15

FROM PROMISING PREACHING TO PILOTING THE PROMISE AND TEACHING WHAT IS PROMISING IN PLANNING PRACTICE

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INTRODUCTION

The quest for sustainable human settlement is not new. For over a century a central tenet of modern town/spatial/development planning[1], alongside the tenets of equity and efficiency in resource allocation and utilisation, has been exactly that (Howard, 1970; Hall, 1996; Oranje, 1998; Taylor, 1998; Pinson, 2004). What is, however, new is the growing focus, along with those of advocacy and persuasion, on the use of science and technology, to ensure more sustainable development. Dubbed 'sustainability science', this novel perspective, has not yet been demarcated and defined as an autonomous field or discipline, or a unique field/area of study, but rather as a "...vibrant arena that is bringing together scholarship and practice, global and local perspectives from north and south, and disciplines from across the natural and social sciences, engineering, and medicine" (Clark and Dickson, 2003: 8060).

Key components of this new perspective are to explore and make sense of the dynamic interactions between nature and society, and secondly, to better understand how social change shapes the environment and how environmental change in turn shapes society (Clark and Dickson, 2003). In doing so, sustainability science argues for certain key elements such as use-inspired research, appreciation of the complexity of

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coupled social-ecological systems, transdisciplinary approaches including reference to multiple epistemologies, and adaptation in research and practice in seeking to ensure more sustainable futures (Burns *et al*., 2006; Burns and Weaver, Chapter 1, this volume).

While sustainability science presents a scientific attempt at securing sustainable outcomes, when compared to the advocacy, artistic and rhetoric-driven tradition of town planning, it has not yet proven to be more successful than town planning at seeing its progressive ideals being articulated in legislation and policy, and in 'changing the world'. It seems that the same fate that befell many a progressive planner – i.e. that 'the better, more impassionate argument' simply did not result in the necessary perception and behavioural change (Robins, 2007) – could also befall many of those in the sustainability science arena. Clearly, the advocacy and rational-scientific view of the world and of political decision-making – i.e. that a progressive argument backed by solid scientific evidence 'should win the day' and result in perception and behavioural change – is not being backed up by empirical evidence from the world of practice, as both planning and sustainability science seem to be more pronounced in text than in the flesh.

Given their likeness in focus and aim, as well as in their struggles, it could be argued that for those interested in the realisation of that which sustainability science stands for through the implementation of what it proposes, the planning experience might offer some useful lessons. This is proposed not only as planning has been seeking to achieve very similar objectives, often through similar lines of 'attack' and for a longer period of time than sustainability science has, but also as a result of the lack of real world, practical examples of sustainability science-applications to learn from. As such, case studies of planning practice can serve as a proxy for sustainability science. In terms of what such learning entails, the focus would fall on both the tactics and strategy deployed in planning and its results. These in turn essentially revolve around three key aspects: first, attempts by planners to sell the rationale and key concepts of planning and ensuring that these gain popular and political acceptance; secondly, ensuring that such support results in the preparation and approval of legislation and policies in which this rationale and set of concepts are articulated, advanced and given practical expression; and, thirdly, and most importantly, endeavours to ensure the achievement of sustainable development outcomes and (real) impact.

Taking this line to its practical research outcome, one could for instance undertake an historical overview, demonstrating the battle lines of planning at different stages of its history, and show what had been achieved and what not in each phase. The danger in such a study would be that it would not have really transcended the challenge facing both town planning and sustainability science – that it did not explore the world as, when and where the word meets the flesh. More importantly though, such a study would not have escaped the growing challenge facing sustainability science and those sharing its grave concerns – that of talking to and about the world, giving

it meaning in growing volumes of text, while often not really knowing how such texts are viewed, internalised, and given expression in deed (or not) by actors/agents in the world of practice. A direct outcome of this, of course, is that such protagonists would not necessarily know how to ensure that their (wordy) concerns make their way into the right (worldly) spaces and have the desired impact.

An alternative would be to conduct more research into the actual implementation of ideas in the world of the sustainability cadre that seek to achieve sustainability science-outcomes. In the sustainability science discourse such research has been labelled use-inspired research. Recently, such an opportunity presented itself when a pilot project with a planning-and-governance perspective[2] was initiated by the national Presidency of South Africa. In this pilot an attempt was made to test both the prospects and limitations of key constructs germane to both planning and sustainability science in a number of district municipal planning processes, and the extent to which these concepts had found acceptance in these districts. In a way, it was an attempt at testing the 'truth-and-use-value' of these concepts from the perspective of those that had to give them expression in practice. While limited to a sample of municipalities (13 of the 52 metro and district municipalities in South Africa), and not conducted specifically from a sustainability science perspective, the study does offer a range of lessons and areas of interest, recorded during and after the project intervention, for those serious about seeing the word of sustainability science becoming flesh. This chapter tells the story of that study, which will be referred to as the 'NSDP[3] District Application Project'.

STRUCTURE OF THE CHAPTER

The body of the chapter has two parts. In the first, we provide a brief description of the rationale, objectives, challenges, roll-out and outcomes of the NSDP District Application Project. In the second, we enter into the arena of learning from the pilot. We first discuss the research approach and methodology we used in making sense of and extracting meaning from the pilot, and then describe lessons learnt, both from: (i) a 'sustainability science-specific'; and, (ii) a 'more generic planning and sustainability science perspective'.

PART I: THE NSDP DISTRICT APPLICATION PROJECT

PROJECT RATIONALE

Even though progressive planners harboured ideas for decades prior to the advent of democracy in South Africa in 1994 about a planning system in which participation, equity and sustainability would be paramount, apartheid made it impossible for

such a system to be implemented (Muller, 1983; Oranje, 1998). However, the democratic transition in 1994, coupled with a greater ecological awareness, and a strong focus in planning on collaboration of stakeholders and communities opened up a whole new world of possibility (ANC, 1992, 1994).

