EVALUATING THE EFFECTIVENESS OF PUBLIC PARTICIPATION IN THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS IN SOUTH AFRICA

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EVALUATING THE EFFECTIVENESS OF PUBLIC PARTICIPATION IN THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS IN SOUTH AFRICA

By

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Submitted in fulfilment/partial fulfilment of the requirements for the degree of Doctor Philosophiae (Geography) in the Faculty of Science to be awarded at the Nelson Mandela Metropolitan University

January 2015

Supervisor: Prof. Maarten de Wit
DECLARATION/STATEMENT OF ORIGINALITY

I, Eldrid Marlon Uithaler with student number 208100580, hereby declare that the thesis for the degree of Doctor Philosophiae in Geography (Africa Earth Observatory Network - Earth Stewardship Science Research Institute (AEON-ESSRI)) is my own work and that it has not previously been submitted for assessment or completion of any postgraduate qualification to another University or for another qualification.

Signature:

Date: January 2015
ACKNOWLEDGEMENTS

Thanks to my Maker for bestowing on me, a healthy body and mind to accomplish what He laid on my path over the last six years.

I would like to thank everyone who made their time available and offered their insights and opinions. In particular, I would like to thank Prof Maarten de Wit who availed himself to provide supervisory assistance and guidance to this study when it was most needed. I also want to express my appreciation for the contribution of Professors Deon Pretorius and Richard Haines.

I had many friends and family that supported me morally and always kept my spirits high. I wish to thank them most sincerely. In particular I want to thank Joy for assisting with printing and continuous support.

My parents, William and Olive, never had the opportunity to study and this thesis is a dedication to their hard work and support in my formative years that allowed me to reach my dreams.

Finally, I would like to thank the most important people in my life - my wife Mary-Ann, son Elon Liu and daughter Lia Saige - for allowing me to utilize time normally spent with them, to complete this research.
ABSTRACT

This research is based on reflections of various practitioners and their views on how public participation processes may or may not contribute to effective EIA decisions. It is therefore grounded in what is described as practitioner-based research.

To study comparative development activities effectively, one must draw on many disciplines and construct a balanced understanding of historical and contemporary development processes. No single conventional disciplinary area of research is able to integrate the issues of public participation, EIA and decision-making in the context of the current development debate. The emergence of Trans-disciplinary areas of research allows for such integration. The Africa Earth Observatory Network (AEON) institute creates the space for this study to achieve an integrated response to the question of the effectiveness of public participation in EIA and decision-making. This further creates the opportunity to contribute and expand the growing body of knowledge and literature of public participation in the earth stewardship science discipline.

Making use of triangulation, this study fulfils four major tasks: firstly, an assessment is made on the historical and theoretical importance, process and outcome of both EIA and public participation internationally and in South Africa. Secondly, three prominent case studies (i) the Coega IDZ, (ii) the Pondoland N2 Toll Road, and (iii) the anticipated Hydraulic Fracturing in the Karoo each focusses on concerns of an environmental, socio-economic, and political nature to assess if the public participation process has had influence, if any, on the final decisions for these projects to go-ahead. Thirdly, a survey was conducted to establish the views and perceptions of practitioners in the EIA and public participation domain on the effectiveness of public participation in EIA processes. Lastly, face-to-face interviews were conducted with various ‘pracademics’, i.e. consultants, practitioners,
government, and non-governmental officials to establish their views on how public participation may or may not influence EIA decisions.

Utilising the International Association for Public Participation’s (IAP2) participation spectrum as an evaluation tool, this research explores thirteen key criteria normally attributed to effective public participation. This provides a scale (inform, involve, consult, collaborate) to assess whether public participation in EIA in South Africa is least effective (inform) or most effective (collaborate).

My research confirms that in South Africa an enabling environment to address impacts on our environment is emerging. One of the main challenges remains putting in place robust, clear and effective regulations, models or approaches that provide for effective public participation and decision-making in EIAs. My research also suggests that the legislation on which EIA is based cannot by itself guarantee the effectiveness of public participation processes. In practice, EIA is an institutional process of power division between different actors, and the practitioner or ‘pracademic’ has to play a more fundamental role to ensure effectiveness and fairness in the public participation process. Academic commentators should therefore call for new approaches that emphasise collaborative interaction between decision-makers and the public as well as deliberation amongst participants.

Key words: development, effectiveness, environmental impact assessment, evaluation, participatory decision-making, public participation, public policy, stakeholders
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<td>AARHUS</td>
<td>Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters</td>
</tr>
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<td>ACC</td>
<td>Amadiba Crisis Committee</td>
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<td>ACCESS</td>
<td>Applied Center for Climate and Earth System Science</td>
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<td>AEON</td>
<td>Africa Earth Observatory Network</td>
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<td>ANC</td>
<td>African National Congress</td>
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<td>API</td>
<td>American Petroleum Institute</td>
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<td>APRM</td>
<td>African Peer Review Mechanism</td>
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<td>AQA</td>
<td>Air Quality Act</td>
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<tr>
<td>BA</td>
<td>Basic Assessment</td>
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<tr>
<td>CDC</td>
<td>Coega Development Corporation</td>
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<td>CDP</td>
<td>Community Development Project</td>
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<tr>
<td>CER</td>
<td>Center for Environmental Rights</td>
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<td>COSATU</td>
<td>Congress of South African Trade Unions</td>
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<tr>
<td>CSO</td>
<td>Civil Society Organisation</td>
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<tr>
<td>DDT</td>
<td>Dichlorodiphenyltrichloroethane</td>
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<tr>
<td>DEA</td>
<td>Department of Environmental Affairs</td>
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<tr>
<td>DEAT</td>
<td>Department of Environmental Affairs and Tourism</td>
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<tr>
<td>DEDEAT</td>
<td>Eastern Cape Department of Economic Development, Environmental Affairs and Tourism</td>
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<td>DMR</td>
<td>Department of Mineral Resources</td>
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<td>DSD</td>
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<td>DST</td>
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<tr>
<td>EAP</td>
<td>Environmental Assessment Practitioner</td>
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<td>Environmental Clearance</td>
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<td>Environmental Control Officer</td>
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<td>Environmental Impact Management</td>
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<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>EIR</td>
<td>Environmental Impact Report</td>
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<td>EIS</td>
<td>Environmental Impact Statement</td>
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<td>EJNF</td>
<td>Environmental Justice Networking Forum</td>
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<td>EMPR</td>
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<td>ESS</td>
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<td>EU</td>
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<td>Environmental Wildlife Trust</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>Global Change Grand Challenge</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>I&amp;AP</td>
<td>Interested and Affected Party</td>
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<td>IAP2</td>
<td>International Association for Public Participation</td>
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<td>ICT</td>
<td>Information and Communications Technology</td>
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<td>IDP</td>
<td>Integrated Development Plan</td>
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<td>Industrial Development Zone</td>
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<td>IEM</td>
<td>Integrated Environmental Management</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>KZN</td>
<td>KwaZulu Natal</td>
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<td>LA 21</td>
<td>Local Agenda 21</td>
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<td>LEAD</td>
<td>Leadership for Environment and Development</td>
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<td>MINCOM</td>
<td>Mineral Commodities</td>
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<tr>
<td>MIT</td>
<td>Massachusetts Institute of Technology</td>
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<td>MPRDA</td>
<td>Mineral and Petroleum Resources Development Act</td>
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<td>NEC</td>
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<td>NEMA</td>
<td>National Environmental Management Act</td>
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<td>NEMBA</td>
<td>National Environmental Management Biodiversity Act</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<tr>
<td>NMMU</td>
<td>Nelson Mandela Metropolitan University</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>NPC</td>
<td>National Planning Commission</td>
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<td>NWA</td>
<td>National Water Act</td>
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<tr>
<td>PCD</td>
<td>People Centred Development</td>
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<td>PCE</td>
<td>Pondoland Centre of Endemism</td>
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<td>PH</td>
<td>Public Hearing</td>
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<td>PP</td>
<td>Public Participation</td>
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<td>PPSR</td>
<td>Public Participation in Science Research</td>
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<td>ROD</td>
<td>Record of decision</td>
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<td>SACP</td>
<td>South African Communist Party</td>
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<td>SAEP</td>
<td>South African Environmental Project</td>
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<td>SAES</td>
<td>Southern African Earth System</td>
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<td>SANCO</td>
<td>South African National Civics Organisation</td>
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<td>SANGOCO</td>
<td>South African Non-Governmental Coalition</td>
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<td>SANRAL</td>
<td>South African National Roads Agency</td>
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<td>SDI</td>
<td>Spatial Development Initiatives</td>
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<td>SEA</td>
<td>Strategic Environmental Assessment</td>
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<td>SEIR</td>
<td>Supplementary Environmental Impact Report</td>
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<td>SEZ</td>
<td>Special Economic Zone</td>
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<tr>
<td>SONA</td>
<td>State of the Nation Address</td>
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<tr>
<td>TCF</td>
<td>Trillion cubic feet</td>
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<tr>
<td>TKAG</td>
<td>Treasure the Karoo Action Group</td>
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<td>UCT</td>
<td>University of Cape Town</td>
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<td>United Nations Development Programme</td>
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<td>United Nations Environmental Programme</td>
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<td>USA</td>
<td>United States of America</td>
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<td>WCC</td>
<td>Wild Coast Consortium</td>
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<td>WCED</td>
<td>World Commission on Environment and Development</td>
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<td>Abbreviation</td>
<td>Full Name</td>
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<tr>
<td>WESSA</td>
<td>Wildlife and Environment Society of South Africa</td>
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<td>XOLCO</td>
<td>Xolobeni Community Empowerment Company</td>
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PREFACE

In this section, I introduce the rationale for doing this research by reflecting on my personal albeit subjective journey of becoming interested in environmental and development issues which our modern society is faced with. It is not common practice in academia to explore such personal notions, but it becomes important to contextualize the rationale for this research as the backdrop to my personal doctoral journey.

My roots stem from the very rural village of Clarkson at the foot of the Tsitsikamma (Khoi for abundance of water) Mountains. I grew up close to the land – working it, living from it, playing on it and most importantly learning from it. The most enjoyable of all was learning from it. I recall how nature became a natural playground and at the same time classroom to many of us. We led discoveries into the realm of the smallest insect to the most dangerous mountain biomes covered with fauna and flora that we knew by name, the vast veld with fynbos species, the wetlands and rivers with various amphibians, crustaceans and the like. It was thus only natural that geography became my favourite subject at school until matric and in which I excelled beyond the expectations of several of my teachers.

University provided a different reality – romanticizing about yester year became an epoch of the past. My ideal world of balance got disrupted with the new terminology that at times became contradictory – ecological balance vs. development; natural vs. man-made; localization vs. globalization; socialist vs. capitalist; rich vs. poor; developed vs. developing and the list goes on. I was left confused and after five years of immersing myself into issues of an environmental / development nature I started to understand that our world is not static; change is imminent. The University of the Western Cape inculcated the ideals of liberalism, democracy, a free world within the context of the order of the day. With these new perceptions, Clarkson never felt the same again.
Later as a Geography teacher, I had to fulfil the role of preaching the gospel as it is - our world is changing and we need to move along with this change. Geography teaching and to some extent environmental studies opened and exposed me to new paradigms (a term I initially struggled to understand when studying Kuhn during under-graduate studies) of thinking that was encouraged by very well inclined learners in my brief stay in the teaching profession. It became a challenge for me to find out more through enrolling for a Masters in Environmental Education and Sustainability Studies at Rhodes University.

I shared this interesting yet critical discipline of study with a group of 18 students scattered from all over the continent. We were under the superb guidance of Dr Euretha Janse Van Rensburg who was instrumental in us becoming critical and analytical scholars understanding the balance of scales in issues of an environment-development nature. In our reading we got to understand that environmentalism with its roots dating back to 1962 with the book *Silent Spring* by Rachel Carson has not really made the strides expected by today. The book argued that uncontrolled and unexamined pesticide use was harming and even killing not only animals and birds, but also humans. Its title was meant to evoke a spring season in which no bird songs could be heard, because they had all vanished owing to pesticide abuse. Since putting issues that are detrimental to the environment in general and the effect thereof on all living things in particular on the global agenda has been the cause for a new school of thought – those campaigning for more sustainable utilization of our limited resources on planet earth. Hence, our interest in studies exploring the various collateral agreements, conventions, treaties and summits signed in the past and exploring possibilities in decades to follow. In addition, the philosophical orientations of environmentalism together with various theories related to sustainability and research formed the basis in grounding our understanding of localised and global issues.

This exposure and much other subject matter during the two-year course made us to realize and accept the fact that human beings cause many environmental problems,
and that the environment needs protection. However, we did not all agree on what it needs protection for. We asked the questions: Should we protect the environment because it is a source of energy, food and materials? Alternatively, should we protect it because it has value in its own right? After much discussion, we agreed that ideally we can and must find room on the planet for both.

To satisfy my curiosity on the issues discussed above, I embarked on a journey back to Clarkson to test the validity of what I learnt in engaging with the course and from fellow students. This journey ended up with a completed dissertation on:
“Community Knowledge, Cohesion and Environmental Sustainability: An Educational Case Study in Clarkson”.

Through two years of study, dialogue, agreements, disagreements, deliberations, motivations we were perpetually shaped and schooled into better understanding the world through various activities whether detrimental or not. We were ready to go out and make the changes needed: reshape policy, create more sustainable projects, and become pro-socialism / anti-capitalism or even pro-capitalistic.

My role in environmental and conservation projects at the Wildlife and Environment Society of South Africa’s (WESSA) biodiversity unit afforded me the opportunity to experience first-hand the issues pertinent to conservation and development in both rural and urban communities. The unequal power relations between the various role-players seemed to undermine the inherent value nature or the environment played in them achieving a sustainable project that could potentially benefit them all. Personal interest marred most deliberations and totally undermined the benefits to the surrounding communities and the public at large. The broader participation by the public created challenges as only a few selected role-players or stakeholders participated in projects conception and implementation. This proved to me that those who have more power would use it such that it undermines the idea of ‘greater good for all’.

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At African Global Skills Academy where I assumed responsibility for environmental and conservation projects, the lesser role communities played in identifying and designing projects was further emphasised. With the passage of time and after many attempts to change the world with the ammunition gained through intense learning and first-hand experience, I came to realize that I do not really understand the issues pertinent to development. As they say, the more you learn the less you know. After long consideration, I persuaded myself to enrol for another Masters in Development Studies. NMMU became my hub for this new venture. It was a shock to share my hard-earned time with 70 students for the same course. I asked myself the question whether so many people are also searching for the answers about the whole perspective of development and all its aspects that have been evading me ever since the realization that I know less than what I thought. Professor Richard Haines and associates exposed me to the theory and policy and a host of other areas that are pertinent to the development question. Policy matters and its influences on our daily lives became a key interest, hence my study on Motherwell, which focused on:

“Development for Socio-Economic Change: An Evaluation of the Urban Renewal Programme in Motherwell”

I found the modules on Rural Development and Environmental Impact Assessments (EIAs) to be extremely valuable. The role of the publics in projects (from conception to completion) and their role in the EIAs became highly contested debates in class and really afforded us the opportunity to engage with these issues. I recall some of the statements issued in various case studies by members of communities involved in projects and that took part in the public participation processes:

“How can we contribute to projects that were developed without us … in our own area?”
“Decisions are made for us not by us”. 
These consultants come and use a language that we don’t understand … do they really want us to assist if this is the case?”

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The exposure to these studies and many more cases indicating how the role of the public is underestimated awakened in me a desire to research this phenomenon of public participation. An interest in environmental and development issues and the role of public participation provided the perfect platform to focus on policy issues relating to such, hence this research. Furthermore, my work and various study tours and conferences to Swaziland, Ghana, Brasil, Colombia, Germany and travels elsewhere made me curious to the way the public are participating in their own development. Development Studies therefore seemed to be the natural habitat for a study into public participation in the EIA process, hence my enrolment in this Department at NMMU. After four years of continuous indifference in opinion between my promoters (a historian and a sociologist) and between me and them, it seemed that I was doomed in trying to find a balance on what this research aims to achieve and their personal expectations of what the research needed to achieve. This led to regular disagreements amongst themselves and later on with me on both the approach and content matter of the research. I argued for quality; they argued for quantity, and as a result this thesis at some stage reached six hundred pages. Any student in such a position eventually finds themselves in a position of giving up or moving on. I decided on the latter and broke ties with the Development Studies Department and was fortunate to be accepted in the Geography Department under guidance of Professor Maarten de Wit who is heading a new discipline in Earth Stewardship Science within the Africa Earth Observatory Network (AEON) institute. It later dawned on me that the shortcomings of my previous promoters may have been their lack in understanding of environmental issues that are noticeably different in the approaches followed within AEON. The latter providing a richer focus and context to a study of this nature.

Be as it may, AEON became my new home and I was steered immediately into a direction of thinking differently about public participation i.e. the use of technology as an alternative to the traditional way of engaging communities. Crowdsourcing as a concept was introduced to me although I could not as yet utilise it as an approach to my studies which was already in an advanced stage. Reference to it is made as a contributing element towards future similar research processes. Prof de Wit further
encouraged me to read the interesting work of Thomas Piketty on ‘Capital in the Twenty First Century’ which provides invaluable insight into the distribution of wealth since the eighteenth century until currently. His experience in the Hydraulic Fracturing process further provided important information for the context of this study and the outcomes this has on the public process. All in all this has been the journey that shaped my thoughts, actions and insights in attempting to successfully complete this research.
CHAPTER ONE

INTRODUCTION

This chapter will present an introduction to the thesis by exploring the concepts of public participation and environmental impact assessment. The current debates and rationale for research on the evaluation of effectiveness and the contribution it can make to the discipline of Earth Stewardship Science (ESS) are explored. I will first set the scene by defining what is meant by Public Participation and Environmental Impact Assessment as used in this study within the context of the research question. I will then explore how global interconnections create human risks and how this manifests itself in participation domain as well as decision-making within ESS.

The term ‘public participation’ (‘public involvement’, ‘community involvement’, or ‘stakeholder involvement’) as used in this thesis, includes traditional processes (public meetings, workshops, focus groups, demonstrating, surveys, etc.) implemented by officials, government, public and private-sector organizations to engage the public in environmental assessment, planning, decision-making, management, monitoring, and evaluation. However, the ability for information technology to empower people, drive change and impact decisions-makers is becoming more apparent. The internet, for instance, has changed the practice of public participation, connecting the different pieces and creating an online public participation ecosystem. Social media like Facebook, Twitter, and Crowdsourcing etc. plays an important role to reach as many people as possible, get them to participate online and to demonstrate broad participation to decision-makers.

Environmental Impact Assessment (EIA) as a tool for public participation purports to be a negotiation process, a technical process of information collection, and a tool for controlling participation. From a sustainable development perspective EIA is a decision tool employed to identify and evaluate the probable environmental
consequences of certain proposed development actions in order to facilitate informed decision-making and sound environmental management (Cashmore, 2004; O'Faircheallaigh, 2010). Reference to EIA in this thesis are based on the regulations as enacted in the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) with its various amendments.

Given the definitional context, this research is premised on the following question:

*How effective is public participation as a tool in the environmental impact assessment process in South Africa?*

Globalisation and technological advancement are rapidly changing our planet which impact on human decisions and actions on our socio-economic systems (Helbing, 2013). Helbing argues that systemic failures and extreme events are consequences of the highly interconnected systems and networked risks humans have created. When networks are interdependent this makes them even more vulnerable to abrupt failures. He indicates that such interdependencies in our ‘hyper-connected world’ establish ‘hyper-risks’ (see Fig. 1.1). Helbing also argues that seemingly beneficial trends such as globalization, increasing network densities, sparse use of resources, higher complexity, and an acceleration of institutional decision processes may ultimately push our anthropogenic (human-made or human-influenced) systems towards systemic instability - a state in which things will inevitably get out of control sooner or later. The ‘Arab Spring’ is a typical example of a hyper risk that pushed Middle Eastern countries into instability as a result of poor governance by political powers of these countries.
Fig. 1.1  Risk interconnections (From Helbing, 2013)
Thousands of scientists worldwide, are now engaged in establishing a ‘Global Systems Science’, in order to better understand systemic instability linked to our information society with its close co-evolution of information and communication technology (ICT) and society (Helbing, 2013). This effort is allied with the ‘Earth System Science’ that now provides the prevailing approach to studying the physics, chemistry and biology of our planet. Global Systems Science wants to make the theory of complex systems applicable to the solution of global-scale problems. This approach is dependent on a serious collaboration between the natural, engineering, and social sciences, aiming at a grand integration of knowledge. This approach to real-life techno-socio-economic-environmental systems is expected to enable new response strategies to a number of twenty-first century challenges.

The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for the assessment of climate change and allows for broad participation towards sustainable solutions in matters related to climate change (IPCC, 2014). The IPCC as a scientific body functions under the auspices of the United Nations (UN). It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. The most recent Synthesis Report has been issued in November 2014. Thousands of scientists from all over the world contribute to the work of the IPCC. Because of its scientific, trans-disciplinary and intergovernmental nature, the IPCC embodies a unique opportunity to provide rigorous and balanced scientific information to decision-makers (IPCC, 2014). By endorsing the IPCC reports, governments acknowledge the authority of their scientific content.

In South Africa, the Applied Center for Climate and Earth System Science (ACCESS), a consortium of several agencies, researcher councils, research programmes, universities and research groups have combined efforts to deliver a range of outputs aligned to the Department of Science and Technology's (DST)
Global Change Grand Challenge (GCGC). ACCESS provides a platform for integrated research and education, services and training outputs and outcomes related to the opportunities and challenges emanating from a varying and changing environment, collectively referred to as Earth Systems Science. ACCESS further offers opportunities for unprecedented co-operation across a range of disciplines which reflects the inter-connected nature of the southern African Earth System (SAES). Through this DST initiative a new scale of interventions in Earth System’s science is developing that provides a unique opportunity for research and development in the southern African Earth System.

Like Global Systems Science and Earth Systems Science, Earth Stewardship Science (ESS), a discipline that has emerged in response to the need for a broadly-based plan of action also deal with the environmental-socio-political crisis of the ‘Anthropocene’, a term for the epoch that began when human activities had a significant global impact on the Earth’s ecosystems (De Wit, 2013). ESS aims to meet the imperatives of fostering meaningful, integrated transdisciplinary interactions between the three fundamental areas of knowledge viz., natural science, human behaviour, and economics with its political and legal framework (De Wit, 2013). A deliberate attempt is made in this thesis to explore concrete actions and processes in public participation that allows for broader social participation, a key focus within ESS.

Environmental decision-making is certainly amongst the subject areas where the issues of democracy and participation are openly exposed (Sexton et al., 1999). Our environment anchors and shapes facets of our lives from basic health to our sense of aesthetics and spirituality. We shape and are shaped by our environment, and we are increasingly aware of the need for both a science that describes the interconnections between humans and the environment, and an ‘art’ that allows us to improve these interconnections or at least to steer away from making them worse.
1.1 CONTEXTUALISING DEBATE ON PUBLIC PARTICIPATION IN ENVIRONMENTAL IMPACT ASSESSMENT

Satisfied local communities pose a low political risk (Kofi Anan in APR, 2013). Anan further indicates that over the last twenty years governments around the world have increasingly treated governance and resource wealth as state secrets (Kofi Anan in APR, 2013). Citizens were only informed of decisions taken by governments on a ‘need to know’ basis, and the assumption was that they needed to know very little (APR, 2013). The APR demonstrates the gap that exists between governments and communities to use public participation as a tool in decision-making that can benefit both parties.

A convergence of activity amongst scholars and decision-makers from a wide range of policy sectors appears to be taking hold of the public participation agenda. Where attention was previously given to normative discussions of the merits of, and conceptual frameworks for, public involvement, current activity worldwide seems largely focused on efforts to design more informed, effective and legitimate public participation processes, with a strong evaluation component (Robino, 2009). Whether the decisions fall into the environmental or local government sphere, policy makers, regulators, experts and public advocacy groups agree on the importance of involving the citizenry in the decisions that affect them, but are grappling with how best to do this (Graham & Phillips, 1998; King, 1998; Leroux, Hittle, & Fortin, 1998; Pratchett, 1999; Rowe & Frewer, 2000; Beierle & Konisky, 2000). This agreement has emerged out of different underlying motivations, arising from ideological (i.e. the desire to pursue democratic ideals of legitimacy, transparency and accountability) or more pragmatic reasons (i.e. the desire to achieve popular support for potentially unpopular decisions) reasons (Rowe & Frewer, 2000; Abelson et al., 2002). Much of the current emphasis on participation methods is also a response to the prevailing view that methods used in the past are no longer appropriate for current decision-making processes or for a more educated, sophisticated and less deferential public (Inglehart, 1995; Inglehart, Nevitte, & Basanez, 1996;
O’Hara, 1998, Cashman et al., 2008; Guijt, 2007; Fernandez-Gimenez et al., 2008; Wilmsen et al., 2008b; Shirk et al., 2012).

The timing of this research has been such that it mostly focused on the traditional public participation practise which fails to provide ample opportunity for people to participate in decision-making. The ability for information technologies to empower people, drive change and impact decisions has become more apparent since the start of this research over the last five years. Tools such as the Internet, Facebook, Twitter and YouTube currently play a profound role in mobilising individuals to become part of an on-line community that demonstrate broad participation in decision-making.

The effectiveness of democratic participation and inept political practise has been tested by events in 2010 leading to the Middle East uprisings, commonly referred to as the ‘Arab Spring’. Social media are said to have been the main medium that sparked and fuelled the uprisings in Tunisia, Egypt and Libya; the impact of these uprisings have also spilled over to other Arab states with Syria still in a state of civil war. The book Why Nations Fail, co-written by the Massachusetts Institute of Technology (MIT) economist Daron Acemoglu and the Harvard political scientist James A. Robinson in 2012, provides some insight into issues that contributed to the events in the Middle East and the challenges with political democracy that are facing many nations around the world. Events like the ‘Arab Spring’ allow researchers to explore reasons for the failure of governance systems and institutions that are closely linked to issues of democracy and participation. This event also brought a timely question as to the role social media and the internet can play in facilitating public participation. This is explored later in this thesis together with crowdsourcing and social networks as new modalities of public engagement. Recommendations on the use of these social media platforms in improving the effectiveness of public participation in decision-making are explored in the last chapter.
Political rights are fundamental for most societies and closely linked to democracy and human rights. Friedman (2012) indicates that Nations often thrive when they develop “inclusive” political and economic institutions, and they fail when those institutions become “extractive” and concentrate power and opportunity in the hands of a few. Why Nations Fail indicates that some countries thrive when they build political and economic institutions that unleash, empower and protect the potential of citizens to innovate, invest and develop (Friedman, 2012). Robinson (2012) indicates that this potential is closely linked to the level to which people are allowed to participate in debates and decision-making that affects their lives and livelihoods.

Recent debates in South Africa focused the attention on concepts of participatory democracy and social justice in decision-making. The highly controversial e-tolls for example, imposed on some Gauteng highways in December 2013 that met huge public resistance, is not resolved (July 2015) and thus still under review. The labour conflict between workers at the Marikana platinum mine and the mine’s owners, Lonmin where 34 miners were killed also caused widespread debate about the manner in which we as a new democracy are deriving at decisions that ultimately impact on the very poor and most vulnerable of our society. Thomas Piketty in his book Capital in the 21st Century indicates that Marikana ‘represents distributional conflict between workers living in wretched conditions and mines’ excessive profits’ (2014). He suggests that this symbolises the inequalities which is a threat to ‘democratic societies’ and the values of ‘social justice’ posed by a market economy … left to itself (Piketty, 2014).

Abelson and Gauvin’s (2006) review of the empirical evaluation literature reveals a range of disciplines, fields of study and methods used to evaluate public participation. They indicate that political science has contributed substantially to research in this area, primarily through studies on public deliberation and its effects on political decision-making. Shirk et al. (2012) indicate that public participation in scientific research has emerged from a variety of social and
academic fields ranging from participatory action research in the fields of environmental studies (Chambers, 1994) and public health (Cashman et al., 2008) to citizen science projects (Droege, 2007; Bonney, 2008; Raddick et al., 2009) to water quality monitoring (Firehoek & West, 1995; Ely, 2002; Wilderman, 2005) and community-based natural resource management (Guijt, 2007; Fernandez-Gimenez et al., 2008; Wilmsen et al., 2008b).

The focus on public participation research (Arnstein, 1969; Wilmsen et al., 2008a) has primarily been on elevating the needs and interests of public participants in the development context, where those interests have historically been marginalised. A number of criticisms of development discourse have arisen and a wealth of alternative conceptions to the dominant development discourse has resulted. This includes perspectives that stress the centrality of power in influencing the nature and outcomes of development projects. The focus needs to be on the relationship of participation and democracy that ensures a development outcome that is reached through collaboration.

A recent summary of participation theory by Cornwall (2008) reviews the literature on participation research activities. It revealed important distinctions between participation for the sake of obtaining ‘buy-in’ and participation that enables social transformation (Shirk et al., 2012). Chambers indicates that there is some degree of consensus regarding appropriate participation strategies (2001) with reference to power relations between various stakeholders. However, Campbell and Vainio-Mattila (2003) raise concerns that some lessons on power relations in the public process are not being transferred to the scientific research disciplines. Hence the call from scholars in both the social and scientific research fields for moving beyond what has become a ‘rhetoric of participation’ (Cooke & Kothari, 2001; Cornwall, 2008) to identify what Rowe and Frewer (2004) and Lawrence (2010a) call ‘effectiveness’ in the application of public participation to ensure citizen ‘inclusiveness’ until reaching the final decision.
The field of environmental policy and related sub-fields such as impact assessment, planning, and resource management have been a consistent source of research activity stemming from the historic role that public participation has played in these types of public policy orientations. Various development practitioners working in social and scientific disciplines, policy and science communication, have been productive researchers in the public participation arena, as have public administration scholars, particularly those working in provincial and local governments. The literature reviewed in Chapter 2, enlists recent contributors to the empirical public participation evaluation discourse. These include a broadly defined group of development practitioners such as social scientists, economists, policy analysts, community development workers, teachers, politicians, development planners and lay-people who have been drawn to the field through efforts to incorporate and integrate public involvement into priority setting, resource allocation and decision-making processes (Cashman et al., 2008; Guitj, 2007; Fernandez-Gimenez et al., 2008; Wilmson et al., 2008b). In addition to the contributions from the academic community, public participation practitioners are well positioned to offer lessons from their first-hand experiences with public participation (Shirk et al., 2012).

Collaborative endeavours by these groupings attempt to address the needs and interests, complex questions and issues in public participation in relation to development from their unique perspectives. The aim is to address the complex issues in science and society that influence the public participation discourse. Brodie et al. (2009) indicate that such collaborative practices enhance participative democracy by keeping ‘community life vital and public institutions accountable’ (see also Roberts, 2004).

Various authors (Wulfhorst et al., 2008; Chilvers, 2009; Benson & Jordan, 2011a; Shirk et al., 2012) indicate that by comparing projects that demonstrate different degrees of participation, we can account for and examine the relationships between participation and various outcomes. High-quality participation in the
design of projects manifests itself in participants ultimately supporting the project, irrespective of the degree or level of participation. Practitioners and theorists involved in development research suggest that generalised participation methodologies can result in dogmatic practice, diverting attention away from quality participation, the essential element of building the foundations for trust, credibility, and reciprocity, and other factors critical for achieving anticipated outcomes (Wilmsen & Krishnaswamy, 2008). Studying and understanding the most efficient ways to develop, implement and evaluate public participation is at its infancy, bridging a number of different social and academic traditions from which these initiatives have emerged. The convergence of theoretical orientations poses advantages to the continued conversation and investigations that span these different fields of research and practice. Continued and collaborative approaches can help broaden and refine definitions and, more importantly, practice.

Aguilar (2010), based on research done in Argentina, advises that the development discourse pertaining to participatory approaches is expanding and it is therefore important to understand the concept and context of the participation in its true sense. Quoting Arturo Escobar (1995), she indicates that ‘development discourse compounds a perceptual field structured by grids of observation, modes of enquiry and registration of problems, and forms of intervention … that span across disciplinary boundaries’ (2010). One of these disciplinary domains has been identified as social policy aligned to neo-liberalism that brought about new approaches to research on civil society, participation and community oriented programs (Akhil & Sharma, 2006). Such approaches of participatory development that expands beyond disciplinary boundaries are current in debates of various disciplines including ESS and will be explored in this research.

The initial focus is on the environmental impact process and the role of public participation in ensuring that an inclusive decision is reached. EIA is a tool for decision-making that entails a process of identifying, analysing and evaluating
the positive and negative environmental effects of a proposed development and its alternatives. The EIA regulations (National Environmental Management Act, 1998 - Act No. 107 of 1998) outline procedures before a decision-making authority can consider approving scheduled activities that may have a detrimental effect on the environment (O’Faircheallaigh, 2008). Partial or poor treatment of environmental and socio-economic impacts and inadequate consideration of concerns raised by the stakeholder in Environmental Impact Assessment’s (EIA) are common in development projects (Zubair, 2001; Mumtaz, 2002; Paliwal, 2006; Manowong & Ogunlana, 2006). One of the many reasons for inadequate consideration of environmental and socio-economic impacts in development projects has been identified to be ineffective public participation (Rajvanshi, 2003). Public pressure during EIA processes may also help in considering their concerns by the project proponents and competent authorities (Morrison-Saunders, 1998).

While public participation is considered an integral component of the EIA processes (Wood, 2003), it is widely recognized as a method to incorporate public needs into projects. It also helps to identify and mitigate environmental impacts and conflicts in the early stages of the project planning process (Aschemann, 2007). Despite this realisation, to date, the EIA literature has mostly emphasised the procedural aspects (Hullet & Diab, 2002). Although this emphasis has played an important role in structuring the process of EIA, it has also met with much criticism (Thakur, 2006). One of the main arguments has been that EIA is being used to obtain development consent rather than as a tool for sound and transparent environmental decision-making (Dipper et al., 1998; Nadeem, 2004; Audouin, 2009). In order to assess the soundness and transparency of environmental decision-making, it is important to evaluate the effectiveness of public participation in EIA, which is a basic aim of this study.

Effective public participation does not take into account only the genuine fears of the public, but also environmental concerns in the subsequent project stages in a
more effective way (Aschemann, 2007). This in turn helps in enhancing the acceptability of the projects, as well as the credibility of the government institutions.

The emphasis in this research is not on how to facilitate public participation in EIAs, but rather on the purpose and role of the public as well as the practitioner in public participation in EIA. This research shows that individuals and community groups for various reasons find it very difficult to participate meaningfully in environmental decision-making processes. Some practitioners view the inclusion of public opinion in the decision-making process as simply a time-wasting exercise that adds nothing to the quality or outcome of the decision. This contradiction in understanding the public participation process assumes that decision-makers have virtually unfettered discretion to make ‘good’ decisions or ‘the right’ decisions (Nadeem, 2004). It is therefore useful to explore the role practitioners play in the public process, which is the focus area of practitioner research. The notion of practitioner research or sometimes also called practitioner-based research emerged in the academic literature in the early nineties. In most organizational settings practitioners are professionals that belong to associated bodies and to a certain extent contribute to the body of knowledge in their fields through various research-oriented practices. Chapter 2 provides a more expansive view on the value of practitioner-based research in the public process and more particularly in EIA.

In order to conduct a successful EIA, it is imperative that a substantial public participation process be followed in which both the public and practitioners understand their roles. This may lead to the consideration of viable alternatives to the proposed development, and the principle of co-operative governance may be adhered to – this is all too often not the case (Abrahams, 2004; Aschemann, 2007). On a practical level, failure to provide the public with meaningful opportunities for participation will have significant consequences for the implementation of policies and decisions. This will increase the potential for
appeals and even litigation against the proponent (private sector or government) or decision-maker, and may result in lengthy and costly delays (Nadeem, 2004; Lawrence, 2005; Du Pisani & Sandham, 2006b; Murombo, 2008; Audouin, 2009).

So far, it is evident that the body of literature on public participation in decision-making is well documented within various disciplinary domains, such as environmental, political, health and other science orientations. EIA has traditionally been explored within natural sciences to assess the impact a project or development may have environmentally. Recently, the political economy and social impact of EIA has been highlighted as important in evaluating the contribution it may add in the development debate (Murombo, 2008; Audioun, 2009; Shirk et al., 2012). However, the environmental sciences discipline seems to be deficient in documented evidence or literature on how EIA can contribute to the discourse of public participation practice and thus enrich the broader development debate. One of the aims of this study is therefore to expand the body of literature in Earth Stewardship Science to include EIA as a means from which to explore issues related to the effectiveness of public participation practice in development projects.

Within this context in South Africa, a ‘gap’ and a need for an evaluation of the effectiveness of the public participation process in EIAs emerged out of the apparent contradiction between the roles of the public and the practitioners in various development projects. This thesis explores this notion through evaluation research to enhance the idea of a more integrated approach to public participation in environmental decisions.

1.2 PROBLEM STATEMENT

The issue of public participation in environmental decision-making is of growing interest to relevant academics, professionals and regulating agencies of developed countries in particular (e.g. UK and Canada) and of developing
countries in general (e.g. South Africa and Thailand) (Leach & Wingfield, 1999). Leach and Wingfield (1999) and Nadeem (2004) indicate that the role of public participation in influencing decision-making in EIA has been identified as one of the research challenges of advancing EIA theory in recent times (Cornwall, 2008; Newig & Fritsh, 2009; Benson et al., 2012). In the case of developing countries, there is little empirical evidence about how public participation is actually influencing the decision-making process in EIA (Nadeem, 2004; Abelson & Gauvin, 2006).

It is important to address public concerns in EIA to avoid conflicts, indirect environmental impacts, and opposition to a project from affected local communities. Many development projects (such as indicated in the three case studies in later chapters) result in effects that are distributed over geographical and social boundaries. These may cause high and concentrated impacts on local communities, which could have been averted through effective public participation processes.

This study therefore attempts to contribute towards this growing literature, by exploring how, under what conditions, and to what extent public participation is actually influencing the EIA decision-making process. The problem to be addressed by my thesis are closely linked to the notion of ‘inclusiveness’, which is based on the assumption that participation by the people who will be affected by a development decision will raise questions about the real impact of their contribution to the final decision, thus rendering a more socially, economically and environmentally viable and or just decision, or what Stirling (2008) refers to as ‘substantive justifications’.

