3rd International Conference

on Public Policy (ICPP3)

June 28-30, 2017 – Singapore

Panel Session

T01Policy process theories, P11- Policy Regime Framework:

Towards Better Theories of the Policy Process

Title of the paper

Complementary lenses in policy change framework:

South Africa case of sustainability transitions

Author(s)

Mapula, Tshangela, Independent Study, South Africa, mapula.tshangela@gmail.com

Mark, Swilling, University of Stellenbosch, South Africa

Date of presentation

Wednesday, June 28th 14:00 to 16:00 (Block B 3 - 1)

Complementary lenses in policy change framework:

South Africa case of sustainability transitions

Mapula Tshangela[1] and Mark Swilling[2]

(mapula.tshangela@gmail.com)

First version presented at the 3rd International Conference on Public Policy,

Singapore, 28-30 June 2017

Abstract

The main question addressed in this paper is how best to improve the understanding of the underlying drivers and dynamics of public policy change towards sustainability transitions? The Policy Regime Framework (PRF) analytical framework by Wilson (2000) is useful for understanding the dynamics of policy-making. However, PRF is not to date sufficiently used to understand transitions to sustainability. PRF analytical framework is enhanced in this paper, based on the proposed five complementary lenses: multi-causal perspective, stages, dimensions, pathways and types of policy change outcome. We investigate the lenses with an empirical case of South Africa. This paper is commissioned through an extensive academic literature review to build theoretical contributions. During the period 2002-2015, South Africa experienced several landscape level policy enablers, including the 2008 global economic crisis and national power shifts in 2009. The multi-causal interactions encouraged notable national institutional arrangements and policy commitments towards sustainability goals. However, South Africa's sustainability goals resulted with layering alongside the existing dominant policy goals. Future research is necessary to enhance the overlaps in PRF with the multi-level perspective framework on sustainability transitions and investigation of South Africa's sustainability policy niches.

Keywords: Policy regime framework (PRF), policy change, policy dynamics, policy actors, sustainability transitions, South Africa

---

[1] This paper is part of Mapula Tshangela independent study. Ms Tshangela has almost 20 years' practitioner experience in policy and research including in environmental management (water, air quality, waste, energy and impact assessment), analytical chemistry, technology, evidence informed policy making, green economy and sustainability transitions gained over the years at the electricity public entity and national government in South Africa. Contact: mapula.tshangela@gmail.com

[2] The study is promoted by Professor Mark Swilling, Centre for Complex Systems in Transition, School of Public Leadership, University of Stellenbosch, South Africa

1. Introduction

The global sustainable development policy events and commitments continue to take place since the 1972 United Nations Conference on the Human Environment. These includes through the 2002 World Summit on Sustainable Development, 2012 Rio+20 and 2015 Sustainable Development Goals and climate change Paris agreement. It is through global commitments that countries initiate the transition towards sustainable development through their national green economy policies (United Nations Commission on Sustainable Development, 2012:10). Such policy context triggers the need for analytical frameworks interested in the complex dynamics that cause dependency, but also trigger change (or stability) processes (Tshangela and Swilling, 2015).

Research questions

The main question addressed in this paper is how best to understand the underlying drivers and dynamics of both public policy change and sustainability transitions? The sub-question addressed is firstly, how do policy actors, institutions, and ideas respond and position the country in policy change? Secondly, what can we learn from the South African experience on sustainability transition as the outcome of a public policy process?

Research objective

The primary objective of this paper is to review the literature on policy change, and to conceptualize a complementary policy change analytical framework for understanding the role of policy in promoting sustainability transitions. The proposed analytical framework is used to investigate the sustainability transitions in South Africa. From these objectives, we aim to identify a departure point for further research.

This paper is commissioned through an extensive academic literature review to build theoretical contributions relevant to fine tuning the policy regime framework. The analysis of relevant policy documents through empirical research evidence and insider participants' observation are also used.

2. Policy regime framework, policy change and sustainability transitions

2.1 Policy change and sustainability transitions

We are interested in policy change especially as it relates to changes (or stability) in public policy towards sustainability over time. According to Cloete and de Coning (2013:7), public policy is a public-sector statement of intent, to give effect to selected normative and empirical goals to improve or resolve perceived problem. The policy statements are pronounced in line with government role to make authoritative decisions on behalf of citizens (Howlett et al., 2009:5). As it relates to the policy actors' response to sustainability idea, the role of research evidence is important to contribute in unpacking the perceived problems and concrete solutions (Kemp and Martens, 2007:9). The sustainability idea builds from the pressure for policies that address the global environmental problems, poverty and unsustainable consumption and production (Kemp and Martens, 2007:5). We therefore argue that policy change and sustainability transitions processes needs to be analysed together (Teschner et al., 2013:94).

2.2 Policy regime framework (PRF)

The key aspects investigated relate to understanding policy change over time- in particular, the role of Government policy actors, institutions and ideas towards sustainability transitions. We explored utility of several policy change analytical frameworks. These include the incremental model on potential for small incremental changes only, elite mass model on small groups that governs policy decision, African process model on institutional factors, generic policy-process

model on comprehensive policy making phases and Wissink's stages and process model on descriptive stages that correlate with the real dynamics and activities that result in policy outputs (Cloete and de Coning 2013:44-49). Also explored is the advocacy coalition framework (ACF) on substantial goal conflicts, important technical disputes and multiple actors from several levels of government (Sabatier and Weible, 2007:189). Another key framework we considered is the punctuated equilibrium, that is relevant for explaining both stability and change (True, Jones and Baumgartner, 2007:155). The synthesis of policy change frameworks reveals that collectively, they have various elements that could contribute the understanding. We however argue that these frameworks are not sufficiently addressing our context on policy change and sustainability transitions (Tshangela and Swilling, 2017:13).

Nowlin (2011) reviewed the status of the established policy process theories and frameworks for the period 2008 to 2010. It is argued that there are emerging new insights identified within the policy regime (Nowlin, 2011:54). Petridou (2014) updated Nowlin's work (2011) by reviewing for periods 2011 to 2012 and reaffirmed existence of new insights (Petridou, 2014:27). The notion of regime is used by scholars in various context such as international relations, governing arrangements and classes of reform (Jochim and May, 2010:310; Wilson, 2000:256). In the emerging new insights, there is recognition of inter-relations among multiple subsystems, hence the concept of boundary-spanning policy regimes is argued for (Jochim and May, 2010:307). The argument is relevant for understanding empirical context where for example, an environmental pollution problem is affecting other subsystems such as in health, trade, agriculture, energy and manufacturing (ibid). Other emerging policy regime insight includes introduction of the notion of "socio-political regime" (Swilling et al., 2015:653). The socio-political regime context address challenges of sustainability transition literature on the role of politics in a just transition (Swilling et al., 2015:656).