The first positive change was the re-definition of the scope of planning, from principally concerned with land-use placing, parcelling and control, in isolation from other kinds of planning (e.g. health, education, environmental and transport), to the normative principles espoused in the 1995 Development Facilitation Act (Republic of South Africa, 1995), and the introduction of 'integrated development planning' by the Forum for Effective Planning and Development (FEPD) in 1995 (Oranje and van Huyssteen, 2004: 13). In terms of this definition, planning was described as: "A participatory approach to integrate economic, sectoral, spatial, social, institutional, environmental and fiscal strategies in order to support the optimal allocation of scarce resources between sectors and geographical areas and across the population in a manner that provides sustainable growth, equity and the empowerment of the poor and the marginalised"[4].

The second significant positive change came about when legislation made provision for the preparation of a plan that would give expression to this new perspective on, and definition of, planning[5]. Aptly called the 'Integrated Development Plan' (IDP), this plan was to be prepared by every municipality in the country every five years, with an annual review. The name was not misplaced, for IDPs were seen as the primary tool in the municipal arena that would bind all other plans[6], destroy poverty, ensure strong, sustainable and equitable local economic growth, uplift the poor and give voice to the oppressed (see Jewell and Howard, 2000 and the Municipal Systems Act, 2000 in Republic of South Africa, 2000). In accordance with the intricate State architecture and 'governance' model introduced by the 1996-Constitution – quasi-federal in form, but unitary in function[7] – the IDP was also called upon to become the instrument that would coordinate the infrastructure investment and development spending decisions of the municipal, provincial and national spheres of government.

The new definition and approach provided for in legislation, while very impressive on paper, proved less so in practice. This was largely due to the fact that for the IDP to perform its desired task it required huge levels of interaction between officials, often spatially located far from each other, and with very different developmental concerns and agendas. In the municipality itself, planning was confronted with a barrage of infrastructure backlogs and economic woes inherited from apartheid, as well as a lack of technical, financial, planning and managerial capacity and very limited budgets (Roux *et al*., Chapter 18, this volume, describes a similar situation facing government officials tasked with managing the country's natural resources, for example water catchments).

In stark contrast to the idealised arrangement, IDPs prepared in municipalities often did not guide municipal budget allocations and implementation priorities, nor did they support or enhance a wider, province or nationwide focus or thrust (Adam and Oranje, 2002; Meicklejohn and Coetzee, 2003; Todes, 2004; CSIR, 2006). Likewise, plans prepared by provincial and national government at best provided strategic guidance for anyone but the entity that prepared them (CSIR, 2006). Within a fiscal and planning system still largely centralised, the foreseen impact and role of municipalities as developmental local government entities remained quite restricted. In addition to the huge harmonisation, integration and coordination challenges, the novel and intricate highly communicative planning model required significant levels of interaction, which in itself, placed an enormous time- and cost-burden on the human resources of especially smaller and more rural municipalities[8]. In short, synergy and coordination in the deployment of State resources proved hard to achieve in practice (Department of Provincial and Local Government, 2005; CSIR, 2006). In this context, the realisation of the progressive ideals of planning, so hugely important in a country beset by enormous developmental challenges, became a distant ideal (The Presidency, 2004a, 2006a).

Government did not give up hope, and towards the end of the 1990s work was started in the Office of the Deputy President (later The Presidency) on a set of spatial guidelines for infrastructure investment and development that were intended to ensure greater synergy in the actions of the three spheres of government. This initiative, as well as the thinking that went into it, was strongly influenced by a burgeoning body of local and international literature that emphasised the value of coordinated, synergised and aligned government investment in achieving social, economic, environmental and spatial objectives (Asibuo, 2000; Boyle, 2000; Cameron and Ndhlovu, 2001; Harrison, 2001, 2002; Bird and Smart, 2002; de Rooij, 2002; Faludi, 2002, 2003a, b; Faludi and Waterhout, 2002; Horgan, 2002, 2004; Albrechts *et al*., 2003; Gualini, 2003; Robinson *et al*., 2003). At the same time another stream of work, largely derived from a detailed scrutiny and analysis of successful economic development emerged, stressing the value of developing nation-states through a focus on 'functional economic regions' and 'clusters' (Amin, 1998; Balchin *et* al., 1999; Lechner and Dowling, 1999; Lloyd and Illsey, 1999; Merrifield, 2001, 2003; Engerman and Sokoloff, 2003; Asheim *et al*., 2006)[9]. A key feature of this approach was that of 'learning regions' in which deep and dense networks of institutions both acted as the instigators and providers of the glue of regional development. The central argument was that regions with strong institutions, well-linked to each other and to the economic activities and livelihoods of the region, are crucial for future growth and development. Hence, a core focus in development practice was to identify, utilise, support and enhance such regional institutions and the actors that operate in and through them, and their links to each other and the economic activities in regions that they enable, govern and sustain.

Out of this emerged the National Spatial Development Perspective (NSDP), prepared by The Presidency and adopted by Cabinet in January 2003 (The Presidency, 2003). Being an indicative, guiding perspective and not a plan, the NSDP did not make explicit statements on state action in specific geographic locations. Instead, it provided a spatial logic and set of normative principles, based on both local and international best practice and theory, to inform and guide decisions on infrastructure investment and development spending by all three spheres of government in 'regions'. Essentially, it sought to ensure greater rationality, synergy, coordination and integration in State infrastructure investment and development spending (The Presidency, 2006a).

At its heart the NSDP had a deep concern with 'people, not places' (The Presidency, 2003). In practical terms this translated into focusing significant infrastructure investment in areas with proven economic development potential, and development spending in areas with high levels of poverty (The Presidency, 2003). Places with, for instance, their origins in spatial engineering by the apartheid regime, with no or very little economic development potential, would thus not be targeted for massive hard infrastructure investment. Instead, State spending in such places would focus on building and supporting the people living there, through education, health care, grants and making available labour-market intelligence (e.g. information on tender and job opportunities).