1.3 SCOPE OF THE STUDY

Public participation is currently a requirement within environmental governance (Bulkeley & Mol, 2003). The notion of participation is being debated within the
various environmental governance and development literature globally (Chilvers, 2009). Benson et al. (2012) indicate that the effectiveness of public participation remains a continued source of debate within and outside the development discourse and hence a need for greater evaluation (also see Coenen, 2009; Chess & Purcell, 1999; Chilvers, 2009; Newig & Fritsch, 2009). One way of exploring the challenges of improving participation is to review and assess international studies and literature to provide a basis for drawing lessons (Benson & Jordan, 2011a).

As a core part of methodology, the international principles and criteria for the evaluation of public participation practices were reviewed and synthesized in this thesis. This helps in developing a framework for evaluating public participation in EIAs in South Africa. In order to evaluate the influence of public participation on EIA outcomes, three case studies located in different provinces were selected. The case studies were selected from the industrial development sector (Coega IDZ), the road transport and infrastructure (Pondoland N2 Toll Road) and the mining exploration sector (Hydraulic Fracturing in the Karoo). These represent a wide spectrum of public involvement in projects that are both rural and urban. The case studies were selected geographically representing three provinces, namely the Eastern Cape (Coega Industrial Development Zone (IDZ)), Eastern Cape and KwaZulu Natal (Pondoland N2 Tollroad), Eastern and Western Cape (Hydraulic Fracturing in the Karoo). I was somehow involved in each project either through previous work commitments (IDZ and N2 Toll road) whilst working for the Wildlife and Environmental Society of South Africa (WESSA), and attended public participation meetings and briefing sessions related to the ‘Karoo Hydraulic Fracturing’ and to date following the extensive debate related to it.

The projects are a mix of various elements of concern to the directly affected communities as well as of interest to the broader South African public, government and proponents. The concerns in these projects mostly relate to: the high impact on the environment, natural resources such as water, the economic
impact and promise of job creation, diversity of political views, social impact on affected areas and the huge public outcry on the process from which projects have emerged. These concerns provide unexplored potential and opportunities for research in public participation, hence the selection of these projects for this research.

For this thesis primary data collection involved a questionnaire survey, interviews with selected public participants, representatives of proponents, consultants, and officials from government departments and Non-governmental Organisations (NGOs). The analysis of data included a review of case study projects and the quantification of the interviewees’ responses to determine the extent of the implementation of various attributes of the participation process. To assess effectiveness of public participation in the EIA process, the framework of the International Association for Public Participation’s (IAP2) public engagement spectrum, was then also adjusted for use in this thesis.

The analysis in each chapter focused on the following key criteria that I developed, based on the various literature reviewed on evaluation processes in various environmental projects: (i) adherence to EIA Regulatory guidelines; (ii) adherence to timeframes to inform Interested and Affected Parties (I&APs) or stakeholders; (iii) representivity of I&APs; (iv) adequate opportunity for engagement by I&APs; (v) access to information related to the project; (vi) language and cultural barriers; (vii) stakeholder identification mechanisms; (viii) public involvement in the design of projects; (ix) involvement of marginalised groups in the public participation process; (x) methods used in the public participation; (xi) independence of Environmental Assessment Practitioners (EAPs); (xii) fulfilment of the intended purpose of public participation; and (xiii) the role of public participation in final decision-making and reasons for opposing authorisations.
This evaluation framework was used to establish the level of effectiveness of public participation as a tool in the environmental impact assessment process. In the absence of a universally agreed definition for effectiveness, and having considered the various evaluation frameworks and criticism against some, I deliberately use a combination of key criteria related to both the process and outcomes of projects to evaluate the effectiveness of public participation in the three case studies identified.

Environmental decision-making and public participation is not limited to the EIA process only, and is therefore very broad. To ensure for a consolidated and compact study the perimeter was specifically set to focus only on the EIA process. The study includes individuals, practitioners and organisations working across the country that assisted in providing information from which broad recommendations could be formulated on making the public participation process in EIA and decision-making more effective.

1.4 AIMS OF THE STUDY

Public participation appears to be more prominent in the literature produced by policy-makers (Cashmore et al., 2010). They indicate that when looking across diverse bodies of literature, particularly the literature on community development, one notes multiple overlaps between the different forms of participation, activities and issues that resonate from the idea of an integrated approach to participation (2010). However, according to Shirk et al. (2012) the contributions from academics and practitioners in various fields have created a large and steadily expanding grey literature on public participation. While this literature provides a rich body of practice-based learning resources, it largely comprises descriptive assessments of public participation experiences rather than rigorous evaluation and analysis (Murombo, 2009). Within the development context, such collaborative endeavours create the opportunity for new knowledge generation,
allowing practitioners and publics to gain new skills and therefore potentially influence policy.

The aims of this study is to determine how an EIA can be approached as a process from which best to explore the effectiveness of public participation and the implications it might have for decision-making in development projects. Furthermore to provide explicit knowledge about public participation practice that will enhance the skills of both practitioners and publics that will allow them to have a more direct impact on policy. Lastly, to develop recommendations on how public participation practise in South Africa can be improved.

1.5 OBJECTIVES OF THE STUDY

This study reviews the theoretical context and practise of public participation in EIA in both developed and developing countries with the view to learn lessons from the literature. The absence of a globally accepted and properly tested measurement tool necessitated the use of the International Association for Public Participation (IAP2) spectrum against which the thirteen key criteria are used to determine the effectiveness of public participation in the three case studies, survey and interview data presented.

To achieve the objectives of the study, a framework for evaluating the effectiveness of public participation in EIA in South Africa is developed and explored. The IAP2 spectrum is designed to assist in selecting the levels of participation that defines the public's role. The Spectrum assists me to draw conclusions and formulate recommendations on how public participation in EIA in South Africa can be improved.
1.6 TRUSTWORTHINESS OF RESEARCH DATA

Substantial work has already been done worldwide on the significance and effectiveness of public participation in EIA. Numerous evaluation criteria and principles of good practice in EIA and public participation can be found in the literature cited in this thesis. In this thesis the focus is on EIA regimes of developed countries, which are arguably moving towards establishing ‘inclusive’, democratic and participatory public participation systems. The effectiveness of public participation practice in EIA in developing countries and how this compared with developed countries was also examined.

The literature suggests that evaluation criteria should be formulated, keeping in view the specific country and project context (Palerm, 2000). Limited research was conducted in South Africa on studies focusing on the evaluation of public participation and EIA. Therefore, some related theses, reports, scholarly journals and articles, as well as the proceedings of relevant training workshops are analysed as secondary sources of data to explore such contextual differences. These data sources are located both within and outside the domain of Environmental Sciences.

This thesis is dominantly qualitative in nature. The trustworthiness of qualitative research is often questioned by positivists, perhaps because their concepts of validity and reliability cannot be addressed in the same way as naturalistic research (Lincoln & Guba, 1985). To ensure trustworthiness in this study, the researcher followed the following strategies as posited by Lincoln & Guba, (1985):

- Credibility - confidence in the 'truth' of the findings;
- Transferability - showing that the findings have applicability in other contexts;
- Dependability - showing that the findings are consistent and can be repeated;
- Confirmability - a degree of neutrality or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation, or interest;

In addition, I also used triangulation i.e. cross-checking of data from case studies, surveys and face-to-face interviews and interpretations by drawing upon different data sources, methods and perspectives (cf. O'Donoghue & Punch, 2003).

1.7 OUTLINE OF THE THESIS

Chapter One presents an introduction to the thesis by exploring the concepts of Public Participation and Environmental Impact Assessment. It further explored the current debates and rationale for research on the evaluation of effectiveness, as observed in various academic disciplines. The problem statement, scope, aims and objectives of the study and the research questions are elaborated upon. This is followed by a brief look at ethical issues in research. A succinct description of the research process is provided as a common thread through the various sub-sections.

Chapter Two

This chapter provides an overview of why public participation remains high on the global political and policy agendas, and considers the historical context of participation and its influence on decision-making in various contexts. It therefore starts off with a contextual overview of public participation by focusing on the historical understanding and theorists that contributed to the debate of the ‘public’ involved in participation. The role of both social and natural scientists that shape debates on public participation is explored. The chapter further focusses on the institutional context of public participation i.e. the introduction of public participation in the development discourse. This is tracked from the early beginnings of the 1950s in the United Kingdom (UK) to current day debates on
climate change, environment and development issues. An overview of the EIA then follows and discusses its origin in the 1960s in the United States of America (USA). The policy domain incorporating EIA over the subsequent decades in various countries are explored next. The South African (SA) context of EIA guided by the National Environmental Management Act (NEMA, Act No 62 of 2008) is explained. The chapter also focus on the transdisciplinary context of public participation. Therefore, a spectrum of models and criteria for evaluating public participation are explored. An extensive discussion on the International Association of Public Participation (IAP2), on which this research is modelled, follows with a critical review on its effectiveness. The chapter concludes with a focus on the practice of public participation around the world and how this study conforms to some of the research and findings elsewhere.

Chapter Three

This chapter outlines the process or methodologies followed in engaging with the research topic to ensure sufficient information has been collected to address the aims of this research. The first section looks at the research strategy and outline how data were collected from practitioners that work in active projects. An explanation is provided on the notion of evaluation within practitioner-based research. Next, an overview of the various methods used for collecting data is provided, i.e. interviews, questionnaires and case studies. The role of triangulation of various data sources that assisted in testing the reliability of information is explained. Reference is made of the need for the use of electronic surveys to complement conventional ways of data collection. This, I indicate may be a remedy to low responses received in this research. Criteria in the selection of various case studies are explained next. A broad discussion on data analysis follows, with specific reference to the IAP2 public engagement model. An explanation is provided on the various levels of public engagement, their meaning and relevance as a measurement tool for effectiveness in this thesis.
Limitations of the study follow next making reference to the low response rate, and this is then followed by the chapter conclusion.

Chapter Four

This chapter is the start of the empirical aspects of this research and illustrates through selected case studies the practice of public participation in the EIA process, as well as challenges experienced in the public participation process. The information in case studies is complemented by the views of various practitioners interviewed and responded to the survey questionnaires. The three case studies include the Pondoland N2 Toll Road, the Coega Industrial Development Zone (IDZ), and Hydraulic Fracturing for unconventional gas extraction in the Karoo. Each case study is discussed in the following sequence: background information that provides the development rationale for each project; contextual issues related to environmental, socio-economic and political dynamics of each project; a discussion on the EIA processes and their associated challenges; and finally a discussion on the role of public participation in each project. This is followed by the application of the 13 key criteria to a public participation ‘barometer’. Each case study concludes with a summery indicating the level of public engagement as well as the effectiveness thereof. The chapter concludes with a summary of the process outlined and provides an outcome to the level of public engagement and effectiveness averaged from the case studies.

Chapter Five

This chapter explores the views held by various practitioners involved in this research around the country on the public participation process and its effectiveness in the EIA. The information obtained through questionnaires is presented both quantitatively and qualitatively. The first section of this chapter focusses on the biographical data obtained from the questionnaires and is
presented in a quantitative format. This is followed by responses related to open-ended questions. The qualitative responses take cognisance of the thirteen key criteria outlined in chapter one and preceding chapters. These are captured in four specific questions posed to respondents. The responses are discussed to capture the authentic ‘voice’ of the respondents. A brief discussion summarises the key ideas from these lists. The application of the public participation barometer follows. The 13 key criteria as captured in the four leading questions are discussed and tested for adherence after which assumptions are made in regards of the level of stakeholder engagement and the effectiveness of the process. The conclusion follows and provides a summary of the main outcomes of the chapter.

Chapter Six

This chapter explores the views of twelve professionals representing various consultancies, NGOs, and government and civil society institutions that were interviewed. Using verbatim quotations or edited narratives of the participants, this chapter, explores different answers to the question on the effectiveness of public participation in the EIA process based on the questions posed in the semi-structured questionnaire (Appendix B). I provide an overview of the methodology followed in the interview process. A table outlining the disciplines in which respondents work is provided. The application of the responses to the public participation barometer follows and explores the relationship between actual responses and the thirteen criteria. These criteria are then used as evidence to indicate the level of stakeholder engagement and effectiveness. The conclusion focuses specifically on the contextual differences between natural and social sciences and their approach to public participation. This difference has been indicated by respondents to inhibit expression of local views. The role of ESS in responding to such a scenario is then revealed.
Chapter Seven

This chapter provides an overview of the research findings obtained from the literature review, case studies and practitioners that responded to both questionnaires and interviews. It also explores some of the shortcomings in the public participation process. One of the main findings indicates that EIA and public participation guidelines alone are not responsible for ineffective public participation. Making use of triangulation, the information from the case studies, questionnaires and interviews are aggregated into tables that provide an overall view on the level of public participation and effectiveness in South Africa. Recommendations in response to some adverse findings are then proposed. This firstly tabulates main conclusions and responding recommendations to traditional public participation processes. Next recommendations to integrate technology to improve public participation are explored. This is highlighted in the current age of technology to increase the effectiveness of public participation. I then recommend ESS as a discipline to explore how such technology could be integrated with other disciplines. The chapter and thesis is concluded with recommendations for further research to strengthen what has been explored in this research.
CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of a literature review is to acquire knowledge and develop an understanding of the previous work related to the research topic. This study keeps cognisance of the fact that similar studies have been done in other disciplinary areas, but integrating various research orientations i.e. evaluation research, practitioner-based research, case studies and empirical research distinguishes the present study from most others. This chapter provides an overview of why public participation remains high on the global political and policy agendas and considers the historical context of participation and its influence on decision-making in various contexts. It therefore starts off with a contextual overview of public participation by focusing on the historical understanding and theorists that contributed to the debate of the ‘public’ involved in participation. The role of both social and natural scientists that shaped the debate on public participation is explored.

The next section focusses on the institutional context of public participation i.e. the introduction of public participation in the development discourse. This is tracked from the early beginnings of the 1950s in the United Kingdom (UK) to current day debates on climate change, environment and development issues. An overview of the EIA then follows and discusses its origin in the 1960s in the United States of America (USA). The policy domain incorporating EIA over the next decades in various countries are next explored. The South African (SA) context of EIA guided by the National Environmental Management Act (NEMA, Act No 62 of 2008) is explained.

This thesis is majorly concerned with the transdisciplinary context of public participation. Therefore, various models and criteria for evaluating public
participation are explored. Again, the viewpoints of ‘experts’ and citizens are needed clarification and how they respond to public participation in both social and natural sciences. An extensive discussion on the International Association of Public Participation (IAP2), on which this research is modelled, follows with a critical review on its effectiveness. The last section of this chapter focuses on the practice of public participation around the world and how this study conforms to some of the research and findings elsewhere.

2.2 CONTEXTUAL OVERVIEW OF PUBLIC PARTICIPATION

2.2.1 Historical context of public participation

Public participation is currently a catchphrase in policy development globally, although it has a long and rich history. However, it is important for this thesis to first provide an understanding of what is meant by ‘public’ as it orientates the discussions of those involved in the public process.

The name ‘public’ originates with the Latin ‘populus’ or ‘poplicus’, and in general denotes some mass population (‘the people’) in association with some matter of common interest. So in political science and history, a public is a population of individuals in association with civic affairs, or affairs of office or state. In social psychology, marketing, and public relations, a public has a more situational definition. John Dewey defined (Dewey 1972) a public as a group of people who, in facing a similar problem, recognize it and organize themselves to address it. Dewey’s definition of a public is thus situational: people organized about a situation. Built upon this situational definition of a public is the situational theory of publics by James E. Grunig (Grunig 1983), which talks of non-public (those who have no problem), latent publics (those who have a problem), aware publics (those who recognize that they have a problem), and active publics (those who do something about their problem).
The relationship between individual citizens and institutions of governance has concerned Western philosophers for millennia. From Aristotle to Marx to Habermas, all have had something to say about how citizens or publics engage with the state and institutions of governance (London, 1995).

“The freedom to speak, to engage in political conversation, to discuss public issues, and to deliberate about the common good is a hallmark of a democracy. The energy of the democratic idea, as Lapham put it, ‘flows from the capacity of its citizens to speak and think without cant, from their willingness to defend their interest, argue their case, and say what they mean’” (London, 1995:1).

According to London (1995), political thinkers dating back to ancient Athens have stressed the importance of public discourse and debate. In the fourth century BC for instance, the orator and political leader Pericles recognised discussions among the citizens of the polis as an ‘indispensable preliminary’ (London, 1995) to political action. In the *Nicomachean Ethics*, Aristotle articulated an extensive philosophical rationale for the importance of this process, noting that ‘the art of legislation’ was impossible without reasoned dialogue and deliberation. Philosophers such as Jean-Jacques Rousseau and John Stuart Mill have reflected on the importance of public discourse. Rousseau deemed it essential to the formation of a ‘general will’. In addition, in his seminal work *On Liberty* published in 1859, Mill outlined a philosophical rationale for something he called ‘government by discussion’ (London, 1995). This general will London (1995) calls deliberative democracy, which is rooted in the ideal of self-governance in which political truths emerge not from a clash of pre-established interests and preferences, but from reasoned discussion about issues involving the common good. In the academic literature, this model falls under the rubric of ‘collective rationality, unitary democracy, or simply deliberative democracy’ (London, 1995).

Locke (1970 in London, 1995) argued that the power of the state should be limited so as not to threaten the basic rights of the citizens. He promoted the civic
virtue of toleration for the beliefs and actions of others, provided they do not impinge on people’s rights. He advocated that individuals should be allowed to meet together, form associations, and enter into relations of their choice.

Habermas’s primary concern on the other hand is with the changing rationale for politics. He contends that the ‘structural transformation’ of contemporary societies means that the discursive and interactive politics of the past are being increasingly replaced by technical and administrative politics devoid of genuine public judgment (London, 1995).

Democratic theory also developed stronger notions of citizen participation, or participatory democracy, in theorists such as Rousseau, Marx and Dewey. In this conception, famously expressed by Abraham Lincoln, democracy is government by, of, and for the people (Antonio & Kellner, 1992). For such a conception of radical democracy to work, to create a genuinely participatory democracy, the citizens must be informed, they must be capable of argumentation and participation, and they must be active and organised to become a transformative democratic political force (London, 1995).

In his book, *Making Social Science Matter* (2001), Flyvbjerg indicates how the social sciences limit their own effectiveness through their attempts to emulate the ‘modern scientific ideal’ as expressed in the natural sciences. Flyvberg (2001) implies in his argument that the current emphasis on the ‘modern scientific ideal’, predictive theory and instrumentalism within the social sciences leads to a reliance on theory and rules. This, he says, relegates the social sciences to an administrative role, the details of which are determined by whichever instrumental rationality prevails (e.g. whichever process or technology is being used), and whichever power relations happen to be dominant (Flyvbjerg, 2001). Such a role is ‘… a ‘headless’ form of ad hoc social engineering no longer given credence by a superstructure of social-science theory’ (Flyvbjerg, 2001:5).
This research is dominantly social science oriented focusing on 'pracademics' involved in concrete projects but also overlaps with theoretical matters in the natural sciences. This is one of the reasons why fusing qualitative and quantitative research approaches was explored. In doing so the aim was to get both the views of the 'public' and that of the 'expert'. It is widely accepted that the public should be involved in policy discussions over contentious issues such as the environment. However, one of the circumstances that can militate against this objective is where 'experts' of one sort or another dominate the discussions. This precludes wider public involvement by defining the discussions as the exclusive preserve of ‘experts’ (Eden, 1996). At times, the contributions by ordinary persons are discarded, as they are believed to lack the necessary knowledge and ability to comprehend what these ‘experts’ construct or ask relevant questions about. The domination of modern science is such that there is a ‘political and cultural demand for scientific rationality’ in decision-making, and alternative forms of rationality are frequently ignored or devalued (Eden, 1996). This creates the foundation for ‘lay knowledge’ to be ‘inadvertently but still systematically suppressed’ by expert knowledge (Eden, 1996). This fusion of social and natural sciences and views from the public and experts therefore aims to expand and strengthen rather than limit social sciences' effectiveness as suggested by Flyvbjerg (2001).

In reference to people participating in matters related to decision-making Chomsky (1983) indicates that these are often ordinary people, not professionals, who are applying their intelligence and analytic skills in these areas and accumulating quite a lot of knowledge and understanding. The same intellectual skill and capacity for understanding and for accumulating evidence and gaining information and thinking through problems could be used under different systems of governance, which involve popular participation in important decision-making, in areas that really matter to human well-being' (Chomsky,1983:1). However, as suggested in this thesis, Chomsky also acknowledges the need for specialized knowledge.
2.2.2 Institutional context of public participation

According to Rahnema (cited in Sachs, 1993) the words ‘participation’ and ‘participatory’ appeared for the first time in the development discourse during the late 1950s. He indicates that social activists and field workers conducting development work before then came up against a reality – that the public was excluded from participation in projects affecting their lives. This led them to attribute most of the failures of development projects to the exclusion of people from processes related to design, formulation and implementation. These activists started to advocate the cessation of ‘top-down’ strategies of action and the inclusion of participation and participatory methods of interaction as an essential dimension of development.

The 1960s globally saw the introduction of numerous government programs to tackle poverty, disadvantage and racial tension, which included an increased emphasis on public participation (Taylor, 1995). In the UK, these developments included Community Development Projects (CDPs), the review of which ‘challenged the assumption that local action alone could tackle problems which had their roots in much wider economic forces’ (Taylor, 1995 in Brodie et al., 2009). The CDP approach was widely influential in the 1970s and early 1980s when community activism was ‘strongly influenced by a radical model that saw an extension of the class struggle’ that developed in Britain and Europe (Gilchrist, 2004:15).

Around the globe, parallel movements also developed in the 1990s as a result of the global interest in the concept of sustainable development, following the adoption by the United Nations in 1992 of Agenda 21 – the agenda for the 21st century. The concept of sustainable development led to fragile links being established between the global issues of environmentalism, international development to tackle poverty, economic development, and social change through greater participation in governance being strengthened and
institutionalised at local, national, and international levels (Della Porta & Diani, 2006). Dunn et al. (2007) indicates that, across the globe, we have witnessed ‘an explosion’ of continued interest in participation since the Rio Declaration on Environment and Development in 1992; this is particularly true for public participation as it provides a critical platform in democratic decision-making processes. In the Climate Change debate it is suggested that collective action be taken at the global scale, because most greenhouse gases accumulate over time and mix globally, and emissions by any agent (e.g., individual, community, company, and country) affect other agents (IPCC, 2014). The IPCC debates have not made much impact on this global cooperative development because effective mitigation will not be achieved if individual agents advance their own interests independently. Cooperative responses, including international cooperation, are therefore required to effectively mitigate greenhouse gas emissions and address other climate change issues. The effectiveness of adaptation can be enhanced through complementary actions across levels, including international cooperation. Research evidence from climate change scenarios suggests that outcomes seen as equitable can lead to more effective cooperation (IPCC, 2014).

Brodie et al. (2009) advocate various reasons for participation: firstly, involving individuals more directly in decisions through increased participation is seen as a way of strengthening the legitimacy and accountability of democratic institutions (Creasy, 2007; Cornwall, 2008; Beetham et al., 2008). Secondly, they contend that involving people in local decision-making processes and bringing them together around a common cause or interest can empower communities and help build social cohesion (Blake et al., 2008; Foot, 2009). Thirdly, they consider participation as a tool for reforming inadequate public services and for providing more efficient delivery or access to services that are better suited to people’s needs (Leadbeater, 2004; Duffy, 2007; Parker, 2007). Finally, they associate participation with personal benefits for individual participants, ranging from increased political efficacy and satisfaction gained from influencing change to
personal development and growth in self-esteem from learning new skills such as public speaking (Barnes & Shardlow, 1997; Popay et al., 2007). The reasons for participation is therefore associated with ‘greater social justice, more effective public services and a society of self-confident citizens’ (Beetham et al., 2008:11), as well as being an expression of active citizenship (Brannan et al., 2006).

The normative element (Brodie et al., 2009) of participation (i.e. participation as a ‘good thing’) emerges strongly from the literature (see also Field, 2003; Cornwall, 2008). However, Field (2003) suggests that dangers or limitations exist in achieving this ‘common good’. In fostering cohesion and social capital, for example, participation as a process may become exclusionary and divisive (Putnam, 2000; Field, 2003). Not all participation therefore necessarily contributes to what might broadly be viewed as the ‘social good’. The institutionalisation for public participation, however, has had positive benefits in decision-making across various disciplines and institutions.

2.3 CONTEXTUAL OVERVIEW OF ENVIRONMENTAL IMPACT ASSESSMENT

Environmental legislation gives effect to two different aspects of planning and development: Integrated Environmental Management (IEM) and Environmental Impact Assessment (EIA). Generally an IEM considers the environmental elements from the inception of the idea right through to the end of a project, whilst an EIA is just one tool or technique used to gather and analyse environmental information that is a part of the IEM process. For the purpose of this study, the focus will be on the EIA as it provides ample opportunity for the public to participate in decisions-making in development projects. However, at times a strategic environmental assessment (SEA) is confused with an EIA. SEA is an environmental assessment that is carried out on one or more strategic actions, policies, plans or programmes (Audouin, 2009). Whereas an EIA studies a physical project, the SEA looks at policies, plans, ideas and programmes as is the current case with the Hydraulic Fracturing in the Karoo.

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2.3.1 The origin of EIA

The 1960s in the USA became an instrumental period in response to a growing concern for environmental quality and recognition of the environmental impacts of government activities. Rachel Carson’s ‘Silent Spring’ published in 1962 forced the banning of DDT (“dichlorodiphenyltrichloroethane”) and spurred revolutionary changes in the America’s laws affecting air, land, and water. Carson’s passionate concern for the future of our planet was instrumental in launching a worldwide environmental movement. The public demanded change. A major change took place in the federal legislation in the USA in respect of the National Environmental Policy Act (NEPA) of 1969 which required federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. This era also witnessed the development of a new field called environmental planning and management (Ortolano, 1997). Environmental planning puts knowledge of the ecosystem into a planning process to create a ‘better fit between the works of humans and nature’ (Domey, 1989).

The EIA process began in North America in the 1970s. Many organisations that otherwise might not be involved with environmental planning were suddenly thrust into this area, because of NEPA’s requirements for EIA. However, the purpose of an EIA is not just to assess impacts and complete an environmental impact statement (EIS); it is to improve the quality of decisions (Domey, 1989; Ortolano, 1997; Mathur, 2006; O'Faircheallaigh, 2010). The hope is that project proponents will make a more environmentally sensitive decision if they are aware of a project’s potentially adverse impacts on the environment (O'Faircheallaigh, 2010).

Four decades ago, EIA was unknown in most countries, but today, it is a formal process in many countries and is in fact practised in more than 100 countries
(Singh, 2007). A large part of the initial development took place in a few high-income countries, like Canada, Australia and New Zealand (1973-74). However, some developing countries introduced EIA relatively early, such as Columbia (1974) and the Philippines (1978). Provisions related to EIA began appearing in developing countries' legislation during the 1970s, shortly after the United States had enacted the first national EIA law – the National Environmental Protection Act of 1969. In addition, the Philippines promulgated supplemental legislation, which set forth more detailed EIA procedures. Throughout the 1980s, more countries established EIA as an element of environmental policy and a legal requirement for proposed development activities. According to Mathur (2006), many countries elected to insert EIA provisions within their framework environmental legislation (e.g. Algeria, Costa Rica, Cuba, Guatemala, India, Pakistan, Palau, Senegal, South Africa, Togo and Turkey), while others introduced elaborated EIA requirements within a complementary decree or regulation (Brazil, Congo, Indonesia and Mexico). Table 2.1 provides an evolution of EIA from 1969 to 1995.

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Table 2.1: EIA Legislation per year (1969 – 1995) (Adapted from Singh, 2007)
Since 1990, the pace of legislative activity on environmental issues has quickened and the number of countries with EIA legislation has increased significantly. UNEP information indicates that EIA provisions exist in the framework environmental legislation of 55 developing countries (Mathur, 2006). He indicates that in addition, at least 22 developing countries currently have specific laws, decrees or regulations that contain criteria or procedures applicable to EIA (Mathur, 2006).

Environmental impact assessments (EIAs) have emerged as a significant process to drive environmental regulation in most of the countries, and as such are frequently presumed to act as a constraint upon 'rampant' economic expansion or development, and thus as a tool of resistance against neo-liberal capitalist domination (Annandale and Taplin, 2003; Lawrence, 1997). However, the reverse view may be that EIA fit well into the neo-liberal framework as a mechanistic and technocratic tool. Furthermore, their stress upon popular participation also implies an element of radical democracy, and a potential challenge to the power of entrenched elites (Eden, 1996). As capitalists insist on accumulating more and more capital in order to increase their wealth and perpetuate their advantage (Piketty, 2014), processes like EIA are perceived as a constraint to such accumulation. In such a process progress toward economic rationality need not imply progress toward democratic rationality. Within this debate the voice of the public needs to be affirmed in ensuring that decisions impacting on their lives and livelihoods are fair and based on principles of democracy.

Environmental Impact Assessment forms the basis of exploring the effectiveness of public participation in this study. O'Faircheallaigh (2010) indicates that in recent years the need to enhance public participation in EIA, and the efficacy of alternative mechanisms in achieving this goal, has been central themes in the EIA literature.
2.3.2 EIA in South Africa

The previous section focused extensively on the adoption of environmental evaluation procedures in various countries around the world. South Africa has been slow to develop procedures appropriate to its circumstances (Sowman et al., 1995). According to Sowman et al. (1995) it was only as recently as 1989, that South Africa enacted legislation (Act 73) which provides for the determination of environmental policy to guide decision-making. Such provisions exist in the Environmental Conservation Act 73 of 1989 to regulate activities that may have a detrimental impact on the environment and require that environmental impact reports be prepared. In that same year, a document was published (Council for the Environment 1989) outlining a recommended evaluation procedure for integrating environmental considerations into decision-making at all stages of the planning and development process (Sowman et al., 1995).

The key constraints to the development and implementation of environmental evaluation procedures in South Africa in the past have been the absence of a general environmental policy, a lack of political will and awareness of the need to consider environmental issues, an authoritarian system of government, a lack of accountability by decision-makers, inadequate public participation, inefficient administrative structures, legislative inadequacies, as well as a lack of environmental expertise and financial resources (Sowman et al., 1995; Rossouw and Wiseman, 2004; Oelofse et al., 2006). As outlined in the previous section, such constraints are not unique to South Africa and have inhibited the development of environmental procedures and practices in various countries.

Another important factor constraining the development of an environmental policy and enabling procedures in South Africa has been the lack of popular support afforded to environmental issues (Sowman et al., 1995). Past political policies and practices played a significant role in the alienation of black people from the
land and produced negative attitudes toward environmental issues generally. It is only after the end of Apartheid in 1994 that environmental issues were placed high on the political agenda. Hence, the selection of the three extremely politically influenced case study projects for this research.

The implementation of environmental evaluation procedures in South Africa (and elsewhere) is influenced by United States and European models, yet these are not necessarily appropriate for South Africa. Consequently, considerable research and deliberation as well as public and authority participation has been undertaken to formulate procedures appropriate for South Africa which has led to the development of its National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) with its various amendments.

It is worth noting that environmental assessment processes are not traditional research projects. They are in fact mostly consulting exercises, but are mainly orientated (amongst various other environmental processes) towards informing a governmental decision, and therefore focus on real rather than theoretical proposals, strategies and recommendations for action. In doing so, environmental assessment procedures marginalise details, as they typically focus on general trends and significant issues that are identified through scoping processes. This focus means that an environmental assessment would not usually contain detailed descriptions of case studies or particular examples. The emphasis in an EIA is on the synthesis and integration of information and assessment to inform a decision, rather than on explaining the particular characteristics of a case study.

The EIA regulations in South Africa guided by National Environmental Management Amendment Act, 2008 (Act No. 62 of 2008) require that specific procedures be followed and reports (‘Scoping’ and/or ‘EIA Reports’) be prepared for those activities that are listed due to their potential to have a ‘substantial detrimental effect on the environment’ (Sowman et al., 1995). The provincial
government in South Africa in cooperation with local spheres of government is the leading authority for managing the EIA process. The regulations require the appointment of an independent consultant to undertake the EIA. A process for the certification of environmental professionals is currently underway that will ensure the appropriate regulation of the profession and ethical compliance in conducting EIA and public participation.

It is generally accepted in the South African context (based on the NEMA, Act No. 62 of 2008) that an EIA comprises the following key stages: screening, scoping, assessment, evaluation, mitigation and optimisation/enhancement, reporting, decision-making, reviewing, implementation, management and monitoring. Today, emphasis is placed on effective scoping, such that each proposal is examined at a level and in the detail appropriate to the activity’s potential for environmental change. A summary and schematic representation (Fig. 2.1) of the standard EIA process followed in South Africa to obtain authorisation to commence with an activity (DEAT, 1998) is provided below.

Minimum requirements to meet public participation in the EIA process alone are not sufficient. EIA guidelines focus more on technical requirements (although also important) instead of enforcing public participation within the various steps. It will never be enough just to indicate that public participation is a requirement and should be applied as such. It leaves enough space for EAPs to find ways and means to ensure that only the minimum requirements are met, mostly to the detriment of a transparent process. Therefore clearer guidelines are needed on the conduct of EAPs concerning public participation in the EIA process. The amendments in the new South African NEMA EIA guidelines of 2010 have to some extent addressed this and are summarised in Regulations 16, 17 and 18 of the Act.
In terms of public participation/consultation, amendments were effected to ensure a fair process. For example, each year the period between 15 December and 2 January has been excluded from public consultation processes and in the counting of days for both decisions and lodging of appeals. Another example of an amendment aimed at improving public consultation and access to the EIA processes is that a provision was added requiring that a decision to grant or refuse an application must be published in the same newspaper used during the public participation process. The new regulations now take into account the
amendments made to NEMA and provide for Section 24 of NEMA (40 days for organs of state to comment) and 60 days for Water Affairs if the application is for a waste activity. In addition, landowner consent has been replaced with landowner notification.

NEMA was developed to become a driver for participatory democracy in environmental decision-making; its integrative EIA process requires authoritative institutions and institutional cooperation, which has eluded South Africans ever since the development of these environmental regulatory frameworks. Rossouw and Wiseman clarify this, indicating that ‘the NEMA principles provide a model of participative democracy that has been difficult to achieve in practice’ (2004:135). Thus while the new environmental laws and policies implemented since 1998 in South Africa have been globally praised as progressive and socially just, the state do not have sufficient experience or capacity to implement the principles contained therein (Oelofse et al., 2006).

EIA potentially generates huge benefits to local communities, business and government affected by developments in the selection of project location, process, design, development actions and decision-making (Oelofse et al., 2006). However, in the current practice of EIA there are a number of flaws, shortcomings, and deficiencies which are further explored in the empirical chapters.

Oelofse et al. (2006) indicates that the EIA system in South Africa compares well with world-wide trends i.e. that it lacks strategic integration. Therefore, weaknesses pertaining to the institutional processes, the enforcement of legal requirements and actual practice are still cause for concern. The lack of technical and financial resources, weak coordination between various institutional sectors, subjective review methodology, inadequate public participation processes, and a lack of proper monitoring of impacts during the implementation of projects are but
a few examples of the shortcomings in South African EIAs (Rossouw and Wiseman, 2004).

2.4 TRANSDISCIPLINARY CONTEXT OF PUBLIC PARTICIPATION

2.4.1 Various models and criteria for evaluating public participation

Research on public participation draws upon many disciplines and requires a balanced understanding of historical and contemporary processes that shapes it to become an effective tool in the decision-making process. Therefore, studying public participation in development projects as a means of social transformation requires a blending of knowledge and perspectives from political science, economics, sociology, psychology, anthropology, geography, history, environmental science, science and engineering. ESS provides the perfect platform to integrate these different disciplines.

The development problem explored in this research, especially the case studies, focuses on the role that public participation plays in EIA decision-making, which is also complex and multidimensional. Public participation in scientific research has deep roots in the history of science as has been shown in the previous sections. In the last few years, it has rapidly been accepted across the disciplines of science and education, fuelled by advances in communications technology and a change in a scientific culture now eager, to welcome outsiders or socially oriented researchers as collaborators in the research process.

A key concern in this thesis is the viewpoints of ‘experts’ (scientists, consultants, technocrats) and those of citizens participating in the public participation process. Regarding these viewpoints the question arises about whose opinion carries more weight: those people with a direct ‘concentrated’ interest in a project, i.e. politicians, and those with only a ‘diffuse’ interest, such as the distant public. Such opinions influence processes of participatory and representative
democracy. To get a better understanding on how the viewpoints of experts and citizens are shaped and the influence thereof on the level of public participation, I reviewed various models of participation. The sections below provide an inter-disciplinary view of these models with a broader focus on the International Association of Public Participation (IAP2), which forms the basis for this thesis.

### 2.4.1.1 Public Participation in Science Research

Shirk *et al.* (2012), explored public participation as a collaborative endeavour between science researchers and public participants through what they term Public Participation in Science Research (PPSR – Fig. 2.2). They indicate that these projects generally strive for outcomes that fall into one or more of three main categories namely: outcomes for research (e.g. scientific findings); outcomes for individual participants (e.g., acquiring new skills or knowledge); and outcomes for social-ecological systems (e.g. influencing policies, building community capacity for decision-making, taking conservation action).

![Fig. 2.2: Framework for public participation in scientific research projects (Shirk *et al.*, 2012)](image)

PPSR is seen as a means of engaging diverse stakeholders and accessing new knowledge, making power relationships transparent, adapting activities to
evolving conditions, and encouraging both the ownership and accountability of the management process among constituents (Kapoor, 2001; Armitage et al., 2007, Arora-Jonsson et al., 2008; Wilmsen et al., 2008; Wulfforst et al. 2008).

Studies undertaken in conservation and natural resource management indicate that the degree of participation can be measured in terms of various criteria. The duration of involvement (Ballard et al., 2008); research effort (Dickinson et al., 2010), numbers (Wilmsen & Krishnaswamy, 2008) and the diversity (Cheng et al., 2008) of participants; the depth or intensity of involvement in the process (Wilmsen & Krishnaswamy, 2008); and/or the power that participants have over the processes in which they engage are of particular importance. These criteria have in fact been the focal point of participation processes (e.g. Arnstein, 1969; Pretty 1995; White, 1996), whilst participation in development and resource management contexts relates to power issues that bring about complex political relationships (Charvolin et al., 2007).