We identify Carter Wilson (2000) policy regime framework (PRF) relevant for complex issues of sustainability transition. Building from the socio-political regime context, we are interested in the policy regime characterised as containing ideas, institutions and actors (Jochim and May, 2010:310). Appropriately, McGuinn (2006:212), argues that policy regime approach offers a systematic framework for analysing the role of ideas, interests and institutions in generating major policy change in a specific issue area over time.

As an eclectic framework, Wilson (2000:270), argues for the policy regime framework as it draws from the policy literature and synthesizes several models of policy change. PRF can explain long term policy stability and short term change (ibid). The policy regime framework Wilson (2000:255), focus on policy processes, with clearer model for policy change. In line with the policy cycle, the PRF integrates various stages such as problem definition, agenda setting, policy adoption and implementation (Wilson, 2013:52). The PRF according to Howlett and Ramesh (2003:234), attempts to capture how policy institutions, actors and ideas tend to congeal into relatively long-term, institutionalised patterns of policy interaction that combine to keep policy contents and processes more or less constant. Our interest is in historical policy change. PRF is therefore relevant as a descriptive lens Petridou (2014:25), that works backwards to map the governing arrangements for addressing problems. Unlike the advocacy coalition approach for example, we prioritise PRF as it draws explicit distinction between government and private sector actors because of the importance of authority as a resource (Hoberg, 2001:10). As a broader concept, May and Jochim (2013:429), argues that policy regimes can be envisioned for any set of problems for which there has been authoritative actions at some level of government. Such authoritative government action is emphasised as relevant when analysing the governing arrangements (Petridou, 2014:26).

While its strengths are valuable, we also identify weaknesses. These include that the PRF has fuzzy boundaries, and it is not clear where state regimes, policy regimes and sub-policy regimes begin and end (Wilson, 2000:272). We agree with May and Jochim (2013:447), who argues that the ability to apply policy regime lens to different levels, mixes and boundaries of the problems is appealing. We therefore mitigate this weakness through specifying the boundaries in this study. For example, we are interested in policy change facilitated through policy support within the national government (Geels, 2005: 694).

In the next session, we bring new knowledge contribution in two ways. Firstly, we conceptualise five complementary lenses to enhance the PRF in policy change. Secondly, we bring to bear new insights on overlaps between PRF and the MLP five complementary lenses in sustainability transitions (Tshangela and Swilling, 2017:13).

2.3 Policy regime framework and five complementary lenses

Our conceptualisation of the PRF five complementary lenses is linked to the work of Tshangela and Swilling (2017) on the proposed multi-level perspective (MLP) five complementary lenses. The PRF and MLP frameworks are both interested in the complex dynamics that cause dependency, but also trigger change (or stability) process. Our review of sustainability transitions literature revealed that there are MLP five complementary lenses linked to understanding the policy dynamics. These are identified as multi-levels, stages, dimensions, pathways, and types of sustainability transitions (Tshangela and Swilling, 2017:8). We argue that there are overlaps in the two frameworks explanation of sustainability transitions and policy change over time- in particular, the role of Government policy actors, institutions and ideas. We therefore introduce the notion of sustainability transitions-policy change overlaps

and we discuss that in the context of PRF five complementary lenses: multi-causal perspective, stages, dimensions, pathways and types of policy change outcome.

2.3.1 Multi-causal perspective lens

We propose the first lens, multi-causal perspective in PRF, as relating to policy regime components, background conditions and policy outcomes (Cashore et al., 2001:10). The policy regime components interactions include institutions that, according to Cashore et al. (2001:12), shape the resources and strategies of actors and ideas that inform interests and strategies of actors. The identified background conditions (ibid), includes public opinion, elections, economic conditions, the macro-political system and other policy sectors. Within background conditions, the interaction of regime components produce policy outcomes we investigate in the type of policy change lens, in relation to policy contents (Cashore et al., 2001:13).

The proposed MLP multi-levels lens complements this PRF multi-causal lens in that it looks at different policy actors' interactions between the landscape, socio-technical regime and niche levels of the MLP (Tshangela and Swilling, 2017:8).

2.3.2 Stages lens

We propose stages lens in PRF, that involve understanding policy actors, institution and ideas response through stressors/ enablers, paradigm shift, power shift, legitimacy crisis and organisational and policy change (Wilson, 2000:266). With this lens, it implies that we could look at how Wilson (2000:267), political leaders play a role in assaulting the existing regime, advocating the new policy paradigm, promoting policy solutions and shepherding policy proposals through government.

To complement the PRF stages lens, the MLP stages lens is useful for understanding different policy roles across the stages of landscape pressure, regime change and niche developments (Tshangela and Swilling, 2017:8).

2.3.3 Dimensions lens

We propose the dimensions lens in PRF, that involve power arrangements, organisational arrangements, policy paradigm and policy itself (Wilson, 2000:259). These are important to observe. Including on the stability of power arrangements, dominance of policy paradigms and organisational arrangements (Wilson, 2000:270). The public officials and policy makers interactions is another key aspect as they are dependent on the regime and could therefore operate to maintain policy stability (ibid). The dimensions lens as it relates to policy paradigm for example, includes the role of researchers whose contribution Wilson (2000:258), on academic discourse shapes the definition of the policy problem. In relation to the role of research in policy making, we see policy paradigm overlapping with the MLP dimension on knowledge base for the regime (Smith, 2007:429). The knowledge base dimension plays a role in facilitating and or inhibiting transitions, and we therefore agree with Jørgensen (2012:1008), argument that academic theories and advice functions as entrenched actors.

We recognise the lock-in mechanisms and path dependence that play a role in incremental innovations thus dimensions for stability and change (Geels, 2012: 473). The MLP dimensions lens provide useful complementarity for understanding the relations to facilitators and or inhibitors of sustainability transitions (Tshangela and Swilling, 2017:9). Two of the seven dimensions of the socio-technical regime in MLP that we are interested in are policy and regulations and knowledge base for the regime (Smith, 2007:429). In relation to the dimension on policy and regulations, it is argued by Tshangela and Swilling (2017:9), that change or

stability response takes place in a context where policy actors have multiple roles. The policy actors also grapple with competing policy goals (ibid).

2.3.4 Pathways lens

The relevance is argued, to examine policy change through the proposed pathways lens. The identified four pathways are dissolution/ recreation, consolidation, internal reorganisation and new creation (Wilson, 2000:265). These pathways are drawn from Hayes (1992) model of non-incremental change (ibid). The PRF in this aspect considers complementarity in for example, Howlett et al. (2009:208), outlining an important guiding model of the change process, that considers a state of stability as a starting point that is followed by anomalies, experimentation, fragmentation of authority, contestation and institutionalisation of new regime.

