and their relatives – who are all involved in or have connections with key government and SNEL officials in the DRC and other countries which buy or trade electricity legally or otherwise from the IHPs. As a result, the IHPs perform far below their capacity with a poor billing system which undermines the capacity of SNEL to fundraise for major repairs and

maintenance. An expert from the AfDB (Interview 99a, 14/03/2012, Kinshasa) states that the National Parliament of the DRC is scrutinising the new regulations of the energy sector in the DRC which intends to privatise different components of SNEL to make them economically profitable (Farrell, 2003). Yet the government and SNEL neglect to improve the management of this sector which could be used as a magnet for potential investors.

Outside the DRC elites in different countries play the same roles in state-owned utilities which deal with electricity-related activities or have vested interests in IHPs. In South Africa, Eberhard (2004: 15-21) contends that in the 1980s:

... The management of Eskom was not fully accountable and could plan and finance excessive generation capacity. Poor investment decisions were made. The result was massive costs to the economy and, initially, to the consumer as well. At the same time, the vast majority of disenfranchised South Africans remained without electricity... The consequence was large price increases, disquiet amongst stakeholders, who thought ESCOM's management was arrogant and unaccountable, leading, eventually, to a government inquiry in 1983. The De Villiers Commission criticized ESCOM's governance, management, electricity forecasting methods, investment decisions, and accounting ... The Commission's recommendations led to changes in the Electricity Act in 1985 and to new Eskom and Electricity Acts in 1987. ESCOM was renamed ESKOM and was reconfigured with a new two-tier governance structure, modeled broadly on the German corporate governance system ... The changes did not, however, make Eskom any less powerful (Eberhard, 2004: 220).

The weakness of Eskom's financial management led to the first privatisation study commissioned by the government and managed and led by Eskom with the assistance of government and industry stakeholders in 1988 (Eberhard, 2004: 15-21).

5.5.2 Losers of the Inga Hydropower Projects

The losers in these massive projects are paradoxically suffered by the same individuals and communities which most need positive outcomes from development projects.

5.5.2.1 Dam-affected communities

The Congolese people bear the costs and risks of these massive projects even though they are structurally excluded from the electricity supply. People in the vicinity of the IHPs and the 27 000 ha of the Inga Zone have lost their land, forests, water, social capital, sense of belonging and communality, without consultation with or compensation from SNEL, the government of the DRC, or the investors. What is more, the communities affected by the IHPs do not even have the opportunity of becoming employed by the IHPs as promised at the beginning of each phase:

I am a descendant of a former employee of SNEL. I graduated as an electronic engineer since 1988. Since then, I never got any opportunity to be employed here at home, whereas SNEL and IHPs hires people from outside the area. The local people are neglected. With equal qualifications, the local communities do not have equal opportunities for jobs. I need a job to support my family and myself inside and outside this camp which does not have water or sanitation. The Inga Dams claim on radio and TV that they provide jobs to 1 500 people, but in practice only 20 people have been employed by the project since their inception. We therefore need compensation for the losses and the suffering that our fathers and forefathers went through in the name of development (Interview 86, 13/ 04/2008, Camp Kinshasa – Inga Zone).

5.5.2.2 Ordinary citizens

The Congolese people have lost, continue to lose, and will be remain the losers in additional developments of the IHPs. Firstly, the initial phases of the IHPs were designed to supply electricity to mining and multinational corporations outside the DRC. This trend remains unchanged because the same actors with the same funding strategies produced similar outcomes. Secondly, the Congolese have lost and continue to lose through repayment of loans which benefit the elites, but not them. Thirdly, the Congolese have lost and continue to lose through the negative consequences that a lack of electricity and its multiplier effects have on the economy. Fourthly, Congolese children who go to school cannot study at night because of a lack of electricity. As a result, their performances at school will remain poor. Lastly, lack of access to electricity will contribute to GHG emissions and climate change through pollution from burning wood for cooking fires and deforestation to make charcoal.

5.5.2.3 Congolese small, medium and micro Enterprises and private sector

The IHPs have not prioritised rural electrification or the SMMEs despite the role that this important markets play in terms of permanent employment, job opportunities, and consequently the development of the DRC. The participants in a study on the limiting factors for emergence and expansion of the SMMEs and later industrialisation of the DRC, revealed that 45% of firms in Kinshasa, 61% of firms in Lubumbashi, and 69% of firms in Kisangani said in a research report published in 2005 that access to electricity was and still is the most important challenge that they face with regard to expanding their businesses and creating jobs (Ulloa, Katz, and Kekeh, 2009: 41). The WB (2010: 13-15) argues that 48 % of firms based in the DRC complain that the “delay in obtaining electrical connection(s)” is the biggest challenge. The same survey revealed that 31.2% of firms on the African continent experience access to electricity as a major challenge. In other words, a firm is more likely to be denied access to electricity in the DRC than in the average African country.

5.5.2.4 SNEL and the Government of the DRC

SNEL and the government of the DRC, as institutions, lose revenue from subscribers who have no electricity meters due to internal inefficiencies (a lack of political will and technical expertise as well as poor financial management), and an inability to accurately charge their consumers. These consumers pay a monthly flat rate billing that only takes into account their geographical location and socio-economic background as Table 5.3 demonstrates.

Table 5.3 Cost of electricity for individual subscribed consumers with no electricity meters (US\$ per month)

Flat Rate	Socio-economic background	Estimated total consumption	Billing
1	Category 4	300 Kwh	11.82
2	category 3	400 Kwh	15.56
3	category 2	600 Kwh	53.28
4	category 1	900 Kwh	79.56

Source: *Cellule d'Appui Technique à l'Energie du Ministère de l'Energie de la République Démocratique du Congo/ Technical Support Unit of Energy, Ministry of Energy of the Democratic Republic of Congo (1998: 87).*

SNEL also does not recover any money from non-subscribers who pay arbitrary amounts each month, often to SNEL agents who threaten these consumers with disconnection regardless of their consumption. Our participant observation and the respondents (Interview 2, 24/02/2012, Kinshasa; Interview 12b, 14/04/2008, Kinshasa) in this study revealed that numerous subscribed consumers without electricity meters as well as non-subscribers consume energy far beyond the estimates of SNEL and the government of the DRC for both domestic and commercial use. In addition, several members of the two groups trade electricity to other people around them for different reasons.

Corrupt practices in tender allocations, cost overruns of projects whose repayments will negatively affect Congolese citizens, and detrimental consequences of inaccurate revenue official billing systems with no transparency or accountability mechanisms, are equally undermining the financial sustainability of these institutions (Interview 56, 11/05/2012, Kinshasa).

5.6 CONCLUSION

Mega hydropower projects have different impacts on the poor and rich and on cities and rural areas. These discrepancies call for a re-formulation of the guidelines regarding EIAs and SIAs, and consultation with, and compensation to, the affected communities. Having appropriate policies in place is one thing but applying them and enforcing compliance is another thing, as our fieldwork has established. The WCD, development agencies, and financial institutions do not have the power to enforce implementation and in bringing about positive changes to affected communities and countries. In other words, the guidelines have no practical impacts.

The DRC did not have any laws to deal with the negative impacts of the mega hydropower projects during the construction of Inga 1 and Inga 2. The denial of land rights to indigenous people has persisted from the colonial to post-colonial eras. After independence, land dispossession was reinforced through the Bakajika Law and the Land Tenure Law of 1973. The guidelines of development agencies and IFIs were not applied during the construction of Inga 1 and Inga 2 due to the absence of civil society organisations and any advocacy. They are even less likely to be applied in further developments of the IHPs.

La Société Nationale d'Electricité and the Inga Hydropower Project have serious financial management problems and struggle to recover consumption bills consumption from both industrial and household consumers. This in turn undermines the ability of the DRC to substantially contribute to additional development phases. In addition, the projects lack technical capacity to maintain the plants and undertake repairs, and to efficiently negotiate international contracts and agreements of behalf of the DRC.

These weaknesses have led to the IHPs having winners (investors, multinational corporations, socio-political and economic elites, and high ranking officials) and losers (communities affected by the IHPs, ordinary Congolese, SMMEs, local entrepreneurs, SNEL and the DRC government).

CHAPTER 6. CONSEQUENCES OF INGA HYDROPOWER PROJECTS FOR THE ENVIRONMENT IN LOWER CONGO

6.1 INTRODUCTION

[Dam] reservoirs are thermally stratified, with a boundary (the thermocline¹) typically located at 2-3 meters depth. The water temperature abruptly decreases below the thermocline, and water trapped below this layer does not mix with the surface water. This deep water (the hypolimnion²) quickly becomes anoxic, and the soft vegetation from the drawdown zone that decomposes under these conditions produces methane rather than carbon dioxide ... (Ramaswamy *et al.* 2001, cited in Fearnside, 2009: 4).

The thermocline and the hypolimnion account of the main contribution of dam reservoirs to GHGs, global warming, and climate changes even though dam reservoirs contribute immensely to “economic growth, social development, and poverty reduction” (Igbinovia and Orukpe, 2007: 19). Indeed, electricity generation, distribution, and commercialisation at affordable rates represent key drivers for socio-economic development. Access to electricity is also critical to the fulfilment of the United Nations’ Millennium Development Goals (MDGs) because it provides relatively safe energy, reduces the time that women and girls spend in search of firewood for cooking, and allows children to study and prepare their homework in the evenings. This is particularly true in developing and poor countries, including the DRC. Energy usage tends to increase parallel with economic growth. A secure electricity supply is also required to support industrial development and to facilitate the movement of people and goods. It follows that an abundance or shortage of electricity, and energy at large, is reflected in both job creation and increased standards of living, and in unemployment and vulnerability, GNP, inflation, and loss of trade (Igbinovia and Orukpe, 2007: 19).

¹ “A thermocline, the location in the profile where temperature changes by more than 1° C within a 1 meter depth, occurs at 10 meters at the dam site and at 7 meters at the mid-reservoir site. The thermocline prevents mixing and allows the depletion of dissolved oxygen in the lower depths of the reservoir as decomposition consumes oxygen from the water column” (Utah Division of Water Quality, 2008: 18-19).

² The hypolimnion is the bottom layer of thermally stratified reservoir or lake with less dissolved oxygen and low temperature due to a lack of air circulation and a lack of combination between this bottom layer and the surface water layer (epilimnion) with high water temperature, continuous contact with air and a lot of dissolved oxygen (Schouten, 1998: 2).

This chapter focuses on the three debates around the hydroelectricity projects whose outcomes will have negative and irreversible impacts on the lower Congo River and the DRC at large. The first debate explores the sustainability of hydropower generation in the context of global warming and climate change, to question the mainstream understanding of water, specifically river flow, as a renewable resource. The second debate seeks to establish whether or not hydropower is clean energy. The third debate intends to determine if hydroelectricity is cheaper than electricity from traditional fossil fuels. The chapter also explores the capacity of the DRC government to mitigate the impact of GHGs on rural communities and the Congolese who live in cities.

6.2 GLOBAL WARMING, THE CONGO RIVER BASIN AND THE INGA HYDROPOWER PROJECTS

Hydropower depends on water flow and reservoir storage. Global warming and climate change both positively and negatively affect water flow through modification of temperature and precipitation patterns. Higher temperatures bring about changes in snowfall and in the timing and amount of snowmelt and so increase water levels in dam reservoirs due to a rise in sea levels which create floods, destroy communities and their livelihoods, and threaten small islands around the world and countries located below sea-levels. Shortages of rainfall and drought in river basins reduce water flow to turn turbines in hydro-dependent areas during times of high demand (Tarlock, 2012: 1738-1740). According to Huybrechts *et al.* (2001: 666), an increase in sea levels is the result of thermal expansion, the melting of mountain glaciers and ice caps, flow instabilities, and rapid ice discharge of Greenland and Antarctic ice sheets into the ocean when the surrounding ice shelves are weakened. In addition, the approximate rate of sea level increase caused by climate change resulting from human interactions with nature ranges from 0.3 to 0.8 mm/year. The figures show acceleration through the 20th century and are likely to continue increasing due to a lack of political will at global level to deal with climate change. Furthermore, unexpected snow falls, heavy rains, and drought due to climate change also have strong impacts on river basins.

The Congo River basin is situated in Central Africa. It is the second largest world river basing after the Amazon. It has a mean flow of 41 000 m³/s (Orange *et al.*, 1997) and is shared between Angola, Cameroon, the Central African Republic, the Republic of Congo, and the DRC. The Congo River basin occupies 3 691 000 km² and hosted 77 344 991 inhabitants in

2005 (Beyene, Ludwig, and Franssen, 2013: 1). The hydrological regime of the Congo River is mainly pluvial, and discharge fluctuations are due to the distribution of its tributaries on both sides of the equator - resulting in an annual hydrological cycle with two maxima in December and May, and minima flows in August and March. The Congo hydrological regime is one of the most steady in the world (irregular interannual ratio = 1.43) (Seylers *et al.*, 2005: 255-256). The Congo River Basin's forests create 75%-95% of the region's rainfall through evaporation and evapotranspiration (Maniatis, 2008: 1) and contribute 17% of West Africa's rainfall (Maniatis, 2008: 1; Nkem, Indinoba and Shandashonga, 2008). Yet the basin faces three serious challenges which undermine the livelihoods of local communities and increase their vulnerability to shock and climate change. The challenges also have the potential to undermine the financial return on investments in the mega hydropower projects in this region, and the IHPs in particular.

The first challenge consists of a decrease of 18% in the Ubangi River's discharge over the last 30 years. As a result of this reduction, the days in which it is impossible to navigate the river have been reduced to 4 days per year between 1935 and 1971, to 40 days per year between 1972 and 1982, to 107 days per year between 1983 and 1989, and to more than 200 days per year since 2002 (Ladel *et al.*, 2008: 2, 5, 8). Climate change in this region is also the result of deforestation creating a diminished carbon sink, pollution caused by equipment and humans involved in both legal and illegal logging, and global pollution which affects all countries (Beyene, Ludwig and Franssen, 2013: 1). The DRC is among the 10 countries with the largest absolute forest loss over the last decade (3.7 million ha of forest cover loss for the period 2000–2010) (OSFAC, 2011: 4). Nearby countries are also adversely affected. The volume of Lake Chad, one of the biggest lakes in the world, has reduced to a tenth of its size since the 1960s. Since the 1970 and 1980 droughts, it has shrunk from 20 000 km² to 2 000 km². The lake is subject to extreme evaporation due to its average depth of only around 2 metres (IRD, 2012). Lastly, there is advance of the Sahara and Sahel deserts (in the north) as well as the Kalahari desert (in the south) towards the equator line (Munzimi, 2008: 5).

Megevand (2013: 57-61) defines two sets of causes that decrease river basins and the Congo River basin in particular: proximate and underlying causes. The proximate causes comprise the extension of infrastructures (transport, settlements, public services, hydropower, mining, and oil exploration); agriculture (industrial farming, shifting cultivation, cattle ranching); the extraction of wood (for commercial use, firewood, and charcoal); and others (predisposing

environmental factors, biophysical drivers, social trigger events such as war, revolution, and social disorder). The underlying causes are demographic factors (migration, natural increment, population density, and population distribution); economic factors (market growth, economic structures, and urbanisation); technological factors (agrothechnical change, applications in the wood sector, and agricultural production); policy and institutional factors (formal policies, policy climate, and property rights); and cultural factors (public attitudes, values, and beliefs, and individual and household behaviour).

The United States Climate Action Report (USCLAR) (2010, cited in Siwila *et al.*, 2013: 30) warns that climate change has already distorted, and has the potential to continue to change “several aspects of the water cycle in the world, affecting where, when, and how much water is available for all uses”. As a result, water security becomes the cornerstone of survival or extinction in communities and countries through adaptation to climate change (Siwila *et al.*, 2013: 30). According to Beyene, Ludwig and Franssen (2013: 1-2), the impacts of climate change may occur as irregular distributions of precipitation in space and time. These impacts define the hydrologic characteristic of river basins. Global climate warming scientists expect the earth’s average temperature to increase by approximately 1.6°C over the Sahara and semi-arid regions of southern Africa and 1.4° C for equatorial African countries by 2050; and 3°C by 2080 (Beyene, Ludwig and Franssen, 2013: 1-2). This will have major consequences on hydrologic processes and likely impact the amount of local precipitation (IPCC, 2001, cited in Beyene, Ludwig and Franssen, 2013: 1-2). It is expected that the increase in temperature will rise the mean sea-level around the African coastline of about 25cm by 2050 (Joubert *et al.*, 1996, cited in Beyene, Ludwig and Franssen, 2003: 1-2) - when the last phase of the Grand Inga is expected to be completed.

Researchers warn that the African continent has been warming up since the 20th century at a rate of about 0.5° C every ten years or so with June to November being warmer than December to May (Hulme *et al.*, 2001: 149), and 1988 and 1995 being the warmest years of the last decade. It is expected that in 2070 the temperature will have increased by approximately 1° C along the coast and between 3 to 5° C inland of the coastal mountains of southern African countries (Tadross *et al.*, 2005: 1-2). This increase in temperature will occur with corresponding changes and increases in evaporation. It will be followed by changes in seasonal rainfall in the tropical western side for the months of October, November, and December whilst in January, February, and March, the model indicates drying to the west in

the tropics, and an increase in precipitation to the east and south east. This prediction is consistent with the statistical downscaling of multiple GCMs by Hewitson and Crane (2006: 1315). The impacts of climate change on the hydropower plants have the potential to reduce hydroelectric generation and the life span of infrastructures. These impacts include but are not limited to:

- i) surface water evaporation and catchment area evaporation which depend on the degree of humidity which is often low in the Congo River Basin;
- ii) reduced run-off due to drought and a subsequent decrease in electricity generation;
- iii) increased run-off due to flooding which may lead to water erosion and loads of sediment that settle in the dams, and
- iv) siltation deposits as a consequence of water erosion. Siltation reduces the life span through a decrease of water in the dam reservoirs and a subsequent decrease of water for irrigation and hydropower (Mukheibir, 2007: 1-2, 6-7).

After having discussed the impact of global warming and climate change in the Congo River Basin, the following section explores the concept of renewable and non-renewable natural resources.

6.3 RENEWABLE AND NON-RENEWABLE NATURAL RESOURCES

These concepts have diverse meanings to different stakeholders which lead to divergent views, and lack of political will to legislate on this issue. This is particularly true in industrialised countries which produce the most pollution yet fail to set clear time frames for co-operation with the private sector to address the problem. This has been the case since the adoption of the Kyoto Protocol in December 1997 and at the 17th Conference of the Parties in December 2011 in Durban, South Africa which reflected that little progress had been made.

According to Groth (2007: 1):

A non-renewable resource is a natural resource, the amount of which on earth is finite and which has no natural regeneration process (at least not within a relevant time scale). Hence, the stock of a non-renewable resource is depletable ... A renewable resource is also available only in limited supply, but its stock is

replenished by a natural regeneration process. Hence, if the stock of a renewable resource is not over-exploited, it can be sustained in a more or less constant amount ...

These definitions point to a fine line between renewable and non-renewable natural resources. Indeed, Groth (2007: 1) emphasises three important features of renewable and non-renewable natural resources:

- i) non-renewable resources should be examined within the relevant time scale (because they can be renewed if one looks at them from another angle);
- ii) there is a limited supply of renewable resources; and
- iii) if the stock of a renewable resource is overexploited it cannot be sustained in more or less constant amounts. This requires a change in mindset because, to quote Albert Einstein (cited in Harris, 1995), “[W]e cannot solve our problems with the same thinking we used when we created them”. In other words renewable resources as we know them will remain renewable if we use them wisely and protect them for future generations.

Hydroelectricity could be considered as a non-renewable energy (Handrickx, Poortinga and Kooij, 2001: 139). It is produced by the water flow from run-of-the river dams or classic dam reservoirs at sufficient altitudes to push water through turbines which in turn produce electricity. Sustainable hydroelectricity therefore requires continuous and constant water flows from river basins and stream(s). The constant flow of water depends on sustained regular rainfall in the river basin. In case of floods, there is more than enough water supply for the turbines. But this excess of water would be lost because the turbines should not generate electricity beyond their optimal capacity due to security reasons. But this flood water is not renewable because “its stock is not resplenished by a natural process” (Groth, 2007: 1). If there is little or irregular rainfall, there will be less flowing water and consequently less electricity generated. Furthermore, if extreme and prolonged drought due to global warming leads to decreased levels of water as is currently the case with Lake Chad whose size has decreased from 45 000 km² in 1960 to 10 000 km² in 1998 and 550 km in 2006 (Urama and Ozor, 2010: 14, 18), there will be less hydroelectricity or no hydroelectricity at all. Water, be it from groundwater or open river stream(s) should not be seen, as previously discussed, not a *de facto* renewable natural resource, because its quantity depends on rainfall which in turn

depends on the extent of vegetative cover and forests in a particular region. Hydroelectricity is therefore not a renewable energy *per se*.

Khanna (2003: 2) observes:

Non-renewable resources not only have a fixed stock, they are also in limited supply relative to the demand for them. Thus, old growth trees with life spans of as much as 1000 years, while renewable by the common definition, may be classified as non-renewable by economists due to their relatively slow growth to maturity and few remaining stands. They may also be ecologically unique and not reproducible. Similarly, while coal would be considered non-renewable by some, most resource economists would consider it renewable due to the vast remaining stock. It is estimated that at the current rates of consumption of about one billion tons per year, there is enough coal to last approximately 3000 years. From an economic perspective, there is no immediate coal scarcity simply due to its fixed stock. It is as if it were renewable. There is no scarcity rent associated with its extraction.

This suggests that whether natural resources are non-renewable or renewable, their lifespan depends on how we utilise and protect them for future generations. Some renewable natural resources could therefore be included in the list of non-renewable natural resources and *vice versa*. Pottinger's (2009) research findings on the effects of global warming and subsequent climate changes in rainfall, river basins, river flows, dam reservoirs, and their impacts on sustainable hydroelectricity generation, point to a similar conclusion. She notes:

Climate scientists predict truly alarming changes to many African waterways. In his 2006 report, Sir Nicholas Stern predicted that a 3-6 degree Celsius increase in temperature in coming years will result in a 30-50% reduction in water availability in Southern Africa. Scientists recently discovered evidence that droughts in West Africa lasted centuries in the past. Their study suggests that global warming could create conditions that favour extreme droughts across much of Western Africa, home to Africa's biggest reservoir (Akosombo's Lake Volta), among others. The Nile, Zambezi, and other major rivers are also expected to see worse droughts and

lower flows [this will in turn reduce or stop hydropower generation in some countries] (Pottinger, 2009).

This apocalyptic scenario reveals some of the causes of the dramatic decline in total rainfall in the Volta Basin since the early 1970s. Water shortages in the Volta Lake and the subsequent decrease in electricity production at the Akosombo Multipurpose Dam in Ghana particularly in 1983, 1998, and 2007 (Owusu, Waylen and Qiu, 2008), are stark reminders that water is not a renewable resource *per se*. As rainfall decreases in specific regions, water supplies destined to fuel hydropower turbines become precarious, as does hydroelectricity generation. Water will remain available as long as it is rationally utilised— i.e. as long as river basins are protected, deforestation is halted, and radical action is taken against GHGs. Furthermore, political will and commitment is required to diversify energy sources and invest in renewable energies such as wind, and solar and thermal energy to mitigate the causes of global warming.

The relevance of these findings to the IHPs is that they, *ceteris paribus*, provide tools for critical decision-making around further developments of the IHPs in terms of their sustainability and financial profitability in the next 100 years at least. These findings also improve stakeholders' understanding of the real costs and benefits of these massive projects. Consequently, stakeholders need to implement appropriate mitigation mechanisms to alleviate or at best prevent the repeat of the negative consequences of Inga 1 and Inga 2 in a bigger scale of Grand Inga. This is necessary because it is difficult to predict continuous and sufficient rainfall in the Congo River basin and the level of the Congo River in the next 50 to 100 years for the construction and exploitation of different phases of Grand Inga and optimal exploitation of the river despite a regular flow of 41 000m³/s (Mtegha *et al.*, 2012).

Congolese living in the southern part of the equator, the biggest portion of the Congo River basin, have witnessed a decrease in tributary river flows. Local people living at the mouth of the river have made the same observations although this needs to be statistically verified. A female research participant from Moanda, at the mouth of the Congo River, pointed to her market garden and said:

[T]his court yard is always covered by peanuts. I grow them instead of allowing weeds to invade my property. Weeds will come with snakes and diseases. But look, please pull out few plants and see how many peanuts you will get from

them. If you are lucky, you will get one or three maximum. Often there is nothing. This is an indication that climate change is here in the DRC and Moanda. It is no more an abstract thing. It is real and it is here to stay, and with it a wide range of issues that that we need to resolve ourselves. When there is no rain, there is no harvest, no food or money to send children to school. When there is no rain, there is no future for us. I wonder what is happening in other provinces of this country. I would be surprised to see something different from what we witness here (Interview 42, 28/03/2012, Moanda).

Another female participant from the same community pointed to a palm tree next to the Congo River and stated:

There is something that we do not understand anymore on this river. For a number years now, we have never seen Congo River flooding this area as we saw it when we were young girls coming every day to the same place to bath, wash clothes, do the dishes and to have a break from domestic work. As girls, we learnt quickly that we must assist our mothers whilst boys go to school or play soccer with their friends. I hope that you remember that from your own childhood in your villages even though you now live with white people from where you are coming. Rainfall is scarce and erratic. After months of the driest seasons ever witnessed in the region, suddenly, we may have heavy rains which, similar to droughts, destroy farming, harvests and leave communities without food or money. And when we go to the forest to pick up mushrooms, wild fruits and small fish with nets, we do not get much because there is no enough water due to the absence of regular rain ... (Interview 43, 28/03/2012, Moanda).

A high-ranking army official from the Kitona military base agreed that global warming and climate change have had negative effects in the form of irregular rainfalls, food shortages, and impoverishment of householders in both rural areas and cities. He commented:

I lived in this military base for 20 years now. Every year, between end January and beginning March, I used to see villagers going to cultivate small pieces of land within and around the military base for vegetables, maize, sweet potatoes and other local foods. Things are different for the last 10 years. People cultivate, sow

seeds and nothing is growing because there is no rain. What is worse is that the topography of the area does not allow manual irrigation. We are on the hill and water from the Congo River is far in the valley. As a result, these subsistence farmers are giving up agriculture and becoming domestic workers in the military base! The situation does not stop there. It has implications for the ability of these villagers to send their children to school, pay medical bills and support their families in the absence of all essential services from the state (Interview 17, 1/04/2012, Moanda).

Global warming changes the rainfall patterns and subsequently the Congo River flow. Although an in-depth study over several years is necessary to confirm or reject the impacts of global warming on the Congo River basin and the river flow, these testimonies coupled with predictions and simulations discussed in Section 7.2 indicate that any long term mega hydropower projects involving the Congo River may not be economically justifiable in the long term. In addition, the reality on the ground also challenges the mainstream and widely accepted thinking that water is a renewable natural resource.

After having demonstrated that hydroelectricity is not renewable energy *per se* since hydropower turbines are fuelled by water from run-of-the river and classic dam reservoirs, and that water is a scarce resource and therefore non-renewable, the next section will debunk the notion of ‘electricity as a clean energy’ (Niu and Insley, 2009: 1; Gretz *et al.*, 1990: 419; Khatib, 2000: 117; Tshering and Tamang, 2004: 3; Boronat *et al.*, 2006; Alstom Power, 2010; David, Aygün and Nicole, 2011: 8, 141; Stori, 2013: 2). This will be achieved by a comparative analysis of water powered plants and fossil fuel powered plants with particular focus on the former, since there is abundant literature on the contribution of fossil fuel powered electricity generation to global warming.

6.4 INGA HYDROPOWER PLANTS AND DEBATES ON CLEAN AND DIRTY ENERGY

This section explores the debate on clean and dirty energy and their implications on hydropower. The term “clean energy” has different meanings depending on the interests at stake. United States’ Senate Committee on Energy and Natural Resources (2012: 1) defines clean energy as:

Electricity generated at a facility placed in service after 1991 using renewable energy, qualified renewable biomass, natural gas, hydropower, nuclear power, or qualified waste-to-energy; and (2) electricity generated at a facility placed in service after enactment that uses qualified combined heat and power (CHP), generates electricity with a carbon-intensity lower than 0.82 metric tons per megawatt-hour (the equivalent of new supercritical coal), or as a result of qualified efficiency improvements or capacity additions at existing nuclear or hydropower facilities. (3) Electricity generated at a facility that captures and stores its carbon dioxide emissions.