Shirk et al. (2012) indicates that their work to create models of PPSR grew out of a need to explore relationships between project design and project outcomes across the many fields of practice in which these activities take place, as well as across the different approaches to project design employed within a given research field. Shirk et al. (2012) indicate that to construct the models presented below (Table 2.2) earlier approaches to public engagement in science and PPSR in particular were explored. The models acknowledge the convergence of thinking by scholars working in different fields of practice and research. PPSR projects across fields of practice explore and elaborate specifically on the different degrees to which the public participates in the process of scientific research.
<table>
<thead>
<tr>
<th>Public action in each PPSR model</th>
<th>Members of the public...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract</td>
<td>... ask scientists to conduct a scientific investigation and report on results</td>
</tr>
<tr>
<td>Contribute</td>
<td>... are asked by scientists to collect and contribute data and/or samples</td>
</tr>
<tr>
<td>Collaborate</td>
<td>... assist scientists in developing a study and collecting and analysing data for shared research goals</td>
</tr>
<tr>
<td>Co-create</td>
<td>... develop a study and work with input from scientists to address a question of interest or an issue of concern</td>
</tr>
<tr>
<td>Colleagues</td>
<td>... independently conduct research that advances knowledge in a scientific discipline</td>
</tr>
</tbody>
</table>

Table 2.2: How public participants interact with scientists through public participation in scientific research (PPSR) (Shirk et al., 2012)

Marris et al. (2010) explored public participation in the biosciences contending that citizens who will be affected by decisions have the right to participate in those decisions, especially when the relevant research is funded by their tax contributions (this would be what social scientists term a normative justification). The example of the Hydraulic Fracturing in the Karoo discussed in Chapter 4 is a good example of normative justification. In other cases, citizens reflect a desire to reduce conflict, help (re)build trust, and smooth the way for innovations (in other words, the reason is instrumental). In addition, citizens expect that such participation will raise questions about the real-life functioning of developments. This may perhaps lead to innovations that perform better in complex real-world conditions, or that may be more socially, economically and environmentally viable (‘substantive justifications’) or not developed at all (Fiorino, 1989; Stirling, 2008).

2.4.1.2 Participatory Technology Assessment’

Marris et al. (2010) introduced ‘participatory Technology Assessment’ (pTA, as it is termed in Continental Europe) or ‘upstream public engagement’ (as it is commonly termed in the UK) for engaging the public. pTA responds to the widespread perception among politicians and policy makers that there is a ‘crisis of trust’ in the relations between science, politics, commerce and society. Marris
et al. (2010) suggests that pTA should be used as a way to achieve the improved integration of stakeholder input into decision-making regarding technological innovations. It further calls for a broader, ‘participatory technology assessment’ model that supplements expert opinion with early input from all corners of society.

Indications are that ‘participatory Technology Assessment’ has become increasingly relevant to the biosciences, where uncertainties as well as potential (positive and negative) stakes for society are particularly high (Marris et al., 2010). For example, notwithstanding the widespread presence of genetically modified organisms (GMOs) in agriculture and in the food supply, critics have continued to raise concerns about potential health and environmental hazards associated with these crops. Political and scientific institutions, troubled by controversies over emerging technologies, have developed a new interest in the role that can be played by social scientists in generating public engagement at an early stage in scientific and technological development. In Europe, such participatory initiatives have been experimented with extensively since the early 1990s. They have also been tried to a more limited extent in the US and elsewhere, including in ‘the global South’ – developing and least-developed nations (Leach, Scoones & Wynne, 2005). In the developed world, such initiatives are increasingly seen as the solution to the perceived problem of public mistrust in science and scientists. Yet many scientists still view them with suspicion and do not accept that members of the public without scientific expertise should be involved in decision-making about scientific matters (Graur, 2007).

However, while some scientific researchers may be wary of involving non-specialists in decisions about the priorities and direction of research, they also need to acknowledge that social factors such as beliefs, values, and assumptions are important to address the kinds of knowledge desirable or useful to ensure
effective participation. These features are inescapably part of the deliberations of those who shape and fund research priorities in the contemporary world.

Benson et al. (2012) indicate that some countries have advanced systems for involving the public, while others have less accessible decision-making processes. In principle, much scope therefore exists for researchers in these countries to facilitate cross-national learning through the exchange of ideas and sharing of knowledge; thereby enhancing the body of literature on public participation policy. Examining catchment management for example, Benson et al. (2012) identified three features that are of importance in participation. First, that policy-makers and the public should be informed about water management (awareness-raising). Secondly, decision-making should occur at the lowest appropriate level (i.e. subsidiary) to be closer to citizens. Thirdly, decision-making should involve full public consultation and the involvement of users in planning and implementation (i.e. what might be called deliberative engagement). According to many commentators, genuine participation should involve the engagement of individuals in a deliberative process that promotes political dialogue aimed at mutual understanding (Smith & Wales, 2000; Hendricks, 2009). This notion relates strongly to deliberative democracy (Dryzek, 2002), which favours ‘inclusive decision-making’, in terms of which ‘reasoned debate’ transforms judgements in the face of publicly convincing arguments that appeal to the ‘public good rather than individual self-interest’ (Chilvers, 2009:401).

2.4.1.3 Arnstein’s ladder of citizen power

Arnstein’s (1969) model and proposed ladder of citizen power (fig. 2.3) have laid the foundation for the evaluation of levels of participant engagement in the public process. In terms of this model, participation can range from passive and tokenistic forms, in which people are told what to do and have no control over the processes and the outcomes, to active and interactive forms, in terms of which community members have control over both the processes and the outcomes.
Since Arnstein (1969), increasingly complex theories of participation have been advanced. Burns, Hambleton and Hoggett (1994) have modified Arnstein’s model, proposing a ladder of citizen power in which a distinction is drawn between ‘cynical’ and ‘genuine’ consultation, and between ‘entrusted’ and ‘independent’ citizen control.

2.4.1.4 Miskowiak levels of public influence

When determining participation objectives, it is important to understand how much influence each objective affords the public. The chart (Fig. 2.4) of Miskowiak (2004) helps to illustrate levels of public influence in which the ultimate level is that of collaboration. Until ‘public decisions are implemented’ (E on fig. 2.4), a process of awareness and education help to build the capacity for the public to become further involved.
Fig. 2.4: Level of public influence (Adapted from Miskowiak, 2004)

Used alone, the levels do not afford the public influence over community planning. Input gathering is the first participation objective that provides the public influence over planning, but only if decision-makers choose to use the public’s input. The public is afforded the most influence in terms of the decision-making objective. With decision-making, the public either shares or has the responsibility to make decisions that directly influence the plan.

2.4.1.5 International Association of Public Participation (IAP2)

More recently, the International Association of Public Participation (IAP2) has designed a model (Table 2.3) to assist in evaluating the level of participation that defines the public’s role in any public participation process. This spectrum shows that differing levels of participation are legitimate and depend on the goals, time-frames, resources and levels of concern in the decision to be made.

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As a general trend, as one moves from top-down approaches to partnerships and bottom-up approaches to community development (Conyers, 1986), citizens should gradually move from powerlessness to empowerment (Finger, 1994; Kagan, 2007; Nikkhah & Redzuan, 2009). Public participation may be placed at different points along this spectrum as it includes activities ranging from disseminating information, consultations, collaborative and interactive devices to inclusive decision-making processes.

Having reviewed the various participation models, the IAP2 Spectrum being more recent and more relevant to the objective of this research, became my preference to explore the role of public participation in EIA. The IAP2 in my opinion articulates best how much influence the public could have in decision-making. As with any model I suppose the IAP2 also has its limitations which are discussed...
below. To overcome these, I amended the model to respond better as a tool to evaluate the effectiveness of public participation in the EIA process in South Africa. I would, however, want to outline in the next section the critique expressed on the IAP2 model.

2.4.1.6 Critique on the IAP2 Spectrum

According to Nabatchi (2007) the IAP2 Spectrum views public participation in terms of decision-making; thus, it may be challenging to apply when there are other goals or reasons for participation, such as exploring an issue, transforming a conflict, or fostering collaborative action. Secondly, she indicates that the Spectrum fails to identify the communication modes that may be used at each level. Since communication is related to levels of cooperation, this is an important issue for consideration. Most importantly, the original Spectrum is organized along a continuum of ‘increasing levels of public impact’. The term ‘public impact’ presumes some kind of positive outcome, which is not necessarily guaranteed in any involvement process (Nabatchi, 2007). For Nabatchi (2007), the Spectrum improperly fuses a scale of influence with normative approval. To address this issue, she proposes an adaption of the Spectrum to follow a continuum of incremental levels of power sharing, or shared decision-making authority, between the organizer and the participants. This may, in her opinion, help to reduce the Spectrum’s normative overtones, by suggesting that one level is not necessarily preferable to any other; differing levels of shared decision authority are legitimate depending on the goals, time frames, resources, attitudes of the decision-makers, interests of the stakeholders, and complexity of the issue, among other factors (Nabatchi, 2007).

Goff and Hardy (2009) suggest that the IAP2 Spectrum of public participation may enable a governing body to move towards the question of influencing power in an ordered manner. They believe that the closer the quality of engagement moves towards the ‘participation’ end of the spectrum and away from the
‘information’ end, the more this question of sharing decisions to act moves into the public square. However, they indicate that it is very rarely that this upper-end of the spectrum is used. Most commissioners of deliberative strategies are said to be content with the level of ‘consult’ that is the second step in the public impact level. Goff and Hardy (2009) believe that it is the role of leaders to make decisions for the public. However, they reflect from studies done that they ‘hear stories from leaders and practitioners alike that reflect their real fear and a sense of incapacity to move towards the participatory end of the deliberative spectrum’ (Goff & Hardy, 2009:2). This may refer to the power dynamics of allowing public too much influence in the decision-making process.

In considering the extent of participation in community engagement by the International Association for Public Participation (IAP2) Lyn Carson (in Susskind & Carson, 2008) suggests when she use the Spectrum, she find herself describing it as a continuum. She notes that it is important to inform constituents, and open governments should do this routinely, but indicate that the column of inform in particular is unworthy of her attention in any discussion about public participation (Susskind & Carson, 2008).

Carson tends to agree with Goff and Hardy (2009) that ‘inform’ on the IAP2 Spectrum is not really community engagement or participation. They indicate that it is a prerequisite for community engagement, but it is not enough in its own right. Processes where the communities are passive recipients of information, e.g., an advertising campaign, are not community engagement. Community engagement needs to be a two way process (Carson, 2008).
2.5 PUBLIC PARTICIPATION IN PRACTICE

In this section I provide a holistic overview of the application or practice of public participation, with reference to EIA and other development domains from both North and South perspectives. I use various examples, lessons and recommendations that depict the various studies conducted in advanced, transitional and developing economies i.e. the USA, Europe, Pakistan, India, various African countries and, finally, South Africa.

2.5.1 Public participation in the USA

A positive picture about the effects of public participation is drawn in the work of Beierle and Cayford (2002). The two authors – using a case survey method – looked at 239 cases of environmental decision-making involving public participation in the North American Great Lakes region. According to them, the case study record shows ‘... that public participation is more than just a theoretical appealing component of democracy...’ (Beierle & Cayford, 2002:74). Involving the public not only frequently produces decisions that are responsive to public values and substantively robust, but it also helps to resolve conflict, build trust, and educate and inform the public about the environment. The authors suggest that ‘understanding what makes a participation process successful is of paramount importance’ (Beierle & Cayford, 2002). I suggest in this thesis that without understanding the public participation process, it becomes the more difficult to evaluate the effectiveness of such a process.

The effectiveness of public participation in decision-making is the main concern in this thesis and Delli Carpini et al. (2004) offer some insight of factors that needs to be taken into account when considering effectiveness. The authors mainly and extensively reviewed social psychology research about the functioning of communication (and specifically deliberation) in groups, concluding that there is substantial evidence that deliberation can lead to some of the
individual and collective benefits postulated by democratic theorists. However, ‘the impact of deliberation and other forms of politics is highly context dependent. It varies with purpose of the deliberation, the subject under discussion, who participates, the connection to authoritative decision-makers, the rules governing interactions, the information provided, prior beliefs, substantive outcomes, and real world conditions’ Delli Carpini et al., 2004:336). So, although the research of Delli Carpini et al. (2004) demonstrates numerous positive benefits of deliberation it also suggests to me that deliberation under less optimal circumstances can be ineffective at best and counterproductive at worst.

2.5.2 Public participation in Europe

Nicholson (2005) observes that the increased deployment of civic participation within the context of public policy-making is mirrored across western democracies with commentators differing in their interpretation of the underlying drivers of this trend. She further indicates that within the UK it is generally acknowledged that since 1997, the Labour government (although not in power currently) has promoted public engagement strongly as one means of modernising public services. This is based on the argument by Mulgan that ‘today’s citizens are far more educated, more knowledgeable and more confident than their predecessors’ (Mulgan, 2003:15). Claeyws agrees and indicate that more people now expect that their voices be heard and views considered in decision-making by government (Claeyws, 2001). Also, communication systems or technology such as the internet and various social media (Facebook, Twitter, blogs etc.) have increased the level of public engagement. Civic participation is considered to be one way to address the perceived ‘democratic deficit’ created by the previous role of the citizen in representative democracy, which appear to some to have been little more than infrequently casting a ballot (Curtain, 2003). In this thesis I argue for increased public participation and greater transparency in decision-making and agree with (Claeyws, 2001) that many traditional
frameworks of governance may be ill-suited to the complex modern issues that need to be addressed.

The September 2014 referendum in Scotland can be seen as a great platform for many people to start talking about politics and create a legacy of making it more likely that people will participate in politics in future. According to Curtice (2014) as many as 32 percent of Scottish people said that as a result of the referendum they are now more likely to get involved in future debates about national or local issues. Equally as many as 37 percent said they are now more likely to vote in future elections. Curtice (2014) observes that an apparent enthusiasm for and interest in politics has evidently been generated by the referendum campaign, enough reason to believe that the referendum has left a legacy of a greater willingness to vote at election times and participate on local as well as national matters.

Tierney (2014) on the I-CONnect blog of the *International Journal of Constitutional Law and Constitution Making* indicates that only 45 percent of Scots said yes to independent statehood, but a massive majority said yes to direct democracy. The turnout of 84.65 percent was the highest for any UK electoral event significantly trumping the 65.1 percent who voted in the 2010 UK general election and the 50.6 percent who bothered to turn out for the 2011 Scottish parliamentary elections. Tierney (2014) indicates that ‘the story we are hearing time and time again from voters and campaigners alike is that citizens felt greatly empowered by the referendum and the role they had in making such a huge decision. Evidence is emerging of the extent to which people sought out information about the issue at stake and engaged vociferously with one another at home, in the workplace, in pubs and public meetings, and, to an unprecedented degree in British politics, on social media through Twitter, Facebook, blogs etc.’ (Tierney, 2014:1). In my opinion the Scottish referendum proved to be a catalyst for increased levels of public engagement. This for me also demonstrates that major constitutional decisions can be made by the people
with government providing relevant platforms that stimulate debate on matters that affect the people. Therefore, whatever arguments can be led in opposition to such referendums or platforms for people to engage, the notion that people are incapable of reaching informed decisions on important and even complex issues has been severely undermined by the Scottish referendum. I am therefore in agreement with Tierney (2014) who indicates that the Scottish referendum has not changed the borders of the UK but it has challenged the boundaries of our imagination.

In Europe, Blume (2001) reports on Denmark’s success in public participation that can be explained in part by the relatively small population and devolved responsibilities, which allow decisions about most public services to be taken at a local level. Denmark experienced much devolutionary public sector reform in the 1970s and 1980s, as a variety of service areas were decentralised to county and municipal levels of government. These changes were supported by the view that placing decision-making responsibilities closer to the level at which services are delivered, would facilitate democratic participation, responsiveness to citizens’ wishes, and strengthen the link between those at management and decision-making levels. On this local stage, informal contact between decision-makers and local public participation was seen as easier to achieve. In addition, the Danes were described as tending to be well educated and active in civil society, enjoying good communication systems and accustomed to government paying attention to their opinions. Policy-making was described as based on the building of consensus. In South Africa where most decisions are implemented at local government level, which is closer to the people, one would expect (like in Denmark) that participation become a norm and that decision-making become a more collaborative process. This thesis will explore if this is so, and if not, provide recommendations to make public participation more effective.
2.5.3 Public participation in Pakistan and India

A major concern in this thesis (and I suppose various similar researches) is the lack of empirical evidence from studies focusing on public participation. The research by Nadeem (2004) which focused on four projects in Pakistan and includes empirical evidence from road construction and industrial development sectors has therefore been explored.

Nadeem's (2004) finding on public participation in EIAs of development projects indicates that public consultation is a legal requirement in every EIA of development projects in the Punjab Province. However, he indicated that, in many cases, particularly in industrial developments, construction work started even before EIA reports were submitted, violating legal provisions. The reasons why this happened were found to be a lack of enforcement due to a shortage of staff, and political interference. Apart from some positive attributes, various flaws in the execution of public consultation processes were noticed. I express similar concerns in the case studies presented in chapter four.

Nadeem (2004) further suggests that the methods of informing stakeholders about participation opportunities through newspapers and writing direct invitations to some government officials were generally ineffective. The EIA reports or executive summaries of all the projects either did not contain sufficient information about the projects’ possible impacts or were not easily accessible to the stakeholders. None of the projects met the criteria of holding consultations at the project planning stage prior to site selection. In addition, no provisions were made for transport and financial support to enable the affected to participate in the public hearings. Accessibility is also major concern expressed in my research and an issue that inhibit effective participation in development projects.

Consultations during EIA preparation were very rarely held. The public hearings served to educate the participants regarding EIAs and potential impacts and the
mitigation measures in development projects. In this respect, the role of EIA experts/academics, representatives of NGOs and concerned government agencies appeared positive in relation to that of the directly affected in influencing the EIA outcome.

Although the overall performance related to the methods and framework for consultation generally remained unsatisfactory, Nadeem (2004) found some encouraging similarities among the four projects. These pertained to the provision of a free and democratic atmosphere for raising concerns, as well as the use of language(s) understandable to the majority of the public hearing participants. However, the results showed an overall inadequate coverage of environmental and socio-economic impacts.

The lack of communication with the affected and interested public was a common issue identified in all the cases. After holding hearings, the public or their representatives were neither informed of, nor given any reason why their concerns about the EIA or project design were not considered. This indicated a lack of transparency in the decision-making process, which resulted in a lack of trust among the stakeholders.

It appears similarly, as will be presented in chapters for to six of my thesis that the decision-making processes in Pakistan seem not to be transparent and public consultations take place merely to fulfil the legal requirement for getting EIA approval. The findings in Nadeem’s (2004) study is consistent with assumptions that the implementation of EIAs and the resultant public process, although contextually different, seem to be experiencing the same challenges where applied globally. This is also true for my own study.

The recent work of Thapliyal (2010) provides succinct insight into the Indian experience with Environmental Impact Assessment. According to him EIA started in 1976-77 when the Planning Commission asked the Department of Science and
Technology to examine a river-valley project from an environmental perspective (Thapliyal, 2010). Since then there have been 12 amendments made in the EIA notification of 1994, the time when EIA was made mandatory under the environmental protection Act of 1986, with the following four objectives: to predict environmental impact of projects; to find ways and means to reduce adverse impacts; to shape the projects to suit the local environment; and to present the predictions and options to the decision-makers. EIA in India is much older than the process in South Africa and one may assume that it should be more effective and allow for better public response in development matters. Public participation in India seems to have been a late-comer in the EIA process.

Thapliyal, (2010) indicates that a major amendment to EIA Notification was made in April 1997 with the introduction of Public Hearing (PH) into the assessment procedure for ensuring participation of local people and stakeholders in various proposed development activities. In support of this new requirement, the process includes provisions for public access to information. Local residents, environmental groups and others located at the project site likely to be affected can participate in the hearings or submit oral or written briefs.

A closer look at the EIA in India reveals that some improvement is needed in the some aspects of the process. Thapliyal (2010) note the following: EIA’s are controversial in India because of little participatory democracy in the formulation and implementation of environmental legislation. There have been cases where more than one EIA for the project has been approved by an authorized agency and subsequently revoked by judicial action initiated by public interest litigations. It is suggested in this thesis (chapter seven) that for South Africa, like in India, new approaches to EIA requirements be reviewed, focusing especially on how better to engage the public.

Thapliyal (2010) concludes that substantive, early investments in public participation can benefit the project proponent, the public and the final plan. I
suggest in this thesis that: an effective public participation programme does not happen by accident; it must be carefully planned. I am of the view that proactive efforts will lead to more effective processes and outcomes than reactive, minimalist approaches to public involvement. Thapliyal (2010) advise that, firstly, public involvement needs to begin well before project planning and decision-making starts. The decision to participate must be genuine or else public participation becomes a procedural exercise rather than a substantive democratic process. Secondly, public involvement can be used to create a project that is more suitable to, and accepted by, the public. Suitability should depend on public opinions and needs (rather than the technical feasibility of the project). Thirdly, public input can be a crucial and valuable source of expertise before, during and after project planning and decision-making. I concur with these three views expressed by Thapliyal. Moreover, based on the case studies I present in Chapter four, it becomes even more important for EIA legislation and public participation to be more explicit in responding to the socio-economic context and impacts on local communities.

2.5.4 Public participation in African countries

Similarly to the foregoing discussions and in line with international trends, African countries and regional organizations are also considering better ways to incorporate environmental governance principles into national legislation and regional initiatives (Environmental Law Institute, 2000).

Due to a lack of dated information on public participation practice in various African countries, I decided to only reflect on the situation currently in existence in Zimbabwe. In an article on citizen participation in Zimbabwe, Katrin Frank (Editor) of the Partnership with Africa Foundation provides a very adverse picture of the Zimbabwean situation. She indicates that it can be arguably prejudiced that most African states have lagged behind in the promotion of direct citizen participation in decision-making processes. To a greater extent, public
participation has only been witnessed in general election processes; which is usually flawed to say the least. The failure by public authorities to create platforms for public participation and lack of capacity by citizens to demand accountability is today Africa’s tragedy trivialising public participation of citizens in decision-making processes (Frank, 2012).

Frank views the Zimbabwe situation as an epitome of a stifled citizen participation practice in Africa. This has, she advises, culminated into disastrous unmonitored poor governance by public officials and a passive citizenry altogether. It should not be misconstrued that the public is extremely ignorant of decision-making and administrative processes taking place within the government, but the general person is denied the opportunity to participate or the environment in which to do so is extremely regulated. Frank (2012) suggests that the possible gains of a mutually beneficial citizen participation process were obliterated by such undemocratic processes.

Frank indicates that it is against this background that the civic society in Zimbabwe (and other African countries), which is largely dominated by non-governmental organisations, should play a leading role in advocating for (direct) citizen participation at local government level and national democratic processes. The appropriate implementation of civic society initiatives aimed at perpetuating citizen participation and their demand for transparency and accountability from public officials will only resuscitate their will to participate in development and democratic processes (LoBaido, 2001). Apparently, the advent of an independent citizen empowerment movement in Zimbabwe in 2000 has bred an unrelenting citizenry when it comes to participatory decision-making processes. This can be evidenced by citizen involvement in the establishment of Accountability Monitoring Committees in most constituencies across the country, the coordination of periodic community meetings, public training workshops on participatory democracy and media campaigns that promote and enlighten general citizens of government decision-making processes (Frank, 2012).
Except for Zimbabwe, I found the lack of information on EIA and public participation in other African countries extremely disappointing and indeed disconcerting. It has been indicated in section 2.3.1 that countries like Nigeria, Uganda, Algeria, Senegal, Togo and Congo enlisted EIA provisions within their framework environmental legislation as early as the 1980s. From an Afrocentric perspective such information would have been useful for a study of this nature.

2.5.5 Public participation in South Africa

South Africa has a plethora of policies, guidelines and information documents across the environmental and development spectrum. However, the biggest single issue that affects the effectiveness of EIAs negatively in South Africa is that they are often executed without taking sufficient account of the broader context within which applications occur (Mosakong Management cc, 2008). This means that while EIA processes may meet the quality criteria (get all the boxes ticked), they often fail to make a real contribution to the quality of the decisions made in the context of the specific area or sector within which they are made.

Research done by Mosakong Management cc (2008) indicates that public participation processes are generally well performed in EIAs in South Africa and in almost 70 percent of the cases they evaluated. This differs vastly from the views of both respondents in the interviews and the surveys conducted for this research. The general indication that is evident in chapters’ four to six of this thesis is that public participation in South Africa is only conducted to ‘tick the box’. In addition, the legal requirements had been met and presented in a clear and structured manner in all these cases. They further indicate that the public participation processes were less successful in identifying impacts and formulating alternatives (Mosakong Management cc, 2008). Only 44 percent of the cases provided clear indications in the documentation of how specific inputs from interested and affected parties had contributed to the identification of impacts or the formulation of alternatives, while in a further 19 percent of cases
there were indications that inputs from interested and affected parties had contributed to the identification of impacts or alternatives. In 28 percent of the cases evaluated, there is no or little evidence that the public participation process had contributed to the identification of impacts or alternatives (Mosakong Management cc, 2008). The research of Mosakong Management cc has shown that the identification of impacts is perceived to be a technical process and something communities are not well equipped to do. The findings of Mosakeng Management cc in this regard are therefore not surprising.

Audouin’s dominantly theoretical study (2009) on project-based decision-making in South Africa indicates that the overall purpose of project-level environmental assessment is to try and model the impacts on the environment of a proposed development, and to recommend ways to mitigate its potential negative consequences and enhance its planned positive effects. Her study focused on the role of practitioners in the decision process where she suggests that social and natural scientists (as well as other key stakeholders) would need to work together, as part of a sustainability team. My research concurs with her findings and I propose in this thesis that the social-ecological system provides a means for the various specialists to develop a shared understanding of the links between their various domains.

The discipline of Earth Stewardship Science (ESS) ascribe to this notion of trans-disciplinary undertakings between various scientists in order to understand parts of, and relationships within system better. It is my opinion that both EIA and public participation would then benefit within the context of this shared systems perspective, jointly constructed by an inter-disciplinary sustainability team. Such a process Audouin (2009) suggests, will enable more effective integration of the inputs of various specialists than if their studies were undertaken in relative isolation with the sustainability practitioner left to piece them together at the end of the process. In addition, the development of a normative framework for the sustainability argument would require social and natural scientists, as well as key
stakeholders, to collaboratively define boundaries of a system, the basis on which stakeholders are selected to participate.

Audouin, (2009) indicates dissatisfaction by stakeholders at being inadequately engaged in processes and decisions that affect their biophysical, social, cultural and economic environment. This dissatisfaction is reflected in comments that ask for better regulation of EIAs and include the ‘triple bottom line’ i.e. social, economic and environmental concerns. Respondents to a survey explored in this thesis (chapter six) indicate that an increasing number of cases are being taken to court, because the concerns of interested and affected parties have not been adequately taken into consideration in the decision-making process. I am in agreement with Audouin (2009), who advocates for better opportunities for stakeholder engagement, democratic governance, decentralisation in decision-making, more coherent influence of civil society and represented organisations, as well as the private sector in matters related to EIA and public participation.

In the Third Report on the implementation of South Africa’s APRM Programme of Action – Broadening Public Participation, the National Governing Council acknowledges the challenges experienced with public participation in South Africa (2014). It indicates that opportunities have been created through platforms such as the development of the Green/White papers, petitions, outreach programmes, State of the Nation Address (SONA) and budget vote where representatives from civil society organisations are invited to participate.

Admittedly so, the Third Report indicates that although platforms are created, there are challenges which include, among others:

- Poor turnout during public hearings in certain areas and on certain issues. In some cases, this has to do with the perceived relevance of government services relative to citizens’ needs and the weak role of civil society formations in representing citizen’s interests in these forums;
- Weak publicity and communication about the public hearings process in general and specific events in particular, which is what both legislatures and civil society need to enhance;
- The relatively poor awareness among citizens of government decision-making processes, public resources and abilities as well as the importance of participatory processes, resulting in the domination of processes by the middle-class that is able to organise itself into NGOs, business and other similar interest groups; and
- There are challenges of physical access in some cases owing to travelling distances to the seats of legislature or meeting places, despite the initiatives by legislatures to bring themselves closer to communities by holding sittings in various localities across the country.

It is further reported that South Africa’s commitment to a people-centred democracy through public participation is demonstrating cumulative improvement (APRM, 2014). The report further indicates ‘the most popular way of interacting with the public’ is izimbizo which are utilized by seven (78%) provinces, followed by ward committees (67%), steering committee meetings and public meetings (56%). Emerging from these statistics are strengths of public participation which vary, of course, from province to province. For instance, Free State and KwaZulu-Natal appear good in using the institution of traditional leadership to make the messages of government more accessible and encourage attendance of public participation forums. The Western Cape and the Northern Cape used client satisfaction surveys to obtain inputs and suggestions for improvements from the public. I postulate later (chapter seven) that the processes for engagement is insufficient as it mostly caters for meetings or information where people are only informed about matters instead of being drawn in to participate in the process i.e. involved or collaborate in the IAP2 Public Participation Spectrum.
2.6 SUMMARY

This chapter provided an overview on why participation remains high on the global political and policy agendas and considered the context of participation and its influence on decision-making in EIAs and various other contexts. This chapter further provided a general overview on contextual and inter-disciplinary approaches to public participation and challenges experienced in evaluating the effectiveness of public participation in different countries.

Even though the positive evidence probably remains to be further developed and validated, the studies and reports mentioned seem to draw rather a complimentary picture. If done well, public participation has much potential, possibly as much as stipulated by theorists. When done poorly, it may have dire consequences. It is therefore important to understand how to do public participation well, the very argument on which this research is concentrated.
CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the process and methodologies followed in engaging with the research topic to ensure ample information has been collected to address the aims of this research. The first section looks at the research strategy and outlines how data were collected from practitioners that work in real-life projects. An explanation is provided on the notion of evaluation within practitioner-based research. Next, an overview of the various methods used for collecting data is provided, i.e. interviews, questionnaires and case studies. The role of triangulation of various data sources that assisted in testing the reliability of information is explained. Reference is made of the need for the use of electronic surveys to complement conventional ways of data collection. This, I indicate may be a remedy to low responses as received in this research. Criteria in the selection of various case studies in explained next.

A broad discussion on data analysis follows with specific reference to the IAP2 public engagement model. An explanation is provided on the various levels of public engagement, its meaning and relevance as a measurement tool for effectiveness in this thesis. The limitations of the study follow next making reference to the low response rate followed by the chapter conclusion.
3.2 RESEARCH STRATEGY

To establish the theoretical context, it was necessary to develop an understanding of why public participation is required in EIA and what makes it effective. In addition, to explore the development of EIA internationally and in South Africa and what are the elements that makes it effective. For the purpose of evaluation, there was a need to have an analytical framework against which the effectiveness of public participation practice in South Africa could be measured. The IAP2 public participation spectrum (see Chapter 2) was adapted for this process and purpose.

The information contained in this research has been collected from participants who are professional practitioners in various organisations, institutions, and departments. The researcher is also a practitioner. Involving practitioners directly in the research process is what McCutcheon and Jung (1990) calls practitioner-research. They suggest practitioner-research can be identified as ‘a systematic form of enquiry that is collective, collaborative, self-reflective, critical and undertaken by the participants of the inquiry’ (McCutcheon and Jung, 1990:148).

In most organizational settings (as is the case with this research) practitioners are professionals i.e. consultants, government officials etc. that belong to associated bodies and to a certain extent contribute to the body of knowledge in their fields through various research-oriented practices. These people are also called ‘pracademics’ (Worldwide Words, 1973) in reference to this group of similar thinking practitioners in some way contribute to the body of knowledge that academia is concerned with. They are thus not lost to academia but rather fulfil a complementary role to academics in that they work within real-life practice, which is normally written up as case studies. This is particularly true for me as well as all those that participated in interviews, surveys, and focus groups that contributed to the body of knowledge in this thesis.
Data were collected from various documents, from ‘pracademics’, captured and analysed using Excel spread sheets, and evaluated against the IAP2 barometer. The information obtained through data collection was then compared with secondary data from Case studies to establish the levels and therefore the effectiveness of public participation in EIA in South Africa. This process is referred to as triangulation, a ‘method of cross-checking data from multiple sources to search for consistencies in the research data’ (O’Donoghue & Punch, 2003:78).

3.3 DATA COLLECTION METHODS

This section provides an overview of the major methods used for collecting and analysing the data obtained in this research. The literature suggested that evaluation criteria should be formulated, with the context of a specific country (Palerm, 2000). Therefore, the status and deficiencies of the EIA system in South Africa have been studied, using document analysis, questionnaire surveys, semi-structured interview techniques, and case studies. These different research methods and different document sources allowed me to compare information. Comparing various sources of information or triangulation facilitates validation of data through cross verification from more than two sources. In particular, it refers to the application and combination of several research methodologies in the study of the same phenomenon (Bogdan & Biklen, 2003).

The purpose of triangulation in this thesis is thus to increase the credibility and validity of the results obtained from the various data sources i.e. document analysis, questionnaire surveys, face-to-face interviews, and case studies. It is thus submitted that the survey results on its own may not have yielded sufficient evidence to make recommendations in this study. However, the use of a multi-method approach provided for reliability and validity on recommendations and conclusions made in this study. Thus, triangulation of the various data sources
assisted in testing the reliability of information prior to conclusion and submission of the study.

The data collected for this thesis mainly includes primary and secondary data. The primary data was obtained through interviews with officials and experts as well as surveys. Interviews included face-to-face, telephonic interviews and questionnaires. Surveys involved open- as well as closed-ended questions. Respondents represent various population groups, gender and age categories from around South Africa.

The secondary data was extracted through a range of documents and information on projects undertaken in South Africa and elsewhere. The study relied on qualitative data gathered from secondary data sources. The following documents in particular, provided me with a succinct understanding of the issues relevant to this research:

- Legislation Relevant to Environmental Protection;
- Guidelines of Public Participation in support of the EIA Regulations, 2005;
- NEMA EIA Regulations Guideline and Information – DEA&DP;
- Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental matters (Aarhus);
- Public Participation Process Review Template;
- Review the Effectiveness and Efficiency of the Environmental Impact Assessment (EIA) System in South Africa – Mosakong Management cc.;
- Efficacy of South Africa’s Environmental Impact Assessment Regime Public Hearing – Parliamentary Monitoring Group (2013);
- Various Doctoral theses in the field of Philosophy, Engineering, Environmental, and Social Sciences completed at various institutions. In particular the work of Audouin (2009) and Nadeem (2004) assisted in the conceptual mapping of this thesis.
3.3.1 Interviews

I conducted interviews that had a combination of semi-structured (Hitchcock & Hughes, 1989) and open-ended (Weiss, 1994) questions. The semi-structured interview format allowed me to develop and expand upon particularly interesting responses and develop a relationship with the respondent where negotiation, discussion and expansion of responses could occur. The semi-structured interviews on the other hand allowed the participants, while answering specific questions, the choice to enhance the conversation with what they consider valid.

The open-ended questions allowed me to follow the lead of the interviewee. They permitted an unlimited number of possible answers. The respondents could answer in detail, qualify and clarify responses. It also permitted them the opportunity for creativity, self-expression, and richness of detail.

Interviews were held with twelve respondents (see Appendix C, interview schedule) representing environmental, conservation, urban planning and public participation consultancies, conservation NGOs, civil society organizations, local government officials and politicians that reside and mostly respond to issues in and around the Nelson Mandela Bay Municipality but also work on projects in the greater Eastern Cape Province. Key informants were selected in a purposive manner with the focus on contacting individuals that could provide evidence related to the political opportunity entrenched in this research. Some snowball sampling was also employed, making use of participants’ own networks to discover other key informants. Most interviews were conducted in person, although a few were conducted over telephone and email.

Interviews took place at the offices of the various respondents and at times that were suitable for them. With the consent of all respondents the interviews were electronically, recorded (audio) to ensure authenticity/accuracy of the information gathered/captured. Complementary, written notes assisted in guiding the
interview process and ensured concentration and interest that allowed for continuous probing.

The purpose of interviewing was to tease-out their point of view and assess the nature and degree of their actual involvement during different stages of EIA. It was also important to understand the extent to which their concerns have been incorporated in both the EIA reports and the final decisions. Their overall satisfaction level about the major components/attributes of the consultation/participation process was also evaluated. Most importantly though was to get their understanding of the effectiveness of public participation in the EIA process in South Africa. Some of the respondents also reflected on the public participation process on which the case studies are based i.e. the Coega IDZ, the N2 Toll road, the E-tolls in South Africa and the debate on Hydraulic Fracturing in the Karoo.

The respondents were interviewed to gain information on a range of issues i.e. their perception about EIA, public participation and public hearing procedures in EIA; the problems they might have faced in preparing EIA reports; addressing concerns of the public during public hearing; addressing issues of implementing mitigation measures; how the EIA procedure was actually working; what were their expertise, institutional capacity and constraints; their views about project proponents’ attitude towards EIA requirements; quality of EIA reports and role of stakeholders in the EIA process; and influence of their participation on the decisions etc. Overall, the interviews provided data and insights into the public participation process particularly about the nature and extent of public involvement in EIAs in South Africa and the degree of its influence on the decision-making processes.

The interviews helped in understanding the attitude and capacity of the officials and regulatory agencies towards EIA in general and public participation in particular. The findings of the interviews provided a base of identifying and
integrating contextual factors into the framework of analysis. It also assisted to investigate and compare the contextual matters identified in the case studies, generate evidences for answering questions in the evaluation framework, and explore the opinion and attitude of all participants in this study about public participation in EIA.

3.3.2 Questionnaires

To complement interviews, a questionnaire survey with a set of questions on how participants view the role public participation plays in the environmental decision-making process was designed (Appendix A). Questions were drafted by me and reviewed by my original promoters, Professors Haines and Pretorius for accuracy after which it went to the University Ethics committee for endorsement. Professor De Wit, my new promoter, was not part of this process as he only started promoting this thesis in 2013.

Questionnaires were circulated at the Annual Conference of the Fynbos Forum held in August 2009 in Bredasdorp which attracted academics, scientists, environmental practitioners and consultants, students, civil servants and the general public. To obtain more responses a second set of questionnaires were electronically distributed through an e-mail based process to environmental and conservation interest groups in 2010. In total 153 questionnaires were distributed countrywide and only 35 (23.3%) were returned.