However, merely adopting the NSDP had very little impact on the ground other than unleashing a chorus of dissent. This in turn gave rise to further work on both the focus and processes of strategic planning instruments, and the adoption by Cabinet in February 2005 of the Harmonisation and Alignment Framework (The Presidency, 2004b), which was intended to ensure greater harmonisation and alignment in the planning and spending proposals of the three spheres of government. This framework argued that maximum developmental impact by a 'Developmental State' is reliant on focused, targeted, integrated development, and that this in turn requires of all role players: (1) a shared understanding on development dynamics and trends in all regions; (2) high-level debate on the development of such regions; (3) commitment by all role players on what needs to be done in these regions in terms of infrastructure investment and development spending; and, (4) provision for this in plans, frameworks and budgets (Oranje and van Huyssteen, 2007).

In addition to this, the framework argued that the 52 district and metro areas were to be used as shared areas of jurisdiction to coordinate planning. The high-level intergovernmental dialogue, shared understanding and joint agreement were meant to provide a foundation on which state actors in the three spheres of government could conduct their strategic and sector planning and prepare their budgets. This would then also form the basis of the district/metro Integrated Development Plan (IDP). The strong position of district and metropolitan IDPs in sustainable social and economic transformation was given a further boost when the President's

Coordinating Council (PCC)[10] resolved in 2004 that the district/metropolitan Integrated Development Plan (IDP) would become the 'shared expression of the development objectives and intentions of the three spheres of government', as illustrated graphically in Figure 1[11].

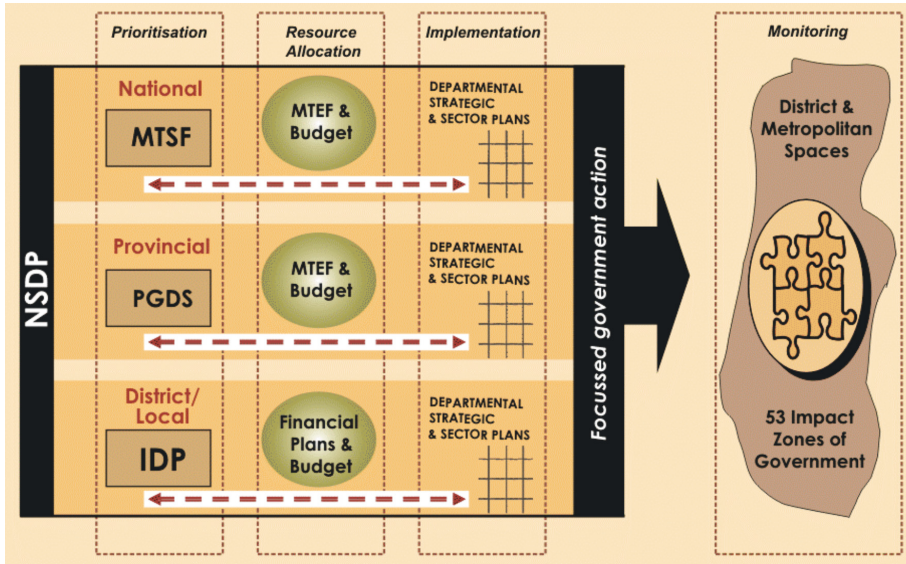

FIGURE 1: Idealised alignment of planning instruments, designed to achieve intergovernmental prioritisation, resource allocation and implementation. Adapted from The Presidency (2006a: 14).

After many efforts and tribulations, a new planning system with a range of planning instruments, had been put in place on paper. The challenge of making it work in the way envisaged, however, remained elusive. This situation resulted in a decision by The Presidency in 2006 to run a pilot project – the NSDP District Application Project[12] – to implement the framework and contextualise the NSDP in a select number of districts and to record lessons learnt from this experience (The Presidency, 2006b). With the support of an intergovernmental task team[13] and the nine provinces, the Presidency launched the project in 13 districts in eight of South Africa's nine provinces.

OBJECTIVES

The NSDP District Application Project sought to ensure that senior representatives from the three spheres of government rigorously debate and reach a shared understanding and agreement on developmental needs. Agreement was also sought on development opportunities, challenges and bottlenecks in the district municipality, as well as the infrastructure investment and development spending required to address these needs and utilise the potentials in a sustainable way (The

Presidency, 2004b, 2006b). This objective was pursued within the developmental logic and normative principles as set out in the NSDP, and backed up by detailed spatial analysis of the participating districts, using the foci of the NSDP (need and development potential) as novel pillars for the analysis. It was done with the clear intent of ensuring the popularisation and application of the NSDP in district development planning processes as part of the broader agenda of establishing this regional unit as the spatial area/territory of State planning action. All of this was based on the assumption that the various components of the agreement would then be translated by the respective spheres and sectors into plans and budgets, as and when these were prepared. This, it was believed, would provide a foundation for state investment and spending to take place in the district, as a spatially defined entity, in a focused, coordinated and synergistic way.

PARTICIPATING MUNICIPALITIES

The 13 district municipalities were selected in a process of negotiation between The Presidency, the provinces and respective districts. Eight of the nine provinces in the country (all excluding Gauteng) were represented in the study[14], and the 13 districts (see Figure 2) included the following:

- Amatole and Cacadu (Eastern Cape);
- Thabo Mofutsanyane (Free State);
- Ilembe, Ugu, and Umkhanyakude (KwaZulu-Natal);
- Vhembe, Waterberg (Limpopo);
- Nkangala (Mpumalanga);
- Pixley ka Seme (Northern Cape);
- Bophirima and Central (North West); and,
- Cape Winelands (Western Cape).