Similarly, Optimal Energy Inc. (2008: 6) defines clean energy as encompassing “energy efficiency and conservation programs, renewable energy (e.g. solar thermal, solar photovoltaic, wind, hydro, biomass) and clean distributed generation including combined heat and power (CHP)”. This definition reflects mainstream thinking around energy generation, about the concepts of “clean” and “dirty” energy, and about modernisation theory on development in industrialised rich countries. The Optimal Energy Inc (2008: 6) definition of clean energy depoliticises the sources of global warming, climate change, and approaches to development that perpetuate poverty and block the upward mobility of the disadvantaged and structurally excluded poor. This research study endorses the first definition of ‘clean energy’ but does not consider hydropower and nuclear power as clean for a number of reasons. Nuclear power does not generate clean energy because of the risk of contamination associated with its generation. Furthermore, non-renewable fuel can contaminate the environment as happened when atomic bombs were dropped on the cities of Hiroshima and Nagasaki in Japan in 1945 (Rosenberg, n.d.). The same applied to the 1986 Chernobyl nuclear disaster in Russia (Bennett, Repacholi and Carr, 2006) and thereafter the 2012 Fukushima nuclear disaster also in Japan (Mahr, 2012). Decades later, the inhabitants of Hiroshima, Nagasaki, and Chernobyl are still exposed to radioactive material with negative consequences on their reproduction systems. It is expected that the same will apply in Fukushima. Furthermore, nuclear waste is very dangerous to store because of potential leaks and contamination and takes decades to disintegrate. Radioactive waste is very expensive to recycle. Hydropower is not clean energy because it pollutes the atmosphere and significantly contributes to global warming and climate change.

Dams and their associated reservoirs represent dynamic ecosystems in which several chemical reactions occur to decompose organic matter through bacteria breaking down organic matter in the presence or absence of oxygen. Hydropower plants can produce GHG emissions and so contribute to global warming and climate change (Mendonca *et al.* 2012: 66), as well as through (1) molecular diffusion at the water-air interface (Helie, 2004: 37-43; Roland *et al.*, 2010: 283-285; Teodoru *et al.*, 2010: 28), (2) bubbling from the sediment (Lima, 2005: 1697-1698, 1701), (3) degassing from water passing at the turbines (Kemenes, 2006: 664-666; Kemenes *et al.*, 2007: 1), and (4) turbulent degassing at the turbines and spillways in downstream rivers (Guerin *et al.*, 2006: 1-3). GHG emissions are mainly produced by dam reservoirs that flood areas previously occupied by trees, vegetation, and a wide range of organic matter, leading to aerobic and anaerobic decomposition particularly in “the early years following reservoir creation” (Barros *et al.*, 2011: 593), followed by the release of substantial levels of carbon dioxide, methane, and other gases into the atmosphere. The aerobic decomposition of organic materials emits carbon dioxide, nitrous oxide, and methane, whereas anaerobic decomposition of the same materials produces a significant amount of methane and nitrous oxide and a smaller amount of carbon dioxide (dos Santos *et al.*, 2006: 482). Carbon dioxide can also be produced through the aerobic decomposition of organic materials and as a result of the oxidisation of methane “in the water column and be emitted as carbon dioxide” (Barros *et al.*, 2011: 593).

Downstream of hydropower plants, energy generation by hydroelectric reservoir turbines results in two kinds of GHG emissions (mainly methane and carbon dioxide) which do not occur in man-made reservoirs built for irrigation, water supply, flood control, and aquaculture; degassing fluxes from water passing at the turbines and turbulent degassing in rivers downstream of the dams (Mendonça *et al.*, 2012: 66, 91). The research findings of Kemenes, Forsberg and Melack (2006: 663) for Brazil shed light on the processes of degassing fluxes from water passing at the turbines, and turbulent degassing in rivers downstream of the dams. They argue that downstream GHG emissions are a product of:

[t]he rapid depressurisation of reservoir bottom waters. The water intake for most hydroelectric dams is located near the bottom of the reservoir to guarantee sufficient head pressure to operate the turbines. As gas-rich water passes through the turbines and is exposed to the atmosphere, the hydrostatic pressure drops

immediately, and a large portion of the gas is released as bubbles (Kemenes, Forsberg and Melack, 2006: 663).

Fearnside (2004, cited in Farrèr, 2007: 1-8) asserts that the rapid discharge of water from the deep reservoir through the turbines involves rapid changes in pressure and temperature. As the pressure decreases, the solubility of the gases in the water also decreases and a substantial amount of carbon dioxide and methane is released into the atmosphere. Yet, “the amount of turbulence depends on the kind of spillway” and the amount of methane released when the water passes through the spillway is higher than the amount of carbon dioxide because methane is less soluble than carbon dioxide (Abril *et al.*, 2005, cited in Farrèr, 2007: 8).

Pre-dam GHG emissions include:

- i) gases from land-use;
- ii) emission value from marshes, bogs, running water, and grazing land;
- iii) carbon dioxide intake from different types of forests (Harby *et al.*, 2012: 8)
- iv) gases from different activities of construction work in the dams and dikes (Hélie, 2004: 159);
- v) carbon dioxide and methane exchange;
- vi) wetland carbon dioxide and methane exchange;
- vii) dioxide from deforestation, and
- viii) carbon sedimentation (Lee *et al.*, 2012: 23).

Bock (2004: 1) introduces a different perspective to the debate, namely that “the manufacturing of the construction materials and the actual construction of the dam” contributes to GHG emissions. The operation of the plant and its decommissioning at the end of its life represent various stages of a “Life Cycle Assessment (LCA) that takes into account all stages in the lifespan of the power plant” (Bock, 2004: 2-3).

Post-dam GHG emissions comprise emissions upstream and downstream from the river after decommissioning of the dam through the release of gases from built-up sediments in the dam reservoirs and during the transportation of built-up organic materials. Bock (2004: 2-3) argues that accumulated sediments in reservoirs restrain elevated amounts of carbon which may be released into the environment as CO₂ and CH₄ upon decommissioning of the dam. Similarly,

Liikanen (2002: 26-31) argues that the carbon released is partitioned into CO₂ and CH₄ emissions and converted into CO₂ equivalent emissions using the global warming potential³ (GWP) method. The addition of this global warming potential to a hydroelectric plant's total emissions, compared with the energy output of the hydroelectric plant over its lifetime, may demonstrate that hydroelectricity is less efficient than previously thought.

Between the pre-dam and post-dam phases, dam reservoirs also contribute to global warming and climate change through GHG emissions with between “5% and 20% higher per unit of area flooded than those from reservoirs in temperate and boreal regions ... [in addition] the worst tropical reservoirs, however, can contribute many times more to global warming than coal plant generating the same amounts of power” (McCully, 2002: 1). DelSontro *et al.* (2011: 9866) insist that tropical dam reservoirs are important sources of methane to the atmosphere in tropical regions and therefore increase global warming and climate change through turbine and downstream degassing. In fact, methane emissions in the atmosphere are estimated at between 10% and 15% of natural methane emissions. Chemical reactions that take place in dams, reservoirs, and natural lakes are followed by a series of exchanges – of the major components of GHG namely methane (CH₄), carbon dioxide (CO₂), and nitrous oxide (N₂O) – between aquatic milieu (the rivers, dams, reservoirs, and discharge levels downstream) and the atmosphere in three different pathways: diffusive fluxes, bubbling fluxes, and the absorption of carbon dioxide and diffusion of methane from the sediment. In fact, carbon dioxide and methane can be transferred by diffusion from or to the aquatic ecosystems through the air-water interface due to the difference of partial gas pressures, between air and water.

According to Harby *et al.* (2012: 7), the phenomenon of bubbling fluxes often occurs in shallow sections of lakes and dam reservoirs of less than 10 metres deep. This is the result of the direct transfer of methane from sediment or soil to the atmosphere. Bubbles build up if methane concentration in the pore of organic materials immersed in water exceeds its maximum solubility in water. In coastal zones covered by vegetation, carbon dioxide can be

³“Global warming potential (GWP) is an index, based upon radiative properties of well-mixed greenhouse gases, measuring the radiative forcing of a unit mass of a given well-mixed greenhouse gas in today's atmosphere integrated over a chosen time horizon, relative to that of CO₂. The GWP represents the combined effect of the differing lengths of time that these gases remain in the atmosphere and their relative effectiveness in absorbing outgoing infrared radiation. The Kyoto Protocol ranks greenhouse gases on the basis of GWPs from single pulse emissions over subsequent 100-year time frames” (Verbruggen *et al.*, 2012: 959-960).

absorbed from the atmosphere or from the water whilst plants operate as methane pipes because areas with vegetation produce 10 times more methane than areas without vegetation. GHG emissions through the pathways described are increased by the continuous input of organic and inorganic carbon that water carries from terrestrial ecosystems to the dam reservoirs, and by production within the water body. In tropical and boreal reservoirs, these emissions decrease with the age of the reservoir from about 3 years to more than 10 years, depending on the amount organic materials submerged, following the dam reservoir to reach the level of emissions of natural lakes.

Yet, the degree of GHG emissions depends upon the area and type of flooded vegetation, the type of soil which hosts the reservoir, the depth of water in the reservoir, the shape of the reservoir, the microclimate, and the physical and ecological features of the river basin which feed the dammed river (McCully, 2002: 2, 5, 6; Weisser and Strasse, 2007: 18). In the worst case scenario, river damming can produce more GHG emissions than fuel powered plants for the same amount of energy. In fact, Fearnside's (2004: 1, 10) research in 1990 – just 13 years after the filling of the dam reservoir was completed and when it was expected that the level of level of emissions would be stabilised – on GHG emissions from the hydropower production of the Curu-Una Dam in Para, Brazil, proved that they were 3.6 times higher than they would have been by generating the same amount of electricity from fossil fuel. In separate studies, Abril *et al.* (2005, cited in Fearnside, 2007) and Fearnside (2004, cited in Fearnside, 2007) found that the Petit-Saut Dam in French Guiana and the Balbina Dam in Brazil, demonstrated the same results. According to Fearnside's (2007) study on the Balbina Dam, the infrastructure was worse than that of a fossil fuel plant, in terms of GHG. These negative impacts of hydropower plants across the different phases i.e. from the deforestation for construction work to the operationalisation of the plants, and thereafter, confirm that hydropower contributes significantly to GHG emissions and subsequent global warming.

The debates and evidence around hydropower plants and hydroelectricity discussed in this section coupled with our own empirical experience and the testimonies from several participants to this research, endorse the school of thought which argues that hydropower is not a clean energy despite its contribution of 16% to worldwide electricity supplies in 2008 (Kumar *et al.*, 2011: 437). These studies on GHG emissions in different dam reservoirs do not include the IHPs or any other dams from the DRC. But if one considers the research outcomes of the Brazilian hydropower plants and the fact that Brazil has climatic conditions and river

basins similar to that of the DRC (in fact their river basins are respectively rated first and second in the world), the research findings on GHG emissions from Brazil have important significance for this research on the Congolese IHPs because the results of Brazilian hydropower plants can be applied to the IHPs in the DRC.

6.5 CLIMATE CHANGE MITIGATION AND CONGOLESE GOVERNMENT CAPACITY

The international debates on climate change and subsequent efforts to mitigate its negative impacts were brought to the attention of a wider audience since the Kyoto International Conference on climate change, and were followed by several other meetings. It started with a “reduction of emission from deforestation” (RED) as a financial incentive to deal with lands that are switched from forest to non-forest use excluding logging activities. The debates were articulated around the “reduction of emissions from deforestation and forest degradation” (REDD) and carbon stock density, and decreases in the forest in 2007, with particular focus on the Congo Basin countries (Megevand, 2013: 119).

The REDD initiative was considered “an incentive for developing countries to protect, better manage and wisely use their forest resources, contributing to the global fight against climate change” (the UN-REDD Programme, 2010). REDD strategies intend to value and preserve forest resources and provide alternatives for income generation for carbon stored in trees. This initiative compels industrialised countries to pay developing countries carbon offsets for their forests once carbon is assessed and quantified. REDD+ strategies go beyond deforestation and forest degradation, and include the “role of conservation, sustainable management of forests and enhancement of forest carbon stocks in reducing emissions in poor and developing countries” (UN-REDD Programme, 2010). REDD+ refers to “the institutions, processes, decision-making mechanisms that enable the country to channel resources from the international level to measures on the ground that address the drivers of deforestation” (Aquino and Guay, 2013: 1). The REDD+ mitigates GHG emissions and its strategies go beyond deforestation and forest degradation, and include the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in reducing emissions (UN-REDD Programme, 2010). The REDD++ mechanism remains the first attempt to broaden its scope to include GHG emissions from agriculture and other land uses including but not limited to agroforestry and forests (Megevand, 2013: 119).

The impacts of aid that developed countries bring to developing countries through the RD, REDD, REDD+, and REDD++ mechanisms, like several other forms of aid discussed in Chapter 3, depend on existing policy frameworks, the political will of donor agencies, the nature of governance in the aid recipient countries, political openness, civil society organisation involvement in public affairs, government capacity, and the political will of governments to balance their economic contracts with the IFIs and their social contracts with their citizens. According to Nzongola-Ntalaja (1986: 1-18), and I fully endorse his position, the outcomes of aid, positive or otherwise, mainly depend on internal factors such as government political will to recruit competent people and fight endemic corruption and clientelism, and on government capacity to build on the economic foundation left by white settlers. The outcome of aid is also a function of visionary and competent leaders from civil society organisations. These ingredients are still either absent or not sufficient to induce radical change in different spheres of Congolese society whose country is listed as a fragile state⁴ (Karsenty and Ongolo, 2011: 1-3) or dysfunctional state⁵.

The mechanisms of RED, REDD, REDD+ and REDD++ have therefore little potential to mitigate the negative impacts of global warming and climate change and to achieve REDD+ goals because (1) the government of the DRC is not capable of making a decision which will shift its “development pathway on the basis of a cost-benefit analysis that anticipates financial rewards” (Karsenty and Ongolo, 2011: 1), and (2) the DRC is not capable of implementing and enforcing “the appropriate policies and measures which could translate into deforestation reduction” (Karsenty and Ongolo, 2011: 4). This is so despite REDD+ hybrid nature in the DRC that combines “the establishment of a national REDD+ fund and independent REDD+ projects at the local level” in order to achieve a higher level of legitimacy for all stakeholders (government entities, civil society organisations and private sector) if one considers that they plan participatory and wider accessibility to funding for different stakeholders (Aquino and Guay, 2013: 1, 4). The REDD+ should rely on competent institutions for enforcement and

⁴ Fragile states refer to the states that are characterised by a “lack of political will and/ or capacity to provide the basic functions needed for poverty reduction, development and to safeguard the security and human rights of their populations” (OECD/DAC, 2007: 29).

⁵ A dysfunctional state is mainly characterised by increasing incompetence or paralysis of the administrative, legal, extractive and coercive institutions that form its essence. Some symptoms of dysfunctional states comprise the following: (1) widespread corruption, (2) the collapse of regular channels of communication and interaction between government and state officials, (3) between state officials and society, and (4) among state officials themselves; (5) the fragmentation of society; and (6) the loss of government control over the coercive institutions of the state (Busza, 1997: 3-4).

monitoring, establishing credible monitoring systems which allow progress to be accomplished in specific countries, and they should contribute to the training of local communities (Megevand, 2013: 119).

6.6 COST OF HYDROPOWERED PLANTS VERSUS FOSSIL POWERED PLANTS

This section compares the cost-benefits of hydropower plants and thermal plants with the intention of assessing which sources of energy contribute more to climate change and global warming.

6.6.1 Hydro powered plants

Supporters of hydropower contend that hydropower plants are cheaper to run and maintain than fossil fuel powered plants for two main reasons. First, hydropower plants are powered by water flow and water is a free and renewable resource (Hall *et al.*, 2012: 8-1, 8-7)). Second, hydropower plants have a long life cycle. They are “able to recover costs before the end of their actual service life. These projects have no fuel cost, have robust equipment and extremely low operating costs after the debt service is paid” (Hall *et al.*, 2012: 8-8).

However, the debates around renewable and non-renewable resources on the one hand, and clean and dirty energy on the other, as noted in previous sections, strongly suggest that water is not a renewable resource *per se*. Indeed, water is a renewable resource “only if it used wisely” (Durgunoglu and Singh, 1993: 1), and if river basins are protected. Water sustainability depends on how we exploit and manage water. In addition, as the previous sections demonstrate, hydroelectricity is not clean. Hydropower plants have the same damaging effects on climate as fossil fuel powered plants. In some instances, hydropowered plants are more harmful than the latter for the same amounts of electricity.

The next section investigates what it is required for financially profitable hydropowered plants. It then identifies the necessary conditions for fossil fuel powered plants. Hydropowered plants need optimum capacity in the dam reservoirs to maintain profitable electricity generation through regular removal of sediment, maintenance of river flows, and protection of the biodiversity, and finally good health of both the staff working at the plants and the host communities.

6.6.1.1 Sediment removal

A close investigation of hydropower plants with particular focus on large plants, reveals that they are cheap in monetary terms in the first few years of their life cycles and thereafter more financial resources are required for sediment removal to maintain water intake to financially acceptable levels. The costs thereafter increase proportionately due to ageing of the reservoirs and plants caused by sedimentation or saltation behind the dams: “Reservoir sedimentation involves entrainment, transport and deposition. They originate from the catchment, river system and settle in the reservoir” (Bashar *et al*, 2010: 5). The result is soil loss and erosion from the reservoir watershed. This in turn leads to loss of reservoir capacity, water intake, and hydroelectricity generation. Durgunoglu and Singh’s (1993: 1) research findings point in the same direction. They argue that, “the loss of storage capacity caused by sediment deposition behind the dam [is] one of the important impacts of building and maintaining dams” (Durgunoglu and Singh, 1993: 1).

Sediment deposition plays two major roles. On the one hand, it spreads upstream and up tributaries and increases local groundwater tables. It also diminishes channel flood capacity and bridge navigation clearance, and affects water division withdrawals. On the other hand, a decrease in sediment load downstream can result in channel and tributary decay, bank erosion and a “change of aquatic habits to those more suited to a clear discharge. Worldwide, reservoir sediment is a serious problem and is considered as a silent enemy” (Bashar *et al.*, 2010: 1) of hydropowered plants. The research findings on the sedimentation of the Roseires Reservoir reveal losses in the energy sector, 25% of which are a consequence of the cost of annual dredging, while other losses are the result of decreased generation efficiency due to the passage of high sediment concentrations (Bashar *et al.*, 2010: 1). The DRC’s Inga 1 and Inga 2 face the same challenge of sedimentation which is partly responsible for the reduction in capacity of the two plants (Hathaway, 2005). The poor performance of Inga 1 and Inga 2 is also “partly a result of years of war, partly a problem of lack of local skills, partly a problem with the corrupt and mismanaged state energy utility” (Sanyanya, 2013).

Durgunoglu and Singh (1993: 1) claim:

Probably one of the most important impacts of building and maintaining a reservoir is the loss of storage capacity caused by sediment deposition behind the dam wall. Sediment deposition in the reservoir reduces the water storage volume and decreases or even negates the utility of the dam, and the water quality in the reservoir deteriorates. The loss of utility of a reservoir as a result of sedimentation or siltation can be considered an economic, environmental and even a design failure.

Strict, efficient, and expensive strategies are therefore required to maintain control of sediment deposition. The plants need to maintain sustainable electricity generation from inception to decommissioning of the dams. This can be achieved through two methods and at three different but vital areas of the dam life cycles. Sedimentation can be controlled through:

- i) 'controlling soil erosion through watershed management';
- ii) 'handling sediment where it creates the problem in the reservoir' or both, i.e., controlling soil erosion and dealing with sediment in the reservoir (Durgunoglu and Singh, 1993: 1).

Proactive and reactive measures need to be adopted in the catchment, the reservoir, and at the dam. In the catchment area, the following measures are required:

- i) erosion protection (soil conservation) through plantations or forestation, stabilisation of slopes, and erosion protection at rivers (against bank and bed erosion);
- ii) bed load retention basins (built on torrents and mountain rivers, requiring regular emptying, an insignificant retention of suspended load, and having a small effect on reservoir sedimentation), and
- iii) sediment retention dams upstream of the reservoir (through which bed load and suspended load is captured and the degree of retention for fine sediments is 90%.

For example, if the capacity of the retention basin is a minimum of 10% of the yearly in-flow, mechanical cleaning or flushing is required). In addition,

- iv) sediment diversion and flushing tunnels (sediment by-passing structures) in combination with sediment-retaining dams upstream of the reservoir even though these measures are only applicable to small reservoirs; and lastly,

- v) (off-stream storage reservoirs that store sediment free water (Schleiss, 2008: 10-26).

In the reservoir, the following measures to prevent reservoir sedimentation are necessary:

- i) dead storage typically designed to last 50 years;
- ii) mechanical removal (at full or empty reservoir and dredging for 50 years);
- iii) mechanical removal (at full lake but limited depth and hydrosuction or airlift);
- iv) mechanical removal (at full lake but limited depth, and slotted pipe sediment sluicer – SPSS);
- v) hindering settlement and re-suspension of fine sediments (new material and coating that increase the abrasion resistance of turbines, creation of turbulence in the reservoir which hinders settling of fine sediments at least near intakes, and water release structures of water transfer tunnels); and
- vi) hydraulic removal or flushing at drawdown of the reservoir. These measures damage or destroy aquatic organisms, especially fish, and lead to the covering of benthos by sediments, local depositions in the river bed, and an increase in the bed elevation sedimentation of downstream reservoirs, among other negative impacts (Schleiss, 2008: 10-26).

At the dam, measures to prevent reservoir sedimentation are:

- i) elevating the dam;
- ii) elevating the water release structures (bottom outlet, power intake);
- iii) flushing the cones in front of the water release structures under pressure;
- iv) venting turbidity currents (high capacity release structures required);
- v) drawing down the reservoir during annual floods; and
- vi) releasing highly sediment charged water through turbines under controlled concentration (Schleiss, 2008: 10-26).

The hydropower industry is highly specialised. It is also costly and prone to corruption and political manipulation and interference which render the industry difficult to run efficiently - from the design to the decommissioning of dams. The strategies outlined in this section are so expensive that many stakeholders are not prepared to implement them even though they could maintain electricity production at a sustainable level through the prevention and reduction of sedimentation in dam reservoirs. Furthermore, were these strategies adopted, they would

increase the cost of electricity beyond a competitive level with fossil fuel-powered electricity generation. This situation may be acute in the war-torn DRC where there is no political will or compliance mechanisms regarding the design, implementation, and monitoring of large projects such as the IHPs. As a result, Inga 1 and Inga 2, built in 1972 and 1982 respectively, function below their capacity due to, among other reasons, sediment deposition in the two run-off river dams.

6.6.1.2 River flow and protection of biodiversity

Hydropower generation leads to intermittent or permanent water-flow disruption and water diversion. The consequences of these impacts on biodiversity and on indigenous people's livelihoods and vulnerability in times of unexpected events and shocks are serious and sometimes irreversible. Biodiversity in the context of this research study refers to "...the variety and variability among living organisms and the ecological complexes in which they occur" (Angermeier and Karr 1994, cited in Rosenberg *et al.*, 1997: 37).

The long-term consequences of river flow disruptions includes a "loss of biodiversity [that] compromises the structure and function of ecosystems, which can in turn compromises the economic well-being of human populations" (Coleman 1996, cited in Rosenberg *et al.*, 1997: 37). The different components of biodiversity are so intertwined that any environmental changes following habitat destruction result in social and economic challenges to communities that depend on natural resources.

Water diversion, as it occurs in the case of run-off from river hydropower plants, may pose serious challenges to fish migration, the natural flow of nutrients, sediments, organic matter, and oxygen. These challenges negatively affect both the upstream and downstream habitats of fauna and flora. A survey on endangered species in the US conducted by Losos *et al.* (1995, cited in Rosenberg *et al.*, 1997) revealed that water development projects have affected larger numbers (30%) of species than any other resource extraction project. Rosenberg *et al.*'s (1997: 37) research findings in Canada reveal that:

Animals were affected more than plants; water developments endangered ~95% of listed clam and mussel species (see also Devine 1995), and ~85% of listed fish species (Loses *et al.*, 1995). Nelson *et al.* (1991) identified 214 native, naturally

spawning stocks of Pacific salmon, steelhead and sea run cutthroat (*Oncorhynchus* spp.) from the Pacific northwest that are endangered (1 stock), are facing high (101 stocks) or moderate risk (58 stocks) of extinction, or are of special concern (54 stocks). Eighteen of the high-risk stocks may already be extinct.

The root causes of the plight of these stocks were and still are “(1) habitat loss or damage, impeded movement and low flows, (2) overfishing, and (3) negative interactions with other species of fish, including hatchery stocks” (Rosenberg *et al.*, 1997: 37). While a similar study has not been conducted at the site of the IHPs, and taking into consideration the fact that this site will host further developments which will eventually lead to water-flow disruption, it is expected that similar long-term effects will occur upstream and downstream of the hydropower plants as well as during the pre- and post-dam periods.

At the level of the ecosystem, one of the most important costs of changing a river by turning it into a series of reservoirs is the disruption of energy flow into the system from “allochthonous and autochthonous sources” (Vannote *et al.*, 1980; Johnson *et al.*, 1995, cited in Rosenberg *et al.*, 1997: 37). Biotic communities structured along resource gradients and downstream communities at least partly depend on upstream processes (Vannote *et al.*, 1980; Johnson *et al.*, 1995, cited in Rosenberg *et al.*, 1997: 38). Impoundments along river courses can interrupt natural longitudinal gradients, causing longitudinal shifts in physical and chemical variables, which in turn cause biotic shifts (Ward and Stanford 1983, cited in Rosenberg *et al.*, 1997: 38).

Methylmercury bioaccumulation of fish and invertebrates from dam reservoirs and the subsequent consumption of fish and birds by humans is a worrying consequence of the creation of a reservoir. Methylmercury is an organic molecule, mainly produced by bacteria (Berman and Bartha, 1986, cited in Rosenberg *et al.*, 1997: 28) from inorganic mercury naturally present in organic materials inundated during the creation of a reservoir (Bodaly *et al.*, 1984a; Hecky *et al.*, 1991; Kelly *et al.*, 197, cited in Rosenberg *et al.*, 1997: 28).

At elevated rates, methylmercury is a neurotoxin which negatively affects the human foetus (Weihe *et al.*, 1996, cited in Rosenberg *et al.*, 1997: 28). This toxic substance is present in dam reservoirs but can also be present up to 100 km downstream. Methylmercury contamination can last between 20 and 30 years or more. Widespread logging and/or forest

fires in the river basin can increase the concentration of mercury in dam reservoir ecosystems (Rosenberg *et al.*, 1997: 28).

Research on northern Canadian reservoirs revealed the following characteristics of methylmercury in fish:

- i) it can reach very high levels;
- ii) levels of methylmercury in predatory fish habitually remain high “for 2 to 3 decades following impoundment, while levels in water and zooplankton remain elevated in biota elevated for 10 and 10-15 years respectively”, and
- iii) in some cases, methylmercury concentration can be important in the biota downstream of reservoirs (Lee, Cheng and Scheelar, 2012: 51).

6.6.1.3 Prevention or reduction of invasion of aquatic weeds

The invasion of a wide variety of species (floating, submerged, and emergent) of aquatic weeds remains a permanent feature of river banks, canals, estuaries, lakes, ponds, reservoirs, and rivers. Challenges arise when “non-native plants are introduced either internationally or by accident into ecosystems in which they did previously occur”. Aquatic weeds present both advantages and disadvantages (Rockwell, 2003: 1-3). The economic importance of aquatic weeds concerns their ability to be more productive than conventional terrestrial crops. In addition, they do not compete with other crops in terms of fertilisers, water, or land. They are abundant in the humid tropical and subtropical zones of the world and do not require intensive cultivation. They provide good sources of livestock feed (a source of protein for water buffalo and cattle), human food (e.g. floating rice, wild rice, taro, swamp taro, arrow head, cat-tail, etc.), fish feed (such as tilapia, silver carp, South American silver dollar fish, cray fish, etc.), organic or biofertiliser (i.e. a source of organic manure or bio-fertiliser because of appreciable amounts of nitrogen, phosphorus, and potassium), energy, fibre, and paper. In addition, “aquatic weeds have the capacity to purify waste water through the uptake of dissolved nitrogen, phosphorus and undesirable excessive minerals, including heavy metals” (Panda, 2013: 99).

The negative economic impacts of aquatic weeds seem to outweigh the economic value of these resources. Chandy (2012) identifies four main challenges posed by aquatic weeds. First, submerged, immersed, and marginal weeds in and along irrigation canals, ditches, and

drainage channels obstruct water flow, augment evaporation, cause damage to canals and structures, and clog grates, siphons, valves, sprinkler heads, bridge piers, and pumps. Consequently, one of the objectives of river damming, namely flood control, is undermined. They also cause significant loss of water through evaporation and transpiration. In India, aquatic weeds decrease water flow in some channels by 30 % – 40% of the designed flow rate. Second, deep-rooted submerged weeds impede another objective of river damming, namely navigation. Some aquatic weeds like water hyacinth and alligator weed become tightly packed and prevent boats and ships from moving along the river. Third, submerged and floating aquatic weeds in farm ponds, village tanks, and water reservoirs reduce their utility for water storage and irrigation. Fourth, aquatic weed growth prevents the use of local waters for fishing. The weeds also absorb large quantity of nutrients from water and this reduces the availability of nutrients to desirable planktonic algae. The weeds compete with other living organisms for oxygen and prevent gaseous exchange with the atmosphere, having an unfavourable effect on fish production and harvesting.