The overlap in MLP pathways lens includes focusing on transformation, technological substitution, reconfiguration, de-alignment and realignment (Geels and Schot, 2007:414). In each of the pathways, there are different policy roles whose understanding is improved by consideration of the MLP-PRF pathways overlaps context.

2.3.5 Types of policy change lens

Last, we propose the lens on types of policy change outcomes. According to Wilson (2000:267), policy change process completes with the emergence of new policies, new policy goals and altered implementation arrangements. The policy outcomes could result with incremental change or transformative change (Borel-Saladin et al., 2013:218). It is argued that political will play a role in driving transformative change policies towards sustainability (ibid). With that in mind, Petridou (2014:25), argues that in policy regimes, the stronger the regime, the greater the levels of policy legitimacy, coherence, and durability.

The type of policy outcome can therefore be examined through four common processes that are *drift* [replacing old goals], *layering* [adding new goals], *conversion* [new instruments evolving] and *replacement* [fundamental restructuring] (Kern and Howlett, 2009:395; Kivimaa and Kern, 2016:206). These processes when incorporated in the PRF may enhance its ability on understanding the policy outcomes on patterns of response. Such as when drifting could indicate the ineffective policies, layering indicating misdirected and ineffective policies, conversion indicating misdirected policies and replacement indicating optimal policies (Howlett et al., 2009:204).

In the context of overlaps with the MLP lens on type of sustainability transitions outcome, we identify endogenous renewal, reorientation of trajectory, emergent transformation and purposive ideal transitions (Geels, 2004:53). The lens on these idealised responses is relevant in PRF overlaps as for example, (Smith et al., 2005:1502), strategies can be developed which foster greater coherence in selection pressures or the regime responses.

We argue for the proposed PRF five complementary lenses and although individually the lenses are not new, we bring new knowledge contribution in three ways. Firstly, when the lenses are conceptualised in a complementary context that enhance the PRF. Secondly, in bringing to bear insights on overlaps with the MLP five complementary lenses from sustainability transitions context. Thirdly, we make contribution on the empirical investigation with the case of South Africa, which we discuss in the next sessions. The proposed PRF five complementary lenses are summarised in Figure 1.

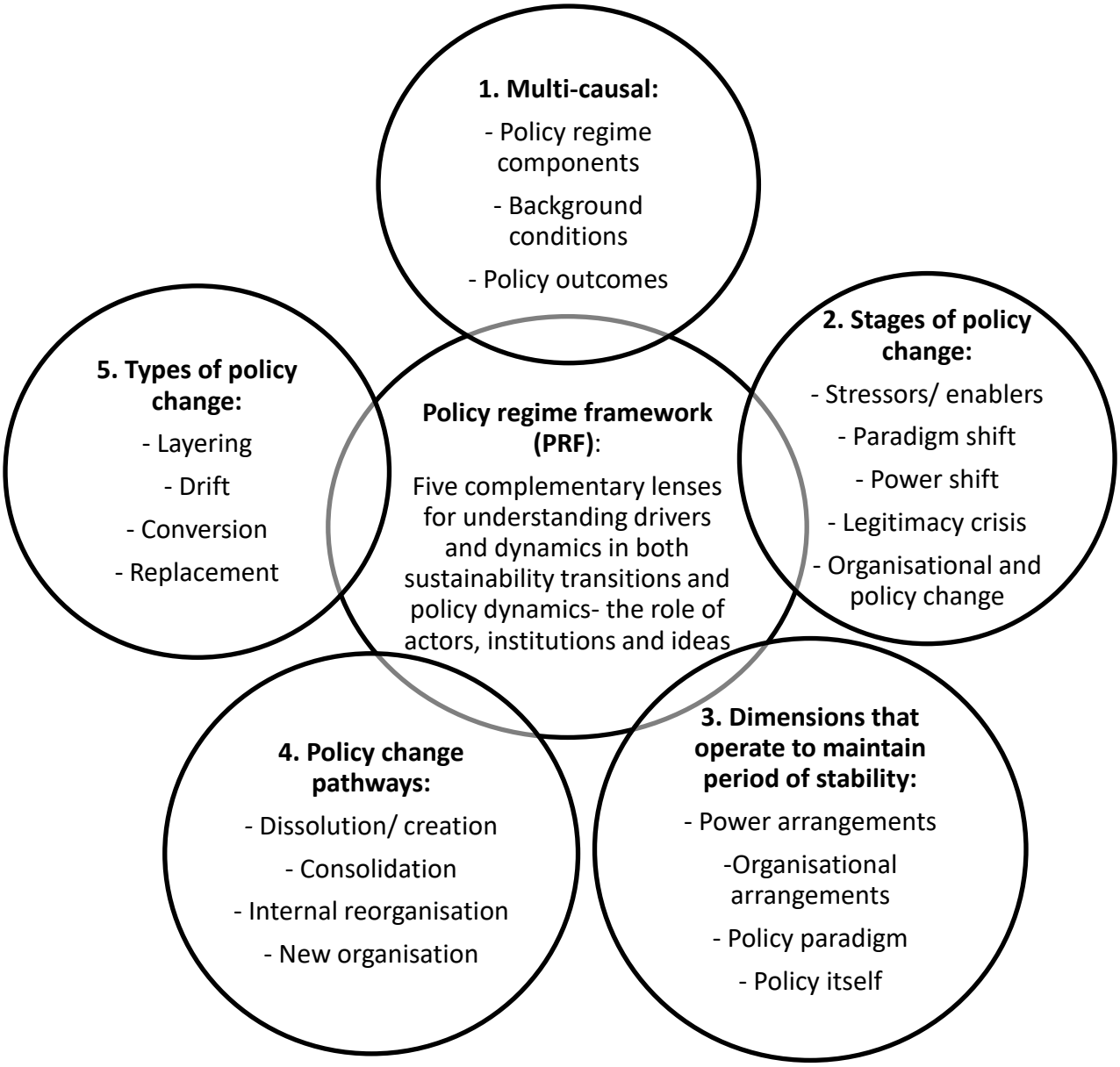

Figure 1: PRF five complementary lenses in policy change

Source: Authors' construct based Swilling et al.,2015:7; Paredis, 2013:55, Hoberg, 2001:10, Kern and Howlett, 2009:396, Wilson, 2000:260