In terms of developmental profile the districts are, by and large, highly representative of non-metropolitan South Africa. They all have large populations living in poverty (in many cases more than half the population), are highly dependent on grants and other social transfers, have big income disparities and experience significant out-migration of able persons (see Cundill and Fabricius, Chapter 16, this volume). Most of the participating district areas have slow-growing, low-base and town-centred economies, which contribute in most cases less than 1% to the national economy as expressed in terms of Gross Value Added (GVA – which measures the value added/contribution made by each individual producer, industry or sector to the economy) and which are principally focused on a few towns[15]. In most cases, the districts are located far from the major metro markets and export ports, face considerable basic infrastructural backlogs, lack technical, planning and managerial capacity and are beset by resource constraints, for example, in the form of ecosystem

services such as sustainable potable water supplies (see Ashton *et al*., Chapter 9, this volume) and available, productive agricultural land (The Presidency, 2006a).

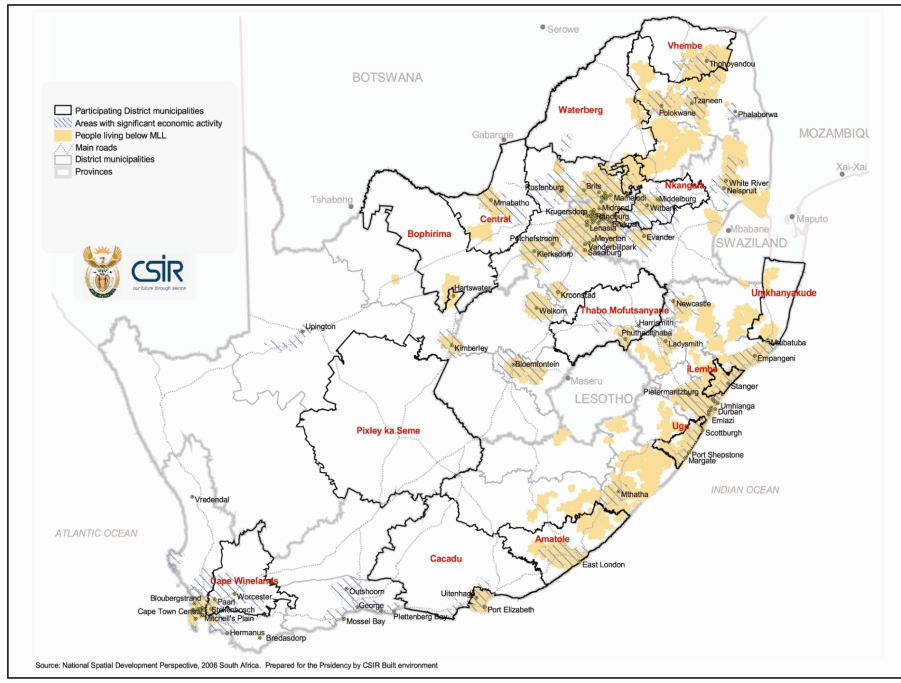

FIGURE 2: District municipalities that participated in the NSDP District Application Project [16].

CHALLENGES

The pilot project was beset with daunting challenges, of which the following were the most pronounced: In the first instance, the pilot with its anchor in the NSDP meant introducing and embedding a controversial approach to development, requiring decision-makers in all three spheres of government to make trade-offs about investment and spending in a resource-scarce environment. Secondly, the pilot required the support and active participation of senior officials and politicians. Thirdly, it ventured into the power-infested waters of turf, influence, status and professional jealousy, and called for a deliberative engagement in which all were equal in the pursuit of greater developmental ideals. Fourthly, it was unequivocal in its call for commitment in plan and budget to what was agreed on in the forums. Lastly, the pilot asked participants, many of whom had been biting at the development mettle, to pack away their cynicism and 'give the pilot a chance'.

FORMAT AND ROLL-OUT

The project consisted of seven phases:

In the first phase the project was defined and conceptualised by the Presidency, and elaborated upon further by a project team consisting of representatives from the Policy Unit in the Presidency, the Development Bank of Southern Africa (DBSA), the Department of Provincial and Local Government (DPLG), researchers at the CSIR, and sub-contractors appointed by the latter (see Mohamed, 2006). The outcome of this was a project charter and analytical framework in accordance with which the project was rolled out (The Presidency, 2006c).

The second phase involved pilot selection and securing buy-in from the various provinces and national government sector departments (The Presidency, 2006b). This entailed numerous meetings by the project manager in the Presidency with officials in Premier's Offices throughout the country, officials in national sector departments (notably the Department of Provincial and Local Government, National Treasury and the Department of Trade and Industry) and with Municipal Managers in a number of districts. During this phase, project champions were also identified by the participating districts and provinces – in most cases, the IDP or Municipal Manager at district level and a representative from the Office of the Premier at provincial level.

The third phase involved setting up of project teams for each of the districts. The teams consisted of a lead facilitator (a consultant), the project champions, supporting technical experts and other key role-players in the district, province and/or national government[17].

The fourth phase entailed the compilation of draft developmental profiles for every district, the holding of preparatory information-sharing and buy-in-seeking discussions with senior politicians and provincial and local officials, and the scheduling of work-sessions in accordance with the project charter. A key component of the data-gathering task entailed interviews (between eight and ten) with key role players in both the private, NGO and public sector in the district on the needs, issues, potentials and the state of intergovernmental collaboration in the area. The bulk of the information, however, was generated through a refinement of the spatial analysis-platform and accompanying socio-economic data set, originally developed at national scale for the 2006-NSDP[18]. In most districts, this task was eased by the existence of data sets, often developed through IDP, Local Economic Development (LED), Spatial Development Framework (SDF), Growth and Development Strategy (GDS) or specific sector initiatives. In many cases, however, the datasets contradicted each other and were products of specific sector planning endeavours, which frustrated rather than facilitated cross-scale, border and discipline synthesis and integration. Will (Chapter 17, this volume) describes a similar situation with respect to indicators and data analysed for State of Environment Reporting.