Aquatic weeds reduce water flow, the capacity of dam reservoirs and water intake, and consequently have serious negative consequences for hydropower generation and the productivity of the hydropower industry. It is therefore imperative that proactive and reactive measures be put in place to control, slow down, and prevent the invasion of aquatic weeds in the catchment, the reservoir, and the dam. The choice of control mechanism depends on the extent of the damage to fish and other wildlife habitats caused by aquatic weeds, and whether the control is proactive or reactive. The control methods can be mechanical, biological, or chemical.

Mechanical methods utilise physical force to remove aquatic weeds or alter the environment so that aquatic weeds cannot survive. Such methods include dredging (i.e. cleaning weeds from drains and ditches), drying (a simple, inexpensive and effective method for controlling submerged aquatic weeds that drains water from a pond or ditch), mowing (i.e. immersed weeds are cut with scythes or swords), hand cleaning (i.e. cutting and removing the accumulated weed growth with heavy knives and hooks), chaining (i.e. the chain drags over the weeds and breaks them off), burning (i.e. a hot flame is passed over the vegetation at such a rate that plants wilt but are not charred), and cutting (i.e. a mechanical weed cutter is used to cut the submerged weeds at 1 to 1.5 m deep in the water) (Chandy, 2012).

Biological methods of aquatic weed control consist of introducing fish, snails, fungi, insects and mammals which feed on aquatic vegetation. For example, about 75 fish can consume one hectare of vegetation. A thread blight caused by *Alternaria eichhorniae* is a potential biological agent for control of this weed and the following fungi have proved promising in the eradication of water hyacinth: *Cercospora rodmanii*, *Acromonium zonatum* and *Ureda eichhornia*.

Flee beetle (*Agariches hydrophylla*) is effective against water hyacinth and salvinia, whilst thrips (*Amgnothrips andersoni*) and moths (*Vogtia malloi*) control other weeds. Sea cows or manatees absorb submerged vegetation and can consume 20 kg of vegetation per day. Snails consume submerged weeds like water hyacinth, salvinia, and the leaves of water lettuce. More than 20 000 snails per hectare can clear thick weed growth within 10 -15 days (Chandy, 2012).

Chemical methods refer to the use of herbicides to control aquatic weeds. The treated aquatic weeds die and slowly rot in the water. Compared with physical methods: (1) herbicides can reach weeds which are inaccessible to mechanical methods, (2) one or two applications of herbicide in a season are adequate, while repetitions of mechanical methods are required, (3) herbicides enable the dead weed growth to sink to the bottom, avoiding loss of plant nutrients from the water bodies, and (4) herbicides are an economical and time-saving method (Chandy, 2012).

Methods to control aquatic weeds – like those advised for de-siltation, waterborne diseases, and biodiversity sustainability – are expensive and can increase the cost of hydroelectricity far beyond the reach of average industrial and domestic consumers. In addition, given the life cycle of hydropower plants of more than 50 years, there are limited options: minimising operational costs including the costs which should result from proactive and reactive measures in order to maximise profit, neglecting preventive measures which could maintain the level of productivity, or bribing the regulators to avoid compliance.

6.6.1.4 Human health issues

A survey of selected dams undertaken for this research study revealed that river damming represent a breeding ground for numerous waterborne diseases despite the fact that some of

these dams have been successful in socio-economic and political terms. The Akosombo Hydroelectric Project in Ghana has made and continues to make a substantial contribution to electricity generation and will at least until the negative impact of global warming decreases the level of the Lake Volta which feeds the dam. Indeed, the Akosombo Hydropower Project supplies the major portion of electricity in Ghana - mainly in the mining sector and for the domestic needs of the country (Alhassans, 2009: 153). This plant also contributes to the general state of well-being of Ghanaians (Pittaluga *et al.*, 2003, cited in Alhassans, 2009: 153). Yet this positive contribution causes many health problems such as malaria and intestinal and urinary bilharzias (Peter and Baumrtel, 2005: 6–10).

The Aswan High Dam Project (AHDP) has been and continues to contribute to the development of Egypt through irrigation for industrial agriculture and electricity generation for industrialisation and rural electrification (Tortajada, 2007: 7; Biswas, 2002; Scudder, 2003: 2). The AHDP was also critically important to protect Egypt from continuous droughts. It is good for the irrigation of about 850 thousand feddans allocated to rice and sugar cane production and was important for rural electrification and navigation on the Nile all year round (Strzepek *et al.*, 2006: 3). These positive outputs however occurred with health issues in terms of water-borne diseases (Biswas, 2002; Scudder, 2003: 2) and several other negative outcomes already discussed.

The first phases of the IHPs – Inga 1 and Inga 2 – were accompanied by a wide range of promises to local people, the dam-affected communities, and the Congolese at large. Congolese citizens were promised free electricity from Inga 1 and Inga 2. These promises did not materialise. What is more, electricity from the IHPs was not designed to supply electricity to people in the vicinity of the plants or to ordinary people in the cities. The electricity produced by the IHPs was sold to mining companies in Katanga with the intention of preventing secession, and outside the DRC to Congo Brazzaville, Zambia, Zimbabwe, Namibia, and Botswana. So politically, the IHPs can be claimed to be successful insofar as it prevented Katanga Province from claiming its independence, and giving the DRC a degree of revenue generation and geopolitical influence over its neighbours.

6.6.2 Fossil fuel powered plants

Fossil fuels are the main GHG emitters in the world. They contribute up to 75% of carbon

dioxide (CO₂), methane, and other GHG emissions largely caused by the production of electricity and also from combustion for different ends such as automobiles and agricultural machinery. In fact, 3.2 billion tons of additional carbon dioxide is emitted into the atmosphere every year, fuel-powered plants produce more than 2.5 million metric tons of carbon dioxide, and in countries like the USA 98% of total energy comes from non-renewable sources where more than 20 million barrels of oil is burnt per day, and more than one million tons of coal is consumed annually (GreenEnergyChoice, no date). Hodges and Rahmani (2012: 1) endorse these statistics adding that fuel-powered plants emitted more than 2.5 million metric tons in 2007; coal, natural gas, and propane contributed to GHG by more than 94% during the same year, and coal represented 85% and 78% of all carbon dioxide emissions by electricity power plants in 2006 and 2007. In addition, “electric power generation contributed almost 41 percent of the carbon dioxide emissions from fossil fuels in the United States and 34 percent of all GHG emissions, the largest share of all major sectors of the U.S. economy” (Hodges and Rahmani, 2012: 1).

These anthropogenic emissions of carbon dioxide represent by far the largest part of the GHG emissions and carbon dioxide receives more attention than any other gas because it is easily identifiable and abundant in the atmosphere. “Of these CO₂ emissions, those that are produced from fuel combustion make up the great majority and, almost all, may be directly and immediately assessed from the combustion activities” (Simmons, 2000: 2). For example, fossil fuels have accounted over the last 39 years for over 80% of the world energy supply. In fact in 2010 fossil sources accounted for 81% of total global primary energy sources (PES). During the same year coal represented 28% and contributed 43% of global CO₂ emissions in 2010 due to its heavy carbon content per unit of energy released (IEA, 2012: 18-19). Compared to gas, coal is on average nearly twice as emission intensive (Simmons, 1996). This trend increased in 2011. In fact, 90% of global CO₂ emissions came from fossil fuels in 2011. This estimate does not include emission from forest fires and wood fuel for domestic consumption (EDGAR 4.2, JRC/PBL, 2011, cited in Olivier *et al.*, 2012: 9, 20).

Subsection 6.5.2 demonstrates that both hydro- and fuel-powered plants contribute to contribute to global warming and that the latter pollutes more than the former. In addition, the examples above prove that there are cases where hydro-powered plants produce more GHG emissions than fuel powered plants for the same amount of electricity. It is therefore critically

important for poor developing industrialised countries to invest in the production and commercialisation of truly clean and renewable energy such as wind power and solar energy to reduce the impacts of electricity generation on global warming and climate change.

6.7. CONCLUSION

Hydroelectricity is not renewable or clean *per se* since it depends on river flow which in turn depends on rain and evapotranspiration in river basins. These phenomena are important in the Congo River basin given its large size which is second to the Amazon River Basin, and because of the amount of water lost through evaporation. Its sustainability depends on rainfall in the Congo River basin, evapotranspiration, the amount of GHG emissions at global levels, the degree of drought, how people protect river dam basins, and pollution from around the world. It is difficult to predict the sustainability of the Congo River flow and subsequent financial profitability of IHPs in the next 50 to 100 years.

Hydroelectricity is not clean either. It derives from waterfall from a dam reservoir and run-offs from the river. The reservoir produces substantial amount of GHG emissions in the flooded area whilst the hydropower plant produce GHG emissions from degassing fluxes from water passing at the turbines. Turbulent degassing in the downstream part of the dam is another issue. In turn, GHG emissions occur at the pre-dam stage due to construction work, and in the post-dam stage upstream and downstream from the dams through the release of gases from built-up sediments in the dam reservoirs. In worse case scnarion, hydropower plants can produce more GHG emissions that fossil fuel plants.

The amount of GHG emissions depends on the time of flooding the reservoir (i.e. new or old dam reservoirs), the type flooded vegetation, the depth and shape of the dam reservoirs, the type of the soil, and the physical and ecological characteristics of the river basin. In tropical zones, some dams emit more GHGs than thermal power plants. In fact, hydropower plants are cheaper to run in the first years of operation. They then become more expensive than thermal plants due to sediment deposits and aquatic weeds which reduce dam reservoirs and therefore the water intake and subsequent amount of electricity produced.

The impacts of GHG emissions are and will remain severe in the DRC given that the government does not have the administrative capacity and technical expertise to empower

ordinary people and government officials to mitigate their negative impacts. As a result, the mechanisms of RED, REDD, REDD+ and REDD+++ as incentives for development countries to protect, manage, wisely use forest resources, and by doing so fight climate change, will have little or no impact in the DRC.

Hydropower plants are cheaper to run and maintain in the beginning because of less production cost due optimum capacity of the dam reservoir and the long life cycle of the plants. But as they get older, they become very expensive to exploit due to high costs of maintenance of the river flow, sediment removal in the dam reservoir, protection of the reservoir against aquatic weeds, and mitigation of socio-environmental problems.

CHAPTER 7. CONGOLESE CIVIL SOCIETY AND THE FUTURE OF THE INGA HYDROPOWER PROJECTS

7.1 INTRODUCTION

“We will show the world what the black man can do when he works in freedom and we shall make the Congo an example of the whole Africa” (Lumumba, 1960, cited in Gérard-Libois, 1966: 267).

This vision has remained far from becoming a reality during the last five decades in the war-torn DRC where, as Mahmood Mamdani laments, “political violence was [and still remains] neither revolutionary nor counter-revolutionary but simply non-revolutionary because it cuts across social classes rather than between them” (Mamdani, 2005: 2). He continues, “I mean by it a kind of violence in which different groups of more or less equally impoverished and disempowered people are pitted against each other, where the battle lines are defined by a difference that is not economic ...” (Mamdani, 2001: 1). In fact, conflicts over distribution of wealth are usually shaped by economic motives between the poor and the rich. But the battles in the DRC are diverted to, and fought among, impoverished and systematically impoverished communities which should fight the system which impoverishes and keeps them in poverty, rather than fighting one another.

Structural exclusion from distribution of resources – e.g. land, water, forest resources, and revenue from different development projects, including the IHPs – and the subsequent conflicts and struggles for inclusion remain a permanent threat to peace and much needed sustainable development in this war-torn country. Some of the conflicts are motivated by a search for justice. Others are shaped by the desperate need to utilise state institutions as resources for personal gain. It is therefore imperative to have a visionary and competent civil society which could lead the masses toward constructive agendas and inclusive development which is lacking in the DRC. This particular civil society has the potential to deconstruct development discourse to be used as a tool for socio-economic and environmental justice, and therefore a cure for the curse of natural resources. This chapter reveals what people think about additional developments at the Inga Falls Site drawing from their experiences of Inga 1 and Inga 2.

7.2 CIVIL SOCIETY AND SOCIAL MOBILISATION AROUND THE INGA HYDROPOWER PROJECTS

Howell and Pearse (2001: 32) argue that the study of civil society and development falls into two categories, both of which are of interest when we examine the IHPs. First, there is the American version of the mainstream view articulated by Alexis de Tocqueville and Robert Putnam (Fabbrini, 2011: 391-395), and Salamon (Magis and Shinn, 2009: 1, 9-11), which considers the state a threat to a free market and free politics. This school of thought draws on the medieval European understanding of civil society as truly voluntary associations. It is seen as a source for the growth of fraternity as political credence, a place where people achieve freedom by belonging to a community, and where the values of friendship, loyalty, and mutual aid are emphasised alongside the defence and protection of the most basic rights. Second is the “alternative view”, the European vision or emancipator vision of Marx (Pietrzyk, 2001), and Gramsci and Habermas (Tas, 2007: 1-5; Sylvia, 1994: 77-80) which regards civil society as a means of interrogating power and the purpose of development (defined in class, racial, gender, ecological, and other contested ways). Like Polanyi’s “double movement” (Muukkonen, 2009: 2-8), in which society lashes back at the market, this school of thought adopts liberatory values as the seed for “positive solidarities that should and could restrain individualism and egotistic greed made rampant by capitalist development ... It recognises the importance of social differentiation, power and conflict” (Howell, and Pearse, 2001: 32). This study endorses the second view in relation to IHPs, since large hydropower projects are characterised by unequal sharing of costs and benefits between rural and urban areas, rich and poor people in the cities, society and nature, men and women, and old and young (Scudder; 2006: 41; Horta and Pottinger, 2006: 30-32; Thamae, 2006: 9-13).

Nzongola-Ntalaja (2002: 61-93; 121-212) studied the reactions of CSOs to exploitation in the colonial and post-colonial epochs in the DRC. He identifies a series of liberation wars from 1895 to 1908, politico-religious movements from the 1920s, and peasant and worker revolts between 1900 and 1945. He argues that these struggles laid the foundation for modern nationalism which led to the struggle for independence. The first struggle was against Belgian imperialism from 1920 to 1960, while the second was waged against Congolese political and economic elites – *new whites* – between 1963 and 1968. The third struggle for independence challenged the Mobutu regime and its western allies between 1992 and 1996. Rento, Seddon, and Zeilig (2007: 33) argue that the Congolese people vehemently resisted what Harvey

(2003: 137) terms “accumulation by dispossession” including the looting of natural resources starting with the Belgian colonial invasion of the DRC. From King Msiri’s defeat in 1891 to Batetela’s revolt in 1895¹ until the Mai-Mai traditional fighters from 1996, the Congolese people resisted and continue to resist different forms of imperialism, colonialism, and neo-colonialism. Yet this resistance has sometimes led to successful stories before they were lost in the technical superiority of the capitalist system. How does this historical legacy of resistance translate into the IHPs, especially in view of the dam-affected communities’ struggles for socio-economic and environmental justice? This is one of the questions this study aims to answer.

According to L’Ecuier (2004: 85-90), the divisions within and between CSOs in the DRC negatively affect their struggles for socio-economic and environmental justice against different forms of abuse of fundamental rights. For example, there are internal divisions in the eastern part of the DRC – including South and North Kivu, Katanga, and Kasai – which remain breeding grounds for insurgency, armed conflict, and regional and foreign invasions that lead to social upheaval, mayhem, rape, and murder (L’Ecuier, 2004: 85-90). My participant observation revealed three important features in this terrain. First, the eastern part of the DRC has the most CSOs in the country. Indeed, CSOs have been formed across the entire DRC to respond to the specific needs of the population (free running water, free adult education, free health care in small clinics, and free primary education for children in some villages and cities, to name a few), even though these needs fall under constitutional mandates and are the responsibility of the government. This approach to service delivery was used by Mobutu’s government and its international allies as security valves against citizen demands and expectations from the government. The increase in the number of CSOs paradoxically strengthened Mobutu’s dictatorship in the 1980s.

Numerous unsuccessful attempts to introduce democratic change during Mobutu’s 33 years rule, Desire Kabila’s short term in the office, and Joseph Kabila’s ambition to remain in power as long as he could, led to activism fatigue. The opportunistic behaviour of some civil society leaders also enabled them to be easily co-opted for positions in government. As a result of these factors, the highest-profile civil society organisations take the form of associations for human rights which issue regular reports on human rights violations and

¹ The insurrection of 1895 was wrongly labelled as a “Batetela revolt” by the Belgians since it included people from many Congolese ethnic groups, and was therefore a national resistance (Nzongola-Ntalaja, 2013).

accounts of theft of natural resources committed by different armed groups (L'Ecuyer, 2004: 85-90).

The shortcomings of DRC civil society undermine the initiatives of genuine Congolese CSOs to engage in struggles for socio-economic and environmental justice. This also affects the intervention of transnational advocacy networks. Limited interests and initiatives, and the passivity of local actors in turn delay the support that DRC civil society could receive from external allies and like-minded transnational institutions:

In Western Europe, ... in the absence of direct action from the parties concerned or allies, even authoritative institutions, like the European Court of Justice [which is the highest supranational tribunal in the EU], have limited reach into domestic politics ... Where [local] social actors are weak and immobilised, as in the cases of public sector employees and EU immigrants seeking the rights to social benefits, justice is contained (Tarrow, 2005: 193).

Petras' (1997: 10-13, 17, 18) research on neoliberal social movements in Latin America identified various ways in which division, co-option, and ideological confusion prevent civil society from expanding and achieving radical change. He argues:

As opposition to neoliberalism grew [in developing countries in Africa and Latin America] in the early 1980s, the U.S. and European governments and the World Bank increased their funding of NGOs. There is a direct relation between the growth of social movements challenging the neoliberal model and the effort to subvert them by creating alternative forms of social action through the NGOs. The basic point of convergence between the NGOs and the World Bank was their common opposition to "statism". On the surface the NGOs criticised the state from a "left" perspective defending civil society, while the right did so in the name of the market. In reality, however, the World Bank, the neoliberal regimes, and western foundations co-opted and encouraged the NGOs to undermine the national welfare state by providing social services to compensate the victims of the MNCs (Petras, 1997: 10).

Numerous NGOs therefore focus on projects that have the potential to attract funding from the same institutions – i.e. the IMF, WB, and European and USA government agencies which violate the rights of ordinary people and impoverish them; exactly what social movements and NGOs are supposed to fight against. These NGOs therefore become a security valve against socio-economic discontents and the possibility of popular revolts created and sustained by neoliberalism. In the DRC, my participant observation and informal discussions with Congolese citizens as well as insider's knowledge revealed that indeed, the interventions of NGOs through provision of basic services which should be funded and catered for by the state divert the expectations of Congolese people from the government to NGOs with little resources which cannot replace the state. As a result, popular revolts and rebellions that the DRC have witnessed since 1996 and which dismantled Mobutu's have been delayed.

Similarly, studies by Petras and Vermeyer's (2005: 220-240) about social movements and state power in Argentina, Brazil, Bolivia, and Ecuador revealed that foreign funding of local NGOs diverted people's demands and expectations from the state to localised and small-scale interventions by the NGOs. This gave rise to a situation where, "local development provides micro-solutions to micro problems, designed as a means of eluding confrontation with the power structure and substantive change" (Petras and Vermeyer, 2005: 220). Similarly, in the DRC two opposition movements emerged to challenge Mobutu's dictatorship during the 1980s and attracted substantial funding from western NGOs. The first was internal opposition to Mobutu's reign. This opposition consisted of a wide range of activities from both ordinary people and politicians, namely student movements, the Group of 13 Members of Parliament, the *Union pour Democratie et le Progres Social* and the Sacred Union, in other words, a coalition of opposition movements. In addition there was the externally-based opposition. It comprised the *Movement d'Action pour la Resurrection du Congo* and the *Front de Liberation Nationale Congolaise* (Nzongola-Ntalaja, 2002: 61, 95, 171). Similar to Argentina, Brazil, Bolivia, and Ecuador (Petras and Vermeyer, 2005: 220-240), the increase in the number of CSOs opposing Mobutu's dictatorship in the DRC with the help of external funding provided to local CSOs and NGOs, ironically reinforced the *status quo* because their small-scale interventions diverted the expectations of the Congolese in their struggles for a better life away, from the state to the NGOs which had begun to replace the state.

Bob's (2005: 3-5) research on the relations between funding institutions and both social movements and community-based organisations reveals a vicious cycle resulting in a lack of

funding and a growing weakness of what could have been insurgent social movements. Weak movements have little or no access to funding to build capacity and achieve their aims and objectives. In the DRC, this interplay between weak movements and a lack of funding has numerous detrimental consequences at both national and international levels. First, CSOs in much of the DRC cannot attract the attention of independent journalists and internally acclaimed academics that could raise their profile and explain the reasons behind their grievances. They seem desperate and incapable and only able to attract a few small funders who invest more out of altruism and a sense of morality than to address real social change. A related problem is the lack of specialised CSOs with in-depth knowledge of their field who could gain national and international reputations. In sum, most DRC CSOs have failed to create international awareness of their struggles or to build transnational networks. This means that they fail to match the needs and agendas of funders and/or like-minded organisations elsewhere. As a shortcut, they adopt ‘attention-grabbing tactics’ in the DRC, a strategy that is risky because of state repression.

The preliminary work on the Inga Falls Site and the fieldwork thereafter revealed that a lack of effective CSOs in the DRC is also apparent at the IHPs site. I identified people who support the IHPs as well as people who are reluctant to endorse it. Some supporters argue that they have no option but to endorse the IHPs as failure to do so would place them in danger of persecution by the state. A second group supports the project in the hope of being appointed to government or gaining other rewards. A third group believes that the project has the potential for job creation in both rural areas and cities, and for the production of energy for domestic consumption and industrialisation of the DRC. The IHPs have the potential to increase the export of hydroelectricity for much needed foreign currency.

However, the active opponents of the IHPs include people in the vicinity of the project who are likely to be displaced or adversely affected, and individuals who believe that the IHPs are not conceived to supply electricity to the DRC but for the benefit of MNCs and other countries (such as South Africa). As discussed in Chapters 5 and 6, over the past four decades the dam-affected communities have written to the president of the DRC, the minister of Energy and the governor of Bas Kongo to express their grievances and seek compensation for their loss of land and water, and to demand that they be included in the further planning of the Inga site as well as the management of income from the project. These appeals have been in vain, even when they hired a lawyer to represent them.

7.3 ROLES OF CIVIL SOCIETY ORGANISATIONS AND THEIR ABILITY TO ADVOCATE FOR COMPLIANCE WITH EXISTING LAWS AND MEANING OF THE INGA HYDROPOWER PROJECTS TO CIVIL SOCIETY

A focus group discussion in Kinshasa on “What can we learn from the IHPs?” and “Who is to blame in case the public witnesses disappointing results?” in Kinshasa (Focus Group Discussion 59, Kinshasa, 01/ 04/ 2012, Zone Gombe – Kinshasa) revealed the following:

Participant No. 1: Civil Society Organisation representative:

When I was younger, I was fascinated by Inga Dams given its promises of free electricity to Congolese households and provision of cheaper electricity for the development of the DRC. As I started growing up, I realised that the entire project was simply unnecessary at least for now due to a lack of political readiness and necessary expertise to efficiently run this massive project. In fact, it uproots local communities from their land and it undermines their future across generations. Inga Dams represent a perfect case of a white elephant project since it costs more money to maintain it and repay the loans incurred to build it than money that the DRC and investors are getting as return on this massive investment ... Inga Dams is a rotten project; its 14 machines are old and poorly maintained if not left to rot despite some revenue that they generate from electricity sold locally and outside the DRC. We need to claim back this project despite the power of the enemy [bad political leaders] and networks that expand everywhere. He has agents everywhere waiting for the instruction to kill anybody who may try to challenge him; the *status quo* ... but one day; people from your country [outside the DRC and the rest of the world] would blame us for engaging in another armed struggle. It is a matter of days and months.

Participant No. 2: University lecturer:

The biggest lesson learnt from the Inga Projects is that ‘the only thing necessary for the triumph of evil is for good men to do nothing’. We remained passive for a very long time in the DRC instead of being proactively engaged in the struggles

for justice for all to improve our country. It is regrettable that Inga Projects were not designed to develop the DRC. It is even more painful that we left these projects to loot and dispossess our people in our presence. We, academics who represent the intelligential of this country, are to blame for all the wrong and failure of development projects because we knew and saw what was coming but we preferred to keep quiet to save our lives. We are scared of death in the hand of politicians even though we are still dying of malaria and TB. We need another Lumumba to lead this country out of chaos. People have suffered so much that they lost the sense of good and bad; happiness and misery; having and having not. But sooner or later, we will be forced to die standing and fighting for improved living conditions of those who are less fortunate or shamefully sitting. We would and must do something to address these weaknesses of development projects and turn failure into success...

Participant No. 3: SMME owner:

I did not know that I have the obligation and power to play an active role in the Inga Dams until my business collapsed due to a lack of continuous supply of electricity and my employees lost the only source of income that they had when other countries were developing and moving forward thanks to our own hydroelectricity that we produce at home. Since I realised my mission as a Congolese citizen, I was arrested six times and beaten so many times that I cannot remember. Inga Dams are not good for me, Kinshasa, and the DRC at large. As it is too late to oppose it, I must try my best to be counted as one of people who have tried to improve access to electricity and other basic services that the government should be providing to its citizens. I am also explaining to other Congolese that our future and the future of our children depends on what we do now to create the culture of freedom of expression, transparency, public accountability, and justice.

Participant No. 4: Government official:

Several people believe that all government officials are bad, corrupt, and getting benefit from the Inga Schemes. What they do not know is that only few

individuals are reaping the benefit of these projects. That is why some tasks must be undertaken by specific individuals and not any others. Prof Evariste Boshab does extraordinary things. In fact, he is an expert of Constitutional Law who has significantly contributed to the development of our country despite our own challenges. But Prof Boshab has also the ability to persuade the Head of State to approve his mission to Congo Brazzaville to recover an old debt that this country had delayed to pay even if he was not the Minister of Finance. Furthermore, in putting his hands in other people's responsibilities, Prof Boshab is capable of betraying the academic fraternity, Congolese politicians, and the DRC when he goes to Congo. In addition, he came back to the DRC with cash in hands instead of having this transaction taking place between the National Bank of the DRC and that of Congo Brazzaville. He did it given that he found himself in the right time at a right place and a specific environment which protects him in these operations. It remains unclear how the money was handed to the Department of Finance, let alone how the substantial amount of cash was spent despite all the interviews on radios and TVs. What would you expect ordinary people such as SNEL agents to do when they recovering electricity bills from consumers? Nothing at best or follow the footsteps of our leaders. Put differently, the IHPs can be used as mirror which reflects the day-to-day challenges of our country.

7.3.1 Local civil society organisations and capitalist expansion

Civil society has historically resisted and continues to resist colonial and capitalist intrusion, the dispossession of natural resources, and abuses of human rights in the DRC since the arrival of white settlers despite ethnic divisions and lack of visionary leadership in the country. Civil society has revolted, sometimes successfully, against different forms of abuses imposed on local communities by the expansion of capitalism. Various indigenous people have used different tools and continue to do so to express their socio-economic and political discontent. For example, King Nzinga Alfonso complained to King João III of Portugal in 1526 about slave traders who violently captured his people for sale:

Each day, the traders are kidnapping our people ... children of this country, sons of our nobles and vassals, even people of our own family ... We need in this kingdom only priest and school teachers, and no merchandise, unless it is wine

and flour for Mass ... It is our wish that the kingdom not to be a place for trade and transport of slaves (Hochschild, 1999: 13).

Ordinary people also expressed their views during the slave trade through revolutionary songs like the following:

We cannot endure that our women and children are taken away
And dealt with by the white savages
We shall make war ...
We know that we shall die, but we want to die.
We want to die (Swedish missionary, cited in Hochschild, 1999: 172).

And without doubt, indigenous people have used active resistance against their fellow countrymen in their quest for social inclusion and fair distribution of resources. They have organised and perpetuated rebellions against the Congolese government and its international partners. The political and religious movements of Simon Kimbangu and Bundi dia Kongo and several other rebellions emerged in the country from the time of colonialism to post-colonialism. These actions were often severely suppressed by the army and their national and international allies as Hochschild (1999: 192) confirms:

As our party moved throughout village after village ... A party of men has been detailed with torches to fire every hut ... As we progressed, a line of smoke hung over the jungle for many miles, announcing to natives far and wide that civilisation was dawning.