2.4 Towards the empirical investigation

Empirical investigation forms a key contribution towards fine tuning of the policy regime framework. We triangulate our investigation through firstly, the analysis of existing 52 peer reviewed empirical research articles generated between 2008 and 2016 about South Africa's green economy and sustainable development policies. The research articles were identified systematically through Scopus, EBSCO and Sabinet databases. We are interested in the national sphere of government departments as defined in terms of Chapter 5 of the 1996 Republic of South Africa Constitution (Thornhill, 2011:56). We therefore secondly, use organizational level analysis of 44 policy events and documents pronounced between 2002 and 2015. These are at national executive level and includes executive endorsements such as by the President, Cabinet and Ministers. Thirdly, as the lead author in this paper and employed in a national government department, my role in this empirical investigation has implication of me being a participant and an observer. To the extent that as a participant in the situation I am observing, I am also active in the dynamics of policy processes and thus completely immersed in the setting (Nieuwenhuis, 2016:91). While I started working with the national Department of Environmental Affairs (DEA) in 2007, I volunteered the coordination of green economy and sustainable development related work in 2009. I have since been within some of the government policy discussions, processes and developments. This includes my contribution to the coordination of the national green economy summit hosted in 2010, national strategy for sustainable development (NSSD) endorsed by Cabinet in 2011 (Bobbins and Culwick, 2015:37; Giordano, 2014:7) and efforts during the establishment of the ZAR 800 million green fund in 2012 (Mohamed et al., 2014:4). Another contribution I made is on the coordination of the environment sector research, development and evidence framework, that aimed to promote evidence-policy interface (Mohamed et al., 2014:10).

In the next section, we discuss the empirical investigation of South Africa's case of green economy policy change (or stability) towards sustainability using, the proposed PRF five complementary lenses.

3. Preliminary results on South Africa's sustainability transitions and the proposed PRF five complementary lenses

The literature analysed and observations potentially, contributes a comprehensive understanding of South Africa's transition towards sustainability. Due to the limited length, our preliminary analysis in this paper is based largely on the process context. Further content analysis is discussed in a separate paper.

Overall, we observed South Africa's policy enablers including the 2002 World Summit for Sustainable Development, 2009 national climate change summit and science conference and 2010 national green economy summit (Death, 2014:10; Death, 2014a:1223). The policy documents observed include the National Development Plan, Green Economy Accord, National Strategy for Sustainable Development, New Growth Path, Industrial Policy Action Plan (Tshangela, 2013; Musango and Tshangela, 2016:78; Nhamo et al., 2014:25-26; Swilling et al., 2015:12). Such an array of policy documents reflects the empirical realities argued by Teschner et al. (2012), on the notion of policy mixes and by Jochim and May (2010) on boundary-spanning policy regimes in multiple subsystem. The identified policy mixes and events are comprehensively mapped in Figure 2, following the detailed discussion on lenses in multi-causal, stages, dimensions, pathways, and types of policy change.

3.1 *Multi-causal perspective*

The multiple-causes and multiple-levels empirical interactions on green economy and sustainability policies are discussed. South Africa is regarded as a global leader in sustainable development and environmental diplomacy (Death, 2014:2). It is no surprise that South Africa is recognised among the global front-runners in taking on the green economy transition forward (Faccer et al., 2014:653; Musvoto et al., 2015:1). Several landscape level-policy enablers are evident in South Africa that contributed to the government responses. These includes the 2002 WSSD, 2011 United Nations Framework Convention on Climate Change's Seventeenth Session Conference of the Parties (COP17) and 2010 national green economy summit policy events (Giordano, 2014:7; Death, 2014a:1223; Bobbins and Culwick, 2015:37; Mvubu, 2016:272; Agyepong and Nhamo, 2016:02; Jarbandhan, 2014:55). The WSSD also coincide with the 2002 pronouncement of national research and development strategy that is relevant to enable sustainability innovations (Heyningen and Ridge, 2016:400). The global economic crisis of 2008 is argued as the dominating policy stressor/enabler or exogenous landscape level event, recognised for playing a major role in South Africa's green economy policy response (Death, 2014:5; Giordano, 2014:1; Musango et al., 2014a:257; Nhamo, 2013:129). Subsequently, as an entry to the socio-technical regime level, the early formal emergence of "green" idea and policy response is observed within the context of climate change in the Cabinet actors endorsement of the 2009 framework for South Africa's response to the international economic crisis of (Nhamo, 2010:265). The 2008 global economic crisis played a key role as a background condition in South Africa and interestingly, the Cabinet endorsed the national framework for sustainable development in the same year.

3.2 *Stages of policy change*

To trigger the relevant transitions, specific enabling conditions are necessary (Borel-Saladin and Turok, 2013:213). The exogenous policy stressors or enablers such as the 2002 WSSD, 2008 global economic crisis and 2011 COP 17 played a prominent role in creating favourable or unfavourable conditions in South Africa. These international external factors contributed to producing enough strain to stimulate a rethinking of existing arrangement such as initially through the 2009 framework for responding to the economic crisis and 2010 national green economy summit (Wilson, 2000:260).

As an emerging policy niche, it is no surprise that in 2004, after the 2002 WSSD, we observe the development of the climate change response strategy, that was followed by the first national climate change conference in 2005. It is also in that context that the idea of sustainability policies gained momentum as early as 2006 in South Africa to catalyse low carbon growth (Swilling et al., 2015:651). Among the first, such a relevant policy document is identified as the National Treasury's 2006 environmental fiscal reform policy (Nhamo et al., 2014:43).

South Africa's policy actors have contributed to popularise the green economy paradigm, thus signalling the policy paradigm shift (Wilson, 2000:263). While favourable conditions were created by policy stressors/ enablers, South Africa's response and emergence of green economy paradigm still exists alongside the dominant paradigm (Wilson, 2000:262). We discuss this dominant paradigm in the dimensions lens. Nonetheless, some level of legitimation is observed when South Africa's policy actors raised the visibility through the 2010 national green economy summit and their commitment to exploit the opportunities as a response to the 2008 global economic crisis (Wilson, 2000:262; Nhemachena et al., 2015:10).

In terms of the power shifts, and the role it may have contributed in South Africa, we observe a change in the executive administration during 2009 that can also be linked to the idea of "green" in policy documents such as the medium term strategic framework of 2009-2014 and of 2014-2019 (Hlahla et al., 2016:116; Musvoto et al., 2015:3; Mukonza, RM. and Mukonza, C., 2015:93; Moyo, 2015:71). In addition to power shifts, such policy commitments may also be linked to the impact of other policy stressors and enablers at the time. We therefore argue that prior to the 2009 power shifts, there was already a momentum that was triggered through the 2006 environmental fiscal reform policy (Swilling et al., 2015:651; Nhamo et al., 2014:43).