The outcome of this was a draft developmental profile for each district and an accompanying set of GIS-maps.

The fifth phase involved the holding of two-day strategic work-sessions in each district municipality, to facilitate strategic, structured, high-level dialogue between key role players. Peter (Chapter 14, this volume) proposes a similar approach to facilitated stakeholder participation as a basis for developing a shared understanding of complex social-ecological systems and their adaptive management. In most districts, the sessions were attended by senior district managers and politicians, senior politicians and officials from local municipalities and relatively high level representatives from provincial sector departments and Offices of the provincial Premiers. During these sessions, the facilitators and their technical support teams and project champions used the draft developmental profiles to structure the discussions, highlight mismatches in prioritisation and resource allocation, flag bottlenecks and elicit debate. Use was also made of a tool developed for the project, called the 'Strategic Engagement and Analysis Matrix', or SEAM (Box 1). While the debate in these sessions was viewed as an objective in its own right, the sought outcome of the session was the achievement of a shared understanding and intergovernmental agreement on the key needs, development potential and long-term development objectives of the district, and assignment of the responsibilities of each sector and sphere of government in meeting these objectives.

The sixth phase entailed elaborating the agreements reached in the preceding project phase into specific documented priority actions to be undertaken by each sector and sphere of government in their respective planning and budgeting actions. These documents were prepared by the project teams and were typically developed further in an iterative process after the two-day work-session. It was then left up to the various government actors to take these agreements further in their respective institutions, planning processes and intergovernmental forums

The seventh phase involved capturing the learning and preparing a report setting out the way forward, given that which was learnt in the pilot. This process focussed on aspects such as the assumptions underlying the contextualisation of the NSDP in municipalities, intergovernmental cooperation and the general operation, capacity requirements, and design of, development planning systems and processes. In addition to a formal learning process that the CSIR was responsible for, the Presidency also organised a feedback-and-horizontal-learning session at the Union Buildings, during which the various district champions had the opportunity to share their experiences and engage with others about theirs.

The SEAM utilises a matrix to surface, discuss, debate, map out and (in the process) develop a shared understanding on the developmental needs, challenges, trends, developmental potentials and requirements of a district/metro to ensure its sustainable development. In order to ensure this outcome, the SEAM relies on well-informed, facilitated, structured and active participation by key state actors from all three spheres of government and non-state role players in the development of the district/metro. This requires commitment from all involved, sound local knowledge and unbiased, outsider interpretation of technical, social, economical, institutional, environmental and spatial data of the area, as well as a strong innovative spirit. This in turn requires that the outside experts and the facilitator are well-versed in the developmental profile of the district/metro, which is where the other methods/instruments in the application of the Harmonisation and Alignment Framework enter the fray. In addition to this, it relies on a dedicated group of champions in the district/metro to bring together and enthuse the different role players, and sustain the momentum.

The matrix is populated through the structured dialogue with the deliberations between the role players, and the understandings they reached – not necessarily agreed to by all, but equally important, as they are held by some to be valid/true. In so doing a shared picture not only of the development profile, but also of the different perspectives on this profile for the region, is developed. Recording the discussion in real time in some cases assisted participants to keep constant check on what is being said and whether their inputs are correctly recorded. Throughout the structured dialogue the focus is on finding innovative ways of addressing the development challenges in the most sustainable way, in terms of affordability, novel technologies and optimal utilisation of facilities and infrastructure.

BOX 1: The Strategic Engagement and Analysis Matrix (SEAM)

OUTCOMES

The following outcomes represent the project 'results' and are discussed from the perspective of the original project aims[19].

1. The project raised awareness of the NSDP in all 13 pilot districts, albeit that the understanding and specific view of it differed in each case. The stark questions the NSDP raised remained controversial and challenging – i.e. that of focusing different kinds of State investment and spending in different places. It demonstrated that a heightened awareness and another set of new eyes do not necessarily result in a different way of acting (in this case through plans and budgets) and a 'new' envisioned reality.

2. The project allowed decision-shapers and -makers in districts from a variety of backgrounds and spheres of government to debate and focus their attention on a distinct geographic unit – the district municipal area. This assisted in providing key role players with a keener appreciation of the specific factors, development dynamics and trends impacting on growth and development in the district, instead of merely a sector/discipline-specific interpretation.
3. The project demonstrated that it was possible for stakeholders to develop a shared (and richer) understanding of the different substantive aspects of development (institutional weaknesses, pressures, bottlenecks related to the economy, livelihoods, services, infrastructure, access to land, etc.) instead of merely listing these challenges as part of a (standard) planning process. It showed that these can be captured in a crisp, concise way and that they need not be incorporated into lengthy documents that drive their readers to deep frustration and anguish. On the downside, it quickly emerged that reaching an agreement on paper in the forums created by the work-session was far easier than taking it back into the participants' own institutional environment and lodging that understanding and agreement into a different system with a different language and set of discourse-triggers.
4. While this only happened in a number of better-capacitated district areas, the project illustrated the value of a platform of shared understanding in a number of ways: first, to generate and guide realistic discussions and visions around desired long-term social and economic outcomes for an area; secondly, to strengthen and ensure strategic thinking about an area; and, thirdly, to mobilise intergovernmental action to put in place appropriately resourced and targeted programmes in accordance with implementation agreements.
5. The project's engagement processes illustrated that agency matters – who attends, who speaks, who speaks first, who listens, and who seeks to make others listen, does make a difference, especially if there are champions who make the success of the project their business. Equally important, it (once again) demonstrated that if leaders commit, others do so more readily.
6. The project demonstrated the benefit to be gained from novel and creative tools/methods to engage complex systems fraught with multi-facetted challenges (see Peter, Chapter 14, this volume). The introduction of the SEAM (Box 1) was, for instance, identified by many role players as a useful way to look at, probe and consider developmental issues.
7. The project re-emphasised a number of pitfalls in mobilising intergovernmental action towards sustainable development (CSIR, 2007a, b). Key amongst these are: (i) the ease with which processes can fall back into exercises aimed at ensuring compliance, rather than moving towards new perspectives and understandings; (ii) the danger of raising expectations that are not lived up to, with cynicism often following in close pursuit; (iii) the persistent absence of consideration

for 'the longer-term'; (iv) the lack of capacity in most government structures to undertake intergovernmental planning; (v) the need for strategic provincial and national guidance; and, (vi) the dangers of 'speaking truth to power' in situations where 'power is the truth'.