The struggles for political, socio-economic, and environmental justice in the 1960s ended with the independence of the DRC and the arrest and killing of Lumumba who refused to admit defeat or betray his vision of a free and prosperous DRC up to the last seconds of his life:

I write to you [my wife] these words not knowing whether you will receive them, when you will receive them, and whether I will still be alive when you read them ... What else can I say? That whether dead or alive, free or in prison by orders of colonialists, it is not my person that is important. What is important is the Congo,

our people whose independence has been turned into a cage, with people looking at us from outside the bars, sometimes with charitable compassion, sometimes with glee and delight. My faith will remain unshakable ... Neither brutal assaults, nor cruel mistreatment, nor torture have ever led me to beg for mercy, for I prefer to die my head held high, unshakable faith and greatest confidence in the destiny of my country rather than live in slavery and contempt for sacred principles ...

Long live Congo! Long live Africa!

... The history would one day have its say; it will not be the history taught in the United Nations, Washington, Paris or Brussels, however, but the history taught in the countries that have rid themselves of colonialism and its puppets. Africa will write its own history and both north and south of the Sahara it will be the history full of glory (Lumumba, 1960, cited in De Witte, 2001: 185).

More recently and in connection with this research, the dispossession of natural resources and the subsequent impoverishment and intergenerational transmission of poverty created another wave of discontents despite the absence of political opportunity to manifest their views. They are clans whose ancestors had been forcibly removed from the Inga Zone and who were deprived of their rights and access to the Congo River for water, fishing, and sand to build houses, forest resources to meet their needs, and land for cultivation. They organised themselves into a committee of clans affected by the IHPs to voice their concerns in the DRC and abroad, and to network with like-minded individuals and organisations to improve their living conditions at home through a boomerang approach (Keck and Sikkink, 1998: 11, 13, 36) and a double mobilisation strategy (Wu, 2005: 65-67). The two approaches to advocacy can take different forms as the quote below illustrates.

My uncle, Ferdinand Sona, was unilaterally appointed by colonial administration to represent the interests of the clans affected by the Inga Dams. After several unsuccessful attempts of securing compensation to the affected and considering that the struggles for socio-economic and environmental justice would take several generations, he duplicated all documents related to Inga. He gave me a file with all documents and advised me to look after it because it may save lives one day when the DRC would have competent people with a political will to address these issues. In addition, we would never know where these struggles will take us or what kind of people we would meet one day. After his death, I called for a

meeting of all clans to share the news with them and made a proposition of beginning to claim our ancestors' rights without contradictions. The clan chiefs elected me to lead the struggles because I was the most educated in the group. I resigned from my teaching career from Kinshasa and moved to around the Inga Zone to lead the fight of David against Goliath; the fight between a lion and a mosquito as the bible and our primary school text books elaborate because the size does matter always. We worked underground and without concrete results for several decades. But now, we can see the light at the end of the tunnel. If we will not be there, our children or their children will reap and rejoice the benefit of our hard work (Interview 70, 26/03/2012, Village Manzi – Inga Zone).

Yet these struggles for socio-economic and environmental justice are often undermined by opportunistic behaviours of some civil society leaders, by diverging interests, by the lack of a unified approach around collective challenges, and by the politicisation of issues of collective interest – which are explored in-depth in this section. Civil society underlines its resistance through endless and unsuccessful attempts at revolts and rebellions against the expansion of capitalism through colonisation and neo-colonisation.

Modern civil society offer resistance through strategic alliance-building with TANs around a wide range of local issues such as access to basic services, environment justice, global warming and change which have both national and global implications. These forms of resistance depend on the degrees of political openness that each government presents to civil society, the mobilising structures, and the framing of grievances and/ or greed that resistance entrepreneurs² express (MacAdam, McCarthy and Zald; 1996: 2-5). The forms and intensity of resistance also depend on the geographical locations of the issues and grievances, and the people involved.

A hermeneutical analysis (Bardick, 2003: 35; Atkins, 2006) and a frame analysis (Oriola, 2012: 125) of different formal and informal discussions with participants – both Congolese and foreigners, informal traders, and the rare few employed in the mainstream economy, ordinary citizens, and government officials, students and housewives – in this research, reveal

² Individuals (activists, academics and businessmen) who have vested economic and non-economic interests in activism and resistance. They can be investors or recipients of the funding for collective commons.

that civil society organisations are characterised by a variety of features that affect their potential adversely.

7.3.1.1 Divisions within and lack of visionary civil society leadership

Civil society organisations are divided along ethnic identities and regionalism in the DRC. This division undermines civil society's efforts and opportunities to be catalysts for positive change, to promote socio-economic and environmental justice, and to achieve inclusive development, as the half-century old extract below illustrates:

Political parties [and civil society in general] of the Congo were [and still are] different from their counterparts elsewhere in Africa; their history was [and continues to be] shaped by the speed with which independence was won. They were born in an environment where the nationalist awakening was very belated and was preceded and accompanied by reinforcement of ethnic self-consciousness. [In addition] the authoritarian nature of Belgian colonialism had allowed less leeway for acquisition of experience in African associational activity than the case in former British or French territories (Young, 1963, cited in Rento, Seddon, and Zeilig, 2007: 84).

Ethnic divisions and conflicts, and regionalism are not new in the DRC. Their roots lie in the colonial era and have been strengthened during the post-colonial era through unequal sharing of resources and privileges which different governments of the DRC perpetuate. Eighty years of colonial rule have officially prohibited the creation of African political organisations. As a result, Congolese political intentions were expressed via cultural associations and strongly influenced by these organisations such as the cultural association of the Bakongo, the Abako, created in the 1950s with the objective of restoring the ancient Kongo Empire, but later converted to the vision of a federalist Congo; the Conakat through which the Balunda tried to exercise power in Katanga either within the federalist or separatist Congo; and the Balubakat who vehemently tried to express a different view from the south of Katanga and therefore prevented the latter from speaking on behalf of the whole of Katanga Province (Rento, Seddon, and Zeilig, 2007: 83).

Firstly, a lack of visionary leadership sustained by ethnic divisions remains one of the most important characteristics of Congolese civil society, as argued by a representative from a Belgian international non-governmental organisation (INGO):

Congolese civil society has serious challenges of leadership, funding, division and a lack of vision. As a result, these organisations will struggle for a long time before they raise funds for their respective programmes. This is because there are claims that civil society is used as stepping stone to government posts and key positions in the same public sector in which civil society organisations are busy trying to enforce transparency, accountability and good governance. CSOs do not receive any funding from the government or any local funders. They therefore rely on international donors. Divisions and power struggles, both within and between organisations, does not help them either.... [In addition] in the DRC, it is truly difficult to get a network of CSOs which is truly representative and inclusive. It is therefore difficult for them [Congolese CSOs] to lobby Belgian CSOs, for example, and those from other countries which are well positioned in their countries of origin on behalf of Congolese CSOs and around Congolese issues. In addition to their diversity and lack of common and unified vision as well as shared objectives, there is a competition among them which undermines all the attempts to improve their work and consequently the lives of Congolese people (Interview 56, 11/05/2012, Kinshasa).

Secondly, cultural associations and subsequent ethnic divisions thus represent a permanent feature of the DRC politics. They were created and remain in place due to a dichotomy of power in the DRC as planned and implemented by colonialists. Traditional authorities were (and remain) in charge of rural areas or 65% of the country, whereas civic authorities were (and still are) urban-based and represented less than 35% of the country in 2010 (WB, 2012: 138). There is a divide between the two types of authority which differ and challenge each other around political and administrative powers. Mamdani (2001, cited in Renton, Seddon, and Zeilig, 2007: 86) insists that:

The nature of colonial rule in the Congo militated against a united national movement. In the colonial period, ethnic [traditional] authorities were set up by the state, and these native authorities were the only direct relationship most

Congolese had with the state. Unlike civic power, which is urban-based [in the] state of Congo, it is better to think of rural Congo as a giant federation of Bantustans. With independence, people of the cities were given the freedom to become free citizens, but people living in rural areas remain subjects to chiefs. The *Mouvement National Congolais* strategy of seeking to control civil society was flawed because it took no account of the situation of the rural majority; it raised demands which were not their own.

The Mulelist Rebellion of 1964 and several other rebel movements that occurred in the DRC since the colonial era have failed to understand the role of relative deprivation, defined in the context of this research as the “perceived discrepancy between value expectations and value capabilities” (Welch, 1975a: 117). Put differently, socio-economic and political discontents in rural communities represent the Achilles heel for political stability and development in the DRC. The neglect of these locations represents a breeding ground for socio-economic and political discontent which leads, in many cases, to ethnic violence, aborted rural revolutions³ (Welch, 1975a: 116), and counter-revolutions. Mainstream development initiatives focus their efforts on cities at the expense of rural areas. These movements, despite their ideological differences and accusations against Kinshasa, do not intend to break away from Kinshasa with the exception Katanga and Kasai’s unsuccessful secession attempts, motivated by the benefits they get from the absence of competent and formal governments. They all take advantage of the dysfunctional and unstable nature of the government of the DRC and some individuals and institutions accumulate more resources than others.

The same reasons apply internationally. A divided and weakened DRC remains subject to predatory practices, political clientelism, war economies, and lawlessness. A strong DRC may emerge through radical change at local, provincial, national, and international levels and have the potential to curb the factors which undermine inclusive development in the DRC.

Englebert (2003: 14) argues that the Congo’s “international sovereignty has been preserved if not reinforced by the Congolese and foreign actors alike ... because of the benefits associated

³ Aborted revolution refers an ideal situation for revolutionary change i.e. “the creation of an underground network by professional revolutionaries, the organization of bold mass actions, [communist] organizations are quite effective in generating political changes under repressive governments” which fails to lead to radical change (2006: 2).

with the international recognition of Congo's sovereignty" (Englebert, 2003: 7-15). Azarias Ruberwa⁴ (2001, cited in Englebert, 2003: 14) echoes the same sentiment:

We want a united Congo. There are more advantages to a united Congo than a partitioned Congo. We have never thought of secession. It is impossible to conceive of it. Our leaders are from all provinces. What we do want is to change the mode of management in Congo and to have more autonomy for the provinces. We want federalism. We say yes to the unity of Congo but never to unitarism Territorial integrity allows us to remain *une puissance en Afrique* Let's create a Congolese nation because it does not exist yet.

Thirdly, cultural associations and subsequent ethnic divisions, as well as individualistic approaches to common challenges are perpetuated and aggravated in the post-independence DRC by the inability of the state to provide welfare, security, and justice to all its citizens. The Congolese were and still are constrained to strongly rely on their ethnic ties, cultural associations, and community associations as safety nets against socio-economic shocks, vulnerability, and uncertainties, because social welfare does not exist. In addition, there is very restricted provision of public services such as water, electricity, and education by the government, which has proven incapable to provide these services. The vacuum left by the government has been filled by non-state actors, such as religious organisations, a wide range of associations, and both local and international NGOs (Kooy and Bailey, 2012: 12).

Lastly, a businessman from Kinshasa argues that the formal sector in the DRC exists by name only. It caters for socio-political and economic elites who work for the government, the MNC, the NGOs, and local CSOs because they get salaries and social benefits like pensions and medical aid (Interview 87, 02/03/2012, Kinshasa). In fact, in 1986, only 25% of household income came from wages and salaries, 29% came from unknown mainly illicit sources, and the rest from gifts, rents, and savings (Houyoux *et al.*, 1986, cited in MacGaffey, 1991: 14). Although these statistics are very old, they remain relevant to this research. The 1986 survey occurred when the economy of the DRC was much stronger compared to what it is today and was among the very last surveys in the DRC.

⁴ Azarias Ruberwa was Secretary-General of *Rassemblement Congolais pour la Démocratie-Mouvement de Libération – Goma* (RCD-Goma). The RCD-Goma and RCD – *Mouvement de Libération (RCD-ML)* did not have any break away agenda. They used their rebellion as leverage for a better deal in the negotiations.

7.3.1.2 Opportunistic behaviours of some civil society leadership

Strong reliance on either ethnic ties or small CSOs or both offers three options left for Congolese citizens at large to make a living. They can become self-employed in the informal economy despite all the risks involved in this sector such as a lack of security, the challenges of getting a loan, and the lack of a safety net in time of shock and random events. They can also create CSOs or NGOs as they are known in the DRC to fill the vacuum left by the lack of service delivery which should be provided by the state, or they can use these institutions as stepping stones for government positions. They can lastly join the government for political positions. The last two options are so appealing that they attract many people and in turn divide the members of civil society into four groups:

- i) individuals who intend to be employed by the government and try their best to show their loyalty to their employers by being active in opposing any criticism of the government;
- ii) those who focus on NGOs as their livelihood through internal and government “funding” and favours for their own survival;
- iii) people who target international CSOs or NGO to receive funding with little or no impact on the ground, and
- iv) the very few who are effectively involved in lobbying and advocacy work for the benefit of local communities in their areas of interest (Interview 36, 02/03/2012, Matadi; Interview 47, 15/03/2012, Kinshasa).

This classification leads to two broader categories. Firstly, there are the first three groups described above. They have the potential of being easily co-opted by the government, international NGOs, or MNCs involved in some of the areas where these individuals had been initially active in their search for justice. Secondly, there is the fourth group also defined above. It represents the only group left to carry the load of searching for justice for the poor and impoverished (Interview 36, 02/03/2012, Matadi; Interview 47, 15/03/2012, Kinshasa). The divisions and power struggles within and between CSOs are, however, not unique to the DRC; they exist in other countries as well. These challenges undermine the contribution of CSOs to the development of the country through their inability to advocate for and reconcile the interests of the elites and marginalised groups. In these processes of self-satisfaction and altruism undertaken by the two categories of leadership of CSOs, civilians have been

abandoned and live in extreme poverty and vulnerability which makes them subjects for recruitment by individuals who use the creation and management of CSOs as a livelihood strategy. Opportunistic leadership of some CSOs stand to gain directly or otherwise from ethnic conflicts and war economies (L'Ecuyer, 2004: 90). Any vision for change that an NGO may have often disappears as soon as the top leaders are co-opted. A representative from an international NGO based in Kinshasa summarises the challenges of poor leadership in Congolese CSOs:

In general, Congolese non-governmental organisations are characterised by:

- i) a crisis of leadership;
- ii) opportunistic behaviour;
- iii) competition and division within and between CSOs, and
- iv) a lack of vision for the DRC.

Leadership crises manifest themselves through the mushrooming of civil society organisations and the splitting up of existing ones who share the same goals and objectives. As a result, the resources available are not used efficiently and effectively. Opportunistic behaviour leads some CSO leaders to use the organisations that they have the mandate for and an obligation to lead as a stepping stone for political positions in the government or/ and the international institutions that they were fighting to address the injustices. Competition occurs through the creation of CSOs with the same goals and objectives and this leads to conflicts which weaken CSOs' outputs on the ground ... These weaknesses translate themselves into lost decades and opportunities to make change through civic literacy, as happened in Latin America (Interview 44, 25/03/2012, Boma).

Similarly, Kabemba (2011: 176) explored the roles of DRC CSOs in the two-month Inter-Congolese Dialogue (ICD) which took place at the Sun City resort on 25 February 2001 to 25 June 2001 in South Africa under the auspices of Kitumire Masire. The aim of the dialogue was to discuss the political environment in the spirit of the Lusaka Peace Accord (LPA)⁵ – i.e. the transitional authority, the national army, the process of democratic and transparent elections, the drafting of the constitution, and the establishment of institutions for a new

⁵ Lusaka Peace Accord, which led to the Lusaka Ceasefire Agreement, was signed in Lusaka on 10, 30 and 31 July 1999 by the representatives of the government of the DRC and the two main rebel groups namely the Congolese Rally for Democracy (CRD) and the Movement for the Liberation of Congo (MLC).

political dispensation in the DRC (Kabemba, 2011: 156-158). The ICD was organised by the African Union and funded by South Africa at R1 million a day for two months as a platform for dialogue among different conflicting parties and other components of the DRC society. The participants included the government of the DRC, the Congolese Rally for Democracy (RCD), and the Movement for the Liberation of the Congo (MLC), the political opposition, civil society, the Congolese Rally for Democracy / Liberation Movement (RDC / ML), the Congolese Rally for Democracy/National (RCD/N), and the Mai-Mai. According to Kabemba (ibid), the leaders of the DRC CSOs have failed to use the many opportunities which Sun City has offered them in terms of the objectives of the meetings due to several deadlocks around burning issue and disputes about the adoption the 1+4 formula (one president and four vice-presidents) imposed by western powers which led to democratic elections. They also failed to take part as equal partners in terms of representation in the institution of the transition⁶ with political parties because they were not prepared for the task. Civil society leaders contributed little to the debates that shaped the direction of the transition. Additionally, they were either easily co-opted by existing political parties or “simply played the politics of the major political parties” (Kabemba, 2011: 176).

Lastly, civil society leaders’ ethnic and political identities superseded their watchdog roles and in doing so transformed these leaders into strong contenders for political power. A number of civil society leaders turned politicians with new political parties, joined existing political parties or became independent candidates in parliamentary elections at the end of the transition. Opportunistic behaviour and poor leadership of some CSOs reduced their scope of action to issues which were likely to attract international funding and transnational solidarity. A representative from an international NGO identifies a link between the lack of competent leadership, funding from transnational advocacy networks (TAN), and a seeming lack of interest in several CSOs in the struggles of the communities affected by the IHP. She argues:

There are very few organisations involved in the debates around the IHPs for the following reasons. First, the Inga Dams do not attract external funding. As a result, local civil society organisations do not feel the need to focus on a subject which does not generate money. They are external donor-driven. This in turn

⁶ Institutions of the transition consist of the three spheres (the executive, legislative, and judiciary) of government were intended, and indeed they did) to lead the DRC from a dysfunctional and collapse state to the democratic elections in 2006 to an economically and politically stable country.

isolates civil society from the debates around both previous developments and future possibilities. Second, transnational civil society organisations are directly or otherwise funded by the same institutions (World Bank, IMF and International Financial Institutions) which fund the Inga Dams. They cannot bite the hand that feeds them. Third, the Inga Dams are considered a strategic project which depends on the Presidency of the Republic. Therefore, any open opposition to the projects is an opposition to the ruling party and the government. This assumption goes with costs that very few people are willing to risk. It is a question of life or death. I hope that you understand what I mean since you are Congolese. Fourth, the Inga Dams are complex with international stakes. It is then imperative to fundraise in order to create incentives for civil society entrepreneurs and work in synergy with transnational civil society organisations. Otherwise, both local and transnational civil society organisations will continue to be excluded from the debates and worsen the lives of people in the vicinity of the projects and across the country (Interview 53, 11/05/2012, Johannesburg).

The poor leadership and opportunistic behaviour of many CSO officials need urgent attention. The donors should prioritise these challenges if they want their funding to have meaningful impacts in the DRC.

7.3.1.3 Diverging interests and lack of unified approach to collective challenges

Diverging meanings and interests exist between the government of the DRC and its allies involved in the IHPs. In fact, while some government officials are busy trying to maximise kickbacks by signing contracts which betray the interests of the country for the benefits of other parties involved, others try to address the weaknesses of these deals by cancelling them and negotiating new ones (Interview 21, 30/03/2012, Kinshasa). In addition, while the government considers the IHPs as a genius idea of President Mobutu's without which one cannot imagine what would happen to the DRC in terms of electricity generation even though there is room for improvement (Interview 12b, 14/04/2008, Kinshasa), many participants wonder when they will ever get their shares of the revenues and hydroelectricity generated by these schemes (Interview 10, 24/02/2012, Kinshasa; Interview 12a, 24/02/2012, Kinshasa; Interview 90, 02/03/2012, Boma; Interview 92, 05/04/2012, Boma).

Disagreements and subsequent tensions also exist between Congolese citizens and the six clans of the *Ayant Droits*. In fact, some Congolese contend that the CAD exaggerate their claims for compensation and have already been paid (Interview 15, 29/02/2012, Inga Zone), while the latter argue that they still need to be paid for the loss that their ancestors endured in the past, the legacies of which exist until today. Lastly, there are diverging meanings within the six clans. Some clan chiefs believe that although the IHPs have not met their expectations yet, their absence would be worse (Interview 58, 13/03/2012, Clan Representative, Mankuku Futila, Inga Zone), and others strongly disagree. They contend that the IHPs have impoverished them across generations (Interview 63, 19/04/2008, Manzi – Inga Zone; Interview 61, 02/04/2012, Camp Kinshasa, Inga Zone). Lastly, given these conflicting meanings and interests, and considering the lack of freedom of expression, many people namely activists, ordinary people, and academics, are not prepared to openly go against the projects supported by government. A CSO representative states:

We will not reject the Inga Dams because no delegate from the DRC present here will be willing to face the consequences of this decision back home [in the DRC] where we will be alone and more vulnerable to harassment, arrest, and death threats. How many activists have been jailed without trial? How many activists have been reported missing or simply killed...? In addition to personal threats, all Congolese will be against anyone here who may try to take such position because the Inga Falls Site is presented to Congolese as jewellery and a symbol of both pride and economic superiority of our country. They can burn your office down and follow your family members wherever they are ... (Interview 27, 17/03/2007, Gaborone).

Furthermore, other CSO leaders may remain indifferent to the IHPs because of a lack of information about the real socio-economic, political, and environmental impacts of the megaprojects, and hydropower dams in particular on the same people that these projects were intended to benefit through improving their living standards. The coordinator of the only NGO actively involved in the struggles of the affected communities says:

I am working hard to persuade my colleagues from different CSOs to include the IHPs and environment-related issues on their agendas and programmes. These colleagues are not interested because dam-related issues are complex and need

appropriate skills. Ignorance is partly to blame for the lack of interest of CSOs in dams for hydropower and water consumption. Yet, sooner or later, directly or otherwise, individuals who understand these issues and those who do not understand we will be affected. I remind my colleagues all the time about load-shedding and its impact on our houses, on the education of our child in terms of their homework in the evening, appliances at home and industrialisation of our communities, province and the DRC (Interview 44, 25/03/2012, Matadi).

Harassment, death threats, and kidnappings around the IHPs are common. The well-publicised disappearance of the French research team of Philippe de Dieuleveult⁷ in 1985 around Inga Falls Site (Associated Press, 1985), and the not newsworthy harassment – including death threats – of Vangu Mpila in 2006 confirm that the IHPs are indeed part of state security. Vangu Mpila, a clan chief, was harassed and received death threats after he had challenged Vika di Panzu (*Administrateur Délégué Général*⁸ (ADG) de la SNEL as we know it in the DRC) at the International Roundtable on Inga 3 in Johannesburg in 2006. The ADG told potential investors in the meeting that the Inga Falls Site is empty because all its inhabitants were killed by unknown diseases at the time and that the Inga Falls Site and subsequent IHPs do not represent any social or environmental concerns. Vangu Mpila stood up in the meeting and told the audience what the ADG said was incorrect. There are indeed people in the Inga Falls Site. He said he was born and grew up in the area. He came from there and would return to the same place.

Once back in the DRC, he was harassed by security agents, the police, and administrative authorities who reprimanded him for having left the country illegally to go to unknown places for suspicious activities which could compromise the security of the state. He was rescued by international solidarity and a local initiative to contact the presidency of the DRC. International Rivers wrote an International Alert on March 2006 to expose the violations of basic human rights such as the right of freedom of movement and freedom of expression. Three local NGOs – the Network of Partners of the Environment in Congo, the Green Advocates, and the Centre for the Promotion and Education of Community-Based

⁷ Philippe de Dieuleveult was a reporter and presenter on a French Television Programme. He disappeared with six other members of the expedition Africa Raft around the islands of Hippos near the Inga Dam in 1985. The expedition was an attempt to cross the rapids of Inga for the first time with two rafts. The circumstances of their disappearance remain unclear and the subject of three hypotheses: drowning, accident or murder.

⁸ Managing Director.

Organisations – also wrote to the prime minister, other ministers and key government officials in the same month with the same objective of exposing the violation of human rights in the DRC. Mr Vangu’s death threats and conflicting interests in the IHPs contain two main lessons for people interested in the struggles for justice around the IHPs. First, there is power in numbers and transnational solidarity has the potential to change the dynamics of local issues. Second, the IHPs have different meanings to different individuals. These interpretations and interests entail contradictions and conflicting expectations from different people and institutions involved which could be used in public accountability, transparency, good governance and fair distributions of revenues from the IHPs.

Diverging economic motives coupled with regionalism and ethnicity make the IHPs acceptable to Congolese from the Bas Congo Province; they see the projects as representing several overdue economic and political opportunities. They believe that the projects represent economic opportunity because electricity could be used to develop the Bas Province through industrialisation, job creation, and its share of revenues from the sale of electricity to Kinshasa, Katanga, Congo Brazzaville, and other countries. These opposing interests and expectations from the IHPs should be used as a platform for strong and transnational advocacy and activism against past injustices and a lack of political will to compensate affected communities.

The dam-affected communities claim that they have never fairly benefited from the IHPs even though they host the dams and the latter generates revenues which central government misuses. They also argue that there is no transparency in the revenues from the projects which is why they should run the projects themselves and use the revenues to develop the Bas Congo Province. They advocate for a special arrangement with the government of the DRC to secure their share and interests in these schemes. The CAD would like to be part of the Project of Emphyteusis Moanda⁹ which has been publicised through political rhetoric and different forms of nationalisms and aborted revolutions such as the Church of Simon

⁹ The natives of the Bas Congo Province were allegedly excluded from the revenues and other benefits from the HIP as well as other development initiatives, prior to, during and after the independence of the DRC. These grievances have been translated into successive but unsuccessful attempts of secession and rebellion including the Church of Simon Kimabangu and Bundu dia Kongo. The natives of this province and the communities affected by the IHPs dream of leasing, under Roman Law of Emphyteusis, a large portion of the province of the Bas Kongo, which hosts the IHPs to the government of the DRC for 100 years with the objective of receiving annual rent for the province and the affected communities.

Kimbandu¹⁰, the 1986 political and religious movement Bundu dia Kongo¹¹ (Covington, 2008: 303) (today dissolved), the demands of the *Aryans Droits Fonciers* of the Inga Falls Site, and ordinary members of the CADs. These demands may lead to future attempts at secession if they are not met or at least openly discussed and a compromise is not reached.

7.3.1.4 Clientelism, predation, tyranny of structurelessness, and NGO professionals

According to Valença (1999: 4), “clientelism is an exchange [of] relationship, of some private and personal nature, where players have reciprocal needs and expectations, but unequal power and status”. Clientelism is one of the patron-client structures in anthropological literature. These are known as dyadic contract, personal network, and action-set in Eastern Kurdish (Kudat, 1970: 64) and in Southeast Asia (Scott, 1972: 92). The patron-client relationship is differently interpreted by different people. In the context of this research, it refers to a special case of ties between two people involving a mainly influential friendship in which a person of higher socio-economic position (patron) uses his own influence and resources to give “protection or benefits, or both, to a person of lower status (client) who, for his part, reciprocates by offering general support and assistance, including personal services, to the patron” (Scott, 1972: 91). Patronage and clientelism are intertwined. This is because the first only makes sense with reference to the second and vice-versa even though “they refer to the action of each side of a relationship, hence one cannot exist without the other” (Scott, 1972: 91). As a result, some people use patronage and clientelism interchangeably (Valença, 1999: 4).

Drawing from the paragraph above, my fieldwork notes, and personal observations, I argue that Congolese CSOs are subject to three types of clientelism. The first type refers to a patron-client relationship between the government and civil society leaders. The patron –in this case the government – provides much needed resources in cash or in kind as well as psychological support and the hope of future positions to the client (civil society leaders) to survive and meet their goals. In exchange, the client provides obedience and unconditional

¹⁰ Church of Simon Kimbangu was the first African Church to be accepted as a full member of the World Council of Churches in 1970 and is also a full member of the South African Council of Churches.

¹¹ Bundu dia Kongo (BDK) is a political, religious and cultural movement which intends to revitalise and restore the former Kongo Kingdom [with its pre-colonial boundaries, which encompasses parts of today’s Angola, Republic of Congo and Gabon]. Composed of Bisi Kongo people, it was founded in 1986 in the DRC by Ne Muanda Nsemi who received a call to continue the political and spiritual work of Simon Kimbangu.

support. The client works as an informant or spy against other organisations, especially the more vocal and radical.