Building from the 2009 administration power shifts, we further observe that the subsequent changes in organisational decision making within government such as new Ministries and rearrangement of existing ones, played a role in opening new venues for green economy policy making. The new Ministries in 2009 included the Economic Development Department, which spearheaded the new growth path (NGP) and the green economy accord whose endorsement is linked to the hosting of 2011 COP 17 policy enabler (Mvubu, 2016:272). Interestingly, the NGP and accord were launched in the same year that the Cabinet policy actors endorsed the NSSD and national climate change response policy. While the 2009 power shifts may have played a positive role, Bobbins and Culwick (2015:39), argues that the complexity of institutional arrangements may bring barriers to the practical application of the concept of green economy. The institutional arrangements complexity is discussed in the section on dimensions lens. We argue that the outcome of South Africa's reorganisation affects the dimensions of stability and pathways lenses.

3.3 *Dimensions that operate to maintain period of stability (or change)*

In terms of the power arrangements highlighted earlier, the South African government is a major actor in promoting periods of change, at least in terms of processes of the emerging sustainability events and policy documents. It is in this context that Borel-Saladin and Turok (2013:214), argues that political will is of critical importance in the formulation and implementation of policies that encourage green agenda.

The dimension lens help us understand how South Africa views, defines problem and propose solutions in the green economy policy paradigm (Wilson, 2000:258). In our conceptualisation of the dimensions lens, we touched on the role of knowledge base as relevant to inform policy. We cautiously agree, that policy makers may have an improved chance of making best decision when such are based on relevant information (Jarbandhan, 2014:61). Bobbins and Culwick (2015:33), raises an important argument however, that there are academic and practical concerns raised about the concept of green economy. What is interesting though is that the concept Bobbins and Culwick (2015:39), still permeated policy and planning processes in South Africa. We raise the question for further investigation on whether and how green economy research evidence played a role in South Africa before, during and after policy commitments? In fact, in our systematic search for South Africa's green economy empirical literature in Scopus, EBSCO and Sabinet databases, we found that the highest number of journal articles peaked in 2014 at 21, and prior to that, no more than 6 journal articles were observed per year since 2009. The research role is important as on the other hand, national governments are required to support the research sector (Creech et al., 2014:376). It is in that context that for example the green fund subsequently assumed the role of a knowledge broker to support evidence informed green economy policy-making in South Africa (Mohamed et al., 2014:10).

Key policy documents were processed through the normal policy making institutional arrangements within the national government, some even in the same year, like the four in 2011 alone (Giordano, 2014:7). Although several Departments coordinate different policies relating to green economy and climate change, no conclusive position is established regarding institutional readiness of the national sphere of government (Nhamo, 2013:136). Bobbins and Culwick (2015:37), however confirms that in South Africa, the national sphere holds the primary power over decisions regarding green economy, economic and environmental concerns. This however, does not mean only national government plays a role, the separation of powers and functions between national, provincial and local government led to blurring of inter-governmental responsibilities and thus fragmented policy in South Africa (ibid). From institutional arrangements point of view, Death (2014:10), argues that:

> It is difficult to treat South Africa as a homogenous entity. This is both because different state actors and institutions—individual politicians, different levels of government (national, provincial and municipal, some with different parties and factions in power), different ministries with different mandates and entrenched interests—have different positions on the green economy, and because the green economy does not yet provide a fully coherent and developed government commitment.

In such institutional arrangements, the leadership and ultimate promotion of sustainable development remain a challenge that even the national climate change response policy is not able to provide way forward on (Jarbandhan, 2014:50).

From a process point of view, South Africa's sustainability events and policy pronouncements suggests that there is period of change, but perhaps these are incremental steps. There are realities that relates to period of stability and dominant paradigm in parallel. Faccer et al. (2014:652), emphasise that South Africa's government continued to invest massively in the commissioning of new (and recommissioning of old) coal fired power plants. While signs of policy change emerged, such coal based investments are argued to be a contributor to dimensions and tensions that maintain periods of stability. South Africa's conditions, according to Borel-Saladin and Turok (2013:213), are heavily weighted towards the prevailing fossil fuel-reliant economy. It continues to build coal fired power stations, thus being heavily coal- and mineral-dependent economy, hence South Africa may have difficulty in meeting the green economy criteria despite its political commitments (Death, 2014:2; Nhamo, 2013:134). It is however recognised in the NDP that careful design and sequencing of decisions is necessary to ensure that the decline of legacy sectors such as coal-fired electricity generation are addressed (Nhemachena et al., 2015:10). Indeed, stability in unsustainable policies cannot be maintained as Musango et al., (2014:9), transitioning towards a diversified electricity generation share is one of essential factors for greening the economy. Nonetheless, the need for a transition to a less resource intensive economic growth is observed in several of the identified policy documents (Swilling et al., 2015:13). This includes the argument by Agyepong and Nhamo (2016:02), that South Africa's national climate change response policy of 2011 is among the progressive green policies.

3.4 *Policy change pathways lens*

The task of categorising South Africa into one pathway is not an easy one. We observe some example context reflected in at least three of the four pathways on dissolution, consolidation, reorganisation and new creation. In the period of investigation, no major dissolution is observed in terms of South Africa eliminating major policies from the dominant paradigms. The ambitious green economy policies exist however the required shift to implement actions contained may be complex and thus relating to aspects of long term nature of policy change and transitions (Bobbins and Culwick, 2015:38). The non-appearance of dissolution may be further linked to the argument by Faccer et al. (2014:654), that the notion of green economic discourse may not be as widely applicable among developing nations.

On the other hand, while no major consolidation took place, we observe that some green economy and climate change elements of the NSSD were incorporated in the NDP, especially its Chapter 5 on transitioning towards environmental sustainability (Swilling et al., 2015:656). As such the NDP and NSSD are among those setting the green economy agenda in South Africa (Bobbins and Culwick, 2015:37). However, as earlier argued, there is no dissolution of dominating paradigm that gives full way for the green economy. Therefore, NSSD and chapter 5 incorporation does not mean green economy is the cornerstone of NDP's thinking (Death, 2014:9).

Some internal reorganisation may have taken place such as positioning of the green industries as a priority in the existing annually reviewed industrial policy action plan (IPAP) (Bobbins and Culwick,2015:37). We argue that IPAP in South Africa is among the key socio-technical regime components, in which the green idea found a place, even though not as a dominant paradigm. The prioritisation of green industries in the IPAP is commendable as potentially, Borel-Saladin and Turok (2013:214), green industrial policies can be used to help spread new

technologies and foster the growth of new sectors. In line with increasingly dynamic policy and institutional policy terrain, the incorporation of such green ideas, according to Mjimba (2015:87), may make green industrialisation a double structural transformation process for developing economies. The new creations such as through the green economy accord were observed, including with the establishment of the green fund in 2012 (Mohamed et al., 2014:4).