PART II: LEARNING FROM THE NSDP DISTRICT APPLICATION PROJECT

As indicated in the introduction to this chapter, the pilot was designed to influence planning processes, resource allocation and development impact in 13 pilot districts. It represented a conscious effort by the South African government to rectify deficiencies in the country's planning system. In doing so, key elements of sustainability science were wittingly and unwittingly used and applied. In addition to this, the project provided generic lessons for progressive endeavours, such as planning, which are aimed at ensuring more sustainable human settlement. In the following sections both generic lessons and lessons for sustainability science are discussed.

RESEARCH APPROACH AND METHODOLOGY

We approached the pilot from an 'Appreciative Inquiry-perspective'[20]. Rooted as it is in social constructionist thought, this perspective argues that, "through a focus on past successes, an organization, community or group can chart a course of future success by using the entity's energies in a constructive way" (Oranje and van Huyssteen, 2005: 5 and Fry, 2000). From a methodological perspective it proposes the collection, documentation, recognition and celebration of the 'good news stories' in a social setting; i.e. those stories that enhance cultural identity, spirit and vision (Mellish, 1999). Thus, it provided us with a way of systematically finding and affirming the best and highest qualities in the systems we dealt with (Oranje and van Huyssteen, 2005). It also provided us with a novel way of exploring and making sense of the complexities that the pilot posed, as well as a useful way of "thinking, seeing and acting for powerful, purposeful change" (Mellish, 1999: 3 and Oranje and van Huyssteen, 2005). This applied not only to those areas 'that worked', but was helpful for reflecting on ways of responding in areas that were not performing as anticipated.

It is argued in the field of sustainability science "that for knowledge to be truly useful it generally needs to be 'co-produced' through close collaboration between scholars and practitioners" (Clark and Dickson, 2003: 8059) of different disciplines. In the coming together of different actors and their collective pursuit of innovative responses to complex situations, "with the goal of creating and applying knowledge in support of decision-making for sustainable development" (Clark and Dickson,

2003: 8059), this project and the supporting research thus presented a unique learning opportunity. With both authors of this chapter being intrinsically part of the project in its conceptual, implementation, management, collaborative adaptation and recording-of-learning phases, this exploration was also done from a participant-observer perspective.

In terms of data sources, we relied largely on our own experiences, which we then corroborated, amended and enriched through structured interviews with key role players in the project and tested against outcomes generated through various learning and reflection sessions. These sessions were conducted through the course of the project with members of the technical team and key role players in participating districts and provinces. Interviews were conducted with: (i) the project management team in the Presidency; (ii) project champions in seven of the 13 district municipalities; (iii) the technical team leaders responsible for executing the project in the 13 district areas; and, (iv) technical-support consultants.

REFLECTING ON OUTCOMES FROM A SUSTAINABILITY SCIENCE-PERSPECTIVE

A synoptic overview of sustainability science-elements discernable in the project is provided in Figure 3. Each of these is also discussed in more detail below, and is summarised in Box 2.

Complexity and social-ecological systems

One of the key similarities of the NSDP District Application Project with sustainability science lies in its recognition of the complexity of the systems in which both are located and/or operate, and in which they seek to intervene. In addition to this, the project sought to identify emergent patterns amidst the seemingly unpredictability of the complex systems that it was engaged with (Smith, 2006; Cilliers, Chapter 2, this volume). Such patterns would then be interpreted for fine-tuning the approach and its roll-out in the other district and metro municipalities. Viewed from this perspective, complexity was used as a metaphor, as a way of assisting in making sense of a reality, rather than a framework to study and 'map' the systems encountered in the project. Furthermore, within each of the respective district areas, the project employed a systems-approach in seeking to make better sense of, organise and manage social-ecological systems, including what were seen as situations, organisations or arrangements in which some or other form or relationship existed. The SEAM tool was also introduced with this aim in mind – i.e. to engage the complexity of development in a district through a multi-role player initiative in a systematic way.

Transdisciplinarity

With its focus on collaborative action between different role players in addressing developmental challenges in particular districts, the project could also be regarded as demonstrating elements of transdisciplinarity, including, *inter alia*, a process of collaborative learning and joint problem-solving, in which scientists from different disciplines work with practitioners to jointly solve real-world problems (Scholz *et al*., 2006; also, see van Breda, Chapter 4, this volume). The project roll out included a series of processes and activities in which local, as well as technological and scientific knowledge (from various sectors) were produced, mulled over and integrated in searching for solutions and opening up debates beyond disciplines, often between technical and political concerns (Scholz *et al*., 2006; also, see Stauffacher *et al*., 2006). In the case of this project the transdisciplinary approach and the acknowledgement of multiple epistemologies also meant engaging with a myriad of policies (such as the NSDP) and their application.

Both the NSDP and the engagement part of the pilot were specifically designed to achieve two outcomes regarded as key to this element of sustainability science: first, to facilitate the coming together of a wide variety of actors from different backgrounds, disciplines, sources of legitimacy (e.g. science/reason, government, private enterprise, ideological positions, grassroots issues and ecological concerns); and, secondly, to surface, consider and debate different rationalities, roles and world views amongst role players, all with one shared goal – a desire to solve the complex development questions in a particular district (Lawrence and Després, 2004; Scholz *et al*., 2006; Stauffacher *et al*., 2006).