Prior to the Fynbos Forum in August 2009 a web-assessment was made on the number of Certified Environmental Assessment Practitioners in South Africa. The Certification Board for Environmental Assessment Practitioners of South Africa had 73 registered members listed. Currently (2014) this list has expanded to 166 registered members. It was decided to distribute 100 survey questionnaires at the August 2009 Fynbos Forum conference as some of the registered members would be in attendance. Only 20 (20%) of the 100 survey questionnaires were
returned. This was expected as not all attendees had an interest or working knowledge of EIAs and public participation in the EIA process. Due to the low response rate a decision was made to distribute the survey again via email in February 2010 to the remaining 53 registered members that did not attend the Fynbos Forum (sample size of 53). Only 15 (28.3%) responses were received. Although the response rate was low there was a consistency of the responses amongst respondents and that provided for reliability and trustworthiness of information. Altogether, 35 practitioners responded to the survey questionnaire, twelve took part in face-to-face interviews. This was complemented by 30 practitioners who provided their views during a focus group session. Informal discussions were held with five other participants on their views of EIA and public participation.

In September 2013, four years after the initial survey, I decided to commission another survey to test the consistency of information obtained in the first survey. This was done by an independent Social Research Company based in Port Elizabeth called, Urban-Econ Development Economists. This company has a national and continental footprint in doing survey research and was used for their expertise in the field and also to allow for an independent process and opinion.

The results of this process are as follow: survey questionnaires were sent via email to two hundred individuals at various organisations that were selected randomly from environmental websites. These include universities, government departments, NGOs, environmental consultancies and civil society organisations. After two efforts between September and November 2013 not a single response was received, this despite an incentive for responses being offered. The non-response was a surprise in an era where digital information is preferred. The recent explosion in social media confirms the preference for digital information sharing. However, an exploration on using social media as a means to do surveys of the nature as required for this study seemed problematic. Survey monkey (2014) advises that the most important decider in getting responses is
for surveys to be focused and to have a greater chance that more respondents complete it, it must be multiple choice-based. This was therefore also not an option as the survey questionnaire for this study comprises both open and closed-ended questions. To understand this disappointing response rate better some further inquiry was needed as discussed below.

Response rates are often used as a measure of the quality of survey data. Researchers take decisions in response rates seriously because in general, the higher the response rates, the more statistically meaningful the results. To better understand the response rate scenario and its occurrence in survey research, and also in this research, the researcher explored outcomes of other recent studies. Survey questionnaires are one of the most popular methods for collecting information from a target population (Shinn et al., 2007). However, in a time when appraisals are more frequently needed, the rate of response in survey research is in decline (Sheehan, 2001; McPeake, Bateson & O’Neill, 2014).

Dillman (2000) examining mail and internet survey methodologies, argued that ‘no other method of collecting survey data … offers so much potential for so little cost’ (2000:40). Sheehan (2001) in a review of e-mail survey response rates noted, ‘… while the number of studies that use e-mail to collect data has been increasing over the past fifteen years, the average response rate to the surveys are decreasing’ (2001:7). On average, the 31 studies in Sheehan’s review reported a mean response rate of 36.83%. The 1995/6 period showed seven studies using e-mail surveys with an average response rate of about 46%. The 1998/9 period, in contrast, showed thirteen studies using e-mail surveys with an average response rate of about 31%.

McPeake et al. (2014) indicate that there is an increasing use of electronic survey methods in healthcare research. They suggest that in recent published research, electronic surveys have had lower response rates than traditional survey methods, such as postal and telephone surveys (McPeake et al., 2014). They
further propose a remedy to low response rates: reminder packs or alerts can increase response rates to surveys. The impact of reminders on response rate in their surveys is shown in Table 3.1.

<table>
<thead>
<tr>
<th></th>
<th>Response rate from email (%)</th>
<th>Overall response rate after each round (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial email invitation</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>First reminder</td>
<td>16</td>
<td>58</td>
</tr>
<tr>
<td>Second reminder</td>
<td>4</td>
<td>62</td>
</tr>
</tbody>
</table>

Table 3.1: Response rate from email invitations (McPeake et al., 2014)

The National Science Foundation (USA) Special Report (Surveys: Tracking Opinion, February, 2014) reports that the future of traditional surveys as a reliable means to measure trends is in doubt. Other than response rates for general surveys being in decline, they advise that e-mail surveys, touted as being convenient, have shown non-response problems. George (2013) reported a similar negative trend in recent webinars published by Snap surveys. He reports a decline in survey response rates over the last decade despite researchers’ offering incentives, shortening the length of surveys, and engaging respondents through scales and sliders.

Various reasons exist for low survey response rates. George (2013) warns that respondents may be ‘time poor’ and wants to get through things quickly and they need ‘instant gratification’; long survey questions are therefore regarded as time-consuming. A number of respondents’ indicated that they have been ‘over-surveyed’ meaning that they on a regular basis are requested to respond to surveys. George further indicates that participation in legitimate, scientific survey research for the greater good is declining. Some respondents recently even want to be compensated for their feedback and time. The National Science Foundation Report (2014) lists poor response on people’s busy schedules and an increasing
volume of ‘junk mail’. Most people presumably find long surveys daunting and time-demanding.

The National Science Foundation Report (2014) concludes that in future researchers applying e-mail surveys are faced with reducing sample size and/or survey frequency, and/or finding new methods to track opinion. General recommendations are that researchers should not be discouraged by these trends of declining responses as a combination of potential multi-mode methods still yield data that are credible to make generalisations and recommendations in the research process.

Given the rapid adoption of social media by citizens around the globe for a diversity of purposes, it is timely to ask what role social media is playing or could play in facilitating public participation in impact assessment (Naber et al., 2012). The traditional public participation process and methodologies (as described above) often respond to older, affluent residents who have time and ability to attend long meetings, but miss the opportunity to engage with younger demographics (Mittal, 2014).

Web-based technologies such as social media and crowdsourcing can change this by giving a wider audience a voice and broaden the number of issues considered. Although these new web-based methodologies have not been used in this research, it is important to mention it as it holds the power to transform the manner in which future public participation will happen. Through web-based platforms such as social media, data collection can be done in real-time and in a format that can be easily analysed and quickly communicated. An example cited earlier is that of the Scottish referendum in September 2014. Another interesting example is crowdsourcing (coined by Howe, 2006) which use ‘collective intelligence of an undefined, generally large group of people in the form of an open call’. The crowds or volunteers outperform experts in making good predictions, because collectively they have access to far more data (Brabham,
Crowdsourcing as a method for public participation in governance has
gained in popularity in recent years, allowing governments to seek the ideas and
opinions of citizens on various policy issues (Brabham, 2013). Recommendations
on the use of web-based platforms and social media in public participation are
provided in the concluding chapter.

3.3.3 Case Studies

For this research, I selected three case studies from the infrastructure (road)
sector, the industrial development sector, and the mining exploration sector
respectively. I selected these cases as they require an EIA that involves public
participation in their decision-making processes.

Three case studies were selected geographically representing three provinces,
namely the Eastern Cape (Coega Industrial Development Zone (IDZ)), the
Eastern Cape and KwaZulu Natal (Pondoland N2 Toll road) and the Eastern
Cape and Western Cape (Hydraulic Fracturing in the Karoo). I was involved in
each project through previous work commitments (IDZ and N2 Toll road) whilst
working for WESSA, and attended public participation meetings and briefing
sessions related to the ‘Karoo Hydraulic Fracturing’ project and am currently
following the debate and progress on this project. The projects are a mix of
various elements of concern to the directly affected communities as well as of
interest to the broader South African public, government and proponents. The
concerns in these projects mostly relate to: the high impact on the environment,
the economic impact and promise of job creation, diversity of political views,
social impact on affected areas and the public outcry on the manner in which
these projects have been selected.

The rationale for a case study research approach in this thesis was to gather in-
depth knowledge of specific cases in relation to EIA and public participation. As
secondary sources case studies provide substantively or theoretically significant
information (Ragin, 2001) that allowed me to make recommendations on what worked or did not work well. The cases in this study were therefore selected purposefully to permit inquiry into and understanding of a phenomenon in depth (Patton, 2002).

In addition to the aspects of EIA and public participation, the three case studies were also selected on the following criteria:

- They all operate in fragile ecosystems i.e. protected forests, sensitive drought-linked ecosystems, protected coastal and marine environments;
- They are all potentially significant economic drivers (or perceived ‘game-changers’) in their respective regions which include communities who are facing economic hardships such as high unemployment and poverty;
- They all had involvement of influential environmental and conservation groups in the respective debates on environmental issues linked to the EIA processes;
- They all are high impact projects with significant political support and have had abundance of media coverage;
- They have been the focus of political contention and deliberation at the level of parliament, and as such were characterized by some sort of public action and litigation;
- They have been characterized by high levels of public participation in which many contentious issues are raised;
- They have seen the involvement of resource intensive Multi-national and local companies which main aim seems to be capital driven and not necessarily sustainable development.
3.4 DATA ANALYSIS

Questionnaire items were codified, captured and analysed using Excel spreadsheets - computer technology - at the first instance. Further analysis was done when computer modelled information became available for more refined and in-depth analysis, evaluation and discussion. I compared the information obtained from the case studies and documents analysed with responses from interview and questionnaires to achieve the purposes of this research. This data triangulation process allowed a focused yet comprehensive approach to write up the information collected. Triangulation was therefore to compare the results from the different methods used i.e., data from interviews, questionnaires, document analyses and case studies. It also allowed me to check for consistency in answers and attitudes thus getting all sides of ‘the story’, or understanding all the shades of meaning in the answer to a question (Mays & Pope, 2000).

The International Association for Public Participation (IAP2, 2012) describes public participation as a spectrum of increasing levels of public impact on decision-making (Table 2.4 and Table 3.2). IAP2’s Public Participation Spectrum ‘is designed to assist with the selection of the level of participation that defines the public’s role in any community engagement program. The Spectrum shows that differing levels of participation are legitimate depending on the goals, time frames, resources and levels of concern in the decision to be made. However, and most importantly, the Spectrum sets out the promise being made to the public at each participation level’ (IAP2 2006:1). The different levels are now explained:

**Inform** - This refers to the provision of information to inform stakeholders of a proposal, activity, or decision. The information provided may be designed to help stakeholders in understanding an issue, alternatives, solutions, or the decision-making process. Information flows are one-way. Information can flow either from the proponent to other stakeholders or vice versa. Advocacy and lobbying is a
way in which I&APs, on their own initiative, can inform and influence the decision-making on environmental issues.

Consult - Consultation involves an exchange of information between stakeholders, which provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the proponent or authorities should take into account the concerns and views expressed by I&APs in making the final decision.

Involve - Involvement builds on the consultation process and refers to the process in which stakeholders work together to ensure that concerns and issues are directly reflected in the planning, assessment, implementation and management of a particular proposal or activity. However, the proponent or the authority retains the responsibility for decision-making.

Collaborate - This refers to the process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. Collaboration is founded on the belief that decision-making does not have to be a zero-sum game with ‘winner’ and ‘losers’ or where the result is an unsatisfactory compromise. Rather, it is based on the ethos that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.
### LEVEL OF STAKEHOLDER ENGAGEMENT

<table>
<thead>
<tr>
<th>INFORM</th>
<th>CONSULT</th>
<th>INVOLVE</th>
<th>COLLABORATE</th>
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</table>

**Public participation goal**

| To provide the public with balanced information to assist them in understanding the problem, opportunities, solutions and alternatives | To obtain public feedback on analysis, alternatives and decisions | To work directly with the public throughout the process to ensure that public concerns are consistently and considered | To partner with the public in each aspect of the decision-making process including the development of alternatives and the identification of preferred solutions |

**Promise to the public**

| We will keep you informed | We will keep you informed, listen to and acknowledge concerns and aspirations, provide feedback on how public input influenced the decision | We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how the public input influenced the decisions | We will look to you for direct advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible |

**EXAMPLE TECHNIQUES**

<table>
<thead>
<tr>
<th>Fact sheets</th>
<th>Websites</th>
<th>Open forums</th>
<th>Press releases</th>
<th>Advertisements</th>
<th>Media</th>
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<tr>
<th>Public comment</th>
<th>Focus groups</th>
<th>Surveys</th>
<th>Public meetings</th>
</tr>
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<table>
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<tr>
<th>Workshops</th>
<th>Polling</th>
<th>Meetings</th>
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</table>

| Citizen advisory committees | Forums | Consensus building | Participatory decision-making |

**PUBLIC PARTICIPATION BAROMETER**

![Increasing level of public engagement over time](image)

**Least effective** | **Fairly effective** | **Very effective** | **Most effective**

**CONCEPTION** ✕ **PROJECT TIME LINE** ➤ **COMPLETION**

Table 3.2: Modified Public Participation Spectrum (from IAP2, 2012)
3.4.1 Application of Public Participation Barometer (IAP2)

This IAP2 spectrum was used as a barometer in this study to establish the level of stakeholder engagement, hence the effectiveness of public participation in the EIA process. The barometer that has been adapted from the IAP2 assisted me to deduct from case studies, responses from interviews and surveys the level of stakeholder engagement. Each level of stakeholder engagement in the adapted IAP2 barometer was assigned a score i.e. Inform: 1 – 3, Consult: 4 - 6, Involve: 7 – 9, Collaborate: 10 -13 based on the key criteria (Table 3.3; see also Chapter 1). The key criteria were developed based on the various literature reviewed on evaluation processes in various environmental projects. Information from the case studies, interview responses and surveys were tested for adherence/non adherence to the 13 key criteria and indicated as ‘YES or NO or POSSIBLY’ (below each criteria and in table format as a summary where YES and NO are given a score of 1 and POSSIBLY a score of 0.5) if confirmed to be relevant to the specific method.

<table>
<thead>
<tr>
<th>NO</th>
<th>KEY CRITERIA</th>
<th>ADHERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adherence to EIA Regulatory guidelines</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Adherence to timeframes to inform I&amp;APs</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Representivity of I&amp;APs</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Adequate opportunity for engagement for I&amp;APs</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Access to information related to the project</td>
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</tr>
<tr>
<td>6</td>
<td>Language and cultural barriers observed</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Stakeholder identification mechanisms</td>
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</tr>
<tr>
<td>8</td>
<td>Public involvement in design of projects</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Involvement of marginalised groups in process</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Variety of methods used in public participation</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Independence of EAPs</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Fulfilment of the intended purpose of public participation</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Public participation influence on final decision</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td></td>
</tr>
</tbody>
</table>

**LEVEL OF STAKEHOLDER ENGAGEMENT AND EFFECTIVENESS:**
1 – 3 Inform / Least Effective
4 – 6 Consult / Fairly Effective
7 – 9 Involve / Very Effective
10 – 13 Collaborate / Most Effective

Table 3.3: Scale on adherence to the level of stakeholder engagement

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The IAP2 spectrum, at this stage, and in the absence of another proven methodology, provides an effective baseline tool from which to explore evaluations in the public engagement milieu. More work is needed, however, to reach agreement about a common set of evaluation criteria, the defining features of public participation mechanisms and how to categorize and evaluate the crucial role of contextual variables in shaping and influencing public participation. To achieve these goals public participation scholars, practitioners and policy-makers from a diversity of disciplines and levels of governance need to start engaging in knowledge exchange (Webler et al., 1995; Petts & Leach, 2000; Stout, 2010). The ultimate aim being to arrive at mutually agreed upon objectives about evaluation frameworks and criteria and, in particular, the balance between generic and specific frameworks. These types of exchanges must have as the ultimate objective to inform practice and subsequently provide standardised tools in evaluating the effectiveness of public participation across disciplines.

3.5 LIMITATION OF THE STUDY

A particular challenge in this study was obtaining ‘enough or sufficient’ information on the views and experiences of environmental assessment practitioners (EAPs), officials, consultants and civil society. In research, it is always difficult to decide when ‘enough or sufficient’ information is collected. Although the number of practitioners in the country seems to be vast, the number directly involved in public participation seems to be limited. However, greater dependence on the grey theoretical and academic literature, both in South Africa and internationally, became inevitable. It should be noted that the respondents to this study is mostly ‘middle class practitioners’ and are not representative of the diversity of the South African landscape. It is important to note that I worked in various capacities and was to a limited extent part of public participation processes in the three case studies. To avoid any bias, I remained impartial to lessen any potential impact on the final outcome of this research. According to Norris (2015) research whether quantitative or qualitative, experimental or
naturalistic, is a human activity subject to the same kinds of failings as other human activities. Researchers are fallible. They make mistakes and get things wrong. There is no paradigm solution to the elimination of error and bias. Different forms of research may be prone to different sources of error, but clearly none are immune. The problem is that while it is easy to label potential sources of bias it is not possible to construct rules for judging the validity of particular studies or domains of inquiry. Nor is it possible to specify procedures which if followed will systematically eliminate bias and error (Norris, 2015). We need, therefore, to think of the social processes that might keep research honest and fair and enhance its quality. For this reason I used triangulation to ensure that any bias of my involvement in various case study projects is reduced.

3.6 SUMMARY

This chapter has broadly outlined the research design and methodologies followed in engaging with the research topic. It sketched the role practitioners play in the research process and looked into the concept of practitioner research. It further provided a brief account of evaluation framework development in projects and programmes. The evaluation model of IAP2, used as the evaluation tool was then substantiated. Lastly, the chapter focused on various data collection and analyses methodologies applied in this research i.e. document analyses, interviews, questionnaires and case studies.

The discussion in this chapter relates to the importance of developing an understanding of why public participation is important in EIA and what makes it effective. The assumption is that an analytical framework should be developed consisting of evaluation criteria against which the performance of public participation practice could be measured.
CHAPTER FOUR

RESEARCH FINDINGS – CASE STUDIES

4.1 INTRODUCTION

This chapter is the start of the empirical aspects of this research and illustrates through selected case studies the practice of public participation in the EIA process, as well as challenges experienced in the public participation process. The information in case studies is complemented by the views of various practitioners interviewed and responded to the survey questionnaires.

Each case study is discussed in the following sequence: background information that provides the development rationale for each project; contextual issues related to environmental, socio-economic and political dynamics of each project; a discussion on the EIA process followed and its associated challenges; and a discussion on the role of public participation in each project. This is followed by the application of the 13 key criteria to the public participation barometer. Each case study concludes with a summery indicating the level of public engagement as well as the effectiveness thereof.

The chapter concludes with a summary of the process outlined and provides an outcome to the level of public engagement and effectiveness averaged from the case studies.
4.2 CASE STUDIES

The information for the case studies was obtained from the interviews, surveys and various secondary data that includes newspaper articles, scholarly journals, study notes, television and radio clips and personal involvements in meetings, workshops, public participation sessions and internet searches.

4.2.1 Case Study 1: Pondoland N2 Toll Road

4.2.1.1 Background information

The 'Wild Coast' of South Africa, flanking the Indian Ocean, has historically been secluded from major developments and associated job creation (Brazier, 2011). The Wild Coast was part of the former homeland of the Transkei during the Apartheid era. According to Brazier (2011) it is the traditional home of the Xhosa people, and the birthplace of many prominent South Africans, including Nelson Mandela. The people of the area experience acute poverty in part due to a lack of infrastructure and other related economic development and investment. Subsequently the area has been declared one of the poorest in the Eastern Cape. The persistent poverty scenario and related problems facing the Wild Coast were the main factors why Government approved the construction of the N2 highway, as one of its priority projects.

Jack (2011) alludes to the great potential for economic development that exists in the Wild Coast in the form of rural development initiatives and tourism-based approaches. The creation of this new road is perceived to increase accessibility to the area and thus potentially increase job creation and wealth. According to the EIA documents, this road will also serve to increase connectivity and logistics between the Eastern Cape and KwaZulu-Natal regions. Overall, it is anticipated that the new N2 road will greatly benefit the surrounding communities in terms of
job creation, infrastructure development, and accessibility, all of which facilitate tourism and related economic opportunities (Brazier, 2011).

SA National Roads Agency's (Sanral) proposed to upgrade the N2 through the Wild Coast to a toll road. Parallel to the proposed road upgrade, Mineral Commodities' (Mincom – An Australian Company) proposed to build a huge mineral sands mine at Xolobeni which is said to be supported by the South African government (Mathews, 2013). Mincom, which has begun constructing its Tormin mineral sands operation about 400km north of Cape Town, has been trying to secure the necessary permissions for Xolobeni for several years. Xolobeni, about 300km north of East London, contains a 346Mt resource of heavy minerals predominantly for extracting of Titanium, one of the largest undeveloped deposits in the world.

After a decade of deliberations between the South African Government and various public organisations, the proposed coastal route of 550 km (Fig. 4.1) was eventually approved in 2011 for the South African National Roads Agency (Sanral) to implement. Sanral indicated in their EIA that they exhausted all alternatives ‘in building a road that will not compromise on the environment in any way’ (Jack, 2011). However, this approval was given after the Record of Decision (RoD) or Authorisation for the Environmental Impact Assessment (EIA) for the new section of the N2 toll road was ‘overturned’ on the grounds of lack of independence of the environmental consultants in 2004 (Jack, 2011).

The estimated cost of the project is projected to be between R8 and 10 billion (Jack, 2011). This new route will shorten the distance between East London and Durban by approximately 80 km, assisted by the addition of nine new bridges. The project has been welcomed by the African National Congress for the job creation potential this may have for the region notwithstanding years of opposition from environmentalists, Non-Governmental Organisations (NGOs), local communities, and the KwaZulu-Natal Provincial Government.
Despite indications that the area is slowly recovering from the poverty and economic deprivation of the apartheid homeland system, there seems to be a definite need for improved infrastructure to the region, and for assisted poverty relief programmes and human resources development (Mathews, 2013).

It is against this backdrop that the debate around the highly controversial project to build a toll road rages. People of the area have opposed the upgrading by sending letters of objection, over 200 appeals against the EIA Record of Decision/Authorisation, and over 20 000 postcards of objection, staged public protests and a handed over a large petition to indicate their frustrations. To date this opposition is still on-going. It is worthy to note that despite all these actions against the building of the toll road, the Minister of Environmental Affairs approved the construction of the N2 Toll Road on 1 August 2011.

Fig 4.1: Proposed upgrade to the N2 through the Wild Coast (www.wildcoast.co.za)
4.2.1.2 The contextual issues

The concern posed by many opposing the development relates to the question: *Is a toll road the right socio-economic solution?* Based on the discussions on the role of public participation in the previous chapters and the broad opposition to the development, this question becomes relevant as it explores the role the Pondoland communities have played in the decision of building the toll road.

The Wild Coast is unique in that it is the only remaining wilderness section of the coastline in South Africa. As an area of plant biodiversity, it has over 200 endemic known species of plant, more than the whole of Great Britain, and has been officially listed as a world hotspot of plant diversity. Botanists concur that many species have probably not yet been discovered in the remote area, and that, because many of the plant populations are extremely small and area specific, any major disturbance or development could drive them to extinction (Brazier, 2011).

Owing to the Pondoland region’s valuable biological diversity and endemism, it is known around the world as the Pondoland Centre of Endemism (PCE). This status renders it special protection under NEMA. Titanium mining has long been considered as an opportunity to enhance the economy of this biodiversity-rich region. The construction of the proposed new road would be a convenient detour to facilitate the proposed titanium mining enterprise in Pondoland, although the EIR failed to mention this as an important factor (Brazier, 2011). A delay in commissioning these mining activities has been linked to the lack of proper infrastructure.

If the N2 road is constructed, it will likely lead to the commissioning of the titanium mining operation, or increased support for it. As such, the possibility of setting-up of the mine could be seen as a considerable secondary impact of the construction of the new N2 toll road. The proposed mining ventures have been
heavily opposed by the local communities and by tribal leaders in the area who have stated that they will continue to oppose this development. If this mining project is implemented, there may be major displacement and relocation of local people, with subsequent changes in social life, cultures, and ancestral graves, not to mention the significant environmental impact. The road construction may also result in habitat destruction and loss due to cumulative or secondary effects of erosion or reduced river flow which will have enormous ecological implications (Vos & Chardon, 1998). However, according to the Amadiba Crisis Committee the Xolobeni Community Empowerment Company (Pty) Ltd (Xolco) want to force the local occupants of the area to accept the proposal from an Australian mining company MRC (Ltd) to mine their ancestral lands for heavy minerals.

By contrast, Sanral argues that the road will bring much needed economic upliftment to the area, create jobs, help alleviate poverty, and that businesses in Port St Johns and Umtata are very much in favour of the road. Engineers estimate that an upgrade of the R 61 road at St. Barnabas Hospital to Hlulekha Nature Reserve alone will be in the region of R250 million. Sanral further suggested that an additional cost of R350 million will be needed to compensate owners of houses and businesses that will have to be moved during the upgrade.

Another question asked is whether the developmental status of the country warrants such a huge input into a road that may do little to stimulate regional economies. In a 2012 statement released by the Amadiba Crisis Committee more important matters in developing the Wild coast was listed with a priority higher than roads or mining.

In his review of the Pondoland Project, Brazier (2011) further indicates that the lawyers and groups representing the communities that will be affected suggested that the then Minister Molewa approved the project without consulting the affected communities. Cormac Cullinan, a lawyer representing the host community, also said, 'We are shocked by the decision, but not really surprised.
Considering the political support this project had, it was just a matter of time before the road was approved’ (Brazier, 2011). It has also been implied that the ANC has not cooperated to resolve the issues at hand and suggested that environmental groups change their views on the project without offering alternatives (IOL Business Report, 2011). However, the rural communities have not backed down and indicated that they will continue to fight this project.

Dissatisfaction with the conduct of the mining lobby has been expressed by community members in the area, who accuse the mining lobby of being evasive about specifying supposed benefits that mining would bring to communities, that promised community upliftment developments such as assistance with improvement to local schools have not been forthcoming, and that intimidating tactics have been deployed by the mining lobby to silence any community opposition to mining (Payn, 2009).

Amadiba Crisis Committee (Mathews, 2013) further indicates that various challenges were brought onto the community since the planning for construction of the N2 toll road and potential mining in the area. They indicated that:

“Some people are being bribed to support the mining application. The attempts to get people, who are against mining arrested, are a common occurrence. The issues have divided communities and families, creating instability in the community. It has become abundantly clear to all that this proposed mining is causing friction in the community. They claim that the organisation called Xolco (Xolobeni Empowerment Company), which asserts to represent the people, was formed without the communities’ consent. It was not formed at Komkhulu or in consultation with the tribal authority of this area and the locals did not participate.

On the issue of graves, the mining company says (in the present prospecting application for the Kwanyana block - one of the five mining
prospect areas along the 21 km long strip) that they had discovered three graves. We know that there are hundreds of graves in this area (Kwanyana), some of which are more than sixty years old. This qualifies to be protected by law (The Heritage Act, Act 25 of 1999). The inhabitants do not want our forefathers graves exhumed. It is clear that once there is agreement for mining to commence, we will experience similar problems as the communities in Richards Bay. People living there grow food, breed and have animals and their water comes from rivers and streams – they will lose their livelihoods.

Taking a look at the (previous) application into consideration, there is no real financial benefit for us the affected community. A licence is given to an outsider company at a price of R2000 (the application fee). The inhabitants will live with the problems caused and the dust for the rest of their lives. They demand to know why government is selling them so cheaply. The inhabitants also complain that this kind of development is not good for them. They did not ask for it. It has just been imposed and forced upon them. All these years they have voted for the ANC. But when they complain about all these problems, they feel that it is as if they are a people without a party.

These concerns were raised with Minister Buyelwa Sonjica. At the time she said that she understood. She promised to come back to the inhabitants to discuss solutions that will help them. To this day she has never come back. The Mbizana municipality does not want to come and listen closely to the problems of the community. The people assert that the only time they see officials and politicians is when they accompany ministers. They voted them into office during all these years, but feel they are being abused and that no one cares about them. They feel helpless and don't know how they are supposed to show once and for all that mining is not required there.
Human rights belong to the people, not to the government. The government does not seem to understand that. If the community does not want something, they feel that their voice must be listened to. The government has a responsibility to unite them instead of trying to use their influence to cause more divisions” (Mathews, 2013).

The responses above clearly support the need for more effective public participation that allows communities a say in the decision-making process. If not, they may object to a project even if clear benefits can be derived from it.

4.2.1.3 The EIA process and associated challenges

The Environmental Impact Assessment (EIA) for the Pondoland road has clearly created controversy. A number of activists, environmental practitioners and social actors suggest that the approval of the toll road has been dubious, with a dishonest and illegitimate Environmental Impact Report (EIR) process (Brazier, 2011). Brazier (2011) also indicates that many of the problems with the initial EIR (commissioned in 2003), that have been exposed and discussed by appeals and public participants, have not been addressed in the more recent EIR (2008). Examples of these issues include the lack of significant alternatives to the proposed road, the lack of acknowledging the importance of the biologically diverse Pondoland Centre of Endemism (PCE) in the final decision, and proper consideration of the environmental impacts and formulation of appropriate mitigation measures.

The proposed coastal route of the 550 km long N2 highway was approved in 2011 after a decade of deliberations by the South African Government and the public (Jack, 2011). This approval was given after the Record of Decision (RoD) for the Environmental Impact Assessment (EIA) for the new section of the N2 toll road was ‘overturned on the grounds of lack of independence of the environmental consultants’ in 2004 (Payn, 2009:1). NEMA of 1998 states that an
EIA should report on the environmental impacts and mitigation measures for any proposed developments.

Payn (2009) further indicates that the EIA was flawed and that the main objective of the construction of the road is for enhancing intercity linkages and not a focus for the development of local communities. A further suggestion is made that the EIA process for the new proposed N2 toll road has barely changed since the last rejected EIA in 2003. According to Payn, the main issues with the EIA are that it has double standards, does not take into account secondary or cumulative negative effects, although it mentions the secondary positive effects, has incompetent mitigation options and lacks adequate future policing in this regard, and it criticises the integrity of public participation in the process (2009).

The EIA appears to have only looked at the direct environmental effects of the road on the natural landscape, and has not taken into consideration secondary effects that may be caused by the road construction on human encroachment and pollution (Payn, 2009).

In terms of the publication regulations, Sanral placed large double page advertisements in many national newspapers and hold media tours to ‘sell’ the road project. The advertisements came under fire when the Advertising Standards Authority upheld a complaint that they were misleading and that Sanral could not give independent verification for many of the claims contained in the advertisements (Payn, 2009).

According to Payn (2009) various stakeholders and I&APs, including residents, businesses and other interest groups of Durban and the South Coast, Sappi, Toyota, the Anti-Toll Road Alliance, the Taxi Association, and sugar and banana growers, point out that new tolls in that area are going to increase substantially the cost of transport of goods to Durban, the major economic hub of the area; some variables that could have an added economic impact they feel should be part of an EIA but are excluded.
4.2.1.4 Discussion on role of public participation in Pondoland N2 Toll Road

In its statement released in 2012 the Amadiba Crisis Committee (ACC) expressed grave concern with the public process and the resultant decisions that stem from it (Clarke, 2012). They do recognise that regular public sessions were held but this has not provided the results expected. They list the following participation sessions (Clarke, 2012) as significant in the decisions reached about both the N2 toll road development and the prospective mining applications: In September 2007 a very well attended meeting of local residents was held at the Mgungundlovu Great Place with the King and Queen of the AmaMpondo, the Executive Mayor of the OR Tambo District Municipality and tribal authorities and representatives of the SA Human Rights Commission present. At that gathering the residents expressed overwhelming opposition to the proposed mining venture. Notwithstanding the investigation by the SA Human Rights Commission which found that the local residents had not been consulted about the proposed land use change, the Director General decided to award mining rights for the Kwanyana Block in July 2008.

After considerable public protest, on September 2008 the then Minister of Minerals and Energy Ms Buyelwa Sonjica visited the Mgungundlovu Great Place to again be faced with overwhelming opposition to the award of mining rights. ACC decided to use the opportunity presented by public consultation meetings to get clarity on various issues and to ensure that the voice of the community is heard in opposition to the proposed developments. They expressed concerns about Xolco members who indicated that they represent the interests of the various communities whilst they have proved themselves to be dishonest manipulators of information (Clarke, 2012).

Rajvanshi (2003) argues that limited opportunities in EIA and public hearings reduce the role of the public in the decision-making process. Clarke (2012) indicates that this has been the case with the Pondoland project. She further
states that excluding the public in the decision-making often leads to opposition of projects, and result in social and environmental movements on behalf of communities, engaging in media campaigns against the proponent. This is evident in the manner in which the Wildlife and Environment Society of South Africa (WESSA) has addressed the issue.

WESSA has threatened court action if the N2 Toll Road Project in Pondoland goes ahead. After the initial approval of the project, appeals were lodged during the 30-day appeals period. WESSA further indicated that an environmental impact study on the secondary consequences for the environment between Port Edward and Lusikisiki was flawed. The organisation has also raised issues around the impartiality of consultants involved in the project (Clarke, 2012).

Mathews (2013) indicates that the Pondoland Project created further controversy when it emerged that one of the proposed developers was also a shareholder in the company that conducted the EIA. In theory, an applicant seeking approval from DEAT for a project has to appoint independent consultants that should not have financial or any other interests in the undertaking of the proposed project. While working for an applicant, consultants may not work for any relevant authority in respect of the same application. The consultants must declare their independence on an official form that states that they have no interest in the proposed project. While a company is contracted to do an EIA for Sanral, the consultants in turn appoint experts to handle the public participation process, botanical studies, and other specialised studies. In the end, the consultants compiled a report out of the experts’ findings and views, which they presented to the relevant authority. The possibility is that independent consultants may write up a biased report. Various allegations to that effect have been labelled against the ‘independent consultants’ (Mathews, 2013).

Owing to the flaws inherent in the public participation, the Environmental Justice Networking Forum, an organisation that promotes sustainable land use amongst
poor communities, has called the route along the coastline an act of enviromandalism and the process of public participation a flaw (Mathews, 2013). The N2 Wild Coast Toll Road seems to be fraught with controversy for more than the decade since it was proposed. Concerns have been raised with Sanral about its silently assisting the mining of heavy mineral deposits along the Wild Coast, which not only threatens the unique biodiversity of the Pondoland Centre of Endemism but may also alienate the communal land rights of the indigenous amaMpondo residents (Clarke, 2012).

According to Clarke (2012), civil society has at considerable cost and effort, rallied to support the local communities of the Wild Coast, who have recently lodged an application in the North Gauteng High Court for the Environmental Authorisation of N2 Wild Coast short cut to be set aside. Clarke further advises that 'the founding affidavit argues that the N2 environmental authorisation was illegal for a host of reasons, but recent revelations from a former senior executive member of Sanral suggests that the development agreement between Sanral and the N2 Wild Coast Consortium (WCC) fell far short of transport policy requirements' (2012:1).

The implications for this area, if the correct mitigation measures are not taken, may be devastating. Although integrated environmental planning is considered a very effective method for planning, it will never yield positive results unless the process is performed honestly and precisely (Payn, 2009).

4.2.1.5 Application of Public Participation Barometer (IAP2)

The information from the N2 Pondoland case study is used below to test for adherence to the 13 key criteria. The criteria extracted from the information in this case study will show adherence/non-adherence and will be assigned as YES / NO / POSSIBLY respectively in the Participation Barometer which in turn
provides an indication of the **level of stakeholder engagement** and thus **effectiveness** of the public process (Table 4.1).

**Key criteria:**

1. **Adherence to EIA Regulatory guidelines**

Sanral indicated in their EIA that they exhausted all alternatives ‘in building a road that will not compromise on the environment in any way’. Approval for the construction of the road was given. The authorisation was approved although the Environmental Impact Assessment (EIA) for the new section of the N2 toll road was rejected. This rejection was based on the grounds that there was a lack of independence from the environmental consultants (Jack, 2011). This statement shows that an EIA was conducted but that it did not conform to the regulatory guidelines, hence the ‘overturn’ of the ROD.

**Adherence: No**

2. **Adherence to timeframes to inform I&APs**

In terms of the publication regulations, Sanral went to the extent of placing large double page advertisements in many national newspapers and holding media tours to ‘sell’ the road. The advertisements came under scrutiny when the Advertising Standards Authority upheld a complaint that they were misleading and that Sanral could not give independent verification for many of the claims contained in the advertisements (Payn, 2009). This is indicative that procedural aspects were not complied with.

**Adherence: No**

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3. **Representivity of I&APs**

The Xolobeni community expressed concerns about Xolco members who indicated that they represent the interests of the various communities whilst they have proved themselves to be dishonest manipulators of information (Mathews, 2013). This suggests that the community was not in agreement with the grouping that was supposedly representing their views.

**Adherence: No**

4. **Adequate opportunity for engagement for I&APs**

An investigation by the SA Human Rights Commission found that the local residents had not been consulted about the proposed land use change. Rajvanshi (2003) argues that limited opportunities in EIA and public hearings reduce the role of the public in the decision-making process. Clarke (2012) indicates that this has been the case with the Pondoland project. It is therefore clear that adequate opportunities for engagement were not provided to the community.

**Adherence: No**

5. **Access to information related to the project**

Social activists and environmental practitioners suggest that the approval of the toll road was dubious, with a dishonest and illegitimate Environmental Impact Report (EIR) process (Brazier, 2011). Brazier (2011) also indicates that the problems with the initial EIR (commissioned in 2003) that have been exposed and discussed by appeals and public participants, have not been addressed in the recent EIR (2008). The suggestion of ‘dishonesty and an illegitimate EIR’ (Brazier, 2011:1) suggests that access to information has been compromised. Through legal means information was provided, hence the appeals.

**Adherence: Yes**
6. **Language and cultural barriers observed**

On the issue of graves, the mining company says (in the present prospecting application for the Kwanyana block - one of the five mining prospect areas along the 21 km long strip) that they had discovered three graves. We, the community, know that there are hundreds of graves in this area (Kwanyana), some of which are more than sixty years old. This qualifies them for being protected by law (The Heritage Act). We do not want our forefathers graves exhumed. Concerns have been raised with Sanral about its silently assisting the mining of heavy mineral deposits along the Wild Coast, which not only threatens the unique biodiversity of the Pondoland Centre of Endemism but may also alienate the communal land rights of the indigenous amaMpondo residents (Clarke, 2012). The extract suggests that the cultural aspects in terms of grave sites and communal or indigenous land rights have not been observed.

**Adherence: No**

7. **Stakeholder identification mechanisms**

There is an organisation called XOLCO (Xolobeni Empowerment Company), which claims to represent the people. No one knows how this organisation was formed and when. It was not formed at Komkhulu or in consultation with the tribal authority of this area. Locals did not participate. The processes in selecting the grouping that supposedly represent the community interests are disputed, leading to the conclusion that no proper stakeholder identification mechanism was followed. However, at a later stage more people and groupings expressed concern and that suggest that wider participation was allowed.