We therefore argue that South Africa's pathways concurrently resemble at least three of the four pathways, that are consolidation, reorganisation and new creation.

3.5 *Types of policy change outcomes*

We investigated South Africa's policy patterns as they relate to drifting, replacement, layering and conversion policy change outcomes. Like with the pathways lens, locating South Africa through one type of policy change outcome in terms of goals coherence and instruments consistency is not a clear cut. On the one hand, there is an argument that South Africa's national green economy policies are supportive towards sustainability transitions (Bobbins and Culwick, 2015:34). However, even though sustainability paradigm may have gained momentum as early as 2000s, Faccer et al. (2014:643), argues that national green economy policy making in southern Africa remains in its infancy. It is emphasised that the green economy conceptualisation in South Africa is still at the beginning stages (Mohamed et al., 2014:10).

There is no doubt that green economy related policies and plans were put in place with goals including to address environmental and socio-economic challenges (Nhemachena et al., 2015:7; Nhamo, 2013:132). The key challenges come when such goals are set within the dominant unsustainable paradigm. It is in that context that, in terms of drifting, at this point in South African policies, there is no complete changing of old dominant goals observed.

Furthermore, with regards to replacement, South Africa does not have fundamental restructuring of policy goals and instruments.

Instead, the addition of sustainability, green economy and climate change goals resulted with layering that took place alongside the existing dominant policy goals. For example, South Africa's dedicated climate change events, ideas and documents consistently increased over a decade from 2004 to 2014. The growth is not only limited to climate change specific policies, but the ideas are also mainstreamed in other key documents such as the 2011 New Growth Path and 2012 National Development Plan (Nhamo, 2013:133). Furthermore, over the years between 2006 to 2015, we observe that climate change and green industries related ideas gained attention and progress made in the annual Industrial Policy Action Plan (Bobbins and Culwick, 2015:37; Nhamo, 2013:133).

Although there are elements of conversion in terms of the number of new green economy related instruments, there are unintended consequences of such volumes, including not having a common understanding, that may result with misdirected and ineffective policies also characterised in layering (Nhamo, 2013:134). Death (2014) argues that although South Africa is positioned as global leader, its policy commitment is dominated by green growth discourse that is rather shallow and incoherent, with inconsistencies (Death, 2014:3; Death, 2014:13). It is argued by Death (2014:19), that overall there are no major shifts in planning outcomes. Therefore, while South Africa's policy commitments are key, the ultimately achievement of green economy goals will require a complete embracing and implementation of the concept (Borel-Saladin and Turok, 2013:219).

South Africa's policy events and document in the context of the MLP-PRF five complementary lenses, over the period 2002-2015 are summarised in Figure 2.

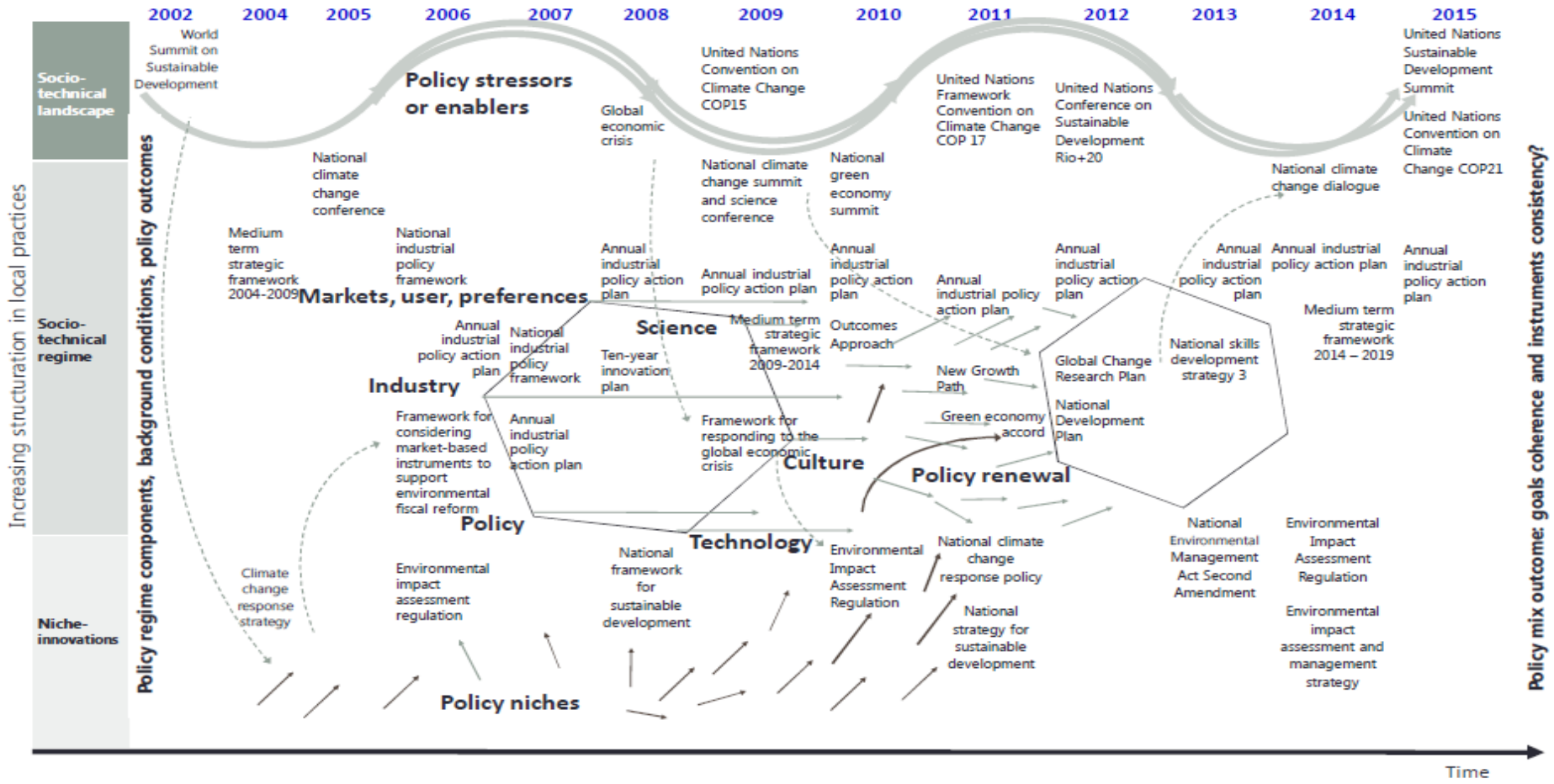

Figure 2: Mapping of South African sustainability transitions and policy mixes, MLP-PRF overlaps patterns of response 2002-2015