Furthermore, they work as buffer zones between human rights violations committed by the government – which should be exposed, challenged, and addressed – and the watchdog role of civil society against poverty production, impoverishment, and a wide range of injustices. Radical civil society leaders and those who do not work for the government receive intimidations and death threats. They can be killed or forced to go into exile with the possibility of being followed and killed elsewhere and silenced forever. One participant still believes that life threats and intimidation should not discourage activists to persist with the struggles of affected communities. Otherwise, not only would there be no improvement in the lives of the CADs, but dispossession and impoverishment could be expanded outside the Inga Zone:

The Congolese people, and the dam-affected communities in particular, should organise themselves to voice their concerns together. But this is not possible today in the DRC because civil society is divided along tribal and provincial lines and around individuals' interests and benefits that different leaders receive from the government, the SNEL, the Department of Energy and the Department of Environment. This division leads to the formation of two types of civil society in the DRC: those which work for the defence of the environment and local communities; and those which work for other entities, including the government and multinational corporations. As a result, the former are seen as a threat whereas the latter are seen as partners to the government. The difference between the 1960s and 1970s when the first phases of the IHPs were built and now when there is a need to expand the projects is that the 1960s and 1970s was the peak of Mobutu's dictatorship in the name of nation building and security. Today, there is some openness for civil society to work, even though this space is not enough and any attempt to challenge the government has negative risks. But divisions undermine the standard of work of civil society on the ground and leave people's expectations unmet. Second, there is a clear lack of an agreed approach to advocacy for the poor and individuals whose rights have been and continue to be violated. As civil society remains divided, the people of this country remain also less concerned by the cause of the dam-affected communities. This is so because

the same institutions which should create awareness around these challenges are behind their own interests and thus remain divided (Interview 33, 28/02/2012, Kinshasa).

The second type of clientelism occurs between TAN and Congolese CSOs. The patron in this context may be TANs, NGOs, and individuals linked to the funders. They provide funding, material assistance, and an international reputation to the client (local civil society), as reward for commitment to the patron's activities. They get involved in the security of the personnel of the patron, and facilitate their integration through reduced bureaucratic manoeuvres and corruption. In addition to funding and material assistance that "good" local CSOs can receive, their leaders can also be co-opted by or get employment in the TANs, NGOs or MNCs. At the University of Lubumbashi for example, my visit as coordinator of the University of KwaZulu Natal in the tripartite partnership between the Universities of Liege (Belgium), KwaZulu Natal (South Africa), and Lubumbashi (the DRC), revealed that some top academics are doing part-time consultancy for formal and informal mining companies as disguised co-option regardless of the companies' poor records on and the absence of EIAs and SIAs and the fact that they work both legally and illegally. These academics do so mainly to make ends meet since their salaries remain symbolic.

In South Africa, the African Rivers Network has embarked on a campaign to lobby and persuade Congolese individuals, CSOs, and NGOs to reject further development of the IHPs. As a reward for their expected obedience, selected delegates from the organisations involved in natural resources were invited to the International Round Table on Inga 3 in Johannesburg in 2006, and a World Energy Council Workshop on Inga 4 in Gaborone, Botswana in 2007. After trying in vain to convince the delegates in various meetings to reject further development of the IHPs, the delegates from the DRC were invited to go shopping just when the main resolutions against further developments of the IHPs were going to be taken. The delegates refused to leave. As a result of this insubordination to the African Rivers, the delegates have never been invited to other meetings by their funding institution until today. This has not made the CSO leaders change their minds in favour of TANs and in this case, oppose the IHPs. Reverend Jacques Bakulu, chairperson of CEPECO which is the only development NGO which accompanies the communities affected by the Inga dams in their struggles for justice, and one of the participants of the Johannesburg and Gaborone meetings argues:

... our organisation and the sons and daughters of this country [the DRC] will never reject the IHPs and further developments of the Inga Falls Site because they represent to us [native of Bas Congo Province, and the DRC at large] rare opportunities for abundant energy that we desperately need to develop our area, Bas Congo Province, and the DRC at large. These projects are gifts from God. We are fighting, however, for socio-economic and environmental justice around the projects. Our quest is that of consultation with and compensation to our brothers and sisters who have lost everything because of these projects. We will continue to do so even if we are not sure of success but we will never reject the IHPs. Second, we are fighting for the recognition of local academics and organic intellectuals who teach foreign visitors on the IHPs. You know what happens. Foreigners arrive here and ask questions. We teach them our struggles. They write books and articles and before you know it, foreigners, our former students, become experts on our struggles and experts on the IHPs whilst the real experts are not recognised and live in the forest without running water, electricity, education or sustainable employment. When the foreigners become experts or/and have published their books and articles, they do not come back here. They stay in the USA, the UK, Paris or any other first world country. They also travel around the world explaining our struggles, often without giving us credit for the knowledge they received from us. I am not talking about you (Interview 39, 25/03/2012, Boma).

The third type of clientelism occurs within CSOs where resource allocation and cost-benefit sharing occurs through a patron-client model because of poor leadership models, divisions within the leaderships of the organisations, legacies of ethnic patronage as already explained, and competition within and among CSOs. This kind of clientelism is associated with the predation of organisational resources sustained by the “professionalisation” of CSOs and NGO leaderships. It is done with little or no popular support and no contact with the masses. The ‘tyranny of *structurelessness*¹²’ condones the biased allocation of financial resources

¹² The tyranny of “structurelessness” was coined by Jo Freeman in 1970. It is a result of a lack of structure, as preferred by unstructured groups, with the aim of allowing the free flow of, and equal access to, information for all members. “Structurelessness” becomes paradoxically a cover-up for the strong individuals within “structureless” institutions to establish an unquestioned hegemony over others through the formation of informal structures. Likewise, the idea of “structurelessness” does not stop the economically powerful individuals from

from funders, as well as the lack of leadership and lack of monitoring and evaluation of funded programmes/ projects.

A patron-client relationship does not fairly share resources within local CSOs. People who are in higher positions try their best to maximise opportunities for conferences, meetings, and resources, and convert their positions into vantage points whenever possible at the expense of their colleagues in lower positions. They also block the upward mobility of younger generations of leaders because they feel insecure and threatened. This in turn leads to a split in existing organisations and the mushrooming of new ones with similar if not identical aims and objectives. As a result the same CSO leaders attend all the local meetings every year and travel from one international conference to the next without reporting back to the members of their organisations. By doing this they deprive the same people who elected them of the opportunities to build capacity. For example, the numerous meetings I attended as a delegate of the Centre for Civil Society in the SADC region, illustrate the blurred line between organisations, a country's agendas, and individual interests, as well as a lack of upward mobility for ordinary members. These examples, however, do not downplay the contributions of rare but very dynamic CSOs and NGOs from the same country who try their best to promote the human rights of Congolese citizens and to empower them with skills to promote and protect justice and accountability despite life threats and assassinations of the most vocal activists.

Patron-client relations undermine continuity within an organisation in terms of leadership. As a result, once a leader dies, or is co-opted by the government or the MNCs, or leaves for diverse reasons, the organisation collapses because of a lack of trained individuals to take over and provide leadership. This vacuum weakens the vision of CSOs and their efforts in a wide range of struggles for political openness of the country. In support to this observation, a leader of a CSO states:

They [the CSOs and NGOs] are not proactive in their approach to deal with the issues that Congolese people face on a daily basis. They are all the time in “a wait-and-see position”. They wait for one organisation to start an initiative and they all follow when funding is coming in. They are opportunistic in various

establishing control over wages, prices and the allocation of resources within and among institutions (Freeman, 1970).

ways. The CSOs and NGOs often lack visionary leadership and aren't capable of planning their activities and fundraising for them. They are also problematic when it comes to the implementation of their own activities. It is then imperative to improve the capacity-building of Congolese CSOs leadership through their participation in international seminars, conferences and exchanges among organisations at both local and international levels. Women are still left behind despite the rhetoric of gender equality and promotion of women (Interview 31, 16/03/2012, Matadi).

This critical view, although relevant and inspiring, overlooks the degree of dictatorship and the risks that activists face in their small contributions toward an inclusive and better DRC which would cater for the needs of the majority of Congolese citizens.

7.3.1.5 Ability of local civil society to enforce compliance with existing laws

Further development of the IHPs does not seem to implement any of the guidelines and recommendations of the World Commission on Dams (WCD) published in 2000 – which laid the framework for further construction of large dam projects around the world. This institution defined the core values namely:

- i) equity;
- ii) efficiency;
- iii) participatory decision-making, and
- iv) sustainability and accountability which should govern water and energy development because large dams deal with “the very meaning, purpose and pathways for achieving sustainable human development and fair (re)distribution of [its] costs and benefits” (WCD, 2000: 201-202).

This commission has articulated the concerns of the dam-affected communities through its recommendations regarding consultation, compensation, and participation in different phases of the project. Inga 1 and Inga 2 were built before the establishment and dismantling of the WCD. Yet its guidelines and recommendations, coupled with the development agencies and financial institutions' own guidelines on mega development projects which adversely affected local communities, could inspire further developments of the IHPs in terms of socio-economic and environmental justice of the CAD.

Congolese CSOs and NGOs are divided around ethnic and economic interests. They also suffer from lack of visionary leadership and shared visions and strategies to achieve collective goals. Furthermore, some leaders of the CSOs and NGOs expect to be appointed in the government in political positions or in the MNCs which civil society tries to enforce into compliance, justice, and protection of human rights. As a result, these CSO and NGO entrepreneurs are either co-opted through clientelism as already discussed, or they divert and diffuse the determination of the rare few who are committed to making positive changes in the lives of the Congolese. In their current state the CSOs/NGOs are clearly unable to mitigate the negative impacts of the IHPs. They cannot implement fair redistribution of revenues from the IHPs and are unable to efficiently advocate for the implementation of existing DRC environmental laws or the guidelines of development agencies and international financial institutions. Lastly, civil society is unable to reduce the negative unintended results of development projects. These include government services (immigration control offices, police stations, and state security offices) “which serve to govern” (Ferguson, 1990: 251) and extend government power, and the subsequent erosion and disappearance of traditional leadership. This lack of active engagement occurs despite the presence of what social movement scholars call necessary and sufficient conditions for the emergence and functioning of social movements. These conditions comprise political opportunity (openness and conducive environment for change), constraint (political repression and massive human rights violations) (Tarrow, 1998: 76-77), mobilising structures (church, clubs, associations, and CSOs/ NGOs) and framing processes (McAdam, McCarthy, and Zald, 1996: 2-20). In the context of social mobilising and social movement, framing is the way in which people make sense of both everyday life and the injustices that they encounter, and framing processes are the ways actors bring into play one frame or set of meanings rather than another when they exchange a message, thereby demonstrating how the message is to be understood (Oliver and Johnston, 2000: 1-5).

I therefore identify the role of TANs which are likely to support Congolese CSOs as follows: They need: to redress the legacies of Inga 1 and Inga 2; to advocate for consultation with and compensation to the CADs in further developments of the IHPs; to fundraise outside the DRC for capacity building of civil society leadership; and to lobby the taxpayers, CSOs, NGOs and politicians from donor countries and individual investors to attach conditionalities of democratic governance, transparency, public accountability, and sound financial management

to further loans to the DRC for the IHPs. The TANs also have a mandate to readjust the focus of local civil society on its roles for present and future generations around the IHPs, and on development of the DRC in general. Otherwise, the TANs will continue to mis-spend the funding which they bring to the DRC with little or no return on investments and in doing so play similar roles to other agents of poverty production (Øyen, 2002: 3, 7). Lastly, I see the role of the TANs as building true partnerships between local civil society and NGOs compared to clientelism and tyranny of statelessness in order to bring about positive change in the lives of ordinary people and the communities affected by IHPs in particular.

7.4 SIGNIFICANCE OF THE INGA HYDROPOWER PROJECTS TO ORDINARY PEOPLE AND CONGOLESE CIVIL SOCIETY

In general, the Congolese believe that the IHPs are bad for their country and the economy because the projects do not improve the Congolese standard of living. The IHPs generate hydroelectricity for export to several neighbouring countries at the expense of domestic consumers, industrialisation, and rural electrification. The IHPs are also bad for socio-economic and political stability in the DRC since there is no transparency in the revenues produced and the revenues do not appear in the DRC's annual budgets - as if the IHPs do not generate any revenues at all. Furthermore, the IHPs are subject to corruption, lack of sound financial management, and a lack of skills to fund and maintain Inga 1 and Inga 2 which makes it difficult for SNEL to collect enough money for repairs, improvement, distribution networks, and replacement of electricity meters and transformers. Lastly, the repayments of loans incurred for the construction of Inga 1 and Inga 2 negatively affect socio-economic and political elites and ordinary people, who do not get much if anything from the projects (Interview 9, 25/02/2012, Kinshasa; Interview 3, 14/03/2012, Kinshasa; Interview 27, 17/03/2007, Interview 23, 30/03/2012, Kinshasa). One consumer from Kinshasa shares her views:

SNEL has serious problems of corrupt practices and a lack of new equipments. They take different forms at different levels of management of SNEL. For example, we can bribe SNEL agents with US\$5 because corruption is the norm to modify our consumption and so undercharging us. If we increase the bribe from US\$5 to US\$20, a SNEL agent can open the meter box and reverses the wires and thus the meter reading for the next three months. This operation can help us to

save money which could be spent for the duration of the operation. Corruption also takes form of a lack of transparency around the revenues generated by the IHPs. Nobody knows how much revenue the IHPs has generated since their inception. The lack of capacity to repair or generate money for repairs leads to a lots of load shedding which destroys our appliances without compensation and to “buy load shedding”¹³. SNEL agents can steal both the cables and the transformers as they fix them and thereafter ask us [consumers] to pay for them in order to get electricity. This is so because SNEL agents install and fix them, and know where [rich suburbs and companies] they can sell these equipments to domestic consumers who need electricity. This is not fair and should change as quickly as possible because it is an organised theft by the international financial institutions which give loans even though they know that the money will be stolen and Congolese socio-political and economic elites who allocate these funds to specific activities (Interview 2, 24/02/2012, Kinshasa).

Another consumer from the same city has a different view. He cautiously praises Mobutu’s vision and creativity for the first two phases of the IHPs to benefit Congolese citizens through access to abundant and cheap energy, industrialisation, and provision of employment. However, he is worried about the lack of political will and professionalism among officials who share this view:

The Inga Dams and SNEL are excellent initiatives. They were created by what we called at the time ‘Mobutu’s madness’. Some people continue to believe until now that it was a bad idea to engage so much funding on Inga Falls Site to produce electricity. I wonder where we could be today if the Inga Dams did not exist. I am, however, concerned with political manipulation/ interference around the appointments of top officials and financial management of the officials at both SNEL and the Inga Dams. I am also concerned about the shortage of skills at the plants and SNEL offices which result in poor revenue collection rates, parallel billing and inability of SNEL to know the number of consumers and accurately project for the future. People are recruited not based on their skills and technical

¹³ To buy load shedding refers to an illegal practice which is common in Kinshasa and other major cities of the DRC. It consists of paying bribe to corrupt SNEL agents to reduce the duration of load shedding in a specific area at the expense of another which was supposed to receive electricity at a particular time.

capabilities but rather through political recommendations and interferences. As a result, good candidates lack the opportunities to contribute to these companies whereas the wrong people are getting employed where they should not (Interview 12b, 14/04/2008, Kinshasa).

Civil society organisations which advocate for the rights of the communities affected by development projects are labelled “anti-development” in the DRC because of the watchdog roles they play against different forms of abuse. These organisations and their TANs regard both Inga 1 and Inga 2 and further developments of the IHPs with scepticism. They argue that further developments of the IHPs through different phases of Grand Inga are premature. The DRC should learn from the legacy of Inga 1 and Inga 2 about the importance of efficient financial, technical, and administrative management, as well as political will before engaging in bigger projects. If not, the same pattern will prevail as discussed in Chapter 6 (Interview 50, 03/04/2012, Boma; Interview 55, 27/03/2012, Matadi; Interview 57, 24/02/2012, Kinshasa).

To the question of what the Ngimbi Clan thinks about further development and the challenges of the IHPs, a focus group was conducted with individuals from the villages Matshelele, Mapulu and Ntulambaza from the Ngimbi Clan, and a resident from Camp Kinshasa (Focus Group Discussion 66, 15/03/2012, Camp Kinshasa, Inga Zone).

Participant No. 1: Clan secretary and retired teacher – Village Mashelele/ Inga Zone:

I worked for the government of the DRC as primary school teacher for 40 years in Kinshasa and Matadi. ... there was water and electricity in each house I rented in these towns. I heard that we [our communities] supply electricity to the mines in Katanga and we export electricity to neighbouring countries of the DRC. But I was shocked to see that the communities which live next to the [Inga] dams have no access to electricity and also to clean water. When I asked the Inga Dams’ officials why, they advised me to report the matter to SNEL Kinshasa or to the Presidency of the republic. How can we produce electricity without using it? I hope that one someone would help me answer to this question. Inga Dams are not good for us.

Participant No. 2: Young male single and unemployed – Village Mapulu/ Inga Zone:

I wish these projects [IHPs] did not exist because they are the source of all our problems among ourselves as affected communities with interests and expectations from the Inga Dams; and between these communities and the government of DRC. Look, we were disposed on our land, water and forest in order to build these projects which, we were told, would provide free electricity to all. We demand compensation in vain. We wrote to Members of Parliament without success. We sent a delegation to see Mzee [Laurent Desire Kabila]. He promised to visit us or send a team of experts to assess our claims. We had hoped that our concerns would be addressed ... People who killed Mzee have no compassion for the Congolese people and the poor in particular. Indeed, few weeks later, he was killed and buried with our hope for better life. His son does not really care. If Mzee was still alive, this country could have gone far in terms of development and improvement of the conditions of life of the Congolese people

Participant No. 3: Kimbanguist Pastor – Inga Zone:

The Inga Dams represent the re-incarnation of devil and hell in this country [the DRC]. It divides people, creates conflicts, impoverishes people, and undermines the lives of current and future generations. I wish the Prophet Simon Kimbangu and his children could hear my prayers now as we speak because people have been killed; people have been tortured day and night because of these projects without any reasons ... You know, God loves this country. He protects it against the balkanisation, endemic wars, extreme impoverishment, and other evil plans imposed to this country. My father told me that his father and other community members were told that the Inga Dams would build houses, tarred road between villages, schools and clinics as compensation for the sacrifice endured for these communities for the development of the DRC. They waited for these promises in vain. I am now praying my God to discourage the people, institutions, and countries which have interests in Inga. I do not see any benefit for us. Our church was burnt just before Christmas because children who came with their parents to the evening prayers were playing with fire next to this church. If electricity was

available, we would not use firewood in this church. In addition, if these children had homework to do, they would not keep themselves busy with fire. But, as you see, there is only one school in this area. This school belongs to the SNEL. We need prayers. We need to pray for our leaders because all authority comes from God and nothing is impossible to God. All we need is to believe that these demands have been met already and we will see them happening.

Participant No. 4: Traditional Healer – Inga Zone:

I do not understand why you [the researcher, pastor, and other members of the community] underestimate the power of our ancestors; the power of the dead who are not dead because they live among us and guide us at the spiritual level which dictate the manner in which we conduct ourselves in this physical world. We do not see them but they are among us. I need to offer something big and very important to them [our ancestors]. It is something that I cannot reveal to strangers like our brother here from Kinshasa or elsewhere. We will discuss this topic another day with all our clan members. We do not need to be afraid. Radical attitude from the government need radical actions from us, the dam affected communities. Then we will know who owns the land, water, and forest at the Inga Falls. Divine intervention is necessary to deal with government officials who create troubles here and now stop these projects all together since they do not have any meaning to us. They simply provide the opportunities for outsiders to invade and negatively modify our cultures and spiritual space. They destroy our youth through the love for money, teenage pregnancies, and a lack of respect to our elders

7.5 CONCLUSION

Mega hydropower projects are planned and funded, at least theoretically, to improve the standard of living of aid beneficiary communities and countries. Yet they go hand-in-hand with socio-political and environmental conflicts which in the long run, if they remain unattended, undermine the entire purpose of development through mega projects. They are also guilty of unequal sharing of costs and benefits that result from the projects. The IHPs are no exception.

There are two schools of thought on civil society. The first school is the American or mainstream view of civil society. It sees the state as a socio-political and economic threat to free markets and the spirit of entrepreneurship. The state should therefore only play a minimal role in the economy. The second school of thought, namely the “alternative view” refers to the emancipatory visions of Marx, Gramsci, and Habermas who look at civil society as a means to interrogate power, the status quo, and the purpose of development through the lens of class, race, gender, ecological, and other forms of contestation. This research is inspired by and supports the second school of thought.

Yet the two types of civil society and their theoretical frameworks are difficult to apply in the context of the DRC despite its history of resistance to the expansion of capitalism and imperialism because of (1) active fatigue, (2) the opportunistic attitudes of some CSO leaders, and (3) divisions within and between civil society organisations. In addition, conflicting interventions of the WB and other development agencies as well as IFIs do not consistently apply their guidelines in all projects and countries. Lastly, there are weaknesses in the government of the DRC to formulate and enforce its own laws on EIAs, SIAs, and other legislations which could protect local communities and the ecosystem.

Guiding policies on EIA and SIA were not followed during the construction of Inga 1 and Inga 2. The Bakajika Law and the Land Tenure Law which deal with land related issues reinforced discrimination and landlessness because of the claim that the land and all natural resources belong to the state.

CHAPTER 8. CONCLUSIONS

8.1 INTRODUCTION

This research study aimed to achieve two broad objectives. Firstly, it investigated the role of development aid and the logic and dynamics of the economic and social contract trade-offs encountered by the DRC government in the IHPs, both dating to the dam's origins, and looking ahead to the next phase. Secondly, it explored the role of civil society as a means of interrogating how state-society, and environmental and economic power relations are affected by mega-development projects (Howell and Pearse, 2001: 32). The thesis explored the roles of DRC civil society in governance, in promoting fair (re)distribution of the country's resources, and in demanding socio-economic and environmental justice, before, during, and after the construction of Inga 1 and Inga 2. The thesis also assessed the ability of civil society to demand future accountability on the part of the state around the IHPs, and explored avenues which would allow the people of the DRC to benefit from these dams - either through direct confrontation with the state (perhaps even to prevent the next stage of construction), or via a strategic move away from unsuccessful confrontations to shared interests and a common understanding of the IHPs.

Thus, the key research questions were:

- i) What can we learn from the history of the IHPs?
- ii) What has been the role of civil society in the DRC before, during, and after the construction of Inga 1 and Inga 2, and what is it likely to be in the development of Inga 3 and Inga 4?
- iii) What do the IHPs mean to local civil society groupings?
- iv) What challenges do local civil society groups face in ensuring that the IHPs will break rather than amplify the cycle of 'resource curse' and poverty?
- v) What are the attitudes of the dam-affected communities and Congolese civil society in general, given their earlier experiences of Inga 1 and Inga 2, towards new hydropower projects?

In order to fully answer the above research questions, the study aimed to achieve the following objectives:

- To investigate the role of international financial institutions, transnational construction corporations, development agencies, and electricity purchasers (especially multinational extractive industries) as well as the local Congolese state, as well as their policy guidelines and possible alliances in megaprojects, especially with regards to the IHPs.
- To understand the impoverishment risks caused by forced displacement and post-resettlement situations.
- To document the achievements and limitations of dam-induced displacement and resettlement plans and policies, if any, especially in relation to livelihood restorations.
- To examine the socio-economic and environmental impacts of Inga 1 and Inga 2 on the dam-affected communities and vulnerable groups (women, the elderly, people with disabilities, and unaccompanied minors), and Congolese people in general.
- To explore the degree and nature of responses from local communities to the IHPs in the 1960s and 1980s, and the present; and to consider the reasons for specific attitudes towards this massive project.
- To explore the possibilities of the dam-affected communities and DRC civil society in general of benefiting from the IHPs.

8.2 CONCLUSIONS

8.2.1 Alternative approaches to mainstream development

Broken promises imply an overdue need for alternative models of development theory which focus on maximising income growth for the poorest groups in the short-term and build their capabilities in the long-term. There is a call for macro-economic and social policies which target the poor through a series of measures such as land reform for subsistence agriculture and small scale farming, subsidised service delivery, and social spending on infrastructure development e.g. roads, power stations, health care, education, rural development, and upgrading of poor residential areas in cities (Harrison, 1980: 29). Alternative approaches to mainstream development models call for inclusive, participatory, emancipatory, environmentally friendly, sustainable, and people-centred strategies.

Economic growth and employment increases the gross domestic product (GDP), and there has indeed been a rise in per capita income since the 1960s in most countries. However, this increase overshadows national disparities and income and resource inequalities which negatively affect the poor who suffer from double vulnerability; they are “the first to be hit in times of stagnation and recession”, and also marginalised during periods of prosperity (Martinussen, 1997: 42). The limitations of income and wealth inequality should be targeted by economic and development policies which reject traditional welfare economists who “conflate well-being with either opulence or utility” (Clark, 2005: 3).

Short of socialist revolution, practical alternatives to modernisation theory are divided into at least four schools of thought which reflect both differences and similarities. Their differences consist of unique contributions to new development approaches instead of mainstream development theory. What they all share is the need for clear alternatives with measurable indicators for monitoring and evaluating development interventions and projects. Alternative development theories should fill the gap left by mainstream theories inspired by modernisation and high modernism. These theories are relevant to this study on IHPs since mainstream models fail to meet the expectations of communities affected by IHPs and ordinary Congolese at large.

8.2.1.1 Basic needs approach

The basic needs approach (BNA) to development was inspired by Rawls’ theory of justice (Rawls, 1971, cited Santos *et al.*, 2010: 1-2), formulated by the International Labour Organisation (ILO) in 1976 (ILO, 1976: 2-3), and introduced into development discourse by Robert McNamara, the President of the WB in 1972. This approach views development as the promotion of overall income of the poor but also as a tool for making sure that all individuals receive essential income for a dignified life free from absolute need (Harrison, 1980: 29). The BNA considers development as continual and quantifiable social improvement of the poor and resource-weak groups in society (Ajei, 2007: 76). It contends that economic growth is important for development but it is not enough for an inclusive prosperity of human kind. Development should therefore focus on “a set of primary goods that are constituent elements of well-being and considered necessary to live a good life” (Santos *et al.*, 2010: 1-2). According to Harrison (1980: 29), the first set of needs entails “a basic level of private consumption consistent with survival, good health for work and school, and dignity”. The

second set of basic needs refers to “essential services that the government provides including clean water and sanitation, health services, public transport, and education”. The third set of basic needs consists of useful employment which pays sufficient earnings because employment is the cornerstone of basic needs (Harrison, 1980: 29). The BNA policy also insists on the contribution of beneficiary communities in making decisions which affect their lives through organisations of their choice (ILO, 1976, cited in Heierli-Hogaust, 1981: 287).

The BNA is relevant to IHPs because it involves international capital transfers at all levels which do not meet the basic needs of affected communities or ordinary Congolese citizens in the vicinity of the projects. Congolese citizens and the dam-affected communities in particular, do not have access to the electricity generated by the IHPs for their basic needs such as access to electricity for domestic consumption and industrial use. Critically important is the fact that the revenues from electricity exports are never mentioned in national budgets. As a result, the BNA to development should assist the government of the DRC in directly redistributing revenues from the IHPs to Congolese citizens or indirectly through other development projects.

The critics of the BNA to development argue, among other things, that it does not include income and consumption which could alleviate unmet basic needs at the household level such as access to sanitation services, children attending schools, economic capacity of household members and more importantly of the household head. These indicators were difficult to measure. Interested groups such as human rights activists and academics were not available when this alternative approach to mainstream development theory emerged. The BNA should therefore include unsatisfied basic needs (UBNA) to accurately reflect the reality at the household level (Santos *et al.*, 2010: 1, 17). In support to and complementing the previous author, Galtung (1979: 60) argues that the key weakness of the BNA is its inability to look at “how misery and marginalisation are produced, reproduced, [and intergenerationally transmitted]”, plus its inability to abolish misery and satisfy basic needs. These shortcomings reveal that we need a wide range of alternatives to mainstream development thinking of which the BNA is one.

8.2.1.2 Capability approach

The root of the capability approach (CA) can be traced Aristotle, classical political economy,

and Marx. Yet, the CA also has links to contemporary development challenges. It was, like the BNA, strongly influenced by Rawl's theory of justice. It is also influenced by Isaiah Berlin's *Two Concepts of Liberty* (Clarck, 2005: 2). The main characteristic of the CA is its focus on what people are effectively able to do and to be, according to their capabilities; CA is strongly people-centered (Robeyns, 2005: 2).

It seeks to measure well-being from a much broader information base by taking into consideration the relevant circumstances that enable or make difficult or prevent altogether the *conversion* of preferences, income, primary goods, and the like "into the person's ability to promote her ends (Sen, 1999, cited in DeCesare, 2011: 227).

Bojer (2004: 2) argues that the CA makes people responsible for their own preferences, and consequently for their own welfare. The CA to development could build the capacity of communities which are affected by the IHPs as well as the people of the DRC at large. The IHPs have two objectives: the first is to maximise the profits of international financial institutions, different investors, and the socio-political and economic elites from the DRC. This objective uses the IHPs as a catalyst to move from a traditional to a westernised stage. The second objective is to lead the DRC through a path of modernisation similar to western industrialised countries, even though our fieldwork demonstrates that the IHPs impoverish, perpetuate the vulnerability of the poor, and maintain intergenerational transmission of poverty through dispossession of natural resources – e.g. land, water, and forest resources – without compensation or bringing any other benefits to the Inga Zone. It therefore becomes critical to look at the IHPs through the lens of a CA to redress the downfalls of these projects. The CA argues that the role of the state is to create a conducive environment and to protect individuals' capabilities to achieve their own goals. Income and wealth are important but do not count as capabilities *per se* because "capability is a kind of freedom: the substantive freedom to achieve alternative functioning combinations or the freedom to achieve various life styles" (Sen, 1999, cited in Bojer, 2004: 3).