In exploring the use of tools to focus discussion on a common spatial area of jurisdiction, and taking the area's contextual and integrated systemic realities as a departure for discussion, the project provided an opportunity for actors from different disciplines to engage each other in a problem-focused and solution-seeking way. In doing so, a foundation was laid to jointly address identified priorities – instead of immediately embarking on the normal intergovernmental discussions and dialogue, tainted by a dominant discipline-specific or sector plan or budget-focussed discourse (see Reyers *et al*., Chapter 5, this volume, who ascribe failures in biodiversity conservation to this fragmentation of planning). In all of these endeavours the dialogue facilitated through the SEAM, and through the spatial analysis and cognitive mapping processes, provided ample opportunity for the acknowledgement of, and dynamic interplay between: (i) technical, outsider knowledge of the district area; (ii) local and context-specific knowledge of the area, institutions and spheres; and, (iii) the expertise of different disciplines and sectors.

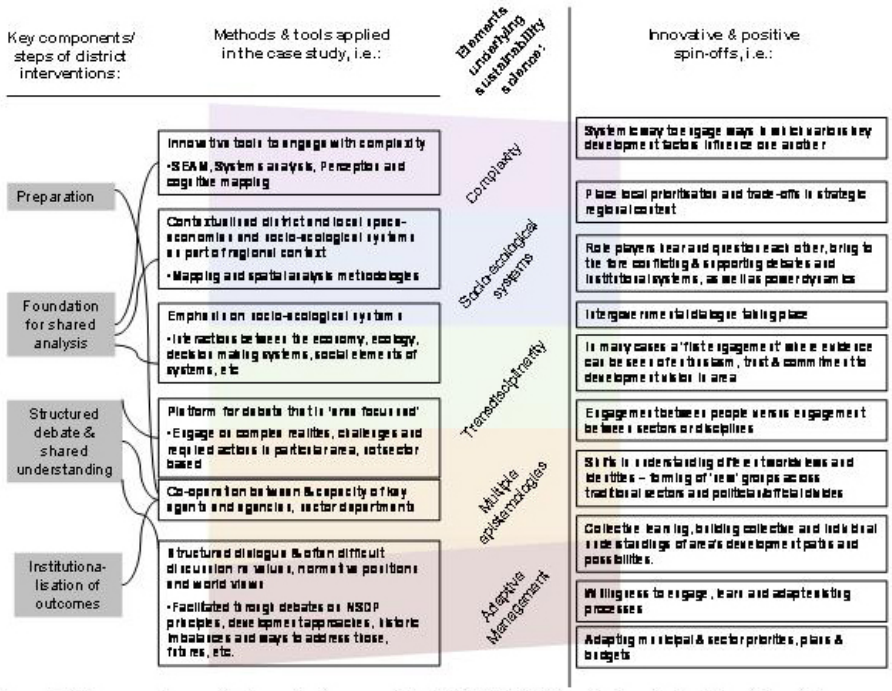

FIGURE 3: Components, methods and outcomes of the NSDP District Application Project in relation to key elements of sustainability science.

Collective/collaborative/mutual learning and adaptive management

The NSDP District Application Project approached learning in three ways. First, as a continuous adaptive learning-and-improvement process, by which the approach and methodologies used were continuously adapted, based on feedback from roll-out in the respective districts. Secondly, as a process of recording and gathering insights to guide and inform future roll-out and capacity building on contextualising and applying the NSDP in other districts and the metros. Thirdly, in expecting districts and provinces to learn from their experiences and in an 'appreciative way', utilise the good practices generated through the project to inform current plans and planning and budgeting processes.

The NSDP District Application case study was used to inform research and practice in the field of sustainability science, and valuable lessons were found in the execution of the case study project. Some of the most obvious parallels between elements of sustainability science (See Burns and Weaver, Chapter 1, this volume) and the aims and design of the case study project are:

- Applying notions of complexity and social-ecological systems in: (i) engaging with integrated municipal planning and regional development in each district, as well as in the context of broader regional dynamics and intergovernmental and socio-political systems across scales; and, (ii) designing tools and methods to enable role players to engage with the complex systems and challenges.
- The very practical way in which notions of transdisciplinarity and multiple epistemologies were (probably unwittingly) employed in the service of improving intergovernmental coordination and impact in the project, through, *inter alia*, explicit attempts to bridge the divides that exist within and between disciplines, sectors, spheres, institutions, world views, and value systems; and,
- The emphasis on adaptive management, through embedding monitoring, learning and adaptations of methodologies as essential components of the project roll-out and development.

BOX 2: Parallels in the aims and execution of the case study project and those of sustainability science.

GENERIC LESSONS FOR PLANNING AND SUSTAINABILITY SCIENCE

Appreciative Inquiry suggests an approach which acknowledges that, "whatever you want more of already exists" (Hall and Hammond, undated: 1). Utilising the NSDP District Application Project to engage on a process of learning in this spirit provided insightful discoveries to improve implementation and application of some of the key notions of sustainability science. Six such aspects that we believe should be of interest to both those in the 'sustainability science and planning-camps' are discussed below.

Moving through and beyond discipline boundaries (and walking through walls[21])

While the project suggests that moving through and beyond discipline boundaries is possible, it can also be a function of the event – i.e. it may last, for example, only for the duration of a work-session, for as long as the participants are lodged in the specific 'transdisciplinary arena/space'. However, as soon as they return to their respective realms and intellectual, disciplinary and institutional domiciles and language games, the transdisciplinary moment would seem to be lost.