**Adherence: POSSIBLY**
8. Public involvement in design of projects

The proposed mining ventures have been strongly opposed by the local communities and by tribal leaders in the area who have stated that they will continue to oppose this development. In his review of the Pondoland Project, Brazier (2011) further indicates that the lawyers and groups representing the communities that will be affected suggested that the then Minister Molewa approved the project without consulting these affected communities. A critical element in the success of any project relates to involvement of those most affected by a development in the design of projects. However, this has not been the case.

Adherence: No

9. Involvement of marginalised groups in process

The inhabitants maintain that they grow food, breed and have animals and their water comes from rivers and streams. They will lose their livelihoods. Rural communities are by definition marginalised due to the lack of access to basic amenities. Their dependence on the land has been emphasised, which this project seems to ignore.

Adherence: No

10. Variety of methods used in public participation

They do recognise that regular public sessions were held but these have not provided the results expected. They indicated the significance of participation sessions (Clarke, 2012). An indication is provided that meetings and participation sessions were held which could have been a variety of methods.

Adherence: Yes
11. Independence of EAPs

The organisation has also raised issues around the impartiality of consultants involved in the project (Clarke, 2012). Mathews (2013) indicates that the Pondoland Project created further controversy when it emerged that one of the proposed developers was also a shareholder in the company that conducted the EIA. The possibility is that independent consultants may write up a biased report. Various allegations to that effect have been labelled against the ‘independent consultants’ (Mathews, 2013). These statements clearly indicate that independence of EAPs may have been compromised.

Adherence: No

12. Fulfilment of the intended purpose of public participation

Owing to the flaws inherent in the public participation, the Environmental Justice Networking Forum, an organisation that promotes sustainable land use amongst poor communities, has called the route along the coastline an ‘act of enviro-vandalism’ and the process of public participation a flaw (Mathews, 2013). The purpose of public participation in any project is to ensure that communities engage in the process from conception to completion. This may result in projects that are accepted and increase the probability of success. The intended purpose of public participation in the Pondoland N2 Toll Road has therefore not been fulfilled.

Adherence: No

13. Public participation influence on final decision

The proposed coastal route of the 550 km long N2 highway was approved in 2011 after a decade of deliberations by the South African Government and the public (Jack, 2011). “This kind of development is not good for us. It is just imposed and forced upon us”. It is clear from the statements that public
participation (whether limited or not) would not have had any influence on the final decision as this road seems to be a government imperative.

**Adherence: No**

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Level of Stakeholder Engagement and Effectiveness:

1 – 3  Inform / Least Effective  
4 – 6  Consult / Fairly Effective  
7 – 9  Involve / Very Effective  
10 – 13 Collaborate / Most Effective

Table 4.1: Scale on adherence to the level of stakeholder engagement (Pondoland N2 Toll Road)

The public participation process for the Pondoland N2 Toll Road with a score of 2.5 out of 13 therefore rates as least effective, and falls in the inform column of the participation barometer (Table 4.1). In line with the characteristics of each level of stakeholder engagement, it is clear that the Pondoland N2 Toll Road Case responds to the process of inform, which involves provision of information to the public to assist them in understanding the problem, opportunities, solutions and alternatives but during which information flows only one-way.

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4.2.2 Case Study 2: Coega Industrial Development Zone (IDZ)

4.2.2.1 Background Information

The Coega (name originates from the Nguni, which means ‘ground water’ - Nguni is a language group to which Xhosa belongs), Industrial Development Zone (IDZ) is South Africa’s first and biggest IDZ, and is believed as one of the largest investment spaces in the Southern Hemisphere (Sunday Times, April 15, 2012). It entails the development of 11,000 hectares of land, effectively the ‘back of port’ space for the new Port of Ngqura (isiXhosa for Coega), for industrial purposes (Fig. 4.2).

An IDZ is a purpose built industrial estate linked to an international air or sea port, which might contain one or multiple Customs Controlled Areas (CCA) tailored for manufacturing and storage of goods to boost beneficiation,
investment, economic growth and, most importantly, the development of skills and employment in these regions (CDC Annual Report 2013/14). The IDZ has so far been developed and operated by the Coega Development Corporation (CDC) – a government-owned proprietary limited (Pty Ltd) company, which was specifically established in 1999 for the purpose of ensuring the success of this project. The sectors initially targeted in the 11,000 hectare Coega IDZ primarily focused on the chemical industries sector. Other industries, such as manufacturing, have also been targeted as key drivers in job creation through the CDC. Manufacturing has proven to be a strategic method through which countries can grow their economies and drive their developmental agendas.

Despite initial opposition in 1999 from the labour sector and the broader public against the development of the CDC, the Coega Project has increasingly proved successful in advancing the developmental and transformation agenda of national government, having signed approximately R140 billion’s worth of investments between 2007 and 2012 and forging various agreements with various actors both locally and internationally (Sunday Times April 15, 2012). To date (2014), Coega is home to major global companies that include automotive industries, renewable energy, agro-processing, business process outsourcing, construction, chemicals, and logistics and container depots. The latest project is the 400 000 barrels-per-day oil refinery that is planned by the Petroleum and Gas Corporation of South Africa (CDC Annual Report 2013/14).

4.2.2.2 The contextual issues

Mtimka (2010) indicates that the Coega Project came at a time when the demand arose for catalytic projects that would change the economic landscape of the Eastern Cape and have a positive impact on the people of the Province, particularly on employment creation and poverty alleviation. Coega was considered by the South African Government as opportune to meet its objectives of industrialisation and job creation.
The political conditions of a country are the main determinant of the policies or strategies adopted by government. In South Africa, the expectations created after the Apartheid years in many communities were that of employment and prosperity. It was envisaged by the political powers that the Coega Project would deliver on the expectations by providing job opportunities to reduce the high unemployment persistent in the region. This would happen incrementally through increased manufacturing over time, mainly resulting from Foreign Direct Investment (FDI) (Coega IDZ Initiative, 1997).

The Transport, Trade, and Industry Ministries of the newly formed South African government announced the Coega Project as part of the Spatial Development Initiatives (SDIs) during 1996. SDIs sought, among other things, to redress historical spatial development imbalances created by the apartheid state. The Coega Project was envisaged to have the potential to redirect economic activity to the severely marginalised Eastern Cape Province and help achieve the objectives of the SDIs (Coega IDZ Initiative, 1997).

Huge government investments were earmarked for Coega. However, these were delayed significantly due to many factors, including differences between the government’s tri-partite alliance (ANC, SACP and COSATU) and many actors questioning the socio-economic and environmental impact this development might have. Serious opposition was encountered from various interest groups, ranging from environmentalists, labour and academics, who proposed an “alternative” developmental path which includes eco-tourism and maritime development. Coega was labelled as a capitalist and potentially destructive and unsustainable development project (Bond, 2002). The environmentalists were opposed to Coega because of potential destruction to the environment of Algoa Bay, which is considered an environmentally sensitive area, with a significant population of rare species of whales, penguins and other marine and coastal life. The critique of labour unions on the other hand, led by COSATU, was that enclaves like IDZs, Special Economic Zones (SEZs), and Export Processing Zones, have the potential for unfair labour practices and marginalisation of labour
and would thus not be beneficial to South Africa. The labour unions were of the opinion that the promises of large-scale employment would not be realised and that investment in the IDZ would not be beneficial to the region or the country (Bond, 2002).

The Coega development involved the relocation of communities. Robust and open debate among the community, the Coega IDZ Initiative, the government, and the ANC started in 2001 during discussions on the relocation of the affected communities (Mtimka, 2010). Key discussions were on the role of the CDC as an economic driver as opposed to being mainly implementing the IDZ. The CDC adopted an aggressive approach to stakeholder concerns in favour of the benefits and impact of the project as demanded by investors (Mtimka, 2010).

4.2.2.3 Environmental Impact Assessment Process and Associated Challenges

An early project in the Coega Industrial Development Zone was initiated by Billiton, a former South African but now London-based multinational company, who proposed the construction of a zinc refinery at the mouth of the Coega River at the outskirts of Port Elizabeth in the Eastern Cape Province of South Africa. Billiton was involved in the design and promotion of a major deep-water harbour at the Coega location in 1996 (Seepersad, 1998). The discussion in the next sections will therefore focus on this early stage of the project and its challenges encountered in the EIA and public participation process.

Approximately 360 people from the original Coega community were relocated from the IDZ to Wells Estate approximately 7.5km away, outside of Motherwell (CDC Annual Report, 2008). Consultants failed to provide residents of Coega and proximal communities informed input on the potential impacts of this relocation or give them an opportunity to assert their interests to ensure that the EIA and ultimate decision incorporated their views (Seepersad, 1998).
Billiton's Supplementary Environmental Impact Report (CEN, 1999) concedes that a number of negative regional and local impacts were possible, including increased competition for resources from induced migration, increased demand for housing, increased stress on education budgets and schools, and the potential social disturbances caused by off-duty workers during construction. Billiton did not want to take responsibility for the relocation and associated challenges and indicated that it is the government’s responsibility (CEN, 1999). Billiton provided no justifiable retort for this abdication of responsibility.

Professor Richard Fuggle of the University of Cape Town (UCT) described the Strategic Environmental Assessment for the IDZ as containing 'serious deficiencies' and 'not a document that can be used to guide decision-makers at a strategic or policy level' (Fuggle, 1997). The period for the environmental assessment imposed by Billiton (two and a half months from ‘scoping’ to completion of the studies) was insufficient for a project of this nature and magnitude (Fuggle, 1997).

The ‘scoping’ process - the foundation for the entire assessment – was completed over a two-week period that included the Christmas and New Year’s holidays, and involved insufficient public participation, resulting in the exclusion of people from the process (Fuggle, 1997). Much of the detail required in any environmental legislative process was not available at the time of conducting the EIA which lead to conclusion that the project should not have been allowed to start (Fuggle, 1997).

The public participation process was merely a public relations process designed to ‘sell’ the project but not to inform interested and affected parties. It failed to include many stakeholders affected, including those who might have to relocate. The public process also failed to adequately inform or empower the historically disadvantaged communities to participate meaningfully in the process. South
African National Civic Organisation (SANCO) described the process as ‘not democratic’ (Burger and Bradshaw, 2002:2).

Cumulative impacts of a major industrial development zone designed to attract massive smelter industries were not analysed for risks, as is required (Seepersad, 1998). No risk assessments were undertaken as would be expected from an EIA for a project of this type. These are serious issues that should have been considered. Seepersad (1998) raised concern that the independence and objectivity of Billiton’s consultant was not assured. South African environmental legislation claims to ensure adequate and transparent assessment of the environmental impact of proposed developments. Billiton indicated that potential environmental impacts were the responsibility of Government and did not appear to treat this with the seriousness that it deserved.

It is clear from the brief summary above that the environmental legislation, specifically concerning impact assessment, had not been complied with, and without proper monitoring, a gap opened for developers and EAPs to exploit the very assets that legislation aims to protect. Instead, Billiton did not display a willingness to engage with the public to ensure potential risks could be avoided.

4.2.2.4 Discussion on role of public participation in Coega IDZ

The limited public voice in the decision-making process has been the topic of much controversy and contention in the Coega project. Korten (1990:68) advocates a participatory form of development, to enable people the ‘right to a voice in making the decisions that influence their lives’. Burger and Bradshaw indicated that a number of interested parties raised objections against the Coega development (2002). One of the main alternatives put forward by opponents of the project, is a conservation program linked to the Greater Addo National Park. Le Quesne puts it as follows: ‘There is a very real choice to be made with respect
to which are the best economic future for Coega (and broader Port Elizabeth) and its people’ (Bond, 2002).

Right from the beginning in 1997, the estimated number of jobs that will be created by the Coega development has been a major cause of disagreement. According to Fayi (Evening Post, 1998) the Congress of South African Trade Unions (COSATU) initially opposed the project, especially with regard to the fact that ‘there is no guarantee that (highly industrialised) projects such as Coega will create any significant number of jobs’ (Bond, 2002).

During the period 1996 to 1997 the public participation process was falling ‘well short of acceptable standards’ (Le Quesne and Tennille in Bradshaw, 2005:18). This is especially true with regard to key affected parties (the Coega community) not consulted or included in the process, as well as insufficient time and information available for ‘the issues to be discussed in an informed manner’ (Le Quesne and Tennille in Bradshaw, 2005:18). A key recommendation in the original Strategic Environmental Assessment (SEA) concerning an on-going public participation process, namely the establishment of a ‘Coega and Harbour Development Forum’, which should include all possible I&APs and which should provide a ‘platform for on-going communication between developers and the public in a structured environment’, was never adhered to by the Coega IDZ Initiative Company (Bradshaw, 2005:47).

Rogers indicates that the lack of participation was also raised in a letter written to the Minister of Environmental Affairs and Tourism by a group of environmental organisations and academics, in which it was claimed that ever since the middle of 1997, any form of public involvement was abandoned and that no information and communication regarding the project to interested and affected parties were forthcoming from the Coega promoters (Bond, 2002).
Interestingly, even the Minister of Environmental Affairs and Tourism at the time, Mr Pallo Jordan, criticised the process as flawed because it had failed to ‘clearly determine public opinion’ (Bond, 2002). Yet, at the same time, the Minister gave his full backing to the project. The overall impression that one gets with regard to the public participation processes conducted during this period is that it was perceived as flawed by many parties to the process. This certainly created a challenge for any future public participation processes.

During the next period (1999 - 2000), the consultants (Sandy & Mazizi Consulting), who handled most of the public participation processes during this period, prepared a comprehensive separate public participation report. This report (and process) covered five studies released during this period, namely: (i) the Draft EIA for the proposed Port of Ngqura; (ii) the Draft Scoping Report for the Proposed Port of Ngqura; (iii) the Algoa Bay Management Plan; (iv) the Rezoning EIR for the Core Development Area; and (v) the Environmental Management Programme Report (EMPR) for Mining of the Western Coega Kop Quarry (aggregates produced from hard rock). Criticism on the limited public participation during these studies was noted by various interested and affected parties (Sandy & Mazizi, 2000).

Kantor Legal Services (Bradshaw, 2005) indicated that the public had not been informed of their right to suggest alternatives and have those alternatives assessed. The Sundays River Citrus Co-operative Ltd. objected to the limited time available to study the various reports to provide an input. Dr J G Castley, an animal ecologist for South Africa National Parks (SANParks), contended that some of the concerns or questions raised, were answered unsatisfactorily and that the ‘two or three day notice’ given for a joint sector meeting was unacceptable. The Zwartkops Trust described the public participation process as deeply flawed, following the statement by ‘the Chief Executive Officer of the Coega Development Corporation that the project was going ahead’ and was signing a contract to this effect (Bradshaw, 2005:19).
Mr J Smith of the C R Property Trust pointed out that most answers given to concerns or questions raised were one-sided and vague, and that no opportunity existed for the affected parties to debate these answers. According to him, all answers were 'conveyed as if all the concerns are fully addressed and agreed on by the Trust and other parties' (Bradshaw, 2005:19).

In their submission, the Southern Africa Environment Project (SAEP) indicated that the new harbour EIA and the Rezoning EIA were already completed in November 1999 and January 2000, respectively, and that it was unclear why they were only released for public comment in August 2000. They also accused the CDC of not releasing all the environmental reports. Sandy and Mazizi's Final Public Participation Report (2000) also included an independent review of the public participation processes conducted by them.

This surely is enough cumulative evidence to warrant, just on a process level alone, a more serious investigation of the public participation processes conducted with regard to the Coega IDZ Project. Glavovic (2000), however, perceive public participation to be a relatively good process providing adequate opportunities for all I&APs to raise issues of concern. He also commends the process as comprehensive and indicates that it has identified, based on existing knowledge and understanding, all key issues in the Coega IDZ Project (Glavovic, 2000). Greyling's (1998) commented on the public process and says that a public participation process 'however extensive and well-meaning it may be', may still be flawed if it does not attempt to realise a common goal and joint vision (by project proponents as well as stakeholders).

The third period (from 2001 onwards) of public participation includes the process with regard to all the future processes concerning other major developments within the Coega IDZ project. There seems to have been much less interest from I&APs than before and it is in my opinion unsure if this was just a matter of 'process-fatigue', or if previous experience with the public participation process
has discouraged I&APs to take part. It can also be that parties had the perception that they cannot change anything anymore with regard to the Coega Project and that their focus is better spent elsewhere.

Glavovic (2000) refers to the concern of several I&APs that the government was both ‘referee’ and ‘player’ in the planning and decision-making process concerning the Coega Project. He comments: ‘As a key partner in the Coega Development Corporation, government is actively promoting the proposed development, and yet it is also the decision-making authority, through the NEC (Ngqura Environmental Committee) and various other authorising procedures. Questions have therefore been raised about whether or not the government can in fact act with impartiality in the public interest’ (Glavovic, 2000:3-5). He further warns that if government is not seen to be acting with impartiality, ‘there is a serious risk that the process will become polarised along racial and socio-economic lines, into what might be called a “jobs versus the environment” debate (Glavovic, 2000:7).

The CDC Annual Reports from 1996 to 2014 list the tangible projects that have, and are, in the process of being implemented and that are supported by government in the quest to address the political economy of the region. The Coega Development Corporation (CDC) 2011/12 Annual Report indicates that the 2012 value of operating investments and those in the pipeline at the CDC exceeds R15-billion, the bulk of which comprises alternative energy (R6.4-billion), downstream metals (R4-billion), and auto manufacturing and components (R3-billion). The total value of projects in the pipeline sits at just over R140-billion.

The report further states that in terms of job creation and training the CDC fared well. A total of 8 898 jobs were created in the course of the 2011/12 financial year (7258 jobs on provincial and IDZ construction activities and 1640 direct operational jobs on IDZ and Nelson Mandela Bay Logistics Park investment
projects), inclusive of 107 internships. The CDC also stimulated growth for SMME’s who benefited from a 31% overall share of procurement.

A general critique levelled against Coega and other IDZs is that they may be no more than platforms for global and local capitalist enterprises to exploit the resources of developing countries with minimal benefits for the host country and its people (Mtimka, 2010). Projects as described above require huge capital investment by the State. Some social actors argue that this becomes wasted resources if not achieving the objectives of ensuring that the post-apartheid development visions are realised. Specifically that of job creation as it is estimated that the townships and northern suburbs of Port Elizabeth have unemployment levels of up to 30% of the population living there.

The discussion so far is indicative of the challenges the Coega Project has had to contend with, and which are fundamental political and economic issues and debates that have a bearing on its functionality and future development. The role of the State in the economy and the necessary institutional frameworks for development from a public participation perspective, therefore, seem to be emphasised as a political imperative. Political organisation and activity, in other words, became the means through which people organised themselves in the quest for better material conditions of existence or ‘development’ (Mtimka, 2010). Despite the associated challenges, Coega has excelled in terms of procuring various tenants to invest in the idealised visions that characterised its challenged beginnings.

The implications that perceptions such as these mentioned here may have for the eventual outcome or success of a public participation process are damaging. With regard to the Coega Project then, one may indeed ask what has led to the formation of such perceptions. It is difficult not to concur with Glavovic (2000:7) that ‘regardless of whether or not such perceptions are correct, they undermine efforts to secure public support for the planning and decision-making processes’.
4.2.2.5 Application of Public Participation Barometer (IAP2)

The following 13 key criteria are now applied as evidence to support the outcome of the level of stakeholder engagement and thus the effectiveness of the public participation process in the Coega IDZ Project. The criteria extracted from the information in this case study will show adherence/non-adherence and will be assigned as YES / NO / POSSIBLY respectively in the Participation Barometer which in turn provides an indication of the level of stakeholder engagement and thus effectiveness of the public process (Table 4.2).

Key criteria:

1. Adherence to EIA Regulatory guidelines

Professor Richard Fuggle of the University of Cape Town (UCT) has described the Strategic Environmental Assessment for the IDZ as containing ‘serious deficiencies’ and ‘not a document that can be used to guide decision-makers at a strategic or policy level’ (Fuggle, 1997). The period for the environmental assessment imposed by Billiton (two and a half months from ‘scoping’ to completion of the studies) was insufficient for a project of this nature and magnitude (Fuggle, 1997).

Adherence: No

2. Adherence to timeframes to inform I&APs

Le Quesne and Tennille’s (in Bradshaw, 2005:18) comments for this period 1996 to 1997 describe the public participation process as falling ‘well short of acceptable standards’, especially with regard to key affected parties not consulted or included in the process, as well as insufficient time and information that was available for ‘the issues to be discussed in an informed manner’.

Adherence: No
3. Representivity of I&APs

The public participation process was in fact a public relations process designed not to inform interested and affected parties, but rather to promote the project. It failed to include many of those directly affected. Based on the various objections one can safely assume that the interested and affected parties were well represented.

Adherence: Possibly

4. Adequate opportunity for engagement for I&APs

The ‘scoping’ process - the foundation for the entire assessment - happened over a two-week period that included the Christmas and New Year’s holidays, and involved insufficient public participation, resulting in the exclusion of key geographical areas and economic activities (Fuggle, 1997). Glavovic (2000), however, perceive public participation to be a relatively good process providing adequate opportunities for all I&APs to raise issues of concern. He also commends the process as comprehensive and states that it has ‘identified, based on existing knowledge and understanding, all key issues’ Glavovic (2000:7). Greyling’s (1998) commented on the public process and says that a public participation process ‘however extensive and well-meaning it may be’, may still be flawed if it does not attempt to realise a common goal and joint vision (by project proponents as well as stakeholders). In short, there seems to be contestations on whether adequate opportunity for engagement was provided. The opinion of the researcher, which is based on the responses from interviewees (see chapters five and six) as well as indications in the case study from various stakeholder groups, is that adequate opportunities were created for engagement in the Coega project.

Adherence: Possibly
5. **Access to information related to the project**

Rogers (in Bradshaw, 2005) indicates that the issue of access to information was also raised in a letter written to the Minister of Environmental Affairs and Tourism by a group of environmental organisations and academics in which it was claimed that, since the middle of 1997, any attempt towards public involvement was abandoned and that no information and communication regarding the project to interested and affected parties were forthcoming from the Coega promoters (Eastern Province Herald, 1998). I would argue against this position as these groups did lodge objections, in a form that required enough and relevant information.

**Adherence: Yes**

6. **Language and cultural barriers observed**

Glavovic warns that if government is not seen to be acting with impartiality, 'there is a serious risk that the process will become polarised along racial and socio-economic lines, into what might be called a 'jobs versus the environment' debate' (Glavovic, 2000: 3-5). The forced removal of the original Coega community from their rural homesteads is a sure indication that cultural considerations were not observed in the project.

**Adherence: No**

7. **Stakeholder identification mechanisms**

A number of stakeholders responded to public participation at various stages of the project. It is not clear if a structured process was followed in identifying these stakeholder groupings, but one can assume that mechanisms were put in place to identify the various interest and affected groups.

**Adherence: Yes**
8. Public involvement in design of projects

Fuggle (1997) indicates that the consultants did not have an adequate project description. Surprisingly, at the same time, the Minister gave his full backing to the project. Since this project was a high level government imperative, the involvement of the public in the design would have been limited.

**Adherence: No**

9. Involvement of marginalised groups in process

Bradshaw (2005) indicates that the Coega Development Corporation failed to include many of those directly affected; including those who might have to relocate, and did not adequately inform or empower the historically disadvantaged communities to participate meaningfully in the process.

**Adherence: No**

10. Variety of methods used in public participation

Various meetings occurred at different stages of the project, which include strategic sessions and joint sector meetings. Whilst it is not clearly stated what format of engagements took place prior to reduction in flow of information, it is presumed that these took the form of various meetings, workshops and information sessions.

**Adherence: Yes**

11. Independence of EAPs

Seepersad (1998) raised the concern that the independence and objectivity of Billiton’s consultant was not assured. It is clear from the brief summary above that the environmental legislation, specifically concerning impact assessment,
had not been complied with, and without proper monitoring, a gap opened for developers and EAPs to exploit the very assets that legislation aims to protect.

Adherence: No

12. Fulfilment of the intended purpose of public participation

Korten (1990:69) advocates for an approach in which people have the right to a voice in making the decisions that influence their well-being and therefore decision-making should be close to the level of the individual, family and community as possible. Le Quesne (in Bradshaw, 2005:18) also indicates as follows: ‘there is a very real choice to be made with respect to which is the best economic future for Coega (and broader Port Elizabeth) and its people’. It is my opinion that that the people had limited opportunities to provide a voice into which future they would want.

Adherence: No

13. Public participation influence on final decision

Consultants failed to provide residents of Coega and proximal communities informed input on the potential impacts or give them an opportunity to assert their interests to ensure that the EIA and ultimate decision incorporate their views (Seepersad, 1998).

Adherence: No

In conclusion, the public participation process in the Coega IDZ project only adhered to the criteria marked (YES and POSSIBLY) in the checklist of the thirteen key criteria (Table 4.2).
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Level of Stakeholder Engagement and Effectiveness:

1 – 3 Inform / Least Effective
4 – 6 Consult / Fairly Effective
7 – 9 Involve / Very Effective
10 – 13 Collaborate / Most Effective

Table 4.2: Scale on adherence to the level of stakeholder engagement (Coega IDZ)

The public participation process for the Coega IDZ project has therefore been fairly effective with a score of 4 out of 13, as indicated in the consult column in the barometer above (Table 4.2). In line with the characteristics of each level of stakeholder engagement, it is clear that the Coega IDZ project can be classified in the barometer as adhering to consult.
4.2.3 Case Study 3: Hydraulic Fracturing for unconventional gas extraction in the Karoo

4.2.3.1 Background information

Hydraulic fracturing or ‘fracking’ is described as a technique used to extract natural gas that is ‘held tight’ in the deep shale formations; hence the term unconventional gas (De Wit, 2011; Esterhuysse et al., 2013). Water is pumped under high pressure through a well that is horizontally drilled deep underground (2.5 km) and this causes the shale formations to fracture, due to water pressure. Sand mixed with water keeps the cracks open, so that the gas can flow freely through the wellbore and be collected at the surface. Besides sand, the water contains about 0.5% added chemicals that may return to the surface as ‘flow-back water’ (de Wit, 2011; Esterhuysse et al., 2013). Scientists and various concerned groups in the fracking debate are concerned about the consequences of possible contamination of shallow water sources via fractures and during the flow-back of water process and, more particularly, leakage of chemicals that may also harm local ecosystems.

The researcher followed the fracking debate in various media and participated in various consultation sessions and discussion groups between 2009 and 2015. This debate is still on-going as it could be a ‘significant game changer in terms of the South African energy situation’ according to Dr Rob Davies, Trade and Industry Minister (Engineering News, October 2013). Both the visual (Carte Blanche and 50/50) and print (Sunday Times, Mail and Guardian and The Herald) media, as well as various radio stations (SA Fm, Algoa Fm, Cape Talk and others), extensively explored and reported on this debate. This has also found expression in various subsequent debates in Parliament, workshops, conferences and academic talks; and now bloggers on various social media, like Facebook and Twitter, have started to engage in the debate. This social capital building process has aided in spreading concerns and actions down to household level. The researcher followed most of these debates to acquire an
understanding of the issues at hand and to assess the role of public participation in the outcomes relating to both those in support of or against fracking in the Karoo.

The shale formations in the Karoo are said to contain a potential shale gas resource that ranges between 20-500 trillion cubic feet (Tcf) of gas, possibly the fifth-largest resource in the world (de Wit, 2011; Prinsloo, 2012; Healy, 2012). It is projected that the shale gas industry could add up to R200 billion a year to the country's GDP and create 700 000 jobs (Prinsloo, 2012; Burkhardt, 2013). By comparison it is estimated that South African petrochemicals giant, Sasol, contributes about R60 billion a year to the country's GDP (Prinsloo, 2012; Burkhardt, 2013).

A number of companies (Fig 4.3) have submitted applications to explore shale gas locally and have been granted permission by the regulator, the Petroleum Agency of South Africa, to undertake preliminary technical desktop studies of different parts of the country, and are awaiting the green light to start exploration from the Department of Mineral Resources.

![Map of Karoo basins](image)

Fig 4.3: Applications for Hydraulic Fracturing (source: de Wit, 2014 via email)
Despite the potential gas resources and its economic potential, various lobby groups have raised concerns about the impact fracking may have on the environment, agricultural resources and people of the Karoo. These include the Treasure the Karoo Action Group (TKAG), Southern Cape Land Committee, Earthlife Africa and various other groupings representative of farmers and the Karoo communities.

The conflicting responses in the fracking debate may be due to a lack of sufficient information to assist all stakeholders in their understanding of the issues. In May 2014 SAfm facilitated a discussion on whether or not fracking was a major threat to South Africa’s water supply. The WWF and SAfm’s Decisive Debates series provided an opportunity for the public to directly engage with dynamic, outspoken experts on this topic. After listening to the recorded version of the discussion, I felt unsure if the ordinary South African, let alone a Karoo resident, has a better understanding about hydraulic fracturing and related issues. The discussion for me was overwhelmingly scientific and complex. It is unlikely that this was anyhow clearly understood, especially in disadvantaged communities in the Karoo.

The internet also provides information about projects and on other people’s views. Various responses can be found on social media platforms but the one response that was particularly significant to me is that of Jeff Rudin who said: ‘The debate succeeded admirably in both confusing and depressing me in equal measures. How on earth, I wondered, are we, the listeners supposed to make an informed decision when the only common agreement amongst experts was that the other side was totally wrong? Both sides claimed exclusive right to science; both sides confidently quoted mutually contradictory facts and figures from evidently highly reliable sources; both sides claimed scientific superiority for their own facts and figures’ (Daily Maverick, June 2014:1). The debate has relevance in various ways: there is a need to balance technical knowledge with information that is easily understood; the understanding of lay-people needs to find expression in debate like these. Information should attempt to reduce confusion
and bring facts to the level of the citizenry. I concur with Rudin’s sentiments and also now wonder how the politicians and affected communities will finally decide on a way forward being confronted with more or less the same conflicting information.

Rosenberg (2013) advises about the importance of obtaining reliable information in order to make public policy decisions on development that affects the health and well-being of all living organisms. He emphasise the role of science in informing the public, the media and policy-makers about democratic processes – not because science is the sole determinant of what choice we should make, but because it must help ground our decisions in what we know about the world we live in (Rosenberg, 2013). De Wit (2011), in addition, advises that regulators, policymakers and the public need an objective source of information on which to base decisions to manage the challenges that may accompany shale gas development. He further indicates that unless systematic and independent baseline data on seismicity and groundwater quality, including isotopic compositions, ecological observations etc. collected well before drilling operations start in the Karoo, and are made available for public scrutiny, environmental safety and scientific knowledge, public confidence will remain compromised (De Wit, 2011; Esterhuyse et al., 2013).

It is worth noting that the Minister of Environmental Affairs launched the commission of a strategic environmental assessment (SEA) of shale gas development in South Africa joined by representatives from the Departments of Water and Sanitation, Mineral Resources, Energy, and Science and Technology on Tuesday, 12 March 2015. The aim of the strategic environmental assessment is to provide an integrated assessment and decision-making framework to enable South Africa to establish effective policy, legislation and sustainability conditions under which shale gas development could occur.
4.2.3.2 The contextual issues

In shale reservoirs, the natural gas is closely bound to the rock and sits in a fine scale array of relatively isolated and small pores and cracks. In order to extract this resource the permeability must be improved by artificial means and hydraulic fracturing is the only viable method (Esterhuyse et al., 2013; Fossen, 2010). Healy (2012) describes hydraulic fracturing or ‘fracking’ as the method used by drilling to stimulate or improve liquid / gas fluid flow from rocks in the subsurface. In brief, the technique (Fig 4.4) involves pumping a water-rich fluid under high pressure into a borehole until the fluid pressure at depth causes the rock to fracture. The pumped fluid contains small particles known as proppant that serve to prop open the fractures (de Wit, 2011). After fracking the pressure in the well is dropped and water containing released natural gas flows back to the well head at the surface. Fracking fluid also contains small amounts (less than 2% in total volume) of chemical additives to help initiate fractures, corrosion and scale inhibitors to protect the borehole lining and gelling agents to alter the fluid viscosity (Healy, 2012).

A major concern by the opponents to fracking is the large volumes of fluid that are injected into the subsurface which they indicate are not without risk to underground environments such as groundwater (Zoback & Arent, 2014). Media reports over the last couple of years and to a lesser extent the scientific fraternity highlighted the potential of contamination of groundwater and drinking water, release of carbon dioxide and methane gas into the atmosphere and the leakage of contaminated drilling water from storage ponds (Creamer, 2013; Rosenberg, 2013; Burkhardt, 2013, The Guardian, August 2013). Lobby groups indicate that these may have disastrous consequences to the Karoo environment and people living there and may thus impact on their constitutional right to an environment that is not harmful to their health or well-being.
Fig 4.4: Artist’s rendering of a horizontal well drilled for shale gas production (N. Fuller, in Zoback & Arent, 2014). Typically, the vertical section of the well is drilled, cased, and cemented to a depth of 2–3 km and then the well is drilled horizontally along the shale for about 1.5 km.

Stokstad’s (2014) studies in Pennsylvania (USA) indicate that resolving whether fracking is a serious threat to water quality will take time. Stokstad (2014) advise that another major obstacle is the lack of predrilling data about water quality in many areas. Although gas companies have tested tens of thousands of water wells above active and potential fracking zones, they haven’t widely shared the data. ‘The lack of baseline information is a really serious issue’ (Stokstad, 2014:1471).

Furthermore, Kintisch (2014) indicates that recent studies in the USA have suggested that large quantities of unburned methane are leaking into the atmosphere - not just from production wells and major pipelines but also from gas lines and tanks that distribute the fuel in cities. The leaks could negate much of the climate benefit of switching to gas (Kintisch, 2014).
Dove (2014) indicates that the prospect of a truly globalized energy economy comes as a trade-off with considerable environmental risks. History, she advises, seems to repeat itself, with the drive to frantically mine Earth resources and then leave behind environmental legacies with tremendous societal and ecological costs (Dove, 2014). Can it be different this time? As we rush forward to develop unconventional energy sources, can new technologies evolve to ensure sustainable development? We have an opportunity to write a new energy legacy that includes more environmental wisdom and foresight than before. In the bigger picture, such a change in mind-set could also guide us toward solving other complex issues, with far-reaching benefits for humankind (Dove, 2014).

Chermak (2014) indicates that to understand the impact of humans on Earth, the expertise of geoscientists will be critical. In his view our understanding of the geosphere, atmosphere, biosphere, and hydrosphere and the associated processes is needed to guide the public and other stakeholders in the myriad of challenges that we face. Geoscientists must take more active roles in leading energy-related conversations with decision-makers in government and industry. Environmental impact analysis and social impacts as an example can be significant during the transformation of a rural environment into a temporary industrial setting (Chermak, 2014). Decisions about the mitigation of impacts are being made by industry from the analyses of consultants and others, but these internal documents are seldom publicly available or communicated to the public. This lack of communication prevents further evaluation and critical discussions with stakeholders to promote community engagement and understanding, and to manage expectations. There currently is little or no public/academic viewing of these documents, when/if they exist; thus there is little or no opportunity for lessons learned to be developed, and operators may be spending money on social impact mitigation without being very effective (Chermak, 2014).

In South Africa, the National Planning Commission (NPC) report (National Development Plan: Vision for 2030, 2011:167-168) states that ‘Shale gas has the
potential to contribute a very large proportion of South Africa’s energy needs. South Africa will seek to develop these resources if environmental damage can be avoided and the benefits will outweigh South Africa’s dependence on coal [and] nuclear energy’. The NPC further argues in the national development plan that exploratory drilling in areas like the Karoo should be allowed to determine whether there are economically viable shale gas reserves.

In contradiction, different sectors of the SA government all appear to be ‘fighting’ for their own mandate in the shale gas debate. The National Development Plan states that SA has to move away from coal-fired electricity to cleaner fuels, but also promises clean drinking water for all, which could be compromised by shale gas extraction in the Karoo. The renewable energy argument has surfaced in opposition to the extraction of gas through fracking. South Africa is seen to have abundant ‘sunny days’ that can ensure sufficient production capacity of solar energy by 2030 (Edkins et al., 2010; Esterhuysse et al., 2013)

A report entitled ‘Karoo shale gas report: A special report on economic considerations surrounding potential shale gas resources in the southern Karoo of South Africa’ has recently been released by Econometrix, a leading independent economic consultant firm based in Johannesburg (Econometrix, 2012). The report acknowledges the environmental concerns over fracking and the analysis is focused on the economic impact side of the debate. The report estimates macroeconomic impacts for estimated gas finds, using a macro-economic framework, equating expanding gas production values to an injection of income into the South African economy (Econometrix, 2012).

The following information has been extracted from the Econometrix Report (2012) and provides an overview of projected economic impact of fracking. The report identifies six possible areas of application for natural gas in South Africa. They are: exporting gas (as NLG); the use of gas as an energy source for domestic, commercial and industrial applications; power generation; creating
automotive fuels and as an energy input in the fertiliser sector. The extent to which gas is exported will influence the scale of downstream value adding activities. The exploration phase is likely to use mostly imported capital equipment, with a shift to more local content as the process moves from exploration to production. The report assumes shale gas production will start by 2020 and estimates the potential economic impact of developing the Karoo basin, over a 25 year period (2020-2045) using two possible scenarios.

Scenario A assumes a recoverable reserve of 20tcf, and scenario B assumes 50tcf. The model is calibrated to use constant 2010 prices. Both scenarios use a well head gas price of US$8/mcf, and apply the 2010 Rand/US Dollar exchange rate of R7.303/$ (2014 is 1: 11) for the conversion to Rand values (Econometrix, 2012).

Scenario A models a combined turnover (upstream and downstream) of R4.031 trillion, a total value added (contribution to GDP) of R2.006 trillion, a R887 billion contribution to government revenue and the maximum employment created was estimated at 355 817 jobs. Scenario B modelled a combined turnover (upstream and downstream) of R9.520 trillion, a total value added (contribution to GDP) of R5.015 trillion, a R2.223 trillion contribution to government revenue and the maximum employment created is estimated at 854,757 jobs. The extent to which gas might be exported will have a significant effect on the estimated economic impacts. The possible impacts arising from a situation where 0% of gas is exported, where 50% of gas is exported and a 100% of gas is exported.