The CA has been criticised for not providing clear criteria of identification of valuable capabilities and for failing to supplement Sen's framework with a coherent list of important capabilities (Clark, 2005: 5). In addition, the concept of capability is so complex that even Sen and Nussbaum who elaborate and fearlessly defend it, do not agree on a standard list of

capabilities. In fact, Nussbaum (2006: 19-56) would like to have the list of capabilities to remain open-ended and subject to future adaptations depending on new insights, discoveries, and criticism even though some capabilities are more fixed than others. Sen (1999: 74-77), on the other hand, categorically rejects the idea of any universally defined list of capabilities with no specification of its use which has the potential to vary over time and space. These capabilities may depend on individuals' upward or downward mobility determined by the opportunities and constraints that they encounter in their day-to-day interactions with environments.

8.2.1.3 Rights-based approach

The rights-based approach (RBA) puts politics and the root causes of poverty at the centre of development practice, and consequently brings an ethical and moral element to the initial development theory which did not survive due to its narrow approach to the well-being of the beneficiaries of development. The RBA provides a basis on which citizens can claim entitlements from the state. In the context of the IHPs, the dam-affected communities and other Congolese have the right to claim their shares of the resources generated by these mega hydropower dams, but the Congolese generally do not make claims, or do so without success. The RBA holds states accountable for the improvement of their citizen's livelihoods. These rights must be brought in line with internationally approved sets of standards supported by international law (Cornwall and Nyamu-Musembi, 2004: 1416-1431).

According to Cornwall and Nyamu-Musembi (2004: 1416-1431), the RBA approach to development has similar outcomes to the human rights (HR) approach to development because it sees rights as a medium which can transform the way we see and practise development - from focusing on identification and satisfaction of needs to enabling people to be aware of and to claim protection for their rights according to the Universal Declaration of Human Rights (Cornwall and Nyamu-Musembi, 2004: 1416). There is, however, a difference between the two. The RBA to development emphasises the entrenchment of a broad range of socio-economic and social rights in the public discourse and the body politic. It also seeks to share existing resources more equally and to assist marginalised communities to claim just shares, making destitution and social exclusion political problems. As a result, the solution to socio-economic marginalisation needs to be political.

The HR approach to development, on the other hand, offers reasons for justifying a focus on severe human rights violations affecting larger segments of the population such as women, children, and the elderly. The HR approach to development emphasises the offering of additional resources for service delivery to destitute groups, thereby redistributing resources (Cornwall and Nyamu-Musembi, 2004: 1416).

The HR approach to development implies three notions:

- i) the “protection of individuals and groups against power exertion from the state and the non-state actors”,
- ii) “non-discrimination, equal opportunities and participation”, and
- iii) “enabling support that allows individuals and groups to lead a life of dignity” (Cornwall and Nyamu-Musembi, 2004: 1416).

Support in this context means empowering individuals through the fulfilment of human rights, including enabling them to organise and claim rights attached to citizenship (Sano, 2000: 3-8). This is a very important approach to social mobilisation in Africa and the DRC in particular, given the role of NGOs in promoting both national and United Nations development and socio-economic rights in recent years.

Both RBA and the HR approaches are important tools for measuring the successes and failures of development projects, and the IHPs in particular, in terms of access to electricity generated by the IHPs, the degree of distribution of the revenues from the these massive projects, and the degree of transparency and accountability of different stakeholders to the people of the DRC. This is because Congolese citizens have a right to benefit from development projects and revenues earned as a result thereof. They have a right to development which does not endanger their lives through pollution, subsequent emission of GHGs, and the over-exploitation of natural resources. The RBA and HR approach as well as all other alternatives to development theory suffer from three challenges. Firstly, they lack the methods for both qualitative and quantitative evaluations. Secondly, they fall short of qualitative and quantitative indicators for measuring effectiveness of developed work (Farrell, 2003: 16-17). Lastly, there are no enforcement and compliance mechanisms. As a result the states are free to selectively implement or reject the RBA and HR.

8.2.1.4 Millennium development goals

The millennium development goals (MDGs) represent quantified and time-bound objectives - including 8 development goals, 18 targets, and 48 indicators (Millennium Project, 2006) - which could be used by the IHPs as springboards and catalyst since all 8 MDGs need access to cheap and sustainable supplies of hydroelectricity in a country “where only 22 per cent of the population have access to drinking water and only 9 per cent have access to sanitation, with wide regional and urban-rural disparities” (AfDB and OECD, 2007: 212). These MDGs were developed by the United Nations and consist of:

- i) eradicating extreme poverty and hunger,
- ii) achieving universal primary education,
- iii) promoting gender equality and empowering women,
- iv) reducing child mortality,
- v) improving maternal health,
- vi) combating HIV/ AIDS, malaria and other diseases,
- vii) ensuring environmental sustainability, and
- viii) developing a global partnership for development (Bloem and Levy, 2005: 5-19; Suphamongkhon, 2005: 54-57).

It is not clear which MDGs the DRC have embraced and how well the country is faring because (1) Mobutu’s dictatorship did not provide any space for independent assessment of service delivery by local and international institutions and (2) the endemic rebellions and war economies since 1996 have not improved the legacy of human rights violations and the lack of freedom of expression.

The hydropower from the IHPs has the potential to speed up government and civil society organisations’ responses to reduce poverty through the provision of equal schooling opportunities for boys, and girls and in doing so reducing poverty, socio-economic discontent, and ethnic wars. In addition, MDGs require a sustainable supply of affordable electricity and a substantial source of revenue that the IHPs could – with everything remaining unchanged elsewhere – generate and diversify.

Suphamongkhon (2005: 54-57) contends that the MDGs shift development debates from rhetoric to concrete actions within the time frame that 190 nations agreed to during the

Millennium Summit in September 2000. The declaration laid down “fundamental and universal values of people-centred and sustainable development” (*ibid.*) which consist of freedom, equality, solidarity, tolerance, respect for nature, and shared values. The eighth MDG occupies a leading position among the MDGs because its achievement is, *ceteris paribus*, critical for the achievement of other seven. Indeed, the eighth MDG calls for industrialised nations to cancel debt, increase aid, and give poor countries fair access to their markets and technology (Suphamongkhon, 2005: 54-57). In practice, however, the global partnership for development is likely to hinder the achievement of other MDGs because of its market-oriented approach to development which remains controversial (Ajei, 2007: 90-93). For example, it is unrealistic to expect poor and developing countries reaching the MDGs under the auspices of the same institutions which cause and perpetuate socio-economic inequality through unequal access to and unfair distribution of resources, and commodification of the same rights which the global partnerships pretend to promote. This means that the MDGs and any other new framework inspired by neoliberal socio-economic policies will not succeed in very impoverished countries like the DRC whose market-oriented and minerals-export policies tend to reinforce poverty, as I will discuss later in this research project. This is especially true in the areas to be most adversely affected by the IHPs.

NGOs and activists around the world have been critical about the MDGs from their inception to their imposition on different poor and developing countries, and of the possibility of seeing their goals being met. The UN is aware of the shortcomings which are: lack of public participation in the definition of MDGs, the neoliberal “one size fits all” approach to development, and the challenges involved in their implementation. The UN therefore funded a global survey for the post-2015 MDGs or 2030 MDGs to be implanted beyond 2015 taking into account the criticisms levelled against the 2015-MDGs concerning the lack participation of NGOs and ordinary people. In Africa, this initiative was called “Voice Africa’s Future, a Global Survey for a Better World”¹.

¹ In South Africa, African Monitor and Africa Unite selected Western Cape, Eastern Cape, and Kwa-Zulu Natal for this global survey. In each province, 11 people (1 supervisor and 10 fieldworkers) were hired for 10 days to interview 500 youth aged between 15 years old – without necessarily having the written consent of their parents or guardians – and 35 years old. The participants were asked to choose five top priorities (from 9 items: (1) better employment and economic opportunities, (2) better access to quality of education, (3) better governance, (4) better health services, (5) improved livelihoods, (6) economic development, (7) peace and stability, (8) equal societies, and (9) environmental conservation and sustainability) for their future and the future of Africa. These priorities would be among the post-2015 MDGs. These interviews were compiled and analysed by the supervisor of each province as they were taking place. The process was rushed; the sampling was not representative; and the quality of data was very poor due to a lack of or poor training of field workers.

8.2.2 Key research findings

i) What can we learn from the history of the IHPs?

- The IHPs is a top-down facility and high modernist development initiative inspired by modernisation ethos and designed to produce electricity for local subsidiaries of multinational corporations and for export. They have little to do with supplying electricity to the people of the DRC. They are declared a strategic security point and fall under state security. The disappearance or murder of Philippe de Dieuleveult and his team, tight security around the dams, harassment of activists and the members of the affected communities who claim reparation, and repression of both local and transnational activists who try to mobilise individuals around dam-related issues sustain this view. Everything is secret. Nobody knows much revenue the IHPs generate or how it is spent and by who?
- The role of multilateral financial institutions, transnational construction corporations, international development agencies and purchasers of electricity through the lens of the IHPs in the 1960s-1980s and thereafter revealed mixed results. People see what they would like to fix the eyes on; and whether they support, oppose and remains indifferent to aid.
 - The IFIs institutions and development agencies believe that aid is doing wonders to the DRC. The shortcoming of aid is a result of internal agents and factors. These include a lack of professionalism and different political aspiration (Manson, 2011).
 - The IHPs are good and bad for government officials. They have positive impacts when they generate profit to the individuals involved (Interview 24, 30/03/2012). They are detrimental for government officials who are not working for and involved in different capacities in the IHPs (Interview 19, 16/04/2008). They bad for civil servants who have a different approach to electrification of the DRC (Interveiw 13, 24/03/2012).

- Civil society organisations are very concerned of unfulfilled promises that these projects brought to the communities; they are worried about corruption at all levels, financial mismanagement, political interference, and lack of expertise to negotiate contracts on the behalf of the government of the DRC (Interview 51, 22/03/2012).
- The historical context of the IHPs revealed two alliances during the construction of the IHPs and subsequently, the Inga-Shaba Power Highway Project. The first alliance occurred between the government of the DRC on one hand, and the hydropower industry which included a wide range of multinational corporations. The second alliance consisted on the government of the DRC and the IFIs, development agencies and secret services which used these projects as a means for geopolitical goals (Hancock, 1989).

ii) What has been the role of civil society in the DRC before, during, and after the construction of Inga 1 and Inga 2, and what is it likely to be in the development of Inga 3 and Inga 4?

- Inga 1 and Inga 2 occurred at the peak of Mobutu's dictatorship and at the time of the rebirth of social movements from a different perspective of class and economics. As a result, there were no EIAs, SIAs or any other studies for minimise the negative impacts of the projects on people and environment.
- Local civil society did not play any role before the construction of the Inga 1 and Inga 2 in the 1960s-1980s because the concept has not developed as yet. In fact, both the mainstream idea and alternative concepts of civil society were prevalent in the USA and Europe whilst absent, in contemporary understanding of the word, in Africa. The construction of Inga 1 and Inga 2 occurred at rise of Mobutu to power through a military coup which perpetuated traditional leadership ruling where there is not contestation of power. Civil society did not play any meaningful roles prior to and during the construction of Inga 1 and Inga 2 for the reasons already mentioned.

- During the 1980s, the idea of NGOs emerged in the DRC without a clear mandate for these institutions. But they came to test the dictatorship, yet without any involvement in environmental issues, let alone the IHPs. Civil society organisations began their work in the Inga Zone in 2006 when underground community mobilising around the negative effects of these plants was taking place in Camp Kinshasa and outside this environment. They are not likely to play any meaningful roles in different phases of Grand Inga due to a lack of political openness, repression of human rights activists, activism fatigue, and opportunistic behaviour of some CSO leaderships. It is less likely that the TANs will play any important roles since local organisations remain inefficient.

- Very few civil society organisations are involved in the dam-affected communities' struggles for socio-economic and environmental justice. They are vocal around further developments of these projects in terms of the legacy of previous developments. Yet, they may not do much due a lack of political openness and freedom of expression. It is expected that the TANs play a critical role from the investors' home country through the boomerang effect. There was no active citizenship g the construction of Inga 1 and Inga 2 because social mobilising was in its infant stage

iii) *What challenges do local civil society groups face in ensuring that the IHPs will break rather than amplify the cycle of 'resource curse' and poverty?*

- Local civil society groups face numerous challenges including but limiting to the following:
 - A lack of political openness to express different and controversial views on the public affairs. Activists are tortured, kidnapped or killed for their opinions on different issues. The murder of Floribert Chibeya and his driver is just one example of these massive human rights violations;
 - A lack of visionary and competent leadership to educate and mobilise members, channel the energy of the masses toward productive goals, fundraise for their activities, and build successful transnational networks;

- Opportunistic behaviour of some leaders which pushes them to be co-opted either by the state or the multinational corporations; or both for personal for personal gain;
 - Competition among the CSOs and power struggles within CSOs undermine their ability to efficiently do lobbying and advocacy;
 - A lack of funding for their different programmes;
- Lack of credibility in the DRC and around the IHPs in particular, and outside the country which may in turn undermine their ability to fundraise and build strong partnership with likeminded institutions.
 - Multiple layers of clientelism i.e. within organisations, between local and international organisations, and between the government of the DRC and local civil society organisations as presented in Section 7.4.4 damage the work of fewer organisations which are truly committed to their visions.

iv) What do the IHPs mean to local civil society groupings?

- These facilities are bad for the affected communities because they were disposed of their land, water and forest resources without consultation or compensation; these projects do not bring any socio-economic infrastructures as promised to their fathers and grand-fathers to the affected communities; or provide job; they increase waterborne diseases (Interview 61, 02/04/2012).
- The IHPs do not provide electricity to the affected communities, job or socio-economic infrastructures - such as tarred roads; free schools, hospitals and clean water as promised - which could have developed the communities in the vicinity of the plants and beyond. They therefore produce poverty and transmit it across generation of the affected communities (Interview 68, 27/03/2012).
- These facilities cause divisions within and between clans of the affected communities which weaken their struggles for reparation from the negative impacts

of Inga 1 and Inga 2; and future negotiations around the different phases of Grand Inga.

v) *What are the attitudes of the dam-affected communities and Congolese civil society in general, given their earlier experiences of Inga 1 and Inga 2, towards new hydropower projects?*

- Despite their slight diverging views on Inga 1 and Inga 2, there is a consensus on further developments of the Inga Falls Site. The participants have a bitter taste of different plants despite their promises. They all believe that the legacy of Inga 1 and Inga 2 should be first addressed before they endorse additional phases of the same projects. Some push their demands even further arguing that they need to sign a Collective Agreement and Emphyteusis Lease with the government of the DRC (Interview 77, 27/03/2012). But what they do not know or failed to remember is that the Bajika Law of 1966 and the Land Tenure Law of 1973 give full right of ownership of land and everything underneath it to the government of the DRC.

- Ordinary people outside the Inga Zone - who are also negatively affected in different ways i.e. repayment of loans incurred to build these projects and lack of access to development – are equally concerned about additional phases of the IHPs because the existing ones are characterised by a lack of technical expertise to maintenance and repairs, increase the capacity of the dams to acceptable levels, connect new subscribers to the grid and distribute electricity meters. They also worried about poor and a lack of administrative and financial management skills to favourably negotiate contracts on the behalf of the state (Interview 15, 29/02/2012).

vi) *Understand the impoverishment risks due to IHP-induced forced displacement and the post-resettlement situation, as well as access to electricity.*

- There was environmental law for forced removal and resettlement or mega development projects. They therefore lost their assets in the name of development. The respondents believe that they inherit poverty from the parents and grand-parents who have been dispossessed of their natural resources. They could be better off today like

the members of other villages far from the Inga Zone if these projects did not come to their villages.

- They have no access to free electricity. Those who would like to pay for electricity, they are denied connection to the grid.

vii) *Document the achievements and limitations of IHP-induced displacement and resettlement plans and policies (if any), especially relating to livelihood restoration*

- The IHPs did not any resettlement policy which could cater for the livelihoods for the first two phases. As a result:
 - 99.9% percent has no formal employment because of a lack of skills that they could trade to make a living. They did not go school because their parents or grand-parents did not afford to pay for their education. Their children are more likely to be poorer at best or they can die of HIV/ AIDS related complications due to high prevalence of the infection.
 - They have a limited access to land they were forcibly resettled. They are therefore obliged to walk long hours to the farms in order to make a living. Women are the most affected because of their multiple responsibilities at home and in the communities. They have no access to forest resources or water from the Congo River.
- Reparation programmes which would be funded by the WB to compensate the losses that the affected communities suffered is on the agenda for additional phases of the IHPs according to the HOD of environment and social impact assessment at SNEL. It remains unclear and difficult to implement such programmes because of corruption, a lack of political will to do so, political interference, and the Bakajika Law of 1966 and the Land Tenure Law of 1973.
- The affected communities, through the contribution of CEPECO and IR, have successfully brought their 53 year-struggle to the international space for international

campaigns on the behalf of the affected communities by the IHPs. It is hoped that positive outcomes will derive from this exposure because the language for reparation is emerging from SNEL and the WB.

viii) What are the socio-economic and environmental impacts of Inga 1 and Inga 2 on the dam-affected communities and vulnerable groups (women, the elderly, people with disabilities, and unaccompanied minors), and Congolese people in general?

- The facilities have not brought in development as yet. Many children stay at home because their parents are too poor to pay for the school fees and there is no free school or clinic for the affected communities; teenage pregnancy is rampant, the impacts of prevalence of HIV and AIDS is important in the Inga Zone and Camp Kinshasa are alarming.
- The IHPs have negative effects on women in both rural areas and the cities. They increase the distance between villages and where women fetch water and firewood for cooking, the sick and other basic needs; and subsequent load to carry on their heads in addition to the babies on the back. In the cities, the situation is not better either.
- People with disabilities and unaccompanied minors pay a heavy price for the projects. They have no easy access to clean and tapped water when and where they need it depending on the degree of their disabilities. So they rely and increase the work load of women inside and outside the Inga Zone.

ix) What are the possibilities of the dam-affected communities and DRC civil society in general of benefiting from the IHPs?

- Strong and visionary civil society organisations have the potential to bring positive change in the struggles of the affected communities and, by extension, the DRC, despite this bleak representation of the projects to the affected communities. They would achieve these changes through civic education, framing and community mobilising around the issues at hand. They can also speedup the realisation of their wishes by strengthening their ties with TANs. The latter would embark on and use

the “boomerang strategy” (Keck and Sikkink, 1998: 11-13) and “double mobilisation approach” to challenging issues at local level (Wu, 2005: 65-67).

- The fact that TANs have successfully brought these struggles to international arena and the WB and the AfDB are aware of these struggles and promised to address the legacy of the past is a step towards successful outcomes.

8.2.3 Other Findings

- Development is synonymous with westernisation.
- Development theorists remain concerned by economic growth without a clear focus on achieving a just (re)distribution of development outcomes or prioritising social issues even development should capacitate to take shape and ownership of their life both in the present the present and future.
- Modernisation theories, like the IHPs, are inspired by a top-down approach to economic growth and development in Southern countries, the DRC in particular. This approach attempts to address social issues – poverty, unemployment and crime, to name a few – and political problems – by blaming the poor, depoliticising poverty, by a lack of political will, and by political interference – through technical solutions to social problems and modernity projects. Development efforts fail to meet their objectives and the expectations of the theoretical target populations, and therefore fail to promote inclusive development. These projects occur with numerous promises, little or no consultation with, or compensation for, the people most affected by them.
- While there are variations in approaches to modernisation theory, they all share three main characteristics. They all believe that development is a staged process, i.e. that development is synonymous with Europeanisation or Americanisation, and the transfer of western experiences into developing countries through modernisation projects such as IHPs. Secondly, they do not emphasise social development *per se*, but are motivated by political agendas and economic growth that support the economies of western countries in the post-World War II era. Lastly, these different approaches

were developed centuries ago in today industrialised countries. They may consequently be difficult to apply in poor and developing countries in which some pre-conditions for development such as well-trained and educated labour force, efficient government bureaucracy, and transport facilities remain challenging because of a lack of political will.

- The Marxist theory of development and Foucault's approach to power are equally relevant to the IHPs. The former contends that accumulation of wealth by the bourgeoisie goes hand in hand with dispossession, exploitation, and impoverishment of the proletariat. That accumulation by dispossession leads to uneven and combined development. The differences are most obvious between cities which benefit from the IHPs and rural areas which have been impoverished by the same projects. The dispossession of wealth is critical to our interpretation of the IHP dams in time and space since the technologies of power shed light to why individuals conform to society's rules.
- Electricity development projects are characterised by unequal shares of costs and benefits borne by rural areas where hydropower plants are located, and cities which consume most of the electricity. They also dominated by disparities between the poor in both rural and urban areas who are unable to afford basic electricity, and the rich who need much more electricity for their houses, swimming pools, and parking lots. Development projects, moreover, result in the poor being dispossessed of natural resources thereby increasing their impoverishment and vulnerability and subsequent uneven development. This situation often leads to class conflict between the bourgeoisie and the proletariat.
- Selected countries involved in large and mega-dam projects enjoy many economic benefits in terms of job creation, hydropower supplies, water for irrigation, and flood control. However, these benefits occur in tandem with numerous challenges to local communities and the ecosystems. These challenges have elicited different responses from the three groups of people and institutions which have vested interests in the dam industry. The supporters of large dams include local political and economic elites, local and foreign investors, and suppliers of equipment and other material used

in the construction of dams. These groups benefit directly and indirectly from such projects. Those who oppose large dam projects argue that the projects are asset draining because they are shaped by political motives rather than social and economic considerations. This group includes affected communities, anti-dam activists, and academics who believe that dams and mega-dam projects in particular, should be avoided. The third group believes that the dam industry is neither good nor bad *per se*. The outcome depends on a wide range of factors such as existing social and economic policies, the level of accountability and good governance, and public participation in these large projects in the receiving countries. This research endorses the third school of thought.

- Either way, an absence of aid could be very detrimental to the fight against HIV/AIDS, river blindness, and other pandemics. In addition, the construction of mega socio-economic infrastructures could be difficult in the absence of development aid. Finally, the reconstruction of war-torn countries would not be easy without development aid. However, it is critically important that visionary and competent civil society organisations be in place to address the socio-economic and political challenges created and perpetuated by large projects all over the world and in the DRC in particular.
- Congolese civil society organisations have resisted the expansion of capitalism since time immemorial. This has ranged from organised massive resistance and sporadic revolts against the imposition of wage labour, to different forms of resistance against political colonialism and neo-colonial projects, including the construction of Inga 1 and Inga 2. The degree of resistance depends on the political opportunities, framing processes, and mobilising structures of each epoch. The IHPs divided Congolese society into winners and losers. It divided them into those who support the projects (government officials and socio-economic elites) and those who, given the opportunity, would oppose the IHPs: dam-affected communities, human rights activists, and some academics.
- Hydropower plants provide electricity which should be used to improve the standards of living of people and the most vulnerable – e.g. the poor, women, the elderly – in

rural and peri-urban areas, and cities. However, the generation of hydropower and other subsequent operations have had negative impacts on the environment, people and the economy through corruption, a lack of transparency and public accountability, and poor financial management. Conditionality to aid which imposes democratic and good governance may mitigate these challenges and enforces the implementation of stakeholders' guidelines and international standards may reduce the harmful impacts of mega development projects on the environment and the beneficiaries.

- Hydroelectricity is not a clean energy even though is not as dirt as electricity produce fossil fuelled plants. It derives from waterfall from a dam reservoir and run-offs from the river. The reservoir produces substantial amount of GHG emissions in the flooded area whilst the hydropower plant produce GHG emissions from degassing fluxes from water passing at the turbines. Turbulent degassing in the downstream part of the dam is another issue. In turn, GHG emissions occur at the pre-dam stage due to construction work, and in the post-dam stage upstream and downstream from the dams through the release of gases from built-up sediments in the dam reservoirs. In worse case scenario, hydro-powered plants can produce more GHG emissions, and therefore pollute more, than fossil fuelled plants for the same amount of energy.
- Hydropower plants are cheaper to run and maintain in the beginning because of less production cost due optimum capacity of the dam reservoir and the long life cycle of the plants. But as they get older, they become very expensive to exploit due to high costs of maintenance of the river flow, sediment removal in the dam reservoir, protection of the reservoir against aquatic weeds, and mitigation of socio-environmental problems. So the idea of generating cheaper electricity through hydropower plants needs to be reviewed.
- Hydroelectricity is not a renewable energy because hydroelectric power is not a renewable natural resource *per se*. It is produced by the water flow from run-of-the river dams or classic dam reservoirs at sufficient altitudes to push water through turbines which in turn produce electricity. Sustainable hydroelectricity therefore requires continuous and constant water flows from river basins and stream(s). The constant flow of water depends on sustained regular rainfall in the river basin. If there

is little or irregular rainfall, there will be less flowing water and consequently less electricity generated. In a worse case scenario of extreme and prolonged drought due to global warming which may lead to the reservoir drying out, there would be no water in the dam and no hydroelectricity.

- The WB, the EIB, and the AfDB have drawn up guidelines for megaprojects with clear categorisations and subsequent actions to be taken. The WCD identified tools and recommendations that the dam industry should adopt in order to prevent or at least minimise the negative effects of large dams on people and the environment in the absence of enforcement mechanisms. There is no uniformity in the implementation of these guidelines, tools, and recommendations. While some projects funded by these institutions follow the guidelines, others do not.
- During the colonial era, there were no environmental laws *per se* in the DRC. Parks, natural reserves, and forest resources were administered under royal treaties which did not make any provision for land ownership among the indigenous population. In the post-independent period, the DRC addressed the deprivation of land rights through the Bakajika Law of 1966 and the Land Tenure Law of 1973. In practice, land was and is still owned by socio-economic and political elites even though they do not have any titles. Land allocation also follows a dual pattern: traditional leadership allocates vacant land and government provides formal recognition on paper.

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APPENDICES

A. 1. Inga Hydropower Projects as high modernist projects, historical background and the vision for development of the DRC

The Inga Hydropower Projects (IHPs), initially called the Inga Hydroelectric Complex Zone for Integrated Development of the DRC, were expected to be a socio-economic and industrial development hub of the DRC for regional planning, industrialisation, and professional and technical training. They were therefore intended to promote (1) increased productivity in the agricultural sector, given the difference in structure between industrial agriculture and subsistence agriculture; and (2) the start of a gradual process of industrialisation thanks to tax and customs facilities, special credits, contributions to the capital account, and the creation of industrial zones and technical assistance (SICAI, 1964). The IHPs were linked to other white elephant projects including but not limited to an aluminium plant, major infrastructure (Banana-Moanda Harbour, railways, roads, Africa's longest double bridge for both trains and vehicles), industrial towns, and the Inga Industrial Free Zone which will rationally utilise the electricity from these massive projects (Willame, 1986)

The IHPs could achieve these objectives by locating the appropriate industries for the domestic market on the left bank of the river between Kinshasa (Kishasa Province) and Kwamouth (Bandudu Province); whilst the right bank of the river, a restricted coastal strip between Banana and Kinshasa, could be reserved for the export market. In addition, the IHPs could supply to two important plants. First, there was a nitrogen plant which aimed at providing a fundamental contribution to agricultural productivity, so meeting the need of local people for agricultural produce. Second, there was an iron and steel plant which should substantially contribute to local construction needs and consequently positively contribute to the balance of payments.

The IHPs should be designed to supply electricity to the domestic market for local industrialisation and subsequent job creation, as well as household consumption. Once the local market could be satisfied, the projects could then expand hydroelectricity exports for the sake of a strong currency, which could be used to buy spare parts and equipment for further developments of the Inga Falls Site (SICAI, 1964).

This high-modernist approach to the IHPs was clearly sustained in 1964 by both the president Joseph Kasavubu and his Premier Minister Moise Tshombe in their speeches during the launch of pre-feasibility study of the projects. According to Kasavubu:

The Congolese government expects the study of SICAI, to firstly verify the economic and technical justification of the Inga initiative, and secondly, to indicate a series of priority operations based on the economic criteria which have the potential to promote an ever increasing progress to allow the most professional use of productive energies of the country, as part of a development hub.

The study of SICAI should not confine itself to indicate the industries which consume large quantity of energy produced by Inga but it will include the measures which are likely to allow both a harmonious development of the economy and accelerate Congolese economy. Primary and secondary activities would find a new balance and they will enable the development of agriculture and the development of the industry in the design of Inga as an economic growth hub.