Source: Authors' overlaps construct based on Geels, 2007:401, Paredis, 2013:55, Hoberg, 2001:10, Kern and Howlett, 2009:395, Wilson, 2000:260, Musango and Tshangela, 2016:78, Tshangela (2013), Musango et al., 2014a:260; Nhamo, et al., 2014:25-26; Nhamo, 2013:132

3.6 Future research

3.6.1 Enhancing the MLP-PRF five complementary lenses overlaps analytical framework

In our first version paper submitted for the 8th International Sustainability Transitions Conference of 18-21 June 2017 in Sweden, we proposed the multi-level perspective (MLP) five complementary lenses based on the sustainability transitions context. We argue that it necessary to strengthen two frameworks utility further towards a comprehensive MLP-PRF overlaps analytical framework.

3.6.2 Empirical investigation of the MLP-PRF five complementary lenses overlaps analytical framework

The enhanced MLP-PRF overlaps framework needs to be empirically investigated in details. From methodology point of view, our current preliminary investigation will also be strengthened with the use data collected through interviews and a focus group sessions. The current paper also focused more on the process analysis and thus more of content analysis is necessary on the quality of South Africa's policy change and sustainability transitions. We have also focused more attention to the interactions in socio-technical landscape and socio-technical regime. A contribution is necessary to further unpack the niche innovations (policy niches) and socio-technical regime interactions. We are interested in the policy niches as they relate to how the environmental legislation and regulations as a specific subsystem can be the major enablers and put pressure on the socio-technical regime (Creech et al., 2014:374). We will investigate the role of environmental impact assessment regulations and the national environmental management act in that regard.

4 Conclusion

The five complementary lenses are proposed to enhance the PRF utility in understanding sustainability transitions and policy change. The lenses are on multi-causal, stages, dimensions, pathways, and types of policy change. Individually or collectively, the lenses improve the understanding of sustainability transitions as the outcome of a public policy process. There are three phases that we observed in the case of South Africa. These are phase one, that took place between 2002 and 2007 and phase two, between 2008 and 2012. We argue that phase three took place between 2012 to 2015. The first phase we see it as linked to the policy enablers such as the hosting of the 2002 World Summit on Sustainable Development and the phase led to the 2008 endorsement of the National Framework for Sustainable Development. We also observe the second phase around 2008 linked to the global economic crisis up to 2012 when the National Development Plan was endorsed by Cabinet. In third phase, we largely observe engagements that led to the 2015 global agreements such as the Sustainable Development Goals and climate change Paris Agreement. South Africa's response and positioning on sustainability goals include remarkable leadership and commendable policy commitment. South Africa's policy change nonetheless, resulted with layering alongside the existing dominant policy goals. Further research is needed on strengthening the MLP-PRF overlaps analytical framework within the proposed five complementary lenses and the relevant empirical investigations.

Disclosure

The paper is part of on-going independent research by Mapula Tshangela and promoted by Professor Mark Swilling. No potential conflict of interest is reported by the authors regarding the submitted paper. Views expressed in this paper are those of the authors and do not reflect the institutions they are associated to.

5 References

Agyepong, A., Nhamo, G., 2016. Green procurement in South Africa: perspectives on legislative provisions in metropolitan municipalities. Environment, Development and Sustainability

Bobbins, K., Culwick, C., 2015. Green growth transitions through a green infrastructure approach at the local government level: case study for the Gauteng city-region. Journal of Public Administration, 50 (1), 32-49

Borel-Saladin, J., Turok, I., 2013. The green economy: incremental change or transformation? Environmental Policy and Governance 23, 209-220

Cashore B, Hoberg G, Howlett M, Rayner J, Wilson J, 2001. In search of sustainability: British Columbia Forest Policy in the 1990s. Canada UBC Press

Creech, H., Paas, L., Gabriel, G., Voora, V., Hybsier, C., Marquard, H., 2014. Small-scale social-environmental enterprises in the green economy: supporting grassroots innovation, Development in Practice, 24(3), 366-378

Cloete, F., de Coning, C., (Eds), 2013. Improving public policy: Theory, practice and results. Third edition, Van Schaik Publishers, Hatfield Pretoria

Death, C., 2014. The green economy in South Africa: Global discourses and local politics. Politikon, 41(1), 1-22

Death, C., 2014a. Environmental Movements, climate change and consumption in South Africa. Journal of Southern African Studies, 40:6, 1215-1234.

Faccer, K., Nahman, A., Audouin, M., 2014. Interpreting the green economy: Emerging discourses and their considerations for the Global South. Development Southern Africa 31 (5), 642-657

Geels, F., 2012. A socio-technical analysis of low-carbon transitions: introducing the multi-level perspective into transport studies. Journal of Transport Geography 24, 471–482

Geels, F., 2005. Processes and patterns in transitions and system innovations: Refining the co-evolutionary multi-level perspective. Technological Forecasting & Social Change 72, 681 – 696

Geels, F., 2004. Understanding system innovations: acritical literature review and a conceptual synthesis. In Elzen B, Geels F, Green K, (Eds). System Innovation and the Transition to Sustainability: Theory, Evidence and Policy. Edward Elgar Publishing, UK

Geels, F., Schot, J., 2007. Typology of socio-technical transition pathways. Research Policy 36, 399-417

Giordano, T., (2014): Multi-level integrated planning and greening of public infrastructure in South Africa. Planning Theory & Practice

Heyningen, P and Ridge, S, 2016. Innovation systems for sustainable business in the knowledge economy. In Swilling, M, Musango, J and Wakeford, J (eds). Greening the South African economy: scoping the issues, challenges and opportunities. UCT Press

Hlahla, S., Goebel, A., Hill, T., 2016. Green Economy: A Strategy to Alleviate Urban Poverty and Safeguard the Environment? KwaZulu-Natal, South Africa. Urban Forum 27, 113–127

Hoberg G, 2001. Policy cycles and policy regimes: A framework for studying policy change. In Cashore B, Hoberg G, Howlett M, Rayner J, Wilson J, 2001. In search of sustainability: British Columbia Forest Policy in the 1990s. Canada UBC Press

Howlett, M., Ramesh, M., Perl, A., 2009. Studying public policy: policy cycles and policy subsystems. Third edition. Oxford University Press Canada