It should, however, be noted that Econometrix report was commissioned to produce these studies, survey and, ultimately, reports for one of the companies that have applied for exploration licences e.g. Shell. It is critical to know whose interest is being served by the Econometrix recommendations: the interest of Shell, the government or that of the affected communities.
As part of the specialist team to provide comments on the 2012 Report on investigation of hydraulic fracturing in the Karoo basin of South Africa, Professors Deon Pretorius (NMMU) and Anthony Leiman (UCT) also provided comment on the socio-economic impact of fracking in the Karoo and a review of the Econometrix report. Below are some of their comments (2012).

Professor Pretorius (2012) indicates that the Economic Assessment conducted by Econometrix is clearly a sophisticated exercise in economic modelling and it is useful in a decision-making process like this, but the data limitations must not only be acknowledged but also the assessment must be treated with the necessary tentativeness. He urges that it would also be wise to delay focussing on positive or negative scenarios in the public arena until better quantitative and geographic/community data is available and the necessary social and socio-economic work was completed. Furthermore, that the earlier assessment of the potential social impact becomes available, the earlier it will be possible to take the necessary and appropriate mitigating actions and the easier it will be to evaluate the positive economic and other benefits.

Professor Leiman (2012) indicates that it is important to note that the ‘reserves’ being discussed are unproven and indeed may not exist, or may be in a such a form as to be sub-economic. The Econometrix report focuses on the identification of plausible economic consequences from the exploitation of natural gas in commercially viable quantities. The consequences of such deposits being absent are neither identified nor discussed. He advises that in assessing the likely outcomes of commercially viable deposits, the report uses a broad simple static fixed-price macro-economic framework and a standard tool, Input/Output Analysis. The latter is well known and widely used. The problems with this approach should be clear. First, the table is compiled using historic data: it is a representation of the economy as it was, not as it is, and certainly not as it will be. Second, it is based on average relationships not marginal ones. If there is substantial unemployment or excess capacity in the economy, or there are large
stockpiles of inventories, then stimulating a sector may have little or no effect elsewhere. Any increase in demand can simply be met by selling off stockpiles or bringing underutilised capacity back on-stream. Thirdly, it takes no account of prices. Any large scale stimulus is likely to affect relative prices in the economy, making some things cheaper and others more expensive. These price effects can themselves have profound effects on the economy. A recent example is the weakening in the oil price in the first week of December 2014 that made the shale gas industry in the United States almost uneconomical.

Leiman (2012) further indicates that there is little current information about whether or not the Karoo shale beds contain gas in exploitable quantities; and if so what the extraction would cost and what the quantity of the gas would be. Without such information any economic outputs would be at best academic. He, however, concedes that there would undoubtedly be structural changes to the economy of the Karoo, and of the country as a whole, if the gas find were significant. When numbers as high as 25Tcf or 50Tcf are posited the potential is enormous. A useful benchmark to bear in mind is that PetroSA’s Mossgas gas-to-liquid refinery was constructed on the strength of a confirmed gas resource of only around 1 Tcf (Leiman, 2012). This refinery supplies upwards of 6% of our national liquid fuel requirement. That said the actual outcome would therefore be largely dependent on political issues.

Responses to the findings of the Econometrix report have not been well received by various lobby groups. TKAG, for instance, dismissed the results saying that opinion polls fail to factually address the issues being considered by government and should be irrelevant to any outcome of the government commissioned task team’s ‘fact-based’ investigation. They added that the Econometrix report appeared to ‘cherry-pick’ data and reports from elsewhere. TKAG suggest that there was still a lack of scientific and economic consensus on fracking globally and that, ‘until this debate is more settled’, the Econometrix ‘projections could be viewed only as an opinion’ (Creamer, 2012:1).
Fig (2012) indicates that fracking may give rise to alliance formation across the social divides, which may serve to deepen social and racial divisions, especially in the Karoo with various poor township communities and rich farmers. It might be argued that the privileged ‘white’ community and specifically large landowners, who have traditionally not shown a great interest in the advancement of others, is articulating most of the opposition to fracking. The demand that this opposition places on solidarity from the black community may not be one that has been earned through past trust (Fig, 2012). This situation could potentially divide the communities further, with energy companies taking advantage of the situation to claim that opposition to fracking means depriving people of livelihoods, opportunities, and resources.

The local people of the Karoo believe that their concerns about fracking are similar to those that gave rise to the struggles of local people for agrarian transformation, unemployment, lack of basic and affordable services, infrastructure and limited access to sustainable human settlements and land issues in general (Esterhuyse et al., 2013). Their call should therefore be included in any approach that will allow them to meaningfully respond to matters that affect their lives and livelihoods.

Scientists like Professors Gavin Keeton (Rhodes University), Gideon Steyl (UOFS) as well as Maarten de Wit, (NMMU), emphasise the need to drill exploratory wells to better inform stakeholders about the potential costs and benefits of developing the shale gas industry (Creamer, 2014:1). Accordingly, this will ‘let us reach a point where we know what it is we are debating. The sooner the geologists get drilling, the better’ (Creamer, 2014:1).
4.2.3.3 The EIA process and associated challenges

Section 24 of the South African Constitution provides that everyone has the right to ‘secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development’, and that legislative and other measures must be enacted to ensure this fundamental right.

The South African government granted permits for exploration, but because of the lack of proper research, public consultation and regulation, a heated debate has arisen as to whether hydraulic fracturing should be allowed in the Karoo or not. Although research by Econometrix shows potential benefits to the economy of South Africa, there is a great deal of concern about the long-term environmental impact of such activities in the Karoo, coming mainly from environmental groups and community members who directly affected. The absence of a clear environmental impact assessment (EIA) process prior to the issuing of permits by the Department of Mineral Resources (DMR) has raised concerns from environmentalists, economists and the public. Because of these concerns the Department of Environmental Affairs (DEA) has not commissioned any EIA for hydraulic fracturing in the Karoo area and country in general. In any event no EIA application can yet be lodged with the DEA.

The South African government has, however, commissioned the Strategic Environmental Assessment (SEA) of Shale Gas Development in May 2015 as a scientific undertaking done to improve the understanding of the risks and opportunities for shale gas development. Such a process will assist government to create a framework and guiding principles to inform responsible decision-making. This Strategic Environmental Assessment will therefore consider both exploration and production-related activities and impacts of shale gas development, including the process of hydraulic fracturing, and will include an assessment of all social, economic and biophysical risks and opportunities presented (Maarten De Wit, personal communication, 27 July 2015).
The study area covered by the SEA will include regions of the Karoo Basin which currently have exploration rights; applications are pending in Northern Cape, Eastern Cape and Western Cape and will run over 24 months (http://www.southafrica.info/about/sustainable/shalegas-sea).

Already in September 2013, the Minister of Water and Environmental Affairs issued a notice of intention to declare hydraulic fracturing a controlled activity in terms of the National Water Act, 1998 (Act 36 of 1998). The department’s key priority is to protect the environment and water resources, and take every precaution to ensure that the possible effect of hydraulic fracturing on water resources was carefully managed and minimised. As a result an inter-departmental monitoring committee was established to review the existing regulatory framework and develop the necessary guidelines and methodologies for hydraulic fracturing (Esterhuyse et al., 2013).

Although no EIA has been commissioned yet, it is worth noting the legislation that regulates the potential exploration of shale gas in South Africa (Decker & Marot, 2012; Esterhuyse et al., 2013):

a) The Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA) Section 39 of the MPRDA provides that any person who applies for an exploration or production right must conduct an environmental impact assessment and/or submit an environmental management programme. Such a right becomes valid only on approval of the associated environmental management programme.

b) The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) NEMA establishes a general framework for environmental law by, inter alia, prescribing national environmental management principles that must be applied by state institutions when making decisions that may have a significant impact on the environment. Section 2(1) of NEMA provides that the
principles set out there in apply throughout the Republic to the actions of State that may significantly affect the environment.

c) The National Water Act, 1998 (Act No. 36 of 1998) (NWA) - The purpose of this Act is to ‘ensure that the nation’s water resources are protected, used, developed, conserved, managed and controlled’ taking into account, inter alia, basic human needs of present and future generations, equitable access to water, social and economic development, the public interest, the growing demand for water, ecosystems and biological diversity and international obligations.

d) The Waste/waste water Management - With the exception of nuclear and mining waste (residue deposits and stockpiles), waste management in South Africa is generally regulated by the National Environmental Management: Waste Act, 2008 which is administered by the Department of Water and Environmental Affairs (DWEA). This statute provides norms and standards for regulating the management of waste by all spheres of government, licensing and control of waste management activities, remediation of contaminated land, compliance and enforcement measures, etc. Waste management activities associated with hydraulic fracturing that may require a waste management licence include, but are not limited to, the following (National Environmental Management: Waste Act, 2008):

i) Storage, including the temporary storage of general and hazardous waste;

ii) Re-use, recycling and recovery of general and hazardous waste;

iii) Treatment of general and hazardous waste including effluent, waste water or sewage; and

iv) Construction of facilities and associated structures and infrastructure. Concern has been raised that the existing regulatory framework may not be adequate to deal with all the implications of the process.
Respondents in this research indicated that South Africa has insufficient hydraulic fracturing-specific legislation and policy and that the MPRDA is insufficient in scope to manage the challenges represented by shale gas mining and hydraulic fracturing. Also, that there is insufficient technical knowledge about hydraulic fracturing. This opinion may be based on the fact that the hydraulic fracturing-specific regulations are not well understood and also that South Africa does not succeed in effectively managing existing mining applications. Additionally, the majority of respondents identified a conflict in departments’ mandates that may hamper effective regulation of hydraulic fracturing activity in South Africa. Officials, academia and consultants generally agree that regulatory gaps for fracking exist and needs urgent address (Esterhuysen et al., 2013).

Amidst the uncertainty and opposition to hydraulic fracturing, it is encouraging to observe the commitment shown by the South African Government in establishing a high-level team to lead the SEA for Shale Gas Development. The team consists of the Council for Scientific and Industrial Research (CSIR), South African National Biodiversity Institute (SANBI) and the Council for Geosciences (CGS). They will be assisted by a Multi-Author team drawn from a broad range of sectors, including research institutions, government, NGOs, universities (including NMMU-AEON), business etc. across different regions of the country with different interests and experience. The ultimate aim of the SEA will be to provide an integrated assessment and decision-making framework to enable South Africa to establish effective policy, legislation and sustainability conditions under which shale gas development could occur (Process Custodian Group, 2015).
4.2.3.4 Discussion on role of Public Participation in Hydraulic Fracturing in the Karoo

Public attention on hydraulic fracturing in South Africa has increased significantly over the past few years. Opinions, rhetoric and approaches to decision-making on fracking at both local and national level are extremely diverse (Rosenberg et al., 2013). Both the proponents and opponents in the debate about fracking agree that better information is needed in understanding the full scope and impact fracking may pose. A stronger role for independent science to inform public dialogue and decision-making on fracking is seen as essential for communities to responsibly approach this complex issue. ‘The information at least, should be in plain view, even if much of the drilling is not’ (Rosenberg et al., 2013:1).

The anti-fracking lobby group i.e. Treasure Karoo Action Group (TKAG) and social rights group, AfriForum have been very vocal in their opposition to the hydraulic fracturing proposed for the Karoo. They have threatened to take legal action against government or even plan to take their matter to the Public Protector if government do continue making decisions that are not informed by comprehensive scientific input (Esterhuysen et al., 2013).

In August 2014 I had a conversation with Khoi elders in the Tsitsikamma about the proposed fracking in the Karoo. They were deeply concerned that the South African government has not properly consulted with the various indigenous groupings of the Karoo and broader Eastern Cape about the proposed fracking. Their opinion was that they need to be recognised as the first people of this country. In their opinion, the discussion so far has been misdirected as the ‘real landowners’ are not consulted. Incwa Chief, Danny Jafta, said that the local heritage to his people was more important than potential foreign and local investment (Weekend Post, October 11, 2014). The following quote by Chief Jafta express the deeply seated suspicions of the indigenous Karoo peoples:
“We as the people of this region have great pride in our heritage and quiet way of life. Who is to say that once this fracking takes place, our heritage sites and history won’t be destroyed? I spoke to my father yesterday. He doesn’t even know what fracking is yet, but should it take place it will change his way of life forever. The Karoo people you say you are so concerned about don’t even know what you are talking about. How are they supposed to oppose your decisions when you haven’t educated then about your intentions?” (De Swart, 2014).

The challenge with available information from the traditional media and the World Wide Web on fracking is that it is not peer-reviewed and often provides invalidated information (De Wit, 2011; Healy, 2012). This surely has been the case with this research as it was quite difficult for the researcher to find peer-reviewed academic information on the fracking debate in the Karoo. Most information provides opinions that are based on emotion and are difficult to validate. This may lead to confusion amongst communities and responses by those involved in the debate can then easily be described as uninformed, emotional and irrational (De Wit, 2011). The confrontational approach of opponents to hydraulic fracturing is at times justified as those in control (proponents) of the process are secretive and do not share information or concerns in a transparent manner with stakeholders. At times companies and their consultants seem unsympathetic to the anxieties and needs of those potentially affected by hydraulic fracturing.

However, when information is provided the response time normally does not allow for proper engagement on the matters that are mostly of a technical nature. Even professionals complained that they find it difficult to access and review the volumes of information in the time period normally provided for comment (De Wit, 2011; Esterhuyse et al., 2013). This may further marginalise the poor as they may not have the resources or competence to access and interpret information. For these reasons De Wit (2011) propose that the energy industry work better
with government, environmental organisations, academic institutions and local communities to ensure broad participation and communication on risks and to allow society to make well-informed decisions.

Engagements with local communities, residents and other stakeholders are thus needed prior to each development phase, with sufficient opportunity for comment and appropriate responses. The proposed fracking regulations provide no opportunity for a transparent public participation process. The NEMA principles promote the participation of all interested and affected parties in environmental governance with all people given ‘the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation and with participation by vulnerable and disadvantaged people ensured’ (NEMA s. 2(4)(f)). Meaningful public participation is a pre-requisite to the realisation of NEMA principle section 2(4)(g) which requires decisions to account for the interests, needs and values of all interested and affected parties. Meaningful public participation must account for the language barriers of South Africa’s multilingual society (and particularly in the case of fracking for the people of the Karoo) and provide clear, comprehensive and accessible information.

Professor Pretorius indicates that public participation in decision-making is regarded as important for the following reasons (Report on investigation of hydraulic fracturing in the Karoo Basin of South Africa, 2012):

“Affected persons likely to be otherwise unrepresented in, for example, environmental or social assessment and decision-making processes are provided an opportunity to present their views. Communities may provide useful additional information to decision-makers – especially when cultural, social or environmental values are involved that cannot be quantified easily. Accountability of political and administrative decision-makers is likely to be reinforced if environmentally relevant processes are open to public view. Openness puts pressure on
administrators to follow, for example, a required procedure in all cases. Without integrating the viewpoints of citizens, environmental policy runs the risk of being delayed early in the implementation phase. Public participation enhances community ownership of decisions and resultant outcomes because of the community being part of the wider decision-making process. Stakeholder engagement may result in partnerships or alliances between interested parties and local government. Public confidence in the reviewers and decision-makers is enhanced since citizens clearly can see in every case that all environmentally relevant issues have been fully and carefully considered”.

In their research Esterhuyse et al. (2013) found that at least fifty percent of the key informants indicated that they are not at all satisfied with their current knowledge on shale gas mining. This is indicative of the unprecedented nature of this activity in South Africa and points towards a serious need for knowledge dissemination through which decision-makers can be exposed to relevant, current and applicable information on shale gas mining and hydraulic fracturing, specifically with reference to South Africa. This conclusion is strengthened by the fact that more key informants relied on the use of popular media than on scientific sources to expand their knowledge base and highlights the urgency of providing more scientific, scholarly information to those in decision-making positions. Therefore, various avenues of dissemination of information will need to be explored in the South African context to assist decision-makers in their decision-making processes.

Owing to the potentially extreme and far-reaching detrimental impacts associated with fracking, it is important that all stakeholders have the opportunity to participate in each significant stage in the shale gas process. Compliance with a defined stakeholder management plan will ensure such participation. In contrast with the EIA Regulations, the MPRDA Regulations make very limited provision for public participation. Under NEMA, the proposed hydraulic fracturing
regulations must include specific and detailed provision for transparent, informed and meaningful public participation. Since the proposed SEA will fall within the ambit for NEMA, the NEMA regulations will have to be complied with.

What is quite encouraging is the promise by Trade and Industry Minister, Dr Rob Davies to the people of the Karoo and the various lobbyists that government would consider their concerns against fracking and involve them in all future processes. This was the stance taken by former Mining Minister, Susan Shabangu to consult with the public prior to making any decision on fracking. This may be the reason why government in April 2011 invoked a moratorium (which has now been lifted by the DMR) on licences where fracking is proposed in the Karoo. The people of South Africa at all levels are entitled to be heard on an issue of this magnitude (Smith, 2013). South African President, Jacob Zuma, reiterated this in his State of the Nation address in February 2014, indicating that ‘the development of petroleum, especially shale gas extraction is important for the Karoo and the South African economy’ and that ‘the people of the Karoo should play an important role in the decisions about this resource’ (State of the Nation address, 2014).

The only thing we are actually able to conclude from the discussion is that we do not really know for sure what the exact consequences of hydraulic fracturing may be, and that the studies proposed by Cabinet will shed more light on this so that informed decisions can be made going forward. However, this may now provide the space for academics in various fields to step up and do research on the various aspects and impacts of fracking that can complement the proposed studies and at the same time build academic competencies which are so highly required in this country. The partnership between the Nelson Mandela Metropolitan University (through EAON) and the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT) worth R18-million, on a research project focusing on the viability of shale gas exploitation in the Karoo is therefore encouraging.
4.2.3.5 Application of Public Participation Barometer (IAP2)

The following 13 key criteria are examined below to test the effectiveness of the public participation process in the Hydraulic Fracturing for unconventional gas extraction in the Karoo Project. The criteria extracted from the information in this case study will show adherence/non-adherence and will be assigned as YES, NO or POSSIBLY in the scale below (Table 4.4). Based on the total value of YES and POSSIBLY provide an indication of the level of stakeholder engagement and thus effectiveness of the public process.

Key criteria:

1. Adherence to EIA Regulatory guidelines

The Department of Environmental Affairs has not received any Environmental Impact Assessment (EIA) for shale gas fracking in the Karoo area as such a stage has not been reached yet. There was therefore an adherence to other regulatory guidelines leading up to the current process of engaging with an EMP.

Adherence: Yes

2. Adherence to timeframes to inform I&APs

In the process so far, when information was provided the response time mostly did not allow for proper engagement on the matters that are often of a technical nature. Even professionals complained that they find it difficult to access and review the volumes of information in the time period normally provided for comment (De Wit, 2011; Esterhuyse et al., 2013).

Adherence: No
3. **Representivity of I&APs**

It might be argued that the privileged ‘white’ community and specifically large landowners, who have traditionally not shown a great interest in the advancement of others, is articulating most of the opposition to fracking. However, affected parties from the Karoo community at large have also provided a response in the fracking debate.

**Adherence: Yes**

4. **Adequate opportunity for engagement for I&APs**

Lack of engagement may further marginalise the poor as they may not have the resources or competence to access and interpret information. Engagements with local communities, residents and other stakeholders are needed prior to each development phase, with sufficient opportunity for comment and appropriate responses. The proposed fracking regulations provide no opportunity yet for a transparent public participation process.

**Adherence: No**

5. **Access to information related to the project**

The confrontational approach of opponents to fracking is at times valid in light of the fact that exploration companies and their consultants are secretive and do not share data or concerns in a transparent manner. At times these companies appear unsympathetic to the anxieties and needs of those potentially affected by fracking.

**Adherence: No**
6. **Language and cultural barriers observed**

Incwa Chief, Danny Jafta, said that the local heritage to his people was more important than potential foreign and local investment (Weekend Post, October 11, 2014). The following quote by Chief Jafta express the deeply seated suspicions of the indigenous Karoo peoples: ‘We as the people of this region have great pride in our heritage and quiet way of life. Who is to say that once this fracking takes place, our heritage sites and history won't be destroyed?’ (Weekend Post, October 11, 2014).

**Adherence: No**

7. **Stakeholder identification mechanisms**

Compliance with a defined stakeholder management plan will ensure broad participation. In contrast with the EIA Regulations, the MPRDA Regulations make very limited provision for public participation. Therefore a proper process of stakeholder identification is limited. These regulations guide how stakeholders in the process need to be identified, so mechanisms are in place.

**Adherence: Possibly**

8. **Public involvement in design of projects**

‘I spoke to my father yesterday. He doesn't even know what fracking is yet, but should it take place it will change his way of life forever. The Karoo people you say you are so concerned about don’t even know what you are talking about. How are they supposed to oppose your decisions when you haven’t educated then about your intentions?’ (Weekend Post, October 11, 2014). It is clear from this quote from Chief Jafta that the general public and especially the marginalised communities are excluded from the consultation process that is very technical and that they have limited knowledge on how such projects are designed.

**Adherence: No**
9. Involvement of marginalised groups in process

In August 2014, during a conversation with some of the Khoi elders in the Tsitsikamma about the proposed fracking in the Karoo, it transpired that they were deeply concerned that the South African government had not to their satisfaction consulted with the various indigenous groupings of the Karoo and broader Eastern Cape about the proposed fracking.

Adherence: Yes

10. Variety of methods used in public participation

Various information meetings have been held by EAPs with selected stakeholder groupings. The various radio and television broadcasts cannot be regarded as serious engagement methods particularly when many Karoo communities do not all have access to such media coverage, let alone the technical language used in such discussions. However, one cannot discard the fact that various interest groups, other than the resource applicants, are having meetings, workshops and briefings with the Karoo communities to allow better information sharing platforms.

Adherence: Yes

11. Independence of EAPs

The EIA process has not commenced yet and the consultants involved in the current process were appointed by the various exploration companies. Their engagement to inform communities has not been independent.

Adherence: No
12. Fulfilment of the intended purpose of public participation

Without integrating the viewpoints of citizens, environmental policy runs the risk of being delayed early in the implementation phase. Public participation enhances community ownership of decisions and resultant outcomes because of the community being part of the wider decision-making process. The opposition to fracking from various groupings, albeit from different positions, suggest that the purpose of public participation will be fulfilled. The aim of the public participation in this project is dissemination of information and not to influence the decision on whether fracking should take place or not.

**Adherence: Yes**

13. Public participation influence on final decision

What is quite encouraging is the promise by Trade and Industry Minister, Dr Rob Davies to the people of the Karoo and the various lobbyists that government would consider their concerns against fracking and involve them in all future processes. This was the stance taken by former Mining Minister, Susan Shabangu to consult with the public prior to making any decision on fracking. This may be the reason why government in April 2011 invoked a moratorium on licences for proposed fracking in the Karoo.

**Adherence: Possibly**

In summary, the public participation process in the Hydraulic Fracturing for unconventional gas extraction in the Karoo Project adhered to 6 of the criteria marked **(YES and POSSIBLY)** in the checklist of the thirteen key criteria (Table 4.3). The public participation process for the Hydraulic Fracturing for unconventional gas extraction in the Karoo Project has therefore been **fairly effective**.
<table>
<thead>
<tr>
<th>NO</th>
<th>KEY CRITERIA</th>
<th>ADHERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adherence to EIA Regulatory guidelines</td>
<td>YES/</td>
</tr>
<tr>
<td>2</td>
<td>Adherence to timeframes to inform I&amp;APs</td>
<td>NO</td>
</tr>
<tr>
<td>3</td>
<td>Representivity of I&amp;APs</td>
<td>YES</td>
</tr>
<tr>
<td>4</td>
<td>Adequate opportunity for engagement for I&amp;APs</td>
<td>NO</td>
</tr>
<tr>
<td>5</td>
<td>Access to information related to the project</td>
<td>NO</td>
</tr>
<tr>
<td>6</td>
<td>Language and cultural barriers observed</td>
<td>NO</td>
</tr>
<tr>
<td>7</td>
<td>Stakeholder identification mechanisms</td>
<td>POSSIBLY</td>
</tr>
<tr>
<td>8</td>
<td>Public involvement in design of projects</td>
<td>NO</td>
</tr>
<tr>
<td>9</td>
<td>Involvement of marginalised groups in process</td>
<td>YES</td>
</tr>
<tr>
<td>10</td>
<td>Variety of methods used in public participation</td>
<td>YES</td>
</tr>
<tr>
<td>11</td>
<td>Independence of EAPs</td>
<td>NO</td>
</tr>
<tr>
<td>12</td>
<td>Fulfilment of the intended purpose of public participation</td>
<td>YES</td>
</tr>
<tr>
<td>13</td>
<td>Public participation influence on final decision</td>
<td>POSSIBLY</td>
</tr>
<tr>
<td></td>
<td>TOTAL (YES)</td>
<td>6</td>
</tr>
</tbody>
</table>

Level of Stakeholder Engagement and Effectiveness:

- 1 – 3  Inform / Least Effective
- 4 – 6  Consult / Fairly Effective
- 7 – 9  Involve / Very Effective
- 10 – 13 Collaborate / Most Effective

Table 4.3: Scale on adherence to the level of stakeholder engagement (Hydraulic Fracturing for unconventional gas extraction in the Karoo Project)

In line with the characteristics of each level of stakeholder engagement, it is clear that the Hydraulic Fracturing for unconventional gas extraction in the Karoo responds to the process of **consult** which involves an exchange of information between stakeholders, which provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the proponent or authorities should take into account the concerns and views expressed by I&APs in making the final decision.
4.3 Conclusion

The case studies discussed in this chapter shows that public participation in development projects in South Africa has both strengths and weaknesses. The strengths include a functioning legal and institutional framework, while weaknesses include lack of inclusiveness of all stakeholders in the process, incomplete information in the final EIA, and lack of credibility of the public participation process. The case studies do not show a clear proactive effort of public participation but rather a more reactive approach to public involvement. The observation from the three cases is that once various interest groups apply pressure, those driving the project increase and broaden the public engagement.

<table>
<thead>
<tr>
<th>LEVEL OF STAKEHOLDER ENGAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFORM</td>
</tr>
<tr>
<td>Pondoland N2 Tollroad</td>
</tr>
<tr>
<td>CONSULT</td>
</tr>
<tr>
<td>Coega IDZ</td>
</tr>
<tr>
<td>Karoo Hydraulic Fracturing</td>
</tr>
<tr>
<td>1996</td>
</tr>
<tr>
<td>1999 / 2015</td>
</tr>
<tr>
<td>INVOLVE</td>
</tr>
<tr>
<td>COLLaborate</td>
</tr>
</tbody>
</table>

PUBLIC PARTICIPATION BAROMETER

<table>
<thead>
<tr>
<th>Least effective</th>
<th>Fairly effective</th>
<th>Very Effective</th>
<th>Most effective</th>
</tr>
</thead>
</table>
| INCREASING LEVEL OF PUBLIC ENGAGEMENT OVER TIME

Table 4.4: Summary on level of stakeholder engagement in the 3 case studies

It is noticeable, however, from the three case studies that public participation is not making a significant difference in the outcomes on whether a development project will proceed or not. Some constraints to the effectiveness of public participation in EIA in South Africa as indicated in the case studies relates to late involvement of public in the EIA process, lack of efficient communication
strategies and technologies, poor quality of EIA reports, inadequate consideration of public concerns and lack of transparency in the decision-making.

The location of N2 Toll Road was disputed by the Wild Coast communities in relation to the indicated economic benefits the construction of the road will bring as well as alternatives to such a road.

Influence exerted by special interest groups often create an environment in which inappropriate government spending decisions are made, e.g. boosting the level of spending in the run up to an election. The Coega Project has been subjected to this type of critique by various proponents, indicating that this may have been a strategy by the ruling party to secure enough votes in future elections.

Observations in working with politicians shows a tendency to look for short-term solutions or ‘quick fixes’ to difficult economic problems rather than doing considered analyses of long-term considerations. The Hydraulic Fracturing for unconventional gas extraction in the Karoo Project is a case in point that proceeded unabated until enough pressure was put on government to invoke a moratorium on licences (now lifted) and to put together a team to investigate the impacts this may have on the environment and people by commissioning a SEA.

Lastly, the three case studies indicate the levels of public participation to be: inform (Pondoland N2 Tollroad), consult (Coega IDZ), and consult (Hydraulic Fracturing in the Karoo) respectively (Table 4.4). It appears that public participation in high impact government projects are improving over time in terms of its effectiveness in public participation. This is evident in the increase in public participation levels over time in the three projects 1996 (inform) to 2015 (consult). In terms of effectiveness, one would therefore conclude that the public participation process in EIA is progressing well and can currently be described as being fairly effective.
This chapter has attempted to illustrate through three selected case studies the practice and subsequent levels of public participation in the EIA process, as well as challenges experienced in the public participation process in large projects. The findings were also presented i.e. the level of stakeholder engagement and effectiveness based on the 13 key criteria through application of the IAP2 spectrum. It suggested that enhanced public participation and participatory democracy processes may lead to more effective decisions. It is encouraging though, to see an increase (see timeline Table 4.4) amongst the South African public in contributing to the public participation debate. If this continues one may in the near future see new projects which reflect collaborate on the IAP2 spectrum.
CHAPTER FIVE

RESEARCH FINDINGS – QUESTIONNAIRES

5.1 INTRODUCTION

This chapter explores the views held by various practitioners involved in public participation processes around the country and their views on the effectiveness of the public process in EIA. The information obtained through questionnaires is presented both quantitatively and qualitatively. The first section of this chapter focusses on the biographical data obtained from the questionnaires and is presented in a quantitative format. This is followed by responses related to open-ended questions.

The qualitative responses take cognisance of the thirteen key criteria outlined in previous chapters. These are captured in four specific questions posed to respondents. The responses are listed in a format that captures the authentic ‘voice’ of the respondents. However, a brief discussion first summarises the key ideas from these lists.

The application of a public participation barometer follows. The 13 key criteria as captured in the four leading questions are discussed and tested first for adherence and then analysed to determine the level of stakeholder engagement and the effectiveness of the process. A conclusion of the main outcomes of the chapter follows.

5.2 RESPONSES TO QUESTIONNAIRES

The survey questionnaire employed for this study allowed mainly for questions with multiple options, whilst including a few open-ended questions. The designed questionnaire (Appendix A) provides an analysis of how respondents view the role public participation plays in the environmental decision-making process. The
questionnaire was circulated at the Annual Conference of the Fynbos Forum held in August 2009 in Bredasdorp which attracts academics, scientists, environmental practitioners and consultants, students, civil servants and the general public. A second approach was adopted in 2010 to distribute a copy of the questionnaire also electronically through an e-mail based process to environmental and conservation interest groups. In total 150 questionnaires were distributed countrywide and only 35 (23%) were returned. The following section provides the biographical data of the respondents and focus specifically on questions 1 to 3 (out of a total of 20) in the survey. Questions 1 to 3 provide a contextual understanding of the work and knowledge generated by respondents as practitioners in the public participation process and EIA. This will be followed by an analysis of the quantitative data obtained in questions 5 to 10 and 12 to 18. A qualitative analysis of the remaining questions (4, 11, 17, 19 and 20) will conclude the presentation of the responses.

5.2.1 Biographical data and responses to close-ended questions

The majority (63 %) of the respondents were female (22). Thirty seven percent (37% or 13) were males (Fig. 5.1)

Fig. 5.1: Proportion of respondents per gender group
Most of the respondents who completed the questionnaire were between the ages of 20 to 39 years (48.6%), whilst 25.7% were between the ages of 40 to 59; and 20% above 60 years of age (Fig. 5.2).

![Pie chart showing age distribution of respondents](image)

**Fig. 5.2: Age distribution of respondents**

The table below (Fig.5.3) and pie chart (Fig. 5.2) gives an illustration of the age distribution of the various respondents. It should be noted that two (5.7%) of the respondents did not declare their age. All age groups seem to be fairly evenly represented in the survey.

![Bar chart showing professions of respondents](image)

**Fig. 5.3: Professions of respondents**
The majority of the respondents were consultants (67%), whilst eight (8) worked for government and six (6) in civil society (Fig. 5.3). The rest works for NGOs (4) and three (3) were students. Two of the respondents did not declare their professional status. A major discrepancy was the non-response from academics. Academics are not necessarily registered as environmental practitioners, or may not have attended the Fynbos Forum where initial questionnaires were distributed. However, in the 2013 email survey, questionnaires were circulated to academics at various universities, again yielding no responses. One can merely speculate about the reasons for non-response from academics, which may be that they were too busy or sceptical about other research than those commissioned by themselves. However, in chapter three Sheehan (2001:5), in a review of e-mail survey response rates noted, ‘... while the number of studies that use e-mail to collect data has been increasing over the past fifteen years, the average response rate to surveys are decreasing’. The non-response from academics could therefore also be attributed to this.

Sixty three percent (63%) of the respondents with EIA experience reside in the Western Cape Province, whilst the remaining 27% work in the other remaining provinces. It should be noted that fynbos is most prevalent in the Western Cape and therefore most practitioners attending the conference work in this province. This is likely the reason for the skewed representation from other provinces.

Ninety one percent (91% or 32) of the respondents indicated that they were involved on a regular basis (at least once a month) in public participation/consultation processes. Eight percent (8% or 3) had engagements less than once a month in the public participation process (Fig. 5.4).
The information indicates that most of the 35 respondents had sufficient experience in EIAs and public participation to provide information relevant to this study. Fifteen had five years’ experience, six had five to ten years’ experience and twelve were involved for more than ten years. Two of the respondents did not declare their number of years’ experience in the EIA and public participation process (Fig. 5.4).

Figure 5.5: Percentage of registered participants affected by the project
The responses to the question on the percentage of people attending public participation sessions that are affected by a project, is illustrated in Figure 5.5, which indicates that fourteen of the respondents specified that most (51% to 75%) of the registered participants attending public participation meetings/workshops are affected by the related projects. Twelve respondents think that less than 25% of the registered participants are affected by the projects; five respondents think that less than 50% are affected. Two of the respondents think that 76 – 100% of those attending are affected whilst another two respondents were unsure of the percentage affected. The attendance of public participation sessions is further confirmed by interview responses in chapter six.

![Figure 5.6: Percentage of registered participants interested in projects in their area](image)

Eight respondents indicated that less than 25% of the registered participants attending public participation meetings/workshops are interested in all of the projects (Fig. 5.6). Seven indicated that less than 50%, and five indicated that less than 75% are interested in the projects. Twelve of the respondents indicated that 76 – 100% of people attending public participation sessions are interested in the projects. Three respondents were unsure about the percentage of participants attending participation sessions interested in the projects.
What follows is a focus on the responses provided by respondents to some close-ended questions (e.g. questions 5 to 10) that do not specifically relate to biographical data. It is presented in a quantitative format that includes both analysis of information and graphs indicating the percentage or significance of responses. The aim of this exercise is to provide a deeper understanding of the opinions amongst the various practitioners or ‘pracademics’ in the field, as to why some may see the public participation process in EIA as unsatisfactory.

With regard to the question (Q 10) on whether enough is done for the various role-players to ensure adequate opportunity for public participation, the following responses were provided from the 35 respondents to this questionnaire:

Forty-nine percent (49% or 17) of the respondents indicated that not enough is being done by the applicants, EAPs, competent authorities and organs of state to ensure adequate and appropriate opportunity for public participation. Thirty two percent (32% or 11) of the respondents believed that enough is being done. Seven of the respondents were unsure of whether enough is being done.

Thirteen (37%) of the participants indicated that there is a general adherence by EAPs to the stipulated public participation guidelines in the EIA process. Eighteen were not sure on whether there is adherence to the guidelines. The remaining four indicated that there is no adherence to the guidelines by EAPs.

Fourteen (40%) of the participants indicated EAPs mostly adhered to timeframes to inform Interested and Affected Parties (I&APs) of public participation meetings, workshops and feedback sessions. Eleven (35%) indicated lower adherence to timeframes (between one and three).

Fourteen (40%) of the respondents rated the independence of the EAPs in the EIA process very low, whilst thirteen (37%) rated the independence of EAPs as being neutral. Eight (23%) of the respondents were unsure.
Few respondents (13% - 37%) indicated that the EAPs are not doing enough to identify and approach specific stakeholders to take part in the public participation process. The rest indicated that they were unsure.

Sixteen respondents (46%) indicated that public participation does not favour the interest of bureaucrats and politicians above other interest groupings, whilst 10 (29%) indicated that it does. The remaining nine (25%) were unsure of whether indeed politics play a role in the public participation process.

The majority of respondents (80%) indicated that one cannot assume that public participation in itself constitutes or influences decision-making. Interestingly, none of the respondents indicated that public participation constituted decision-making.

The majority (71%) indicated that the reason for the public participation processes was justified.

5.2.2 Responses to open-ended questions

The following section provides a summary of the authentic responses to the open-ended questions (e.g. questions 4, 11, 17, 19 and 20) posed in the questionnaire. The answers to the open-ended questions were presented in the form of a list, a few sentences, a paragraph and even an essay. The choice of open-ended questions for this research was to encourage full and meaningful answers using the respondents own knowledge and/or perceptions. Together with the initial promoters who assessed the questions, it was decided that open-ended questions tend to be more objective and less leading than closed-ended questions. This would allow respondents to come up with their own views and allow the researcher to document the opinions in respondent's own words. Through this process it was anticipated that in-depth information on facts can be obtained with which the researcher is fairly familiar with.
The validity of this research depended greatly on the selection of survey questions that could provide answers to the effectiveness of public participation in the EIA process. The decision to utilize open-ended questions was critical as it had the potential of yielding widely different results from the same type of question asked in a closed format.

The actual questions are included below for ease of reference (but see also Appendix A). Not all responses had a direct influence on the outcomes of this research; hence, I only list those deemed appropriate. The aim of this exercise in the research process is, initially, to highlight the responses provided, and then to provide an analysis of, and discussion on the implication thereof with respect to the effectiveness of public participation in the EIA process. In most instances, the direct word/narrative of the respondents will be used to ensure the authenticity of the statements. These statements may be in the form of either full sentences or phrases.

**Question: Please indicate the specific role or function you fulfil relating to the EIA process**

The following categories of respondents participated in the questionnaire (Table 5.1). They are involved in both the EIA and public participation process. Their involvement in these processes provided credible information for the analysis in this thesis. As indicated in the methodology chapter, the knowledge and experience of these ‘pracademics’ are essential if one wants to establish a more detailed role that public participation plays in EIA in South Africa.
<table>
<thead>
<tr>
<th>Categories of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientists (biodiversity, freshwater ecology, botanist, agriculture)</td>
</tr>
<tr>
<td>EIA Consultants</td>
</tr>
<tr>
<td>Interested and Affected Party</td>
</tr>
<tr>
<td>Decision making Authority (national provincial or municipal)</td>
</tr>
<tr>
<td>Environmental Assessment Practitioner</td>
</tr>
<tr>
<td>Specialist Assessment practitioner (stakeholder engagement)</td>
</tr>
<tr>
<td>Civil Society NGO and CBO (WESSA)</td>
</tr>
<tr>
<td>Researchers / Students</td>
</tr>
<tr>
<td>Proponents and developers</td>
</tr>
</tbody>
</table>

Table 5.1: Categories of survey respondents

**Question:** From your observation in public participation, how has language use influenced the dissemination of information in the process?