From this perspective, the SICAI will discuss the programme of the territorial layouts and the problem of training and skills transfer to local personnel who will determine the success of the realisation of these objectives.

The revival of Inga [...] cannot be realised without sacrifices from the nation of DRC. The obstacles may arise on the road we have to travel for the realisation of this great work. However, if the objectives and perspectives that I have just outlined are properly followed, our action in favour of the Congolese people will not fail to bear fruit (Kasavubu, 1964, Cited in SICAI, 1964).

Prime Minister Moise Tshombe (SICAI) argued:

[I] am fully confident that with Inga, as a pole for economic and social development, the Congolese people have a powerful and functional tool to initiate, amplify, and

consolidate emancipation and economic independence and to guarantee political independence and national sovereignty.

The political will of national elites at the time of design - the Second Republic from 1965 to 1997 - and the pressure from the international financial institutions and development agencies might have pushed the Congolese government to overlook the recommendations of the first study on the Inga Falls Site. That design focused solely on the export of electricity without supplying electricity even to the cities located under the power transmission lines.

A. 2. Authorisation to conduct research at Inga Hydropower Projects and SNEL

28 APR 2008

DRH/DFP/0441/2008/

5399 - - 2

NOTE A LA DIRECTION DE LA PRODUCTION

CONCERNE : AUTORISATION DE RECHERCHE EN FAVEUR DE L' ETUDIANT BARUTI BAHATI AMISI.

L'Université de KwaZulu Natal, U.K.Z.N. en sigle, nous recommande l'étudiant dont le nom est repris ci-dessus, pour une recherche en vue de l'élaboration de son travail de fin d'études intitulé :

« ETUDE DE L'HISTORIQUE DE LA REALISATION DE LA CENTRALE D'INGA I ET II »

Nous vous prions de lui accorder l'autorisation d'accès à votre documentation y relative dans le respect des consignes de gestion et d'assurer son encadrement endéans 20 jours .

 LE DIRECTEUR DE LA FORMATION
DU PERSONNEL


MOBOLAMA MONTALA



C.C : - INT



UNIVERSITY OF
KWAZULU-NATAL
INYUVESI
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<http://www.ukzn.ac.za/ccs>

Durban 29/02/2012

Objet: Recommandation de Baruti B Amisi.

Je soussigné, Docteur Professeur Patrick Bond, Directeur du Centre pour la Société Civile et Professeur à l'Université de KwaZulu Natal de Durban, atteste par la présente que Baruti B Amisi est étudiant de doctorat au *School of Built Environment and Development Studies of the University of KwaZulu Natal* à Durban.

Baruti B Amisi est actuellement entrain de récolter les données pour ses recherches de fin de Troisième Cycle à Kinshasa et au Bas Congo dans la République Démocratique du Congo.

Nous demandons aux autorités civiles et militaires ainsi qu'aux responsables des organisations non-gouvernementales d'assister de lui faciliter ce travail de terrain.

Cordialement,

Docteur Professeur Patrick Bond



**Société
Nationale
d'Electricité sarl**

Kinshasa, le **15 MAR 2012**.....

N/REF. : DG/2012/ **01453**

A Monsieur BARUTI B. AMISI
P.O. Box 63074
Bishop Gate4008
DURBAN

Concerne : V/Demande d'Interview sur l'Historique des Barrages d'Inga

Monsieur,

J'accuse réception de votre lettre du 08 mars relative à l'objet mieux spécifié ci-dessus et vous remercie pour l'intérêt que vous portez à SNEL.

Afin de répondre à vos attentes, je vous communique ci-après les références des personnes à contacter.

Il s'agit de :

- 1. Mr Conrad IBALANKY EBU LEY**
*Directeur du Département Etudes, Planification,
Normes et Standards*
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Veuillez agréer, Monsieur, l'expression de mes sentiments distingués.

L'ADMINISTRATEUR DELEGUE,

Eric MBATA MUSANDA

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RAWB : 0100015603-71 (Fc)

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E-mail : sneldg@ic.dg

A. 3. List of interviews and focus group discussions

(*) = Interview; (**) = Focus group discussion

Category 1: 13	Activity number	Date
Ordinary consumers	1 (*)	24.04.2008
	2 (*)	24.02.2012
	3 (*)	24.02.2012
	4 (*)	24.02.2012
	5 (*)	24.02.2012
	6 (*)	24.02.2012
	7 (*)	25.02.2012
	8 (*)	25.02.2012
	9 (*)	25.02.2012
	10 (*)	24.02.2012
	11 (*)	25.02.2012
	12a (*)	14.03.2012
	12b (*)	14.04.2008

Category 2: 12	Activity number	Date
Government officials	13 (*)	24.03.2012
	14 (*)	14.02.2012
	15 (*)	29.02.2012
	16 (*)	12.03.2012
	17 (*)	01.04.2012
	18 (*)	30.03.2012
	19 (*)	16.04.2008
	20 (*)	15.03.2012
	21 (*)	30.03.2012
	22 (*)	12.03.2012
	23 (*)	12.03.2012
	24 (*)	30.03.2012

Category 3: 23	Activity number	Date
Civil society (DRC+SA)	25 (*)	25.03.2012
	26 (*)	30.03.2012
	27 (*)	17.03.2007
	28 (*)	31.03.2008
	29 (*)	09.03.2012
	30 (*)	01.03.2012
	31 (*)	16.03.2012

	32 (*)	12.03.2012
	33 (*)	28.02.2012
	34 (*)	24.05.2012
	35 (*)	24.04.2012
	36 (*)	02.03.2012
	37 (*)	14.03.2012
	38 (*)	26.03.2012
	39 (Bakulu) (*)	26.03.2012
	40 (*)	27.03.2012
	41 (*)	11.05.2012
	42 (*)	28.03.2012
	43 (*)	28.03.2012
	44 (*)	25.03.2012
	45 (*)	08.03.2012
	46 (*)	15.03.2012
	47 (*)	15.03.2012

Category 4: 10	Activity number	Date
Transnational advocacy networks	48 (*)	03.04.2012
	49 (*)	29.05.2012
	50 (*)	03.04.2012
	51 (*)	22.03.2012
	52 (*)	21.03.2012
	53 (*)	11.05.2012
	54 (*)	27.03.2012
	55 (*)	22.03.2012
	56 (*)	11.05.2012
	57 (*)	24.02.2012

Category 5: 29	Activity number	Date
Clan chiefs & affected communities	58 (*)	13.03.2012
	59 (**)	01.04.2012
	60 (*)	27.03.2012
	61 (*)	02.04.2012
	62 (*)	01.04.2012
	63 (Malanda) (*)	19.04.2008
	64 (*)	18.03.2012
	65 (**)	18.03.2012
	66 (**)	15.03.2012
	67 (*)	05.04.2012
	68 (*)	15.03.2012
	69 (*)	06.04.2012

	70 (Malanda) (*)	26.03.2012
	71 (Vangu) (*)	26.04.2012
	72 (*)	13.03.2008
	73 (*)	27.03.2012
	74 (*)	09.04.2012
	75 (Malanda) (*)	04.04.2008
	76 (*)	09.04.2012
	77 (*)	27.03.2008
	78 (*)	13.03.2008
	79 (*)	13.03.2008
	80 (*)	13.03.2012
	81 (*)	13.03.2008
	82 (*)	01.04.2012
	83 (*)	27.03.2012
	84 (*)	05.04.2012
	85 (*)	13.03.2008
	86 (Vangu) (*)	13.04.2008

Category 6: 12	Activity number	Date
SMMEs	87 (*)	02.03.2012
	88 (*)	13.03.2012
	89 (**)	02.03.2012
	90 (**)	02.03.2012
	91 (*)	30.03.2012
	92 (**)	05.04.2012
	93(*)	04.03.2012
	94 (*)	04.03.2012
	95 (*)	24.02.2012
	96 (*)	24.02.2012
	97 (*)	24.02.2012
	98 (*)	24.03.2012

Category 7: 11	Activity number	Date
IFIs and development agencies	99a (*)	14.03.2012
	99b (*)	21.04.2008
	100 (*)	13.03.2012
	101 (*)	14.03.2012
	102 (*)	12.03.2008
	103 (*)	12.03.2012
	104 (*)	15.03.2012
	105 (*)	15.03.2012
	106 (*)	12.03.2012
	107 (*I)	12.03.2012
	108 (*)	14.03.2012

Category 8: 12	Activity number	Date
Informal Traders	109 (*I)	26.02.2012
	110 (*)	26.02.2012
	111 (*)	04.03.2012
	112 (I)	04.03.2012
	113 (*)	25.03.2012
	114 (*)	26.03.2012
	115 (*)	26.03.2012
	116 (*I)	15.03.2012
	117 (*)	15.03.2012
	118 (*)	15.03.2012
	119 (*)	15.03.2012
	120 (*)	15.03.2012

Total: 98 people (in-depth interviews) + 24 (6 focus group discussions)

A. 4. Awareness and capacity building of the affected communities by the Inga Hydropower Projects as per recommendations of the DRC CSOs and ARN meeting which brought the struggles of the affected communities to international arena in 2006

Rapport du «Projet sensibilisation et organisation des Populations affectée par les barrages»

Report of the “Sensitizing Project and Organization of the Communities Affected by the Inga Dams”, March 2006

I. Résumé:

Summary

La deuxième réunion d’African Rivers Network, en abrégé ARN tenue en octobre 2005 en Nairobi au Kenya a été à l’origine de cette initiative qui est géré conjointement entre Avocats Verts / ong et CEPECO.

The second meeting of African Rivers Network (ARN) in October 2005 in Nairobi Kenya was the origin of this initiative which is managed jointly between Avocats Verts and CEPECO.

INGA, lieu où est construit les barrages Inga 1 et 2a été choisi comme site pour la réalisation du projet. Il se trouve dans la province du Bas – Congo, District du Bas Fleuve, territoire de Seke – banza.

Inga, the place where Inga 1 and 2 are built has been chosen as the site for the realization of the project. It is found in the province of Bas Congo, District of Bas Fleuve, Territory of Seke – Banza.

L’objectif principal du projet était de sensibiliser les populations de la cité d’Inga et ses environssur l’existence de la Commission Mondiale des Barrages (CMB), d’identifier les différentes communautés affectées par les barrages d’Inga, de les organiser en un comité de pilotage qui servira d’avant – garde, relever les problèmes auxquels ces communautés sont assujetties et enfin, élaborer un rapport d’activité en associant les images de visite.

The main objective of this project was to sensitize the populations of the site and around Inga to the existence of the WCD, identify the different communities affected by the Inga dams, to organize them within a steering committee which will serve to raise community problems connected to the dams, and finally, to elaborate an activity report including images of the visit.

La descente sur le terrain, la consultation des autorités locales, le dialogue avec les populations cibles et la visite des sites ont été identifiés comme démarche afin de réaliser les objectifs ci – haut visés. La mission a été effectuée pendant une période allant du 13 au 21 janvier 2006. Cette initiative a reçu un soutien financier de la Global Greengrants Fund.

The field visit, the consultation with local authorities, the dialogue with the targeted populations and the site visit were identified as the approach in order to realize the high-marked objectives. The mission took place during January 13 – 21, 2006. This initiative received financial support from Global Greengrants Fund.

II. Résultats et Recommandations du projet :

Results and Recommendations of the project

II.1 Résultats:

Results

- *Poursuivant la démarche circonscrite ci – haut, le premier jour, le travail a été centré autour du Chef de Cité d’Inga. Au cours de cette rencontre, le Chef a été tenu informé sur l’existence de la CMB (son but et ses objectifs), sur les conclusions, recommandations de la CMB et, sur les objectifs du projet. Nous tenons à signaler que les échanges ont été fructueux et notre hôte a donné les orientations, des informations et conseils qui nous ont servi pour la poursuite normale de notre mission.*

Following the approach described above, the first day, the work was centered around the Chief of the Inga settlement. During this meeting the Chief was informed of the existence of the World Commission on Dams (WCD) (its goals and objectives), on the conclusions, recommendations of the WCD, and on the objectives of our project. We want to point out that the exchanges were fruitful and our host gave the orientations, of information and advice which were helpful for the normal proceedings of our mission.

- *Le premier constat est que l'autorité politico – administrative d'Inga trouvée sur place est très intéressée par l'initiative et il nous rassuré de son implication personnelle dans l'action de la CMB.*

The first report is that the political-administrative authority of Inga was very interested in our initiative and he reassured us of his personal implications in the actions of the WCD.

- *Concernent le dialogue avec les populations cibles, trois villages ou camps des populations directement affectées par les barrages d'Inga ont été identifiés et visités (Quartier Lubwaku, Quartier Zaïre et Inga village). Leurs villages ont été déplacés sans conditions pour servir aux travaux de construction de deux barrages « Inga 1 et 2).*

Concerning the dialogue with the target populations, three villages or camps of people directly affected by the Inga dams were identified and visited (Lubwaku Quarter, Zaire Quarter, and Inga village). Their villages were displaced and the people were unable to obtain jobs in the construction works of the two dams, Inga 1 and 2.

II. 1. a. Structure du comité de pilotage:

Structure of the steering committee

*Pour besoin d'histoire, chaque village identifié est dirigé par un chef du village qui est, en même temps désigné de représenter le village au niveau de la structure nommée « **Ayants Droits** » regroupant en son sein, les chefs de tous les villages.*

For the purpose of the history, each village identified is controlled by a village chief, who is, at the same time, designated to represent the village at the level of the named structure “entitled beneficiary” bringing together in its center, the chiefs of all the villages.

En dehors des Ayant Droits, d'autres regroupements tels que les confessions religieuses, et les jeunes ont été pris pour cible. Les populations affectées rencontrées sont de deux origines : les populations autochtones et les populations venues pour de raison de travail et qui y sont

restées définitivement). Cette population est estimée à plus de 8.000 habitants (chiffre avancé par le Chef de Cité d'Inga après le dernier recensement du décembre 2005). Pas d'eau potable. L'un des village déplacé est nommé « LUBWAKU » qui signifie « rejet ». Seulle nom démontre à suffisance le degré social de la population. D'autres informations font état de l'apparition des insectes connus sous le nom des « rainguins » depuis l'érection de deux barrages. Selon les informations en notre possession, dans les années 80, la Société Nationale d'Electricité (SNEL) pulvérisait de l'insecticide, mais depuis lors, rien ne se fait et la population est restée à son triste sort. Ces insectes sont nuisible à la santé humaine, laissent des taches corporelles et précipitent la cécité.

Outside of the entitled beneficiaries, other groups such as religious groups and youth were identified and brought together. The affected populations we met are of two origins: the native populations and the populations coming for reasons of work who then stayed. This population is estimated at more than 8,000 inhabitants (the number given by the Chief of the Inga site after the last census of December 2005). There is no potable water. One of the displaced villages is named "Lubwaku" which means "rejection". Only the name shows with sufficiently the social degree of the population. Other informants talk about the appearance of insects known by the name "rainguins" [Black Fly] since the construction of the two dams. According to information in our possession, in the 1980s, the national electricity utility, SNEL, sprayed insecticide, but since then, nothing has been done and the population remains with its sad fate. The insects are harmful to human health, leaving marks on the skin and precipitating blindness [both caused by Onchocerciasis, river blindness, and transmitted by the Black Fly].

II.1. b. De la visite:

On the visit

La visite des différents endroits stratégiques d'Inga a été pour nous, un moyen important d'observation et d'analyse. Nous avons ainsi visité en somme les endroits ci-après : Inga 1 et 2, les sites où seront érigés Inga 3 et 4, ainsi que les différents villages environnants.

The visit to the various strategic places of Inga was for us, an important means of observation and analysis. We thus visited altogether the following places: Inga 1 and 2, the sites where will be set up Inga 3 and 4, as well as the various surrounding villages,

II. 1. c. Composition du comité de pilotage: Composition of the steering committee

Au regard de la faiblesse que présentait cette structure des ayants Droits, il a fallu à cet effet, l'élargir à d'autres comme : les Ongs, les confessions religieuses, le regroupement des jeunes, des femmes, la corporation enseignante et à d'autres indépendants. Ainsi, est né le comité de pilotage dont la structure provisoire est composée de façon suivante :

Monsieur NZITA PHANZU, Président (Ayant Droit)

Monsieur VANGU MPILA, Vice – Président (Ayant Droit)

Madame NSIMBA KAYI, Secrétaire (Comité des femmes)

Pasteur Jacques BAKULU, Conseiller (CEPECO)

Monsieur Emmanuel PULUPULU, Conseiller (Avocats Verts)

Looking at the weakness of the entitled beneficiaries' structure, it was necessary for this purpose, to widen it with others like: NGOs, religious groups, the grouping of the youths, of the women, the teaching corporation and with the other independent ones. Thus, was born the steering committee of which the provisional structure is made up in the following way:

Monsieur NZITA PHANZU, Président (Entitled beneficiaries)

Monsieur VANGU MPILA, Vice – Président (Entitled beneficiaries)

Madame NSIMBA KAYI, Secretary (Comité des femmes)

Pasteur Jacques BAKULU, Adviser (CEPECO)

Monsieur Emmanuel PULUPULU, Adviser (Avocats Verts)

II. 1. d. Impacts:

Impacts

- *Dans toutes nos rencontres, nous prenons les priorités stratégiques de la CMB comme indicateur de base d'observation et d'identification d'impacts par rapport aux différents ouvrages des barrages d'Inga.*

In all of our meetings, we used the strategic priorities of the WCD as base indicators of observation and identification of impacts in relation to the different works of the Inga dams.

- *Les informations recueillies des populations affectées démontraient qu'elles n'ont*

jamais étaient consultées tant pour l'érection des ouvrages d'Inga 1 et 2 que ceux qui sont en projet (Inga 3 et 4).

Information collected from the affected populations showed that they were never consulted regarding the construction of the works of Inga 1 and 2 and those which are in project (Inga 3 and 4).

- *Aucune évaluation exhaustive ni participative n'a été effectuée tant pour les ouvrages déjà construits qu'en projet.*

No exhaustive evaluation nor participative was carried out so much neither for the works already built nor for those in project.

- *Un problème social se pose avec acuité. Ces villages déplacés n'ont pas d'électricité, mais ils sont à moins d'un kilomètre du site d'Inga ; sans aucune infrastructure scolaire et hospitalière viable, la population habite des maisons de fortune où une seule maison est logée par 4 familles. Le risque de transmission de maladie est très élevé.*

A social problem arises with acuteness. These moved villages do not have electricity, but they are in less than one kilometer from the site of Inga; without any viable school and hospital infrastructure, the population lives in very poor houses where only one house is placed for four families. The risk of transmission of disease is very high.

- *L'on a constaté la présence de la motivation négative de la part des autorités et un exemple éloquent est celui du Commissaire de District du Bas – Fleuve qui, lors de son meeting populaire en décembre 2005 à Inga a demandé des villages précités de vider leurs villages sans condition et un préavis de déguerpissement leur avait été accordé, C'est – à – dire au plus tard le 1^{er} mai 2006. La raison avancée pour ce déplacement est que: la canalisation des eaux pour Inga 3 et 4 traverseront ces villages. A cet effet, la population ne sait quoi dire faire. Le problème institutionnel est l'un des facteurs sociaux le plus important à prendre en compte dans la conception et l'exécution des travaux de construction d'Inga 3 et 4. Avocats Verts / ong et CEPECO ont proposé au comité de*

pilotage mis en place d'entrer en contact avec le Chef de Cité d'Inga pour faire entendre leur voix et trouver un compromis pour cette affaire cruciale.

We noticed a negative motivation from the authorities, and an eloquent example is that of the Police chief of District of the Bas - River which, during its popular meeting in December 2005 in Inga required from above mentioned villages to empty their villages without condition, and a previous notice of abandonment had been granted to them, It is - with - to say at the latest on May 1, 2006. The reason advanced for this displacement is that: the drain of water for Inga 3 and 4 will cross these villages. To this end, the population doesn't know what to say or do. The institutional problem is one of the social factors most important to take into account in the design and the completion of the work of construction of Inga 3 and 4. AvocatsVerts and CEPECO proposed at the steering committee set up to come into contact with the Chief of City of Inga to make their voice heard and to find a compromise for this crucial business.

- *Sur le plan environnemental, la visite des sites nous fait confirmer la théorie de la non évaluation des impacts environnementaux causés par les barrages d'Inga. La cause principale de la diminution de la production agricole est due à la déforestation des milieux. Celle des poissons est due en amont, au manque de système de dragage où le sable et autres objets solides ont érigé domicile sur la côte favorable à la pêche.*

On the environmental level, the visit of the sites makes us confirm the theory that there is no evaluation of the environmental impacts caused by the Inga dams. The principal cause of the decreasing of the agricultural production is due to the deforestation of the environment. That (the reduction of the fish production) of fish is due upstream, with the lack of system of dredging where sand and other solid objects set up residence on the shore favorable to fishing.

- *L'énergie produite par les deux barrages (Inga 1 et 2) est sous – utilisée, les machines ne sont presque pas entretenues selon les normes internationalement reconnues. La non évacuation par le système de dragage des corps solides en amont du barrage a des effets sur les conditions atmosphériques (changement climatique).*

The energy produced by the two dams (Inga 1 and 2) is under-used, the machines are almost not maintained according to internationally recognized standards. The non evacuation of solid objects by the dredging system upstream of the dam has effects on the atmospheric conditions (climatic change).

- *Tous travaux de construction d'un barrage entraînent toujours de perte en biodiversité, c'est le cas avec la construction de Inga 1 et 2 et de même pour Inga 3 et 4 qui entraîneront certes, la disparition des hommes, des plantes, des animaux, des poissons et autres espèces naturelles.*

All construction work of a dam always involves biodiversity loss, it is the case with the construction of Inga 1 and 2 and the same for Inga 3 and 4 which will certainly involve, the disappearance of the people, plants, animals, fish and other natural species.

- *Le déplacement d'un village à un autre fait perdre à cette population leurs cultures et elle en est abonnées et déplacées d'autres comme les cimetières et autres références et symbole de leurs cultures.*

The displacement of a village translates into the relevant people losing their culture and displaces other elements like cemeteries and other references and symbols of their cultures. [Stated exactly as written up]

- *Un autre constat observé est celui de la manipulation de la population à des fins inavouées.*

Another observed fact is that of the manipulation of the population at unavowed ends.

II. 2. Recommendations:

Au regard de ces constats ci – haut mentionnés, il est de notre devoir derecommander ce qui suit:

Taking into consideration the above mentioned facts, it is of our duty to recommend what follows:

- *Jouer un rôle de majeur pour l'encadrement psychologique de la population affectée vis-à-vis des éléments de démotivation;*

To play a major role in the psychological framing (support) of the population affected with respect to the elements of demotivation;

- *Continuer la vulgarisation des recommandations et conclusion de la CMB en langues locales et en langue vernaculaire.*

To continue the sensitization of the recommendations and conclusion of the WCD in local languages and vernacular language.

- *Faire le lobbying auprès des autorités politico – administratives à tous les niveaux afin d'obtenir une motivation positive de faire participer les populations affectées (organisées en comité de pilotage) à toute initiative pouvant affecter leur vie. Et aussi de tenir compte de leur point de vue.*

To lobby with the political-administrative authorities – at all levels - in order to obtain a positive motivation to make the affected populations participate (organized in steering committee) in any initiative able to affect their life. And also to hold into account their point of view.

- *Le comité de pilotage mis en place doit être redynamisé, équipé, et capable de défendre la cause de toute la communauté;*

The steering committee set up must be reinforced, equipped, and able to defend the cause of all the community;

- *Assurer un renforcement des capacités techniques permanent au comité de pilotage;*

To ensure a technical and permanent capacity building to the steering committee;

- *Accompagner ce comité dans le recherche, l'identification et l'analyse des différents impacts que causent et causeront les travaux de construction des barrages;*

To accompany this committee in the research, identification and the analysis of the various impacts which cause and will cause the construction works of the stoppings;

- *Organiser un atelier national sur les populations affectées et impacts négatifs dus par les barrages.*

To organize a national workshop on the affected populations and negative impacts caused by the dams.

Le respect des critères de construction d'un barrage dans les normes a des effets d'entraînement dans l'efficience, l'équité, la conservation de l'environnement et de la biodiversité et dans la protection des communautés qui y vivent.

The respect of the criteria of construction of a dam in the standards has effects of drive in efficiency, equity, the conservation of the environment and biodiversity, and in the protection of the communities which live there.

Pour Avocats Verts

Emmanuel PULUPULU KIMESO

Coordonnateur Délégué

Pour CEPECO

Pasteur Jacques BAKULU

A. 5. SADC CSO MIDRAND statements on Inga Inga 3(2006)

DECLARATION DE LA SOCIETE CIVILE A LA TABLE RONDE INTERNATIONALE SUR LE DEVELOPPEMENT HYDROELECTRIQUE DU SITE D'INGA

06 octobre 2006, Johannesburg.

Nous, les délégués des organisations de la société civile de cinq pays partenaires de WESTCOR, réunis ce jour à l'occasion de la Table Ronde Internationale sur le développement des projets hydroélectriques du site d'Inga ;

Reconnaissant les besoins urgents de développement durable de l'Afrique et ayant à l'esprit le caractère stratégique du site d'Inga et sa contribution substantielle à l'intégration et au développement des Etats d'Afrique ;

Considérant en même temps que l'hydroélectricité est une des options multiples qui sont à la portée des Etats africains et qu'il y a lieu de considérer aussi d'autres alternatives possibles pour satisfaire les besoins énergétiques du continent ;

Tenant compte de tous les enjeux politiques, économiques, sociaux et environnementaux qui se rattachent au développement du site d'Inga ;

Nous rappelant que l'hydroélectricité n'a pas toujours une histoire positive en ce qui concerne son impact social et environnemental en Afrique et que, par ailleurs, ses performances économiques ne se traduisent toujours pas en termes de développement humain et social ;

Ayant présent à l'esprit que l'exploitation hydroélectrique en Afrique est constamment associée aux injustices sociales et environnementales, à l'instar de Kariba et Cahora Basa sur le fleuve Zambeze, de Inga I et II sur le fleuve Congo, de Kainji, Jebba et Shiroro, au Nigeria ;

Ayant noté que la société civile et les communautés locales n'ont pas encore fait l'objet de l'attention toute particulière qu'elles requièrent à l'occasion des Tables Rondes comme celle-ci ;

Rappelant les engagements souscrits par nos gouvernements respectifs dans le cadre des conventions internationales environnementales d'assurer la participation de toutes les parties prenantes intéressées, et notamment des organisations non gouvernementales et des communautés locales dans tout processus de prise de décision touchant aux ressources naturelles ;

Conscients du rôle essentiel qui nous revient en tant que, d'une part, partenaires du gouvernement dans l'élaboration et la mise en œuvre de la politique énergétique nationale et, d'autre part, organisations d'appui et d'accompagnement des communautés locales dans la gestion et l'exploitation des ressources naturelles ;

Reconnaissant que la Banque Africaine de Développement et la Banque Mondiale ont des politiques et un cadre de référence pour la consultation de la société civile et des communautés locales ;

Nous rappelant aussi que la Conférence des Ministres Africains sur l'Hydroélectricité et le Développement Durable tenue à Johannesburg en mars 2006 avait reconnu le rôle de toutes les

parties prenantes, notamment de la société civile et des communautés locales dans les projets de développement du site d'Inga;

Tenant compte du fait que les priorités de la Table Ronde de Johannesburg mettent plus en évidence les aspects économiques et techniques du développement des projets Inga et ne s'appesantissent pas sur les mécanismes de contribution de ces projets dans la réduction de pauvreté, pourtant l'un des objectifs les plus affirmés du Millénaire ;

Soucieux de voir le développement des projets INGA être mis à contribution dans la lutte contre la pauvreté et l'amélioration des conditions de vie des populations, par la réalisation des infrastructures à caractère social, culturel et économique ;

RECLAMONS QUE:

- Toute planification des travaux ultérieurs d'expansion sur le site d'Inga tiennent compte des droits fonciers traditionnels des communautés locales ayant droit du site d'Inga et, en conséquence, donne lieu à réparation des injustices sociales passées aussi bien à l'endroit des communautés locales ayant droit et des populations d'anciens travailleurs habitant le camp dit Kinshasa, dans la concession Inga ; populations à ce jour sommées de quitter les lieux, sans aucune compensation ;
- Les communautés pouvant être affectées par le développement ultérieur du site d'Inga reçoivent une réparation correspondante ;
- Les besoins sociaux et en énergie des communautés locales soient satisfaits par le biais des projets et des programmes d'habitat, d'infrastructures routières et d'électrification rurale ainsi que par la mise sur pieds des mécanismes tels que le cahier des charges de l'investisseur, la rétrocession d'une quotité des revenus générés par l'hydroélectricité, etc ;
- Les organisations de la société civile environnementale soient reconnues comme un des partenaires clés dans la planification et la mise en œuvre de la politique énergétique de la RDC ; et ce, à tous les niveaux et à tous les échelons territoriaux
- Que soit mis sur pieds un cadre de participation de la société civile environnementale et des communautés locales affectées par le développement du site d'Inga ;
- Les organisations de la société civile environnementale soient impliquées dans toutes les phases ultérieures du développement des projets du site d'Inga, pour leur permettre, en toute connaissance de cause, de faire le monitoring sur les investissements projetés et le lobbying par rapport aux intérêts nationaux et communautaires ;
- Dans le cadre du renforcement des capacités de la société civile et du transfert des technologies et des compétences, toutes les études d'évaluation environnementale et sociale mises en œuvre par les bureaux d'études internationales dans le cadre du développement du site d'Inga associent l'expertise locale des organisations de la société civile, plus averties des questions d'intérêt national et local ;
- La corruption soit enrayerée dans la gestion des revenus générés par l'exploitation hydroélectrique du site d'Inga, en assurant la plus grande transparence dans le système de perception des recettes, de leur redistribution et de leur affectation ;
- La construction de grands barrages en Afrique soit suivie des recommandations de la Commission Mondiale sur les Barrages ;
- La recherche et les investissements soient aussi orientés sur les technologies des énergies renouvelables et durables pour satisfaire les besoins en énergie du continent ;
- Les grands barrages soient exclus de la liste de subventions accordées aux énergies renouvelables.