Howlett, M., Ramesh, M., 2003. Studying public policy: policy cycles and policy subsystems. Second edition. Oxford University Press Canada

Jarbandhan, D., 2014. The evolution of environmental stewardship as a leadership philosophy for the South African public sector: critical considerations. Journal of Public Administration, 49-63

Jochim, A., May, P., 2010. Beyond Subsystems: Policy Regimes and Governance. The Policy Studies Journal 38 (2), 303-327

Jørgensen, U., 2012. Mapping and navigating transitions- The multi-level perspective compared with arenas of development. Research Policy 41 (2012) 996-1010

Kemp, R., Martens, P., 2007. Sustainable development: how to manage something that is subjective and never can be achieved? Sustainability: Science, Practice and Policy 3 (2), 5-14

Kern, F., Howlett, M., 2009. Implementing transition management as policy reforms: a case study of the Dutch energy sector. Policy Science 42, 391-408

Kivimaa, P., Kern, F., 2016. Creative destruction or mere niche support? Innovation policy mixes for sustainability transitions. Research Policy. 45, 205-217

May, P., Jochim, A., 2013. Policy regime perspective: Policies, politics and governing. The Policy Studies Journal 41 (3), 426-452

McGuinn, P., 2006. Swing issues and policy regimes: Federal education policy and the politics of policy change. The Journal of Policy History, Volume 18 Number 2, 2006

Mjimba, V., 2015. A Case for Industrial Policy towards Green Economy Transition in Developing Economies. Africa Insight Vol 45(3)

Mohamed, N., Maitho, E., Masvikeni, E., Fourie, R., Tilly, M., Zondi, T., 2014. The Green Fund of South Africa: Origins, establishment and first lessons. Development Southern Africa, 1-17

Moyo, T., 2015. Local government and green jobs creation: exploring opportunities in selected metropolitan municipalities in South Africa. Journal of Public Administration 50 (1), 70-89

Mukonza, RM., Mukonza, C., 2015. Implementation of green economy policies and initiatives in the city of Tshwane. Journal of public administration 50(1), 90-107

Musango, J., Brent, A., Bassi, A., 2014a. Modelling the transition towards a green economy in South Africa. Technological Forecasting & Social Change 87, 257–273

Musango, J., Brent, A., Tshangela, M., 2014: Green economy transitioning of the South African power sector: A system dynamics analysis approach. Development Southern Africa 31, 744-758

Musango, J., Tshangela, M., 2016. Green growth engines and green jobs. In Swilling, M, Musango, J and Wakeford, J (Eds). Greening the South African economy: scoping the issues, challenges and opportunities. UCT Press

Musvoto, C., Nortje, K., De Wet, B., Mahumani, BK., Nahman, A., 2015. Imperatives for an agricultural green economy in South Africa. South African Journal of Science 111(1), 1-8

Mvubu, M., 2016. Green supply chain management constraints in the South African fast-moving consumer goods industry: a case study. Journal of Contemporary Management 13, 271-297

Nhamo, G., 2013. Green economy readiness in South Africa: A focus on the national sphere of government. International Journal of African Renaissance Studies 8(1), 115-142

Nhamo, G., 2010. Green economies and green jobs: implications for South Africa. Environmental Economics and Investment Assessment III 131, 257-268

Nhamo, G., Pophiwa, N., Tshangela, M., 2014. Mapping the green economy landscape in South Africa. In Nhamo G, (Ed). Breakthrough: Corporate South Africa in a green economy. Africa Institute of South Africa.

Nhemachena, C., Jonas, S., Karuaihe, S., 2015. understanding of the current practices, challenges and opportunities of the green economy in Limpopo province. Journal of public administration 50(1), 6-31

Nieuwenhuis, J., 2016. Qualitative research designs and data gathering techniques. In Maree, K, 2016 (Ed). First Steps in Research. Van Schaik Publisher. Pretoria

Nowlin, M., 2011. Theories of the Policy Process: State of the Research and Emerging Trends. The Policy Studies Journal 39 (S1), 41-60

Paredis, E., 2013. A winding road: Transition management, policy change and the search for sustainable development. PhD Dissertation. Ghent University

Petridou, E., 2014. Theories of the Policy Process: Contemporary Scholarship and Future Directions. The Policy Studies Journal 42 (S1), 12-32

Sabatier, P., Weible, C., 2007. The Advocacy Coalition Framework: Innovations and Clarifications in Sabatier, P., 2007. Theories of the policy process. Colorado, Westview Press

Smith, A., 2007. Translating sustainabilities between green niches and socio-technical regimes. Technology Analysis and Strategic Management 19 (4), 427-450

Smith, A., Stirling, A., Berkhout, F., 2005. The governance of sustainable socio-technical transitions. Research Policy. 34 (2005) 1491-1510

Swilling, M., Musango, J., Wakeford, J., 2015. Developmental states and sustainability transitions: Prospects of a just transition in South Africa. Journal of Environmental Policy and Planning 18, 650-692

Tescher, N., Garb, Y., Paavola, J., 2013. The role of technology in policy dynamics: the case of desalination in Israel. Environmental Policy and Governance 23, 91-103

Tescher, N., McDonald, A., Foxon, T., Paavola, J., 2012. Integrated transitions towards sustainability: The case of water and energy policies in Israel. Technological Forecasting and Social Change 79, 457-468

Thornhill, C., 2011. South African public administration and management. Pretoria Van Schaik publishers

True, J., Jones, B., Baumgartner, F., 2007. Punctuated-equilibrium theory: Explaining stability and change in public policy making In Sabatier P, 2007. Theories of the policy process. Colorado, Westview Press

Tshangela, M., 2013. National green economy initiatives and South Africa green economy modelling (SAGEM) report. Key note address, 19th International Sustainable Development Research Conference, Stellenbosch, South Africa

Tshangela, M., Swilling., 2017. Five complementary lenses in sustainability transitions and policy dynamics: A literature review. A paper presented at the 8th International Sustainability Transitions (IST) Conference: Taking the lead in real world transitions, 18-21 June 2017, Gothenburg, Sweden

Tshangela, M., Swilling, M., 2015. Overlaps in sustainability transitions and policy change: A South African case of green economy policies. Abstract, 6th International Sustainability Transitions Conference, 25-28 August 2015, University of Sussex, Brighton, United Kingdom

United Nations Commission on Sustainable Development (UNCSD), 2012. The future we want- Outcome document. United Nations General Assembly resolution adopted by the General Assembly, New York

Wilson, C., 2013. Public Policy: Continuity and Change. Second edition, Waveland Press

Wilson, C., 2000. Policy Regimes and Policy Change. Journal of Public Policy 20 (3), 247-274