The responses below relates to the question on how language influences information dissemination in the public participation process. Respondents identified language as an inhibitor to the provision of clear information. Here language has to be understood to mean both appropriate to the home language of the participants in the public participation process and appropriate in terms of the level of technical experience and vocabulary required to understand the communication.

Many people are baffled by the complexity of an EIA and public processes, and believe that the language used is often a tool to disguise conflicting information. In most instances for example English, as the language of communication, is fairly well received. Respondents indicated that it would be fair to have presentations addressing participants in an indigenous language also. Not receiving a message brought across to you in one’s mother tongue can make the meaning somewhat challenging. Contrasting responses indicate that language issues have always been accommodated by ensuring that multilingual communications, facilitations and consultations are employed.
Linked to language is the level of education and socio-economic standing, which are often more of a barrier to effective communication and understanding than language *per se*. Respondents indicate that it is not English vs. Afrikaans, its technical jargon vs. precise information given in plain English or Afrikaans that is the issue. Suggestions indicate that it is critical to have a translator at public meetings when written material and information are presented in English. Language use also depends on the application. In affluent areas, where applications include mostly golf estates etc., there is no problem with the wording and general language used in public participation documents. However, in many instances, the legal jargon is problematic and interested and affected parties do not understand the process. In response to the case studies respondents for example indicated that in the Karoo the language most spoken is Afrikaans. Similarly in townships around Coega and in the Pondoland, Xhosa is the most spoken language. Yet most public participation sessions are conducted in English.

The general public find it difficult to follow what is going on, as they are not part of the scientific community that uses specialised language. The public participation process is seen to be fraught with technical and semi-legal jargon. This excludes many participants from engaging in projects. Language is a problem in rural areas, as much meaning is lost in the interpretation if presentations are not in the mother tongue.

Two different interpretations can be distinguished by respondents in terms of the language used during public participation and how it influences the dissemination of information. Some make the distinction between the language use (i.e. mother tongue) and technical and scientific language. They indicate that language is one of the major obstacles identified in public participation processes in projects where they are involved.
Lessons from Pakistan in particular and other African countries generally, cite this as a major factor that may influence effective participation in the public process (Nadeem, 2004 and Sampong, 2004). Most of the respondents agree that language issues, whether they involve the use of mother tongue or non-mother tongue, scientific technical or legal jargon, have not been adequately addressed in the public participation process. A need exists therefore to seriously address the language issues if the public participation processes are to succeed in South Africa. Language is one of the key concerns listed that may inhibit the effectiveness of public participation and decision-making in the EIA process. How this can be improved is discussed later in the analysis section.

Question: Public participation only serves the interest of bureaucrats and politicians.

Several respondents expressed their views that decisions may be influenced by political pressure; however most indicated that this is outweighed by the influence of the proponent. While this issue cannot be remedied by measures recommended here, it is crucial that it be addressed. Interference or pressure to influence an outcome or decision (whether from politicians, bureaucrats or proponents) severely undermines the public’s confidence and trust in the validity of the public participation process. Respondents often perceive public participation as a manipulation by the proponents through the process of, for example, exaggerated statements and ‘data’ on the supposed benefits.

Most public participation is perceived only as a ‘tick in the right box exercise’ and due cognisance is rarely taken of what the public says in detail. Local knowledge is mostly overlooked.

The role of politicians is also questioned as they rarely participate in the public participation process, although ‘community leaders’ very often do. In practice public participation is perceived as a requirement to comply in obtaining a Record
of Decision (RoD), rather than a process in its own right that should guide, influence and amend outcomes.

Thus whilst it has been perceived that politics play a major role in influencing the outcome of an EIA, the influence of the proponent seems more prominent. It is appropriate then to argue that public participation do not only serve the interests of politicians and bureaucrats. In reality, however, the case studies highlight, the impact political interest can have on the outcome of a project. In all three cases (Coega, N2 Toll Road, and the Karoo Hydraulic Fracking) it appears that political interest played a major role in the decision outcome of each project. This is opposite to the views expressed by the practitioners which indicate a higher influence by proponents.

Question: In your opinion, are the grounds justified on which public participation is sought or required?

The question was designed to establish whether respondents see a need for public participation in EIA. Twelve out of the 15 responses below indicate the need for public participation. There seems to be overwhelming support for public participation in the EIA process.

Respondents agree that public participation is an essential part of making informed decisions. Responses suggest that decisions are important enough to justify some level of public participation. Without public participation there would be no chance to consider the environmental effects of a development. It is therefore everyone’s constitutional right to have an influence over decisions that could affect their environment and wellbeing. In, for example, a change in land use (e.g. in the Karoo), people have a right to be consulted if they feel involved enough to participate in the process and have sufficient background knowledge to make an input. NEMA stipulates consideration of environmental, social, and economic variables. Public comment is therefore very important in all three of
these considerations. The public needs to be part of decision-making and often may bring important issues to the table.

A few responses indicate that the fundamentals of public participation are well supported in the South African legislation, but the political and economic issues steadily erode these through law amendment processes, policy and regulation, and weak administration of the law. Although the public participation process is not without flaws, it is necessary for developers to realise that all actions have consequences and that there is a responsibility to the environment.

A development should not go ahead without informing interested and affected parties. The public concerns must be brought into the public participation process. Public participation is therefore essential in the EIA process to give a balanced view of the development in which the project has been proposed.

Although most respondents agreed that enhancing public participation is desirable, the rationale for seeking greater participation is sometimes unclear and encompasses multiple and possibly conflicting goals. There seems to be general agreement that the grounds on which public participation is sought or required are justified. A major challenge highlighted, seems to be the application of the process and the mere compliance with the regulations rather than honest attempts to ensure a fair and inclusive process.

**Question: What is your opinion on the National Environmental Management Act (NEMA) Guidelines on public participation?**

Many of the respondents reveal opposing views, and some indicated that they are not satisfied with the NEMA guidelines and associated processes. A minority views the public participation guidelines to be applicable and appropriate for the reasons they are used.
In terms of the public participation process, the NEMA guidelines are a step forward in the evolution of this process. Indications are that NEMA guidelines are based on practical experience over the last 20 years, and are therefore well thought through and applied. However, whilst this is the philosophically speak and talk about capacity building to enable proper public participation, this remains mostly lip service with regard to actual processes. Hence the response that NEMA Guidelines on public participation is described as a process in need of a major revision. Some of the major challenges of NEMA relate to the reality that an EAP is employed and paid by the developer to obtain a satisfactory RoD. The old saying “He that pays the piper calls the tune" applies (meaning: the person who pays for a service or finance the project has the right to say how it should be done).

The information is often problematic, of a technical nature or uses trade jargon that is not understood by the public. This is further compounded by placing only one copy of the draft EIA report, frequently running into thousands of pages in the local public library or the company offices for a limited period. Studying such a document in detail under such circumstances can be very difficult. Although EIA reports are now frequently available on the internet, access is not generally available particularly in rural communities in Pondoland and the Karoo and their size makes them impossible to download with a dial-up system.

The final EIA is supposed to contain comments generated from the public after it has studied the draft. The final report is frequently not made available to the public before submission to the authorities. After the RoD has been issued, the public has ten days to issue a notice of appeal and then 30 days to motivate that appeal. Experience has shown that to motivate and submit an appeal in the time allowed is a fulltime job, thus excluding the public who does not have the time to do so. Once the RoD has been issued, the developer may start work and the public is barred from any further participation. Unless there is excessive noise, dust, smoke or smells that can be detected from outside the site, there is nothing
people can do except complain to the authorities who are slow to react if they do so at all.

It is observed that there is no obligation on the part of the EAP to keep the public (i.e. I&APs) informed of progress on the development. Furthermore the process is flawed in the way in which EIAs are set up; no consultant is able to be independent even if s/he wants to be. Consultants are answerable to the client who pays them and until this system is changed, the whole process remains flawed.

Authorities and key stakeholders have a much better understanding of the process requirements, as well as legislative requirements, and their guidance/comment is in many cases more relevant and fair towards the process itself. Parties that do not live in the project area tend to sometimes make unreasonable demands and/or support a development without considering the day-to-day impact, simply because they will not be faced with it. This very often results in project roll-out, no matter how strong public opposition may be.

General indications are that the focus should change to make the EIA system more effective, including views and suggestions around (i) governance and co-operation, (ii) utilisation of other instruments in combination with or instead of EIA, and (iii) utilisation of strategic instruments and spatial planning to establish the context for EIA.
5.3 Application of Public Participation Barometer (IAP2)

The process described in the methodology chapter and similarly applied in the previous chapter, comprising the 13 key criteria are now used as evidence to support the outcome of the level of stakeholder engagement and thus the effectiveness of the public participation process. The criteria extracted from the questionnaire responses will show adherence/non-adherence and will be assigned as YES, NO or POSSIBLY in the scale shown in Table 5.2. The total value of YES and POSSIBLY provides an indication of the level of stakeholder engagement and thus effectiveness of the public process.

Key criteria:

1. Adherence to EIA Regulatory guidelines

Respondents indicate that the final EIA is supposed to contain comments generated from the public after it has studied the draft. The final report is frequently not made available to the public before submission to the authorities. After the RoD has been issued, the public has ten days to issue a notice of appeal and then 30 days to motivate that appeal. Experience has shown that to motivate and submit an appeal is time-consuming, thus excluding the public who does not have the time to do so. This suggests that in cases like these there is no adherence to the EIA regulatory guidelines.

Adherence: No

2. Adherence to timeframes to inform I&APs

One copy of the draft EIA report, frequently running into thousands of pages, is placed in the local public library or the company offices for a limited period. Studying such a document in detail under such circumstances can be very difficult. This, some respondents advise impact on the timeframes needed for
responding. I&APs are not allowed to take this information from the library and also do not have sufficient time over a longer period to study these documents.

Adherence: No

3. Representivity of I&APs

‘The needs of local communities are often not taken into consideration; public participation often only serves the interests of the I&APs who shout the loudest’. This statement summarises the feeling of most respondents who are of the opinion that those that participate in the public process are not representative of the interested and affected communities where projects are implemented. It is further suggested that parties that do not live in the project area tend to sometimes make unreasonable demands and/or support a development without considering the day-to-day impact simply because they will not be faced with it.

Adherence: No

4. Adequate opportunity for engagement for I&APs

Public participation processes are fraught with technical and semi-legal jargon. This, respondents indicate excludes much participation from those that are interested and affected in various communities. People who would otherwise participate do not see the need to raise their voice as they have already been excluded from adequate participation in the process. In addition, the final EIA is supposed to contain comments generated from the public after it has studied the draft. The final report is frequently not made available to the public before submission to the authorities. These weaknesses, however, do not suggest that adequate opportunity for engagement is not provided.

Adherence: Yes
5. **Access to information related to the project**

Respondents in this research appeal for more transparent information sharing, provision of the correct information during public participation, and addressing problems participants may have in understanding and communicating scientific information. Information is available, but may not be in an accessible language that allow for better engagement of communities.

**Adherence: Yes**

6. **Language and cultural barriers observed**

Practitioners indicated that their primary concern relates to getting an authorisation. In doing so some advice that the role of non-scientists i.e. I&APs are of lesser importance as they are considered a potential threat to ‘good science’. Suggestions are therefore to ensure information is accessible and in a language that are easily understood. People may feel excluded if too much technical and scientific language is provided that inhibits their participation. This is a key concern for many respondents as no practical means exist to educate all attending public participation sessions.

**Adherence: No**

7. **Stakeholder identification mechanisms**

It was suggested that a form of screening be introduced to identify only those for which public participation would be meaningful and could make a contribution. Public participation is an extensive and time-consuming process and not all want to participate. Respondents suggested that some flexibility be introduced in terms of which appropriate public participation processes would be agreed between the authority, the proponent, the EAP and the community leadership.

**Adherence: Yes**
8. Public involvement in design of projects

Some respondents suggest that public processes should include participation at the earliest stage possible, i.e. problem formulation or project conception. This process should particularly involve those that may have critical information about potential risks. Currently, this is not achieved.

Adherence: No

9. Involvement of marginalised groups in process

Marginalised groups in particular, should be provided with technical assistance through key community leaders that they are familiar with and whom they trust. It is further suggested that the selection of potential participants to provide input in any public process, should be transparent. Not proactively involving marginalised groups in the public process is indicated to be a weakness by EAPs.

Adherence: No

10. Variety of methods used in public participation

Processes that promote the separation of EIA and public participation may impede the outcome or decision. However, the opportunity lies in integrating the experiences of ‘non-scientists’ with the knowledge of scientists. It is suggested that this can be done using information sessions that relates to ‘collaboration’ rather than public meetings which allows for ‘informing’ or ‘consulting’ only. Generally though, respondents indicate that a variety of methods are at time used.

Adherence: Yes
11. Independence of EAPs

Some of the major challenges of NEMA relate to the reality that an EAP is employed and paid by the developer to obtain a satisfactory RoD. The old saying “He who pays the piper calls the tune” applies (meaning: the person who pays for a service or finance the project has the right to say how it should be done). The issue of independence was frequently raised. Most respondents believe that an EAP or other practitioner would be independent if they were paid from a state administered fund and not by the proponent.

Adherence: No

12. Fulfilment of the intended purpose of public participation

Respondents indicated that EIAs in particular requires information about local context which is most likely to be provided by people with close experience of local conditions. The conclusion from this is that the public cannot make good value judgements without good explanatory science, and scientists cannot make good decisions without listening to the public.

Adherence: No

13. Public participation influence on final decision

The majority of survey responses show that public participation is associated with better results. Practitioners that are very critical of the public process raised the concern that although public involvement may increase the legitimacy of decisions, it does not automatically results in better decisions. It is worth noting that practitioners know that legitimate processes also do not guarantee better informed decisions. The popularity of or support for a particular decision also does not ensure more informed assessments or decisions.

Adherence: No
In summary, the responses from the questionnaires indicate a public participation process that has been fairly effective with a score of 3 out of 13, as indicated in the consult column in the barometer above (Table 5.2). In line with the characteristics of each level of stakeholder engagement, it is clear that this responds to the process of consult, which involves an exchange of information between stakeholders and provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the proponent or authorities should take into account the concerns and views expressed by I&APs in making the final decision.

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<tbody>
<tr>
<td>1</td>
<td>Adherence to EIA Regulatory guidelines</td>
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</tr>
<tr>
<td>2</td>
<td>Adherence to timeframes to inform I&amp;APs</td>
<td>NO</td>
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<td>3</td>
<td>Representivity of I&amp;APs</td>
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<td>4</td>
<td>Adequate opportunity for engagement for I&amp;APs</td>
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<td>5</td>
<td>Access to information related to the project</td>
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<td>6</td>
<td>Language and cultural barriers observed</td>
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<tr>
<td>7</td>
<td>Stakeholder identification mechanisms</td>
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<tr>
<td>8</td>
<td>Public involvement in design of projects</td>
<td>NO</td>
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<tr>
<td>9</td>
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<td>10</td>
<td>Variety of methods used in public participation</td>
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<td>11</td>
<td>Independence of EAPs</td>
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<td>Fulfilment of the intended purpose of public participation</td>
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<tr>
<td>13</td>
<td>Public participation influence on final decision</td>
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<td></td>
<td><strong>TOTAL (YES and POSSIBLY)</strong></td>
<td><strong>4</strong></td>
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Level of Stakeholder Engagement and Effectiveness:

1 – 3 Inform / Least Effective
4 – 6 Consult / Fairly Effective
7 – 9 Involve / Very Effective
10 – 13 Collaborate / Most Effective

Table 5.2: Scale on adherence to the level of stakeholder engagement (Questionnaires)
5.4 CONCLUSION

This chapter deliberated on the views of practitioners or ‘pracademics’ who responded to the questionnaires. The questionnaires provided evidence of causal links or associations between public participation and its outcomes. These links or associations suggest that public participation do not only lead to more informed decisions but also increase the credibility of EIA and its effect on policy.

The need for early information and participation has been widely advocated. This has been indicated to be particularly challenging in the South African context and needs to be part of the regulations so that early involvement of the various stakeholders can be ensured that will allow for continuity in the process. In South Africa, therefore, our policies need to be clear that public participation is not only a requirement, but that it should start at project conception or initiation level already. The evidence presented in this chapter which is based on the experience and perceptions of practitioners, concludes that inclusive public participation processes allow for more balanced decisions, legitimacy of the process and enhance the capacity of participants simultaneously. This respondents advice, may lead to a more effective public process and better decision-making in the EIA process. The evidence also concludes that presently the level of stakeholder engagement and effectiveness is ‘fairly effective’ in South Africa.
CHAPTER SIX

RESEARCH FINDINGS – INTERVIEWS

6.1 INTRODUCTION

This chapter explores the views of twelve professionals (see Appendix C, interview schedule) representing various consultancies, NGOs, and government and civil society institutions that were interviewed face-to-face and telephonically. Using edited verbatim quotations or edited narratives of the participants, this chapter, explores and analysis different answers to the question on the effectiveness of public participation in the EIA process based on the questions posed in the semi-structured questionnaire (Appendix B).

First, I provide a brief overview of how the responses to the interview questions are structured. This is followed by a summary of the various disciplines in which respondents work. The questions posed, linked to the thirteen key criteria are provided, followed by both responses from respondents interviewed face-to-face and those done telephonically.

The application of the responses to the public participation barometer follows and explores the relationship between actual responses and the thirteen criteria. These criteria are then used as evidence to indicate the level of stakeholder engagement and effectiveness.

The conclusion focuses specifically on the contextual differences between natural and social sciences and their approach to public participation. The role of ESS in responding to such differences is then stated.
6.2 RESPONSES TO INTERVIEW QUESTIONS

The discussion below outlines the responses to the questions and follows the sequence of the questions as contained in the semi-structured questionnaire. The thirteen key concerns identified in chapter one are fundamental sources explored in the selected verbatim responses below. It should be noted that the excerpts are the edited words of the respondents in face-to-face interviews with limited editing to their responses, language use or communication style, so that the original meaning is conveyed. Owing to clustering, responses are edited and convey the answers of a group rather than individuals.

The twelve respondents’ experience and expertise relate to urban planning, biodiversity management, specialist botanical studies, public participation consultations, environmental management, and specialists in reviewing EIAs. To protect the persona of respondents and their various organisations, reference to them as respondents has been the general trend in this research.

Question: What in your opinion is meant by Public Participation?

Most respondents indicated that it is to give the public and more specifically parties that would be affected by any development proposal the opportunity to understand development processes. It implies that, when communicating with the public, the documents used are tailored for them to understand the information. This will provide the participants an opportunity to understand a development proposal and understand how a development proposal will affect them and the environment. Public participation gives people an opportunity to raise any concerns that they might have or are relevant concerning the development proposal. It also allows them to understand how decisions are made regarding the environment and development and if they have objections that can be noted through the process even if the objections cannot be resolved through the EIA process.
Public participation is indicated by some respondents as a right to access to justice. Justice they say is about just administrative action and to ensure that people’s views are heard and that when authorities are administering the process, there is fairness in the process. The right to association – this right, regardless of racial/socio-economic grouping, allows people to come together and establish a local interest forum and object to a project that is against the principle of natural justice. Public participation is therefore not just a process or event without context. Some respondents indicate that in South Africa, the debate of the rich and the poor remains relevant – where the poor are dependent on the decisions made by the rich and the powerful. However, some suggest that public participation in our new dispensation is a means to give the poor and other vulnerable or marginalised groups a voice. Some confusion occasionally exists: public participation is a consultative process; not a decision-making process as perceived by many people. The public participation process thus provides a formal mechanism in which the public has an opportunity to express views on an issue.

Generally most respondents indicate that the intention of public participation is good, but in reality it does not work. So naturally, public participation is good because it gives people the opportunity to provide input, but often it only serves as window-dressing. People do not really understand the issues because sometimes they are just too complicated.

**Question:** In most of your projects, would you say the public – more generally referred to as the interested and affected parties (I&APs) – is involved in the design of projects? If NO, why not?

Often a proponent will have a development in mind that will be taken to the public for input, normally after the design of the project is quite well developed. Respondents indicated that public input normally result in small changes to an overall design rather than re-designing with the limitations that are indicated in
the public participation process. These changes have to do with the details of the design rather than the overall concept itself.

Several respondents point out that it is not inappropriate to exclude people from the concept phase. They indicate that one often needs some level of direction before opening up or presenting a project to the public. Afterwards, the public can comment on some concrete concept. It does happen at times that people are involved in the design of the project. However, the applicant is in most instances clear on what he/she would like as an outcome, but then allows refinement of designs in collaboration with the public during the public participation process. Some respondents indicated that despite the good intent, one always gets people who are anti-projects, so they will object for the sake of objecting. Therefore, people should not be involved in the design stage.

The general views from respondents are that it is not advisable to include people at an early stage of project design. In short, they advise, nobody besides the developers must actually be involved in the development phase of a project.

**Question:** Since marginalised people have historically been excluded from the public participation process, would this scenario still be true today in most of the projects you are involved in? What may be the reason for this?

There is a genuine attempt made by many EAPs to involve marginalised people in the public process. However, there may be some indirect reasons why disadvantaged people are not able to contribute to the process. According to respondents English (not the mother tongue of most), technical education levels prevent people from meaningful engagement in the process. Other barriers to participation have been identified as the timing of the public meetings, transportation to the venue, public notices in languages not understood by most people.
Some respondents view the exclusion of marginalised people from the public participation process as a historic truth. They indicated that in the last five to ten years, a concerted effort was made to involve the broader public. This is as a result of greater awareness of their rights to be involved in the planning and participation processes throughout the country and across disciplines. Today, the democratising factor has definitely changed the views of many people. Increased awareness, the fact that government has encouraged people to be more involved, has had a marked impact on the public participation process.

Respondents advise that in many cases, one sees many marginalised people brought into a development to present objections to an application. A developer, for instance, knows there are going to be a number of objectors against his project. He then transports in a number of people from the local community that are desperately in need of work. Many of the people might stand a chance to get a job, but in most cases they do not. They are only used by the developer to get a favourable RoD.

Several respondents view exclusion as a default not by design, but because of technicalities not understood by the ordinary person. Public meetings become a process where the person whose voice is amplified is the one that gets his/her way. In previously disadvantage communities, the norm are to tell them that the project is good because it is going to create jobs. This is an approach by many EAPs to play on the emotive issues of people. Most marginalised people that attend public meetings believe that a development will provide them with employment opportunities and must therefore be supported. Alternatively, employment is going to be taken from them so they must support the development. In some cases, the only black or disadvantaged people attending are professionals who want to know if there are more contracts or want to understand how a project is going to benefit their private ownership.
In general respondents indicated that people do not understand the meaning of an impact on their environment. Their concern is mostly how they can benefit. If people are excluded, it is not done deliberately, but because of circumstances beyond the control of the EAP. The way public participation is practiced allows for the marginalisation and exclusion of black and vulnerable people, because EAPs want the job done at any cost. Generally, one knows what to do, but one does not always do it that way.

**Question:** What is the average estimated number normally attending your Public Participation sessions (Excluding proponents and EAPs)?

Respondents provided contrasting views on this question: in the historically white communities, they indicate the numbers are small – one can look at four or five people at a meeting. Contrary, in the black communities, attendance is usually huge (hundreds of people) if sufficient measures are taken to get the word out. This relates specifically to how their living conditions will be affected by a development or how much the development will affect them. Developments that do not concern people will attract a very small number of people. Sometimes, it is not even necessary to hold a public participation meeting, because one has nobody registered, unless it is a controversial matter. The nature of engagement also plays a huge role, i.e. workshops, public meetings, full cast sessions, one-on-one sessions with a particular interest group, one-on-one consultation session or focus groups.

In addition the numbers also depends on various other factors – how far people stay from the venue, or how well the workshop or meeting was advertised. People that are interested and/or feel that they are affected will attend in large numbers. The time of day, the type, scale, and location of the project, the design of the public participation process and the type of session also plays a role in the numbers attending.
Question: Do you think the EIA/Public Participation regulations focus too much on advertising rather than provide a means or methods to ensure more inclusive participation of a broader group of I&APs?

Respondents indicated that advertising is not necessarily done because it is the most effective way of getting people involved, but due to the regulations. Newspaper advertisements for instance reach a very small segment, as most people do not look for EIAs or public meetings when reading newspapers. It is therefore not a very effective means of informing the public. In terms of the regulations, however, there is a large emphasis on advertising and it is not necessarily the best way of getting people involved. Radio stations may succeed and community loudhailers can be great, but practicalities and cost factors are involved.

The guidelines for public participation are very clear to the extent that they provide one with a suggestion of what should go into an advertisement. The guidelines indicate the location of where the project is located, which is fundamental information. It also stipulates the contact and relevant details of both the applicant and consultant. It also specifies the timeframe in which one needs to provide comment. According to respondents the common mistake consultants make is to confuse the list of activities in an EIA with the regulations of notices. The regulations state that there should be a notice to inform people of any development and a separate notice for a meeting or a set of meetings to be held. One can be creative and include all this information in the same advertisement. This makes it easy for people to get all the information, including the date, times, etc. of meetings.

Several respondents indicated that advertising is a good method to reach people. However, if the public does not bother or does not see the need to engage, what can one do? Not enough effort is made to use the radio, but it is uncertain how the public will respond to hearing an EIA advertisement on radio. The advertising
of notices is problematic, because sometimes big boards are used; and sometimes the writing is too small. There is too much information relating to the laws in these notices. Mostly, there is not enough information on what the actual project entails. It is indicated by most respondents that EAPs find advertising more convenient, because most of them do not take pleasure in engaging with communities. If they can send an advertisement, all is good and fine. It has nothing to do with the regulations; the government just wants to make sure they advertise.

South Africa has some of the best legislation in the world, but very poor capacity to implement. It is therefore incumbent on the public participation practitioner to see regulations as guidelines and use his/her skills to enhance a good public participation process. No two public participation processes are the same and stakeholders are different. Therefore, advertising is necessary, but other things in a public participation process are designed to suit community needs. According to respondents there seems to be an over-emphasis on advertising, which few people actually read, and therefore the intended purpose thereof is lost.

**Question:** Is it true that public participation is a mere formality/a one-size-fits-all mechanism for the EAPs and that the actual incentive remains the financial rewards to them and the proponent?

According to most respondents consultants, like any other professional people, demand a certain rate for their work and any professional person who is working in that capacity is driven by the financial rewards of it. Respondents further advise that people do not become consultants because of emotive concerns. Consultants vary – some try to earn a living, but at the same time have certain ethics and values and want to practice those through their profession – others do not. Some are motivated by the financial incentive and if they can take shortcuts, they will. There is nothing necessarily wrong with taking shortcuts as long as it does not jeopardise the process and as long as it does not affect the quality of the work.
One can follow the public participation procedure with the minimum effort – if one has ticked every box, technically and legally one would have done everything one should, but one can do a better job by investing more time, understanding the issues better and presenting them better. Respondents feel that the system is flawed, because consultants are paid by a proponent who obviously has an expectation of development in the identified location. One finds instances where the work was done, but the reports were not what the proponent liked. The consequence is non-payment for that work done. Therefore, there is that tension that one is paid by a person who wants his expectations fulfilled.

EIAs and public participation fees, unlike engineers’ fees, are not gazetted. As a result, one consultant can charge R20 000 for a Basic Assessment (BA), whilst another can charge R200 000 for the same BA. Respondents indicate that some remain in the business for the financial rewards, and for them public participation is a mere formality of getting all the boxes ticked.

In general most respondents indicate that monetary incentives are the exception rather than the rule as some consultants do exceptionally hard work by getting everything arranged before, during and after the public process. Most consultants protect their professional identity, in particular those who see themselves as environmental consultants. Some consultants, however, loose the monetary incentive when they decline ethically questionable projects or they inform developers that they have not received the decision wanted. Some spend half a year on a project and then the developer will not pay because of a negative RoD/authorisation. There is therefore a need for a stronger mechanism within the law that states that no developer may withhold payment to an EAP for failure in securing the expected RoD/authorisation.
Question: Is there a genuine effort to include the views and concerns of I&APs in the EIA reports?

Often if somebody raises a question that is outside the scope of the process, the comment will only be noted. One sometimes comes across a report that has the actual email report from people, with the response they have given. Some EAPs would table the questions and responses from I&APs and others conveniently leave out certain sections.

According to respondents where there are real, stressing environmental issues, consultants cleverly omit those issues. They will often engage stakeholder groups, like WESSA, to raise awareness of issues that are normally controversial. Most consultants make a genuine effort to really engage with I&APs and capture the views and concerns that emerge in the process. However, at times the task of capturing all views and concerns is just too complex.

The public participation regulations ensure that the views of I&APs are included in reports. Most companies that have a distinct public participation division go even further – they have to write a public participation process report and give it to the EIA Practitioner. According to most respondents companies always wants to include a good account of the public participation process. Therefore, although it is regulated, it is also based on the internal policies, procedures, and structures of every company. Furthermore it is suggested that most clients are genuinely interested in what I&APs have to contribute.

Question: Do you provide any feedback to I&APs after the RoD/authorization? What form does this take? Is it a standard practice by your company?

Normally, feedback is provided to all registered I&APs. Once a RoD is issued, a letter is sent to I&APs informing them thereof. A copy of the RoD is send to I&APs to let them know that authorisation has been granted and to make them
aware of the appeal period and the process involved. It is a requirement in the
regulations to provide feedback to l&APs.

The evidence from respondents indicates that most consultants do provide
feedback on the RoD and the authorisation. Often, when a person is not one of
the appellants, s/he would not hear anything more after the appeal. Some
consultants, however, will keep l&APs informed of the planning approval and the
process beyond. The developer needs to keep informing l&APs, but this seldom
happens. EAPs give feedback to those people that follow-up, more specifically
the registered l&APs. Some consultants have open days where they permit
people to raise particular concerns. However, after the RoD, one seldom hears
from EAPs to ensure compliance with the 30 days’ objections period.

Feedback can take the form of email, snail mail (postal services) or whatever
means preferred. This is accompanied by a reminder of the period in which a
response is needed. Since it is a legal requirement, indications are that
mandatory communication in the form of letters is sent by e-mail and post, mostly
indicating the way forward on the project.

**Question:** In general, would you say that the current public participation
process in EIAs is an effective and influential means of
including public views in the decision-making process?

Respondents indicated that it is very effective - it might even be too effective in
that a large amount of the time is devoted to incorporate the comments of the
public and l&APs into the process. According to some, the waiting period of 30 to
40 days as part of the process provides sufficient time for comments and
responses - this makes it an effective tool. In some instances, it is just a tick box,
because nobody is interested in the project and it might be that people have not
been consulted before.
Objectivity in making fair decisions is sometimes influenced by issues relating to the triple bottom line. In the last one and a half years, more decisions have been made that are really looking at the issue of public participation and public views. In some cases, public participation has proven to be effective when one looks at some of the decisions made against what government wanted. A good example is the delay in the Wild Coast Project (see Case Studies) due to public pressure. Genuine environmental issues were considered in ensuring an outcome. Much also depends on how the public participation process is managed and how the issues are presented to ensure that no personal agendas are involved. Some decisions are factually incorrect, because the reviewers did not properly apply their minds to the issues involved, maybe due to overwork and too many applications to process. A number of applications are objected to mainly by people who are misinformed.

According to most respondents the process is not effective in terms of addressing people’s personal issues. Many controversial RoDs do not revolve around an environmental impact, they revolve around a ‘not in my backyard’ view, which is difficult to address. One cannot side with the proponent; one can neither side with the community, because the guidelines require neutrality. The process therefore seems to be fine, but the main question is what one does with it.

In general, though, there are many projects where the public has had no say. Decision-makers went ahead without considering views by affected communities. The e-tolls in Gauteng are a good example where the intention was to have a system implemented irrespective of the public views. So, at times public participation is only a window-dressing exercise.
Question: What changes (if any) would you suggest to make the public participation in EIAs a more effective tool to ensure more participative and democratic decision-making?

According to some respondents consideration should be given to outsourcing public participation to an objective party. This can perhaps be a panel from different organisations that needs to reach consensus. Another solution suggested is to get the internal capacity within the provincial authorities’ right. This is in line with high expectations of government to actually be sufficient and deliver on time and to run government more like a business, to have better performance indicators, and a more stringent review process in place for appointing people involved in reviews. Reviewers should be provided with tighter timeframes and if they are not performing, they should be held accountable.

The new guidelines brought a revolutionary change in the public participation process and according to several respondents’ identification of I&APs should be a process on its own. The public participation consultancy should be legally obliged to find the actual people that are interested and more so affected by the development within a given timeframe. In so doing one can exclude those who attend without making any positive contribution. Currently, many EAPs overlook certain individuals, because they are going to be controversial, which is putting the project in jeopardy. Furthermore, public participation consultants need to sign the same declaration as EAPs or EIA consultants. This will render them more accountable and they will need to conduct the process without any bias or challenges that could negatively impose on the decision-making process.

It is further suggested that free community newspapers and not only the commercial ones, should be used for all advertisements and notices. This will ensure that people, especially the poor, are not marginalised in the process. Advertisements on the local radio stations will ensure that all languages are used. Those that are interested and affected, but cannot read, will then not be excluded.
Written advertisements should be providing useful, understandable information. Consultants can do more to engage with community-based organisations to attend meetings and to have one-on-one sessions to discuss the application. Meeting with all these organised groupings is far more valuable and allows for better stakeholder relations and engagements. The public participation consultant can include more information to reach I&APs than what is happening after the RoD has been issued. It will be good if the regulations stipulate that, before construction begins, registered I&APs be supplied with details by the Environmental Control Officer (ECO). This will allow I&APs to monitor compliance and they can become the eyes and ears for government.

Some respondents indicated that complicated reports should first go for scrutiny to an independent body that can look at it from an environmental and scientific point of view. A simplistic report should then be compiled that is information friendly, without the clutter of technical language. To ensure the effective representation of community interests, environmental NGOs should start operating under the auspices of the South African Non-Governmental Coalition (SANGOCO). This will allow them a broader spectrum of support in matters of public concern.

The process should further make a fair distinction between the work done by natural scientists and social scientists. Public participation should be the domain of social scientists only. Public participation takes up the most time in all EIA applications and reduces the time of natural scientists to investigate environmental matters.

The biggest problem, however, is that I&APs currently have too much power and no accountability in the processes. Officials put too much emphasis on avoiding appeals and not enough consideration is given to the best interest of the country and community as a whole. Respondents indicated that there seems to be no repercussions for I&APs that cause unsubstantiated costs and delays in project
implementation in the pursuit of personal interest. This is hampering development in South Africa, contributing to unemployment and poverty challenges. Changes should therefore be made to hold individual EAPs responsible and accountable in some way.

The public does not believe in public participation and does not think that it can make any difference. There is therefore a total lack of trust (they do not trust the system, the consultants, or the proponent) that needs to be eradicated first. This results in an antagonistic approach from the public’s side and hampers cooperation between parties.

Lastly, it is suggested that public participation practitioners be trained in tools other than formal meetings, such as focus groups, workshops, exhibitions, etc. These alternative tools to public meetings could enhance participation and democratic decision-making. Complementary to this is to teach proponents and the regulatory bodies that meetings are not the ‘be all and end all’ of participation.

6.3 Application of Public Participation Barometer (IAP2)

Similarly to previous chapters, the 13 key criteria will now be used as evidence to support the outcome of the level of stakeholder engagement and thus the effectiveness of the public participation process. The criteria extracted from the questionnaire responses will show adherence/non-adherence and will be assigned as YES, NO or POSSIBLY in the scale below (Table 6.1). The total values of YES provide an indication of the level of stakeholder engagement and thus effectiveness of the public process.
Key criteria:

1. **Adherence to EIA Regulatory guidelines**

Regulations have streamlined the participation process and allowed the EIA process to be fast tracked at the expense of the quality of the public participation process. Consultants do generally adhere to the regulations on the grounds that they assist in streamlining the EIA and specifically the participation process through recording everything as indicated by these regulations.

   Adherence: Yes

2. **Adherence to timeframes to inform I&APs**

   The scoping process – the foundation for the entire assessment – is at times done over a two-week period that included the December Festive season and New Year’s holidays reducing the effectiveness of public participation. Mostly consultants do come back to inform communities of the decision or the way forward. This therefore suggest adherence to the timeframes as set in the EIA process.

   Adherence: Yes

3. **Representivity of I&APs**

   Representation of all who have concerns is, at times, questioned in the public participation process. At times, I&APs consist of only representatives from community organisations mobilised for the process. It is perceived that the views of a whole community can never be effectively represented by a few individuals. The general view of respondents indicates that those involved in the public process are not representative of the communities where projects are implemented.

   Adherence: No
4. Adequate opportunity for engagement for I&APs

An inadequate public participation process led to delays in the development, as stakeholders who felt dissatisfied with the process expressed their objections through an appeal process. The correct amount of public input is not properly documented and therefore not being adequately represented in the reports. However, the opportunity for engagement is provided but this may be influenced by other factors such as venue, timing and the nature of the projects.

Adherence: Yes

5. Access to information related to the project

Dissemination of information through various media is viewed as exclusionary, as most South Africans do not have access to all formats. Public participation processes at times seem like a public relations process designed not to inform interested and affected parties, but to sell the project. Respondents indicate that project specific information is not readily accessible because of the volume and also the language which is at times too technical. This, they indicate reduce the responsiveness of communities to information.

Adherence: No

6. Language and cultural barriers observed

The language (English or Afrikaans) in which notices are advertised does not reach the majority of the disadvantaged people who may not be proficient in English and Afrikaans. EIAs have been seen as a very scientific, technical and reactive method of assessing the impacts on the environment, which requires expert knowledge, and the ordinary citizen is not an expert.

Adherence: No
7. **Stakeholder identification mechanisms**

EAPs at times fail to include many of those who would be most directly affected by a development. A ‘broader’ body must be appointed during an EIA to ensure that all stakeholders are involved in the public participation process.