Enfin, lançons un appel solennel à nos gouvernements respectifs de partager équitablement les coûts de l'exploitation de ces barrages ainsi que les revenus qui en résulteront, et d'assurer la plus grande transparence dans la gestion de ces revenus et des informations y relatives.

Fait à Johannesburg, le 06 Octobre 2006

Pour la RDC:

Avocats Verts:

CEPECO Parkem Jacques Bakulu Jambé

REPEC:

Augustin MPOYI MBUNGA, Secrétaire

Représentants des Communautés Locales du Site d'Inga:

~~Vivianus VP~~
VANGU MPILHA

Pour l'Angola:

~~João Baptista~~ LUKONBO

ROBERTO da

Pour la Namibie:

Orlando

Pour

A. 6. SADC CSO GABORONE declarations on Grand Inga (2007)





République Démocratique du Congo
 Ministère de l'Environnement, Conservation de la Nature, Eaux et Forêts
 Cabinet du Ministre
 Exceptionné le 29 MARS 2007
 Par SCE.001/07.03.29
 Sous le N° 0976

République Démocratique du Congo
 Ministère de l'Énergie
 ACCUSE DE RECEPTION
 DATE: 30 MARS 2007
 N° :

RESECRETARIAT / RECEPTION COURRIER
 N° 01/ENR/EN
 DATE: 30 MARS 2007

Son Excellence Monsieur le Premier Ministre de la R.D.CONGO

Son Excellence Monsieur le Ministre d'Etat chargé de l'Intérieur,

Son Excellence Monsieur le Ministre de l'Environnement, Conservation de la Nature, Eaux et Forêts

A Monsieur l'Administrateur Délégué Général de la SNEL,

A Monsieur le Gouverneur de la Province du Bas-Congo

A Son Excellence Monsieur le Ministre de l'Énergie,

Concerne : Transmission du compte rendu du Forum International sur Grand Inga et doléance sur le cas de Monsieur VANGU MPILA

Nous avons l'insigne honneur de vous transmettre, en annexe, le compte rendu du **Forum International sur le Grand Inga**, qui s'est tenu à Gaborone, du 16 au 17 mars 2007, à l'initiative du **Conseil Mondial de l'Énergie** et auquel ont pris part, notamment, les délégués de la société civile de la RDC, signataires de la Déclaration en annexe, qu'accompagnait un des représentants des clans ayant droit du site d'Inga.

Comme vous pouvez vous en rendre compte en parcourant ce compte rendu, le Forum de Gaborone a finalement débouché sur l'adoption d'un plan d'action global pour la mise en œuvre du Projet Grand Inga ; mais curieusement, en l'absence quasi-totale des autorités congolaises et de la SNEL qui devaient être pourtant les premiers concernés.

La société civile entend attirer l'attention des officiels congolais sur l'impérieuse nécessité de leur présence, à l'occasion des rencontres comportant de tels enjeux, pour négocier des partenariats qui garantissent l'intérêt de l'Etat Congolais ainsi que les droits des communautés et populations locales concernées. S'agissant surtout du Projet Grand Inga, c'est là une exigence fondamentale, lorsqu'il faut considérer la complexité des montages institutionnels, financiers et techniques auxquels sa mise en œuvre pourra donner lieu.

Par la même occasion, Excellence Monsieur le Ministre, nous vous informons que Monsieur VANGU MPILA, le représentant des six clans ayant droit du site d'Inga, qui est souvent avec nous dans le suivi des projets d'expansion du site d'Inga fait l'objet des tracasseries et des menaces de la part du Comité local de sécurité du Site d'Inga, depuis son retour du Forum de Gaborone, en date du 18 mars courant.

Nous voulons ici rappeler que Monsieur VANGU est un citoyen libre, qui bénéficie au même titre que tout congolais de la liberté de circulation, à l'intérieur comme à l'extérieur des limites territoriales de l'Etat Congolais, dès lors qu'il a accompli les formalités requises par la loi et les usages. Nous ne comprenons donc pas le sens de l'agitation au niveau des services de sécurité.

La représentation des intérêts et droits des communautés locales dans les investissements appelés à être mis en œuvre en RDC est une faculté reconnue par la Constitution et ne saurait d'aucune manière et sous aucun prétexte s'analyser en une infraction, pour justifier l'attitude des services de sécurité au niveau du site.

Aussi, vous prions-nous, et avec vous le Ministre d'Etat chargé de l'Intérieur qui nous lit en copie, de bien vouloir faire cesser les menaces et les tracasseries dont est victime Monsieur VANGU ; lesquelles ne font que ternir l'image des institutions issues des élections dont vous êtes pourtant l'émanation, et d'instruire les services concernés de s'en tenir à la loi. Et vous aurez agi contre l'arbitraire.

Nous voulons ici renouveler notre intérêt à accompagner le gouvernement congolais et la SNEL dans toutes les phases de développement des projets INGA et à assurer le suivi des engagements pris par les uns et les autres sur le plan environnemental, social et de la gouvernance.

En annexe, vous trouverez notre Déclaration à la Table Ronde Internationale sur les Projets de développement hydroélectriques d'Inga tenue à Johannesburg, du 05 au 06 octobre 2006 ainsi que celle de Gaborone, du 17 mars 2007, faite à l'occasion du Forum sur le Projet Grand Inga, qui résumant notre vision et nos attentes sur le sujet.

Vous remerciant de l'attention toute particulière qu'il vous plaira de réserver à la présente, nous vous prions, Excellence Monsieur le Ministre, de bien vouloir prendre en gré l'assurance de nos sentiments de parfaite considération.


Pour Avocats Verts
Emmanuel PULUPULU
Coordonnateur Délégué



Pour le CEPECO
Pasteur BAKULU



Pour le Réseau REPEC
Augustin MPOYI



DECLARATION DE GABORONE

Nous, délégués de la société civile de cinq pays partenaires de WESTCOR et participants au Forum International du Projet Grand Inga, tenu à l'initiative du Conseil Mondial de l'Energie à Gaborone, du 16 au 17 mars 2007, réunis ce jour à l'Hôtel METCOURT ;

Rappelant les termes de notre Déclaration du 06 octobre 2006 à Johannesburg, à l'occasion de la Table Ronde Internationale sur le développement hydroélectrique du site d'Inga ;

Considérant que les promesses faites à la suite de cette déclaration par les officiels du gouvernement congolais et de la SNEL (Société Nationale d'Electricité), de la BAD (Banque Africaine de Développement) et de WESTCOR d'assurer à la société civile l'accès à l'information sur le processus de développement du site d'Inga et sa participation à toutes les phases de ce processus n'ont pas été tenues ;

Ayant noté à cet effet que les études de pré faisabilité déjà entreprises par une firme canadienne sur le site d'Inga se déroulent et se poursuivent, sans implication de la société civile, ni information des communautés locales ayant droit de ce site ; et que, par ailleurs, s'agissant du présent Forum de Gaborone, aucune invitation, ni prise en charge n'a été prévue pour couvrir la participation de la société civile environnementale des pays concernés ;

Inquiets que par la marge qu'elle observe entre les déclarations sur les tribunes des grandes places et le comportement réel des gouvernements, des institutions financières internationales et autres intervenant dans le processus de la mise en œuvre des projets d'expansion du site d'Inga ;

S'interrogeant sur la sincérité des institutions précitées à rechercher et à faire valoir la rentabilité écologique, sociale et économique pour les communautés et populations locales et les municipalités, au regard des aspects techniques et financiers de ces projets ;

Etant déterminés à contrer toute poursuite des travaux d'expansion du site d'Inga, au mépris des principes de la transparence, de la participation et de précaution ;

Revenant sur l'impérieuse nécessité de procéder rigoureusement à l'évaluation environnementale et sociale de tous les projets INGA et d'y associer la société civile environnementale, qui entend assurer fondamentalement le suivi des engagements pris à ce titre ;

Conscients de la mission qui est la nôtre devant Dieu et devant l'histoire et du rôle qui est attendu de nous :

DECLARONS QUE :

Nous nous en tenons aux termes de notre Déclaration de Johannesburg du 06 octobre 2006 et invitons toutes les parties prenantes impliquées dans le développement du site d'Inga à la considérer à juste titre ;



Nous ne pourrons apporter notre adhésion aux projets de développement du site d'Inga et entraîner avec nous les communautés et populations locales concernées qu'en nous assurant que les revendications clairement exprimées dans la Déclaration précitée du 06 octobre 2006 sont prises en compte ;

RECLAMONS QUE :

Toute planification des rencontres, conférences et ateliers relativement aux projets Inga, leurs calendriers et ordres du jour soient préalablement portés à la connaissance des organisations de la société civile concernées et des communautés locales du site d'Inga et que les budgets y relatifs intègrent le coûts de la participation de ces dernières ;

Les organisations de la société civile bénéficient des appuis requis, en termes des voyages d'étude et de formation, en vue du renforcement de leur rôle dans le monitoring environnemental et social de la mise en œuvre des projets Inga.

Ainsi fait à Gaborone, le 17 mars 2007

Pour la RDC

Avocats Verts, Emmanuel PULUPULU

CEPECO, Pasteur Jacques BAKULU

REPEC, Augustin MPOYI

Représentant des communautés locales du site d'Inga, François VANGU MPILA

BARUTI AMISI

Pour l'Angola

Jean Baptiste LUKOMBO

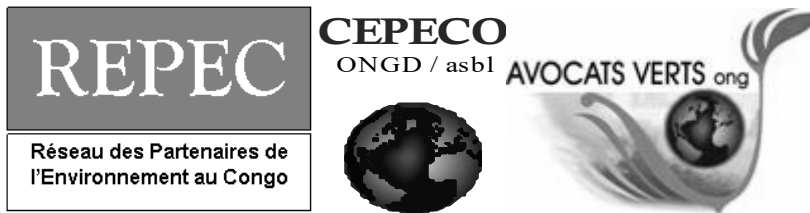
Pour la Namibie

SHADRACK TJIRAMBA

Pour l'Afrique du Sud

Bryan ASHE

A. 7. DRC CSO suggestions to the World Bank on the rehabilitation of Inga 1 and Inga 2 (2007)



Kinshasa, le 25 mai 2007

Aux membres du Conseil d'Administration de la Banque Mondiale
à Washington

Concerne : Nos suggestions pour la réhabilitation et le développement du site d'Inga

Chers et distingués membres du Conseil d'Administrations,

Nous sommes des représentants des organisations non gouvernementales de la République démocratique du Congo qui suivons de près tous les travaux de réhabilitation et/ou d'expansion du site d'Inga. A ce titre, nous avons des préoccupations que nous entendons vous exprimer, espérant qu'il vous plaira de les tenir en compte dans tous les appuis que la Banque Mondiale destine à notre pays.

Nous avons, en effet, par nos propres voies et contre toute attente du gouvernement congolais, participé aux conférences sur Inga, qui se sont tenues, respectivement à Johannesburg et à Gaborone ; et à l'occasion, nous nous sommes clairement exprimés par deux déclarations qui résument l'essentiel de nos attentes relativement à tous les projets de réhabilitation et/ou d'expansion du site d'Inga. Vous les trouverez en annexe.

Chers et distingués membres du Conseil d'Administration, nous apprécions l'intérêt que la Banque Mondiale porte à la RDC, et tous les appuis qui sont envisagés dans les différents secteurs de la vie nationale pour assurer la relance de ce pays, dont vous connaissez le sombre tableau et la misère économique et sociale.

C'est peut-être ici l'occasion de remercier, par vous, la Banque Mondiale pour son accompagnement dans le secteur forestier, dont le rendement nous fait glisser aujourd'hui lentement mais sûrement vers les meilleures perspectives quant à la gouvernance de ce secteur. Nous formulons ici le vœux de voir vos efforts dans ce secteur vital inspirer votre démarche dans les autres secteurs, dont celui des mines et, ici, de l'énergie.

Par rapport au secteur de l'énergie, et spécialement s'agissant des projets INGA, nos suggestions se présentent de la manière suivante:

1° Définir un plan social pour le développement des populations et communautés locales du site d'Inga

L'intervention de la Banque Mondiale pour la réhabilitation de Inga I et Inga II ne devraient pas manquer d'intégrer l'amorce d'un processus de réparation des injustices sociales passées vis-à-vis des populations concentrées dans le camps Kinshasa et des communautés d'ayant droit du site d'Inga. Cette première phase de réhabilitation, qui sera certainement suivie de celle de lancement de Inga III et plus tard de Inga IV devrait aider à définir un plan social pour le développement des populations ; lequel sera mis en œuvre avec les appuis qui seront apportés lors de l'exécution des Projets Inga III et Grand Inga.

Le plan de réhabilitation de Inga I et Inga II devrait mentionner les engagements du gouvernement de la RDC et de la SNEL à associer les populations et communautés locales du site d'Inga et les organisations non gouvernementales qui les encadrent dans la définition et la mise en œuvre du plan social. Nous rejeterons d'office tout plan imposé, qui ne garantirait pas les intérêts sociaux des populations et communautés locales. Le principe de partage des revenus doit être clairement définis dans le plan social, de sorte à garantir le financement des projets d'investissement à caractère socio-économique au profit des populations et communautés locales.

2° L'appui à la SNEL fait appel à l'urgence d'une transparence correspondante

Nous avons appris que la SNEL pourra bénéficier de la part de la Banque Mondiale d'un appui substantiel de plus de 200.000.000 millions de dollars, pour mettre en œuvre les travaux

de réhabilitation de Inga I et Inga II. C'est la première fois, avons-nous encore appris, qu'une entreprise africaine bénéficie d'un tel appui de la Banque.

C'est une initiative que nous saluons, pourvu que les sommes mises à la disposition de cette entreprise servent réellement aux fins pour lesquelles elles sortent. Or l'expérience du passé s'agissant de la gestion du portefeuille de l'Etat Congolais nous inquiètent, lorsqu'il faut considérer que les entreprises publiques n'ont d'autonomie que de nom. Leurs dirigeants subissent toutes sortes d'influence venant à la fois du gouvernement et de la Présidence de la République.

La Banque Mondiale a la responsabilité de mettre en œuvre les mécanismes de monitoring et des instruments de contrôle pour garantir que ces sommes ne sont pas détournés et qu'elles profitent réellement au pays et aux congolais, en couvrant effectivement la réhabilitation de Inga I et Inga II.

La Banque est également responsable de garantir, comme en matière forestière, l'implication de la société civile, dans le suivi de l'utilisation des sommes qu'elle met à la disposition de la SNEL et du gouvernement pour financer les projets de réhabilitation et/ou d'expansion du site d'Inga.

3° Le renforcement des capacités de la SNEL et ses agents devrait s'étendre aux organisations de la société civile congolaise

Les organisations de la société civile congolaise associées au suivi des travaux d'expansion du site d'Inga devraient également bénéficier du renforcement des capacités prévu pour la SNEL et ses agents, de sorte à renforcer leur vocation dans le monitoring de nombreuses interventions envisagées dans ce secteur ; missions qu'elles ne peuvent valablement assumer si elles ne sont pas formées et renforcées, au même niveau que les agents de la SNEL.

4° Reclassement du PMEDE de la catégorie B à la catégorie A.

La réhabilitation de Inga I et Inga II a été classée dans la catégorie B, au motif qu'elle ne comporte que des impacts très négligeables sur l'environnement. Nous sommes loin de partager cette conclusion de la Banque. Nous soutenons, au contraire, tout l'argumentaire

développé par IRN, plus informée que nous sur cette question. Prière de considérer attentivement les explications apportées par IRN et y faire droit, en reclassifiant la catégorie retenue par la Banque pour le projet PMEDE.

5° Tout le processus de mise en œuvre des travaux de réhabilitation et d'expansion du site d'Inga doit être conduit dans la transparence et en toute objectivité

La gestion passée de l'aide et des crédits internationaux, des contrats sur les ressources naturelles du pays et des revenus qui en ont résulté a mis à l'épreuve la foi de la population congolaise et des organisations de la société civile dans la capacité des officiels congolais à bien faire. Dès lors, au-delà des mécanismes de contrôle déjà préconisés, tout le processus doit être conduit, de sorte à garantir l'accès à l'information et la transparence absolue, y compris dans les montages institutionnels, techniques et financiers auxquels pourra donner lieu la mise en œuvre des projets Inga.

Les droits de l'Etat Congolais, en tant que propriétaire du site d'Inga, de la SNEL, de la Province du Bas Congo et des populations et communautés locales du site d'Inga doivent être clairement énoncés, pour être respectés en conséquence.

La corruption doit être fondamentalement empêchée d'opérer, plus encore dans la gestion des revenus générés par l'exploitation de l'hydroélectricité du site d'Inga. La société civile n'a pas oublié ce qu'il a été fait, en définitive, des 32.000.000 d'arriérés payés par le République du Congo, dont la destination et l'affectation ne peut en aucune façon être établie à ce jour. Ces genres de pratique doivent disparaître dans les moeurs politiques de notre pays. Et la Banque Mondiale, qui a un ambitieux programme de lutte contre la corruption, est interpellée au plus haut point à traduire son souci à aider le pays à endiguer ce fléau.

6° Publier le rapport sur la gestion des fonds alloués par la Banque à la RDC pendant la transition est un préalable fondamental, avant d'envisager tout autre appui.

Les informations en notre possession font état de l'existence d'un rapport encore interne de la Banque Mondiale sur la gestion passée des fonds mis à la disposition du gouvernement congolais par la Banque Mondiale, mais qu'il y aurait des hésitations à rendre public un tel rapport.

L'on ne comprend pas, dès lors, les hésitations de la Banque à publier ce rapport, dès lors qu'il peut en résulter des informations pertinentes à être capitalisées pour la suite des appuis qui sont encore envisagés au bénéfice du gouvernement congolais.

Nous exigeons donc préalablement à la poursuite de tout appui, y compris pour la réhabilitation de Inga I et Inga II, la publication de ce rapport.

Pour Avocats Verts

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Pour le CEPECO

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Augustin MPOYI

A. 8. World Bank's response to DRC CSOs on the rehabilitation on the Inga 1 and Inga 2 (2007)

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

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Madame Terri Hathaway
International Rivers Network
Africa Program Office
Yaoundé, Cameroon

Objet: Vos suggestions pour la réhabilitation et le développement du site d'Inga

Chère Madame, Chers Messieurs,

Nous accusons réception de vos lettres des 24 et 25 mai 2007 relatives à vos suggestions pour la réhabilitation et le développement du site d'Inga dans le cadre du Projet de Développement des Marchés d'Electricité pour la Consommation et pour l'Exportation (PMEDE). Nous vous remercions de l'intérêt que vous portez au site d'Inga et au projet.

Nous vous prions de bien vouloir noter, ci-dessous, nos réponses à vos points soulevés :

Tout d'abord, en ce qui concerne l'établissement d'un Plan pour le développement des populations et communautés locales du site d'Inga, la Banque mondiale a encouragé le Gouvernement à adresser cet aspect de traitement des populations locales. S'il est vrai que dans le cadre du projet, les activités de réhabilitation des installations existantes n'auront pas un impact majeur sur la population, et ne nécessitent donc pas la formalisation d'un Plan de développement des populations, il est important que le Gouvernement s'assure d'un bon traitement des populations locales (en tenant compte des lacunes qui auraient pu éventuellement exister dans le passé) en particulier dans le cadre du développement futur du site d'Inga (construction d'Inga 3 ou du Grand Inga). Il est important aussi de signaler que ce projet PMEDE préconise des actions pour l'amélioration de la qualité de vie des populations locales, puisqu'une composante du projet concerne la lutte contre les mouches noires pour les

riverains du site d'Inga. Par ailleurs, le Gouvernement prévoit des actions pour améliorer l'approvisionnement des populations d'Inga en eau potable ainsi que l'assainissement. Malgré le taux d'électrification très bas du pays (environs 7 %), l'accès à l'électrification devrait effectivement être une priorité pour cette population rurale frustrée de ne pouvoir bénéficier de l'électricité malgré la proximité de la centrale d'Inga. Le Gouvernement et la SNEL étudient déjà de telles actions.

En ce qui concerne la classification du projet PMEDE, celle-ci a été évaluée et revisitée à différentes phases de la préparation du projet. Le fait que les activités à Inga n'engendrent pas de modifications du site et n'aient pas d'impact important sur les populations locales mais concernent plutôt la réparation des installations existantes justifie la classification du projet en catégorie B.

D'autre part, le Gouvernement, avec l'appui de la Banque Africaine de Développement (BAD), commence à explorer le développement du site d'Inga (Inga 3 et Grand Inga). A cet effet, il est effectivement important de renforcer le dialogue et de collaborer avec les populations locales et les ONGs. Comme vous l'avez noté dans vos lettres, les ONGs locales ont participé à la Table Ronde sur le futur développement d'Inga, organisée par la BAD en Afrique du Sud en Octobre 2006. Il est évident que le dialogue entre les parties prenantes doit être harmonisé et formalisé pour que le développement d'Inga se fasse dans des conditions transparentes et équitables. Nous avons encouragé le Gouvernement à œuvrer dans ce sens et nous en informerons la BAD qui est le leader pour les bailleurs dans le futur développement du site d'Inga. Nous encourageons aussi les ONGs à engager un dialogue avec le Gouvernement.

Dans le domaine de la transparence par rapport à la gestion des fonds par la SNEL, le projet PMEDE met en œuvre des moyens pour s'assurer de la bonne gestion des fonds de l'IDA et des activités de la SNEL en général. Reconnaisant l'importance de l'amélioration de la bonne gouvernance, le projet comporte un important volet de renforcement des capacités et d'amélioration de la bonne gouvernance. Il s'agit en particulier du renforcement du système financier de la SNEL, de l'audit et de la publication des états financiers de la SNEL (l'audit de l'exercice 2005 a été effectué et publié dans la presse locale en Avril dernier) et des audits des passations de marchés. D'autre part, une Agence Fiduciaire sera recrutée sous des termes de référence acceptables par l'IDA, afin de prendre en charge la passation des marchés et la gestion financière du Projet PMEDE. Par ailleurs, le renforcement des capacités de la SNEL est crucial pour l'amélioration de la qualité du service. A cet égard, le projet prévoit de financer des activités prioritaires afin d'améliorer les fonctions de la SNEL.

Quant au rapport de l'INT sur la gestion des fonds alloués par la Banque mondiale à la RDC, il a été récemment remis au Gouvernement qui est en train de l'analyser. La décision de publication du rapport relève des prérogatives du Gouvernement et nous l'avons encouragé à en partager les résultats avec les parties concernées. En substance, le projet tient déjà en compte certaines suggestions du rapport et tirent notamment des leçons du passé, en considérant notamment le recrutement international d'une Agence Fiduciaire pour la passation de marchés et la gestion des fonds de l'IDA sous le projet PMEDE.

26 juin 2007

En conclusion, nous tenons à vous remercier de vos suggestions, et à vous assurer que vos suggestions seront tenues en compte lors de nos futures discussions avec le Gouvernement et autres partenaires.

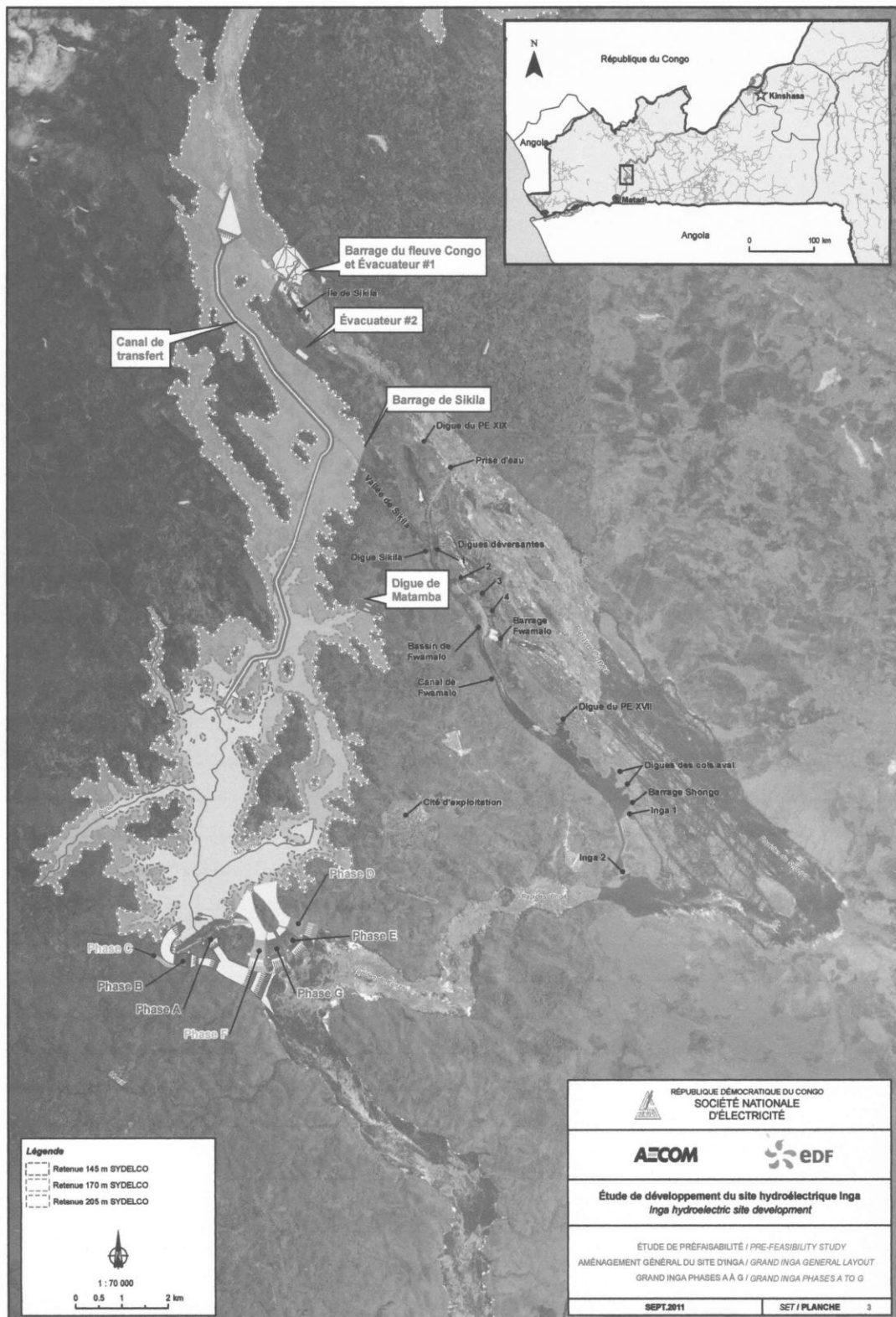
Nous vous prions de croire, Madame, Messieurs, à l'assurance de notre considération distinguée.



Philippe Benoit
Chargé d'Opérations
Département de l'Energie
Banque Mondiale
Région Afrique

- Cc:
- Mr. Amadou Zakou, BAD
 - Son Excellence Monsieur Salomon Banmuhere Baliene, Ministre de l'Energie
 - Monsieur Yengo Massampu Daniel, Administrateur Délégué Général de la SNEL
 - Jean-Michel Happi, Représentant Résident, Kinshasa
 - Pedro Alba, Directeur des Opérations, Afrique Centrale et Grands Lacs

A. 9. New design of the Inga 3 and Grand Inga Projects



A. 10. Selected interviews in the Inga Zone



Preparation of a focus group discussion in MankukuVunda Clan



Interview with a clan chief in Mbenza Clan