**Adherence: No**

8. **Public involvement in design of projects**

Respondents indicate inadequate integration of local knowledge at design stage and that different approaches applied by natural and social scientists may at times be obstructive to the project, the EIA and the public participation process.

**Adherence: No**

9. **Involvement of marginalised groups in process**

The regulations do not adequately empower the historically disadvantaged communities to participate meaningfully in the process. The majority of ordinary citizens and black people in this country who do not buy newspapers are left out of the process which is used as a medium to communicate the initial process.

**Adherence: No**

10. **Variety of methods used in public participation**

Among the comments made regarding meetings or workshops was the desire for it to be at times convenient to the community. Determining the most convenient time is often difficult, as there are competing programmes and rhythms for different people. Some prefer not to attend meetings in the evenings, while others cannot attend during working hours. Weekends are often problematic due to sporting and religious commitments.

**Adherence: Yes**
11. Independence of EAPs

Concerns regarding the independence and objectivity of consultants are raised continuously. An independent body must replace the EAP who are biased when objections are made against the developments during the public participation process. Some respondents indicated that the interest of many consultants lie in the monetary value attached to the EIA and public participation process. This is based on the general perception that consultant work is exclusive and that they are employed by the proponent and get a decision approved at all cost.

Adherence: No

12. Fulfilment of the intended purpose of public participation

Decision-makers mostly rely on the judgment of scientific experts, and local knowledge is mostly overlooked. The EIA is biased towards those knowledgeable in scientific and technical aspects of the development process as compared to those who lack this type of knowledge. Thus, the intended purpose of getting the views from communities is not being fulfilled.

Adherence: No

13. Public participation influence on final decision

Once the final report is completed, communication with the original stakeholders seems to cease. Communities are mostly not given an informed analysis of the potential impacts on them or given an opportunity to assert their interests in this regard. Views are normally captured at public meetings, but no feedback on comments is provided by either the EAP or authorising department.

Adherence: No
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**Level of Stakeholder Engagement and Effectiveness:**

1 – 3  **Inform / Least Effective**  
4 – 6  **Consult / Fairly Effective**  
7 – 9  **Involve / Very Effective**  
10 – 13 **Collaborate / Most Effective**

Table 6.1: Scale on adherence to the level of stakeholder engagement (Interviews)

The responses from the questionnaires indicate a public participation process that has been *fairly effective* with a score of 4 out of 13, as indicated in the consult column in the barometer above (Table 6.1). In line with the characteristics of each level of stakeholder engagement, it is clear that this responds to the process of *consult*, which involves an exchange of information between stakeholders and provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the proponent or authorities should take into account the concerns and views expressed by I&APs in making the final decision.
6.4 CONCLUSION

The twelve respondents to the questions posed, have presented a variety of views. It has not been surprising to see how similar the responses have been to those in the previous two chapters. Respondents indicate that scientists are usually in the best position to identify and systematically consider the effects of environmental processes. However, scientific analysis in EIA and public participation often requires information about local context that is most likely to come from people i.e. practitioners and locals with close experience with local conditions.

Respondents also ascribe the main constraints to effective transdisciplinary work in South Africa to the differences in the terminology and conceptual frameworks used in various disciplines. One of the main limitations to effective dialogue between specialists is the use of language and terminology that is specific to a particular discipline or that has a particular meaning in that discipline, which varies from its use in another. Several respondents indicated differences between their disciplines and their fundamental different ways of thinking, as a constraint to effective integration. The failure of integrating EIA and public participation in various disciplines is ascribed to a lack of training of environmental assessment practitioners, with only a few having adequate skills to integrate socio-economic with scientific considerations. Most environmental practitioners are trained in natural sciences, and therefore define development from a narrow biophysical perspective. There is a profound call for interdisciplinary work on EIA and public participation. This type of complementary approaches is currently absent in the South African EIA domain and negatively influences the final decision. Earth Stewardship Science is well positioned to host such transdisciplinary approaches integrating socio-economic and natural science aspects of EIA and public participation.
Generally, there seems to be agreement that making EIA processes more participatory can yield improved results in decision-making. The evidence suggests that public participation processes can also lead to undesired results that may be worse than what would have resulted from less participation. Lastly, public participation in EIA needs to shift away from the approach in which only scientists participate in gathering and synthesizing information. It needs to be recognized that non-scientists also possess knowledge and experience that complements the expertise of the scientific community and can help improve environmental understanding which may lead to better decision-making. It is thus not surprising that the outcome from the interviews conclude that presently the level of stakeholder engagement and effectiveness is ‘fairly effective’ in South Africa.
CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7.1 INTRODUCTION

My research explored the effectiveness of public participation and how the South African government might support a more integrated approach to environmental decision-making, giving citizens not only a voice, but also a responsibility and platform to ensure that decision-making that affects their lives and livelihoods involves them. It also draws on lessons learnt and good-practice models from internationally and nationally relevant cases.

This chapter provides an overview of the research findings obtained from the literature review, three case studies and 35 practitioners that responded to questionnaires and interviews. It reveals shortcomings in the public participation process but also highlights some uncovering developments. One of the main findings indicates that EIA and public participation guidelines alone are not responsible for ineffective public participation, but also the capacity of EAPs and the process of implementation. Making use of triangulation, the information from the case studies, questionnaires and interviews are aggregated into a table that provides an overall view on the level of public participation and effectiveness in South Africa.

Recommendations in response to some adverse findings are then proposed. Findings firstly tabulate main conclusions and responding recommendations to traditional public participation processes. Next recommendations to integrate technology to improve public participation are explored. This is seen in the current age of technology to increase the effectiveness of public participation. I then recommend ESS as a discipline to explore how such technology could be integrated with other disciplines. The chapter and thesis is concluded with
recommendations for further research to strengthen what has been explored in this research.

7.2 RESEARCH FINDINGS

The literature reviewed in Chapter two allowed me to acquire knowledge and develop an understanding of the previous work related to the research topic. This study keeps cognisance of the fact that similar studies have been done in other disciplinary areas, but integrating various research orientations i.e. evaluation research, practitioner-based research, case studies and empirical research distinguishes the present study from most others. This thesis is therefore majorly concerned with the transdisciplinary context of public participation. Various models and criteria for evaluating public participation were explored. I extensively discussed the International Association of Public Participation (IAP2), on which this research is modelled. The IAP2 spectrum, at this stage, and in the absence of another proven methodology, provided an effective baseline tool from which to explore evaluations in the public engagement milieu. Most importantly, the practice of public participation around the world and how this study conforms to some of the research and findings elsewhere provided a context for comparing and contrasting the effectiveness of public participation in other parts of the world with South Africa. A brief reflection of the main findings from various countries is now explored.

The implementation of environmental evaluation procedures in South Africa (and elsewhere) is influenced by United States and European models, yet these are not necessarily appropriate for South Africa. Consequently, considerable research and deliberation as well as public and authority participation has been undertaken to formulate procedures appropriate for South Africa which has led to the development of its National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) with its various amendments. Oelofse et al. (2006) indicates that the EIA system in South Africa compares well with world-wide
trends i.e. that it lacks strategic integration. Therefore, weaknesses pertaining to the institutional processes, the enforcement of legal requirements and actual practice are still cause for concern. The lack of technical and financial resources, weak coordination between various institutional sectors, subjective review methodology, inadequate public participation processes, and a lack of proper monitoring of impacts during the implementation of projects are but a few examples of the shortcomings in South African EIAs (Rossouw and Wiseman, 2004).

It has been suggested that public participation in the USA is more than just a theoretical appealing component of democracy. Involving the public not only frequently produces decisions that are responsive to public values and substantively robust, but it also helps to resolve conflict, build trust, and educate and inform the public about the environment. In Europe, Blume (2001) reports on Denmark’s success in public participation that can be explained in part by the relatively small population and devolved responsibilities, which allow decisions about most public services to be taken at a local level. These changes were supported by the view that placing decision-making responsibilities closer to the level at which services are delivered, would facilitate democratic participation, responsiveness to citizens’ wishes, and strengthen the link between those at management and decision-making levels.

In Pakistan public participation is ineffective due to a lack of enforcement, shortage of staff and political interference. Apart from some positive attributes, various flaws in the execution of public consultation processes were noticed. The decision-making processes in Pakistan seem not to be transparent and public consultations take place merely to fulfil the legal requirement for getting EIA approval. The findings in Nadeem’s (2004) study is consistent with assumptions that the implementation of EIAs and the resultant public process, although contextually different, seem to be experiencing the same challenges where applied globally. Thapliyal (2010) note the following in India: EIA’s are controversial in India because of little participatory democracy in the formulation
and implementation of environmental legislation. There have been cases where more than one EIA for the project has been approved by an authorized agency and subsequently revoked by judicial action initiated by public interest litigations.

Frank indicates that it can be arguably prejudged that most African states have lagged behind in the promotion of direct citizen participation in decision-making processes. To a greater extent, public participation has only been witnessed in general election processes; which is usually flawed to say the least. The failure by public authorities to create platforms for public participation and lack of capacity by citizens to demand accountability is today Africa’s tragedy trivialising public participation of citizens in decision-making processes (Frank, 2012).

This evaluation focused on implementing a survey among a range of individuals or ‘pracademics’ in the environment and conservation fraternity, interviews with consultants and government officials, a review of various reports, as well as attending public hearing proceedings. Overall, public participation has succeeded in providing a more egalitarian environment in comparison with practices pre-1994. But, the research revealed a number of shortcomings in public participation as experienced by a variety of role-players. These role-players include the voices of communities in the three case studies, as well as critical views expressed in questionnaires and interviews by ‘pracademics’ in various settings. It can be reported, that the majority of the challenges in public participation do not lie with the current EIA and public participation requirements. Indications are that most challenges are with the competences of those (consultants, EAPs etc.) that carry out the public participation processes, as well as the manner in which it is conducted.

Generally, this research attempted to answer the question on the effectiveness of public participation in the EIA process in South Africa. The main findings of this research which are framed within thirteen key criteria are listed below. I used triangulation i.e. cross-checking of data from case studies, surveys and face-to-
face interviews and interpretations by drawing upon different data sources, methods and perspectives to arrive at these findings.

It is suggested that EIA is generally not being implemented as prescribed by the regulations. It is neither integrated into the project planning process nor initiated before making major decisions. To date, it is used as a project justification rather than a decision support tool. It has failed to achieve its purpose of facilitating a consultation process that can lead to informed decisions and selecting environmentally sustainable options for development projects. Respondents indicated that a review and update is needed on the Guidelines for Public Participation issued by the Department of Environmental Affairs as the current guidelines do not respond adequately to the public process implemented in various projects across the country.

Legislation prescribes timeframes for information sharing and public participation, but respondents are not in agreement with such timeframes. However, what does become clear is that there is uncertainty about the appropriate periods to be allowed for various public participation processes, such as notices of meetings or other events and the length of time allowed for comments. Some prefer not to attend meetings in the evenings, while others cannot attend during working hours. Weekends are often problematic due to sporting, religious and other commitments, and so forth. This is a serious issue that needs attention to create effective engagement platforms.

Response from communities, as captured in the case studies in particular, raised issues of inclusivity. The questionnaire and interview responses on the other hand indicates that community organisations that are normally invited to participate in public participation processes may not be representative of the broader community views. The desire to participate is at times outweighed by other priorities in some communities.
The issue of timing has been emphasised in the case studies, questionnaire and interview responses. Communities suggested that adequate opportunities for engagement will be created only if appropriate times to commence public participation processes are agreed upfront.

Respondents indicated that access to information is closely linked to the capacity of the community to understand the information on a project. A significant number of respondents suggested that capacity building among all types of I&AP was a high priority to ensure information does not just become understandable but is also accessible through the use of language that facilitates understanding. It was felt that a better understanding of the process and of the rights and responsibilities of all the role-players would lead to better informed participation and better decision-making. Apart from the use of local language, requests also focused on innovative communication methods that are appropriate to the relevant community. The methods of informing/inviting stakeholders and the quality of information provided through public notices and EIA reports were found to be inadequate. In addition, information is not easily accessible to a majority of the stakeholders.

Respondents and communities expressed the need for more ethical behaviour by EAPs, stakeholders and decision-makers alike. The issue of independence was frequently raised. Most respondents believe that an EAP or other practitioner would be independent if they were paid from a state administered fund and not by the proponent. This view is contested as it is believed that independence could not be judged on financial grounds only, but required peer review of reports and findings. Furthermore it is suggested that EAPs need a change of mind-set going beyond their tasks as being a recorder or reporter of technical/scientific information regarding the issues and leaving the decision up to the authority. Many respondents also suggested improvements in the methodology employed, especially by EAPs, who most regard as lacking in facilitation skills and understanding of contextual community issues. Respondents indicated the need
for EAPs to be trained in social science or an understanding of community
dynamics. The underlying rationale for public participation should be of making it
as easy as possible for as many voices to be heard.

It is further suggested that public participation should be adaptive to the cultural
and institutional context as well as compatible with the capabilities and
environmental values of the affected communities. It should be based on
proactive approaches to consultation and participation at early stages of the
project planning and decision-making process.

The decision-making process is frequently lacking in transparency and
communication. Stakeholders are not provided with access to the minutes of
public hearing proceedings nor post hearing decisions. This situation causes a
general lack of trust among the public in the competent authority and project
proponents. To get the maximum public input, the information provided in the
executive summaries and EIA reports must be comprehensive and
understandable by the stakeholders. It is recommended by respondents that the
executive summary be written in non-technical language with translations into
various regional languages. Doing this would possibly result in a better
understanding of the project’s impacts and mitigation measures. It can be argued
that this would also lead to more useful comments and lessen opposition to the
project.

Respondents advised that a code guiding the conduct of registered EIA
consultants is also necessary. This will not only help do away with a ‘copy and
paste’ culture when producing reports, but also discourage unethical behaviour
amongst consultants. In order to make the decision-making processes more
impartial and transparent, respondents recommended the establishment of
review committees, comprising of experts from the relevant professions and
broader categories of development sectors. Lastly, several respondents reported
their suspicions that decisions were influenced by political pressure that override
community concerns. Political interference or pressure to influence an outcome or decision undermines the public’s confidence and trust in the validity of the public participation process.

7.3 LEVEL OF PUBLIC PARTICIPATION AND EFFECTIVENESS AS ESTABLISHED THROUGH TRIANGULATED INFORMATION

The application of data triangulation techniques enabled me to compare the results from interviews, questionnaires, document analyses and case studies to evaluate the effectiveness of public participation. The information obtained and presented on the effectiveness levels of public participation in the empirical chapters has been aggregated into Table 7.1 to establish an overall position on the status of public participation in South Africa and this yielded an aggregated score of 4.1. This corresponds to a Consult / Fairly Effective status on the public participation barometer, and provides a level and effectiveness of public participation in South Africa. It is further revealed from Table 7.1 that South Africa is ‘fairly effective’ in the adherence to the criteria based on stakeholder identification and methods used in the public participation process (aggregated as 3 and 5 respectively on the barometer).

In general this research concludes that public participation in South Africa is a dynamic, iterative and evolving process. Whilst there appears to be no hard and fast rule that can make public participation effective, I believe that a combination of the tools described in this thesis can surely enhance the process from its current inefficiencies and result in the achievement of a level of Collaborate, as illustrated in the IAP2 Spectrum (Table 7.1) used in this thesis. It is mostly through non-adherence to the thirteen key criteria that public processes in South Africa are not achieving the level of collaborate. The next section therefore evaluates some of the main conclusions from this study in order to recommend measures that can be implemented to achieve this desired level of collaborate.
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<td>NO</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Public participation influence on final decision</td>
<td>NO</td>
<td>NO</td>
<td>POSSIBLY</td>
<td>NO</td>
<td>NO</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL (YES)</strong></td>
<td><strong>2.5</strong></td>
<td><strong>4</strong></td>
<td><strong>6</strong></td>
<td><strong>4</strong></td>
<td><strong>4</strong></td>
<td><strong>20.5</strong></td>
</tr>
</tbody>
</table>

Level of Stakeholder Engagement and Effectiveness:

1 – 3  Inform / Least Effective
4 – 6  Consult / Fairly Effective
7 – 9  Involve / Very Effective
10 – 13 Collaborate / Most Effective

Average: 20.5 / 5 = 4.1 which responds to:
Consult / Fairly Effective

---

**Table 7.1:** Barometer rating on the level of stakeholder engagement and effectiveness of public participation in South Africa

---

205
7.4 RECOMMENDATIONS

7.4.1 Traditional Processes of Public Participation

This study revealed a high degree of willingness on the part of the public to participate in EIAs, which is in contrast with what international literature generally suggests. It is suggested that existing literature should be complemented by more experimental studies to increase the scientific knowledge needed to make policies on public participation and EIA more effective.

Although the recommendations in this document are principally developed for national government, they are considered also relevant to the provincial and local spheres of government undertaking processes requiring public input. Similarly, these recommendations have application to non-government agencies that engage in public participation, such as consultants, non-profit organisations and other companies, as well as the public at large.

For ease of reference Table 7.2 provides a schematic summary of the main conclusions derived from this research and recommendations related to each.
Table 7.2: Summary of the main conclusions and recommendations

<table>
<thead>
<tr>
<th>Main conclusions</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to information, reports, and the process itself is often problematic for I&amp;APs.</td>
<td>To remedy this it is recommended that all preliminary information, e.g. BIDs, are written in plain language and available in the majority language of the area, and reports are supplemented by an Executive Summary in plain language in the majority language of the area that is made freely available to all I&amp;APs. All reports are made available in full at convenient places identified by the community; all reports are presented at feedback workshops with I&amp;APs.</td>
</tr>
<tr>
<td>Proposals are often presented in a manner that does not promote a clear understanding of the proposed development and the environmental implications.</td>
<td>Workshops or information session for I&amp;APs should be held at the commencement of any environmental assessment to explore what the associated public participation process can achieve, what its limitations are and the methods of engagement agreed upon. EAPs and public participation practitioners could also be granted continuing professional development points in return for providing assistance with capacity building workshops for civil society.</td>
</tr>
<tr>
<td>There is a commonly held view that public participation is often undertaken by those with scientific expertise but without the required public participation skills.</td>
<td>The competence of those undertaking public participation should be verified by membership of a recognised professional association. Registration as an EAP with EAPASA does not in itself indicate competence in public participation.</td>
</tr>
</tbody>
</table>
| The independence of EAPs and public participation practitioners cannot be guaranteed by financial criteria only. The best way to improve independence is to make provision for peer review on demand | The most appropriate way to improve independence is to make provision for peer review on demand. It is recommended that this be implemented in two ways:  
   i) Voluntary  
   Any practitioner should be entitled to include peer review of their report(s) and underlying activities as part of their terms of appointment.  
   ii) Required  
   On request by a stakeholder to the EAP or relevant authority any practitioner’s report(s) or activities should be peer reviewed by a person acceptable to all parties. |
| A number of exclusionary practices were identified and include insensitive choice of  
   • language and technical terminology in documents such as BIDs, notices and advertisements,  
   • venues for meetings that are remote from places where I&APs live times for meetings and events that clash with community timetables. | It is recommended that all public participation processes should include preliminary engagement with the affected community to jointly plan the public participation process. |
<table>
<thead>
<tr>
<th>Meetings are often unproductive ways of achieving meaningful public participation where people are only provided with information without proper platforms for discussions.</th>
<th>Some of the barriers to effective engagement in meetings can be remedied by planning meetings in conjunction with local community members or leaders, conducting meetings and other events either in the majority language of the area or with ready translation, conducting workshops rather than meetings, using local people as facilitators and/or translators at meetings, using easily accessible venues in communities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some of the shortcomings in the methodology followed in current public participation processes stems from a lack of understanding of the nature of the affected communities.</td>
<td>It is recommended that before any process is undertaken or planned, a preliminary social investigation is first undertaken. This should be used to ascertain the predominant language in the community or area, the governance structures in the area, the names and contact details of the leadership, both civic and traditional if applicable, the names and contact details of any organs of civil society (established NGOs and CBOs) in the community or area. This information should then be used to guide the development of a Public Participation Plan for the project in conjunction with the leadership and identified organs of civil society.</td>
</tr>
<tr>
<td>Unreliable and selective methods of communication are often troublesome</td>
<td>It is recommended that flaws in notification and communication practices are remedied by a few fairly easily applied requirements. Use of appropriate language medium. Avoidance of technical language unless absolutely necessary and then accompanied by an explanation in plain language. Using appropriate media, such as local community newspapers. Communicating at regular intervals to keep I&amp;APs abreast of developments. Using community structures to disseminate information.</td>
</tr>
<tr>
<td>Specialist public participation is becoming increasingly problematic for all concerned.</td>
<td>Given the difficulties experienced by some I&amp;APs it is recommended that a public participation specialist is appointed in the same way as other specialists are appointed to provide an EAP with relevant services.</td>
</tr>
<tr>
<td>There is no quick fix for the shortage of capacity in the environmental departments in all three spheres of government. However the recommendations regarding competence and ethics outlined above are equally applicable to government officials.</td>
<td>The competence of those reviewing public participation should be verified by membership of a recognised professional association. Registration as an EAP with EAPASA does not of itself indicate competence in public participation.</td>
</tr>
<tr>
<td>There is confusion over the time periods to be observed particularly by I&amp;APs, EAPs and proponents.</td>
<td>It is recommended that timeframes for responses by I&amp;APs be reviewed taking consideration of the difficulty to access information.</td>
</tr>
<tr>
<td>Public participation improves the effectiveness and legitimacy of a decision;</td>
<td>Public participation should be fully incorporated into EIA and decision-making processes; should be</td>
</tr>
<tr>
<td>Builds capacity of those involved; leads to better results in terms of environmental quality; enhance trust among parties</td>
<td>Recognized as a requisite of effective action and not merely a formal procedure</td>
</tr>
<tr>
<td>Poor engagement, planning and inadequate resources results in poor public participation and ultimately poor decision-making.</td>
<td>Those involved in EIA need to ensure clarity of purpose; commitment to use the process to inform actions; provision of adequately trained staffing; appropriate timing in relation to ultimate decisions</td>
</tr>
<tr>
<td>Outcomes of public participation depend on the way process is organised and implemented; contextual factors influence achievement of principles of good practice.</td>
<td>Purpose of public participation should be designed to address contextual challenges and should focus on: inclusiveness, collaboration in design, and transparency of process.</td>
</tr>
<tr>
<td>Integration of participation with scientific analysis is needed for participation to be effective.</td>
<td>EIA and decision-making needs to ensure transparency of decision-relevant information; distinguish clearly between facts and values; engage I&amp;APs in a collaborative fashion; view new information as a means to reconsider past conclusions.</td>
</tr>
<tr>
<td>Contextual issues such as environmental factors, knowledge and stakeholders influence principles of implementing good public participation.</td>
<td>Practitioners or ‘pracademics’ must adopt good practice methodologies based on: identification of potential difficulties or risks; public participation techniques that are context specific; continuous monitoring of the process and adaptation of tools and techniques if needed.</td>
</tr>
<tr>
<td>There is a need for public participation research and methodologies that are scientifically grounded and includes use of new technologies.</td>
<td>EIA and decision-making needs to be a topic of research spanning between social sciences and natural sciences to improve current knowledge and practice; evaluation research and case study scenarios form a good base for theorising and creation of new methodologies.</td>
</tr>
</tbody>
</table>

7.4.2 Integration of communications technology to improve public participation

Traditional public participation processes focus extensively on the effectiveness of the methodologies used whilst participation numbers are just as important for decision-makers. Web-based technologies such as social media and crowdsourcing have the ability to reach a broad range of participants in on-line dialogues and are able to quantify participation in response to decision-makers’ needs. Simply defined, crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call.
This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals (Howe, 2006).

Social media and crowdsourcing have opened up exciting new avenues for public engagement and participation, yet many government and private institutions are often hesitant to use the new mechanisms as a legitimate form of public participation. The fears are that these platforms might bring controversial viewpoints that may weaken institutional controls (Howe, 2006). Despite these perceived risks, worldwide experiences show that now more than ever is the time for those in power to recognise the impact of social media and crowdsourcing to change how we collect data, engage publics, implement projects, and create innovative solutions that ultimately lead to better informed and more effective decision-making.

The quantity and quality of feedback from traditional public participation processes are indicated in this thesis as fairly effective in terms of its impact on both the process and decision-making. It is recommended that to increase public participation feedback (quantity) and the quality of feedback via social media and crowdsourcing in South Africa, that a digital engagement platform based on the IAP2 spectrum (see Table 7.1) of public participation be developed. Social media is well positioned to deepen engagement as it create the space for broader audiences, act as an education tool and enable real-time participation with immediately available results.

Any digital engagement platform based on the IAP2 spectrum should be able to gather meaningful feedback from the public. To do so a variety of tools must be developed to meet increasing levels of participation and impact such as: gathering feedback, generating new ideas, self-education of the public and prioritization of issues. Such tools will provide decision-makers a richer, better organised and more manageable two-way dialogue process with the public. It is important though to ensure that ‘the content does the work’ by providing
information that makes people want to get involved and encourage others to do the same.

Furthermore, disadvantaged and marginalised communities should be provided with affordable access to computers, mobile smart phones and the internet. It is imperative to ensure they know how to use the technology platforms so as to effectively respond to issues that needs public engagement. Crowdsourcing platforms (http://www.crowdsourcing.org/) currently use mobile technology, in the form of mobile phones that are bridging the digital divide in especially developing nations around the world as more people access the internet via mobile phones than laptops or desktop computers. SMS–based contributions as well as rich mobile WEB contributions must be the basis of the proposed digital engagement platform for the South African context.

Earth Stewardship Science (ESS) as a new discipline that aims to meet the imperatives of fostering meaningful, integrated transdisciplinary interactions between the three fundamental areas of knowledge viz., natural science, human behaviour, and economics is one of various disciplines appropriate to host research into the use of web-based technologies and social media in public participation. ESS can facilitate a process of interdisciplinary research to investigate and contribute to the understanding of how web-based technologies and social media could be used to make public participation more effective and environmental decisions more acceptable. It will further provide the opportunities for use of both quantitative and qualitative methods in research producing results that can be generalised and uncovering the richness of individual experiences of participants.

**In conclusion:** the evaluation of the three selected projects, combined with information obtained from questionnaires and interviews revealed an overall weak influence (fairly effective and at the level of consult) of public participation on the effectiveness of EIAs in South Africa. The recommendations are aimed at
improving the way in which public participation is conducted and towards setting standards for measuring the effectiveness of public participation processes.

It is acknowledged that this research and its outcomes, together with the framework proposed, needs to be further tested practically. This emanates from the original thesis that public participation processes need to be designed purposefully in order to be more effective in improving decision-making in South Africa. The model developed in this research should thus be adopted by the various stakeholders involved in public participation in EIAs. This model should be complemented with additional research that moves away from traditional public participation practise to technology based platforms of public engagement.

7.5 FURTHER RESEARCH

It is important for further research to devise an evaluation or review tool in South Africa that establishes, prior to the final decision, whether public participation has been effectively implemented in the EIA process.

Post-implementation of EIA is an area that also receives little attention in the theoretical debate about EIA and public participation. An evaluation of proponents’ adhering to mitigation proposals is another area that needs research, as it is found that once the project is completed, these requirements are ignored.

Lastly, the importance of web-based technologies such as social media and crowdsourcing as new tools for public participation have been identified as a means to broaden the scope of participation and also to improve the effectiveness of decision-making. It is proposed that more research be conducted to establish the real impact of such technologies in the context of South African public participation and decision-making processes.
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APPENDIX A

SURVEY QUESTIONNAIRE

RESEARCH IN COMPLETION OF THE D.PHIL DEGREE IN DEVELOPMENT STUDIES AT THE NELSON MANDELA METROPOLITAN UNIVERSITY (NMMU)

INFORMATION FOR THE PARTICIPANT

THIS RESEARCH AIMS TO DO AN EVALUATION OF THE EFFECTIVENESS OF THE PUBLIC PARTICIPATION PROCESS IN EIA’S IN SOUTH AFRICA. IT IS HOPED THAT THIS RESEARCH WILL COME UP WITH MORE PRO-ACTIVE APPROACHES AND MODELS TO ENSURE THAT BEST PRACTICE COLLABORATIVE INTERVENTIONS ARE ESTABLISHED TO ENHANCE THE ABILITY OF PUBLIC PARTICIPATION AS A TOOL IN ENSURING MORE INTEGRATED ENVIRONMENTAL DECISIONS.

YOUR PARTICIPATION IN THIS SURVEY IS VOLUNTARY AND THE QUESTIONNAIRE REQUIRE YOU TO ANSWER A FEW QUESTIONS. THE COMPLETION OF THE QUESTIONNAIRE SHOULD TAKE APPROXIMATELY 45 MINUTES. THE INFORMATION GATHERED DURING THIS SURVEY WILL BE USED FOR RESEARCH PURPOSES ONLY. PLEASE ANSWER ALL THE QUESTIONS HONESTLY AND TO THE BEST OF YOUR KNOWLEDGE AND ABILITY. PLEASE MARK THE APPROPRIATE BLOCK AND EXPAND ON ANSWERS WHERE NEEDED/POSSIBLE.

YOUR ASSISTANCE IS HIGHLY APPRECIATED. MANY THANKS.

1. GENDER:  
   1.1 FEMALE  
   1.2 MALE

2. AGE RANGE:

   2.1 > 20  
   2.2 20 - 29  
   2.3 30 - 39  
   2.4 40 - 49  
   2.5 50 - 59  
   2.6 60 <

3. PROFESSION:

   3.1 Government  
   3.2 NGO  
   3.3 Consultant  
   3.4 Student  
   3.5 Academic  
   3.6 Civil Society

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4. Please, indicate the specific role or function you fulfil relating to the EIA process.


5. Your experience in EIA’s and public participation has been obtained in projects in the following provinces:

<table>
<thead>
<tr>
<th>5.1</th>
<th>5.2</th>
<th>5.3</th>
<th>5.4</th>
<th>5.5</th>
<th>5.6</th>
<th>5.7</th>
<th>5.8</th>
<th>5.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>W-CAPE</td>
<td>E-CAPE</td>
<td>N-CAPE</td>
<td>KZN</td>
<td>GAUTENG</td>
<td>N-WEST</td>
<td>MPUMALANGA</td>
<td>FS</td>
<td>LIMPOPO</td>
</tr>
</tbody>
</table>

6. To what extent are you involved in public participation/consultation processes?

<table>
<thead>
<tr>
<th>6.1</th>
<th>6.2</th>
<th>6.3</th>
<th>6.4</th>
<th>6.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularly (at least once a month)</td>
<td>Occasionally (at least once in three months)</td>
<td>Sometimes (not more than twice per annum)</td>
<td>Never</td>
<td>Other:</td>
</tr>
</tbody>
</table>

7. Your accumulated experience in EIA’s and public participation amounts to:

<table>
<thead>
<tr>
<th>7.1</th>
<th>7.2</th>
<th>7.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5 years</td>
<td>5 – 10 years</td>
<td>10 years &lt;</td>
</tr>
</tbody>
</table>
8. In your opinion what % of the registered participants attending public participation meetings/workshops etc. are people who are affected by the project?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>0 - 25</td>
<td></td>
</tr>
<tr>
<td>8.2</td>
<td>26 – 50</td>
<td></td>
</tr>
<tr>
<td>8.3</td>
<td>51 – 75</td>
<td></td>
</tr>
<tr>
<td>8.3</td>
<td>76 - 100</td>
<td></td>
</tr>
</tbody>
</table>

9. In your opinion what % of the registered participants attending public participation meetings/workshops etc. are people who are interested in the project?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1</td>
<td>0 - 25</td>
<td></td>
</tr>
<tr>
<td>9.2</td>
<td>26 – 50</td>
<td></td>
</tr>
<tr>
<td>9.3</td>
<td>51 – 75</td>
<td></td>
</tr>
<tr>
<td>9.4</td>
<td>76 - 100</td>
<td></td>
</tr>
</tbody>
</table>

10. In your opinion is enough being done by the applicants, EAP’s, competent authorities and organs of state to ensure adequate and appropriate opportunity for public participation?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1</td>
<td>10.2</td>
<td>10.3</td>
</tr>
<tr>
<td>YES</td>
<td>NO</td>
<td>UNSURE</td>
</tr>
</tbody>
</table>

11. From your observations in public participation, how has the language used influenced the dissemination of information in the process?

______________________________________________________________________
______________________________________________________________________

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12. In your opinion what is the level of adherence of Environmental Assessment Practitioners (EAPs) to the general stipulated public participation guidelines in the EIA process?

1 = low
5 = high

12.1 12.2 12.3 12.4 12.5
1 2 3 4 5

13. In your opinion what is the level of adherence of EAPs to timeframes as indicated in the guidelines to inform I & APs of the public participation meetings/workshops/feedback etc.?

1 = low
5 = high

13.1 13.2 13.3 13.4 13.5
1 2 3 4 5

14. How would you rate the independence of EAPs in the EIA process?

1 = low
5 = high

14.1 14.2 14.3 14.4 14.5
1 2 3 4 5
15. Do you think EAPs do enough in identifying and approaching specific stakeholders to take part in the public participation process?

<table>
<thead>
<tr>
<th></th>
<th>15.1</th>
<th>15.2</th>
<th>15.3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
<td>UNSURE</td>
</tr>
</tbody>
</table>

16. In your experience with EIAs what percentage of authorizations/RODs are opposed due to insufficient or flawed public participation?

<table>
<thead>
<tr>
<th></th>
<th>16.1</th>
<th>16.2</th>
<th>16.3</th>
<th>16.3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 - 25</td>
<td>26 – 50</td>
<td>51 – 75</td>
<td>76 - 100</td>
</tr>
</tbody>
</table>

17. Public participation only serves the interests of bureaucrats and politicians.

<table>
<thead>
<tr>
<th></th>
<th>17.1</th>
<th>17.2</th>
<th>17.3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TRUE</td>
<td>FALSE</td>
<td>UNSURE</td>
</tr>
</tbody>
</table>

17.4 Please motivate your answer:

__________________________________________________________________________________________

__________________________________________________________________________________________

__________________________________________________________________________________________

18. Can one assume that public participation in itself constitute decision-making?

<table>
<thead>
<tr>
<th></th>
<th>18.1</th>
<th>18.2</th>
<th>18.3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
<td>UNSURE</td>
</tr>
</tbody>
</table>
18.4 Please motivate your answer:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

19. In your opinion are the grounds on which public participation are sought or required justified?

<table>
<thead>
<tr>
<th>19.1</th>
<th>19.2</th>
<th>19.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>NO</td>
<td>UNSURE</td>
</tr>
</tbody>
</table>

19.4 Please motivate your answer:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

20. What is your opinion on the NEMA Guidelines on public participation?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

MANY THANKS FOR YOUR ASSISTANCE.
APPENDIX B

QUESTIONNAIRE - INTERVIEWS

RESEARCH IN COMPLETION OF THE D.PHIL DEGREE IN DEVELOPMENT STUDIES AT THE NELSON MANDELA METROPOLITAN UNIVERSITY

Title: Evaluating the Effectiveness of Public Participation as a Tool in the Environmental Impact Assessment Process

1. NAME:

2. PROFESSION/TITLE:

3. COMPANY NAME:

Public Participation (PP) is a mandatory and legal process guided by the National Environmental Management Act of 2006. Based on this statement please answer the following questions as broad and truthful as possible:

4. What in your opinion is meant by Public Participation?

5. In most of your projects: would you say the public - more generally referred to as the interested and affected parties (I&APs) - are involved in the design of projects? If NO why not?

6. Since marginalized people have historically been excluded from the PP process, would this scenario still be true today in most of the projects you involved in? What may be the reason for this?
7. What is the average estimated number normally attending your PP sessions? (Excluding proponents and EAPs)

8. Do you think the EIA/PP regulations focus too much on advertising rather than provide a means or methods to ensure more inclusive participation of a broader group of I&APs?

9. Is it true that PP is just a mere formality/a one-size fits all mechanism for the EAP’s and that the actual incentive remains the financial rewards to them and the proponent?

10. Is there a genuine effort to include the views and concerns of I&APs in the EIA reports?

11. How do you capture the views of I&APs in the PP process?

12. Do you provide any feedback to I&APs after the ROD/Authorization? What from does this take? Is it a standard practice by your company?

13. In general would you say that the current PP process in EIAs is an effective and influential means of including public views in the decision-making process?

14. What changes (if any would) you suggest to make the PP in EIAs a more effective tool to ensure that the aims of allowing more participative and democratic decision-making?

15. Do you think sufficient provision is currently made in EIAs for mitigation and adaptation measures to respond to the issues of global warming and climate change?

MANY THANKS FOR YOUR ASSISTANCE
## APPENDIX C

### INTERVIEW SCHEDULE

<table>
<thead>
<tr>
<th>RESPONDENTS</th>
<th>PROFESSIONAL CATEGORY</th>
<th>SECTOR</th>
<th>DATE INTERVIEWED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent 1</td>
<td>Conservation Manager</td>
<td>Eastern Cape Parks Board</td>
<td>19 March 2010</td>
</tr>
<tr>
<td>Respondent 2</td>
<td>Urban and Regional Planner</td>
<td>Private Consultant</td>
<td>20 March 2010</td>
</tr>
<tr>
<td>Respondent 3</td>
<td>Environmental Impact Assessment Practitioner</td>
<td>Wildlife and Environmental Society of South Africa</td>
<td>20 March 2010</td>
</tr>
<tr>
<td>Respondent 4</td>
<td>Public Participation Consultant</td>
<td>Private Consultant</td>
<td>21 March 2010</td>
</tr>
<tr>
<td>Respondent 5</td>
<td>Environmental Impact Assessment Consultant</td>
<td>Private Consultant</td>
<td>21 March 2010</td>
</tr>
<tr>
<td>Respondent 6</td>
<td>Botanist</td>
<td>Private Consultant</td>
<td>22 March 2010</td>
</tr>
<tr>
<td>Respondent 7</td>
<td>Environmental Manager</td>
<td>Local Municipality</td>
<td>22 March 2010</td>
</tr>
<tr>
<td>Respondent 8</td>
<td>Environmental By-Law Enforcement</td>
<td>Local Municipality</td>
<td>23 March 2010</td>
</tr>
<tr>
<td>Telephonic</td>
<td>Ecologist</td>
<td>SANBI</td>
<td>04 April 2010</td>
</tr>
<tr>
<td>Respondent 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephonic</td>
<td>Public Participation Consultant</td>
<td>Private Consultant</td>
<td>06 April 2010</td>
</tr>
<tr>
<td>Respondent 2</td>
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