Building upon, and keeping vibrant the sensation of a collective 'having had a moment back there' and glimpse of what is possible, is thus critical. This calls for a language

and set of processes that are not seen as exclusively linked to 'events, holidays and (really intergovernmental or other) *holy* days'. Sustainability science calls for: (i) an acknowledgement of the complexity of systems of which 'we' as planners are a part of and intervene in; (ii) a recognition (and even attempt at understanding) of the resilience (or lack thereof) of such systems; and, (iii) the need to explore adaptive management approaches to build desirable system resilience. It also calls for a language that transcends, infiltrates and shakes disciplines and invigorates and brings new reflections – i.e. transdisciplinary knowledge with epistemological properties that are quite different to the initial knowledge systems subscribed to by participating stakeholders (see van Breda, Chapter 4, this volume). Such language has the potential to cast a new and enlivening light on, and to enthuse, all that it touches – i.e. it can create an evolving mind-set that is shared and persists beyond the special occasions at which it is first generated.

The power of new tools in closing old cans (of worms) and opening new ones

Sometimes vexing challenges seem to simply resist solution. In this project the introduction of innovative tools such as the SEAM and fine-grained district GIS-generated maps and spatial analysis tools, demonstrated two things. The first was the value of such tools and models to enable the interpretation of, and interaction with, complex systems in simplified ways, whilst emphasising and enabling a clear focus on the relational aspects of development. Secondly, it was shown that it is possible to approach an old, tired and over-tested event, such as 'a workshop on the development of a district' differently, ensure novel deliberations, and secure results that extend beyond descriptions and prescriptions.

Importantly, what emerged strongly in the project was a shared sense of learning and a new appreciation of the integrated nature of life in space, and of the value of slight differences in background in making sense of phenomena. Roads were for instance not discussed as stretches of gravel waiting for tar, or as tar strips returning spot by spot to gravel and ashes, but as conduits of hope, of strips of dignity, of the skeleton of a myriad of systemic responses – from children at play, on their way to school, to the settings for scenes of human drama in the interplay of arrival, meeting, mingling, loss and departure. In terms of this perspective, interventions in 'infrastructure profiles' become far more than simply that – they shape, re-arrange and re-size space, place, community and people's lives, and from that perspective, agreement becomes possible on 'what should be done'.

Appreciating complexity

It is often easy to profess sustainability and either get wild-eyed about how complex the world is or fall into a trap of formulating reductionistic solutions to sustainability challenges. Worse, is to assume the 'high ground' in promoting a dictatorship of the Green Elite with sweeping calls to 'ridicule and silence all voices of dissent',

which often invites the 'environmental criminals that dare speak a different tongue' to subvert this action through resistance or feigned retreat. This project clearly demonstrated the value of exploding the debate, uncovering and keeping open options and acknowledging the many views and opposing priorities, without losing focus on the urgency of rapid, but sustainable, development.

This suggests a fine balance, of not falling foul oneself of the various types of reductionism (albeit clothed, economically, in shining gold or, environmentally, in earthy green) that helped to land us in the global predicament that we find ourselves in, whilst keeping the collective eye on the ball of development imperatives facing South Africa. In the case of the project, this did not stop with the work-sessions, but also had to find expression in the documentation of the shared understandings and the agreements reached at the end of the process. In a way this suggests a balance between a debate that acknowledges and celebrates complexity, while appreciating the need to produce a straight-forward program for joint action at the end of the process. Once the shared understanding and agreement 'leaves the particular forum' it has to enter the many complex processes through which investment and spending take place in the district. To have any impact, it requires not only a certain level of clarity, but even more so some complexity-supporting and navigating practices, mindsets and abilities – driven by agents with a passion for sustaining this rich appreciation in a focussed pursuit of strategic objectives.

Transdisciplinary leadership

The project illustrated the value and need not only of inter-disciplinary, but actually of transdisciplinary action (see van Breda and Reyers *et al*., chapters 4 and 5, this volume, for a discussion on the distinction between multi-, inter-, intra- and transdisciplinarity). In particular, this included the need for leadership that unearths and ensures the best in each discipline, in interaction with other disciplines and to engage the novel contributions 'through and beyond' disciplines and other groups (Max-Neef, 2005). Leadership in this context does not mean stamping out dissent, but rather demonstrating the capacity to accommodate and appreciate one's own discipline and its dissidents, while at the same time granting that right to others, without usurping the need for decisiveness in terms of determining particular directions for development (van Breda, Chapter 4, this volume). The project showed that, with varying degrees of success, leadership that can promote or facilitate this is crucial.

In the project it became apparent that a major breakthrough lay within the question of 'who takes ownership and responsibility for transdisciplinary processes and resulting actions'. As is often found in multi-role player projects, somebody needs to drive, take responsibility and ensure follow-through. In this project, where this 'in-between' space could be filled by, *inter alia*, the IDP manager from the district, the Office of the Premier and the Presidency, it also illustrated the lack of

'teeth' and the tendency for unhelpful compromise that usually goes along with a position in this 'in-between' space. Thus, what is required is a space that is neither constrained nor merely powered by factors such as sector-specific, departmental or individual performance management targets. Enabling development paths beyond discipline boundaries is one thing; ensuring implementation is a very different matter altogether. As is so often the case, sector targets and tangible measurements inevitably become the easy-to-do and easy-to-measure components of a project/process (Will, Chapter 17, this volume).

Systems and sensibilities

Engaging different role players on development challenges and bottlenecks, identifying key leverage areas in regional economies and improving service delivery in districts from a social-ecological systems approach, has proven to be extremely valuable. Pursuing the NSDP-approach and applying its principles in such a way that the systemic implications of immediate gains (service-delivery targets) can be comprehended (and realised) within a perspective that also acknowledges imperatives of long-term social-ecological system sustainability is where the balance between different local perspectives and outside expert knowledge was so crucial. It was in this local-outsider interplay that the interrelatedness of local and broader regional economies, linkages, for example, between people migrating from areas where it is difficult to make a living to areas where opportunities exist and the subsequent impact of this on carrying capacity and service delivery, became very apparent (see Cundill and Fabricius, Chapter 16, this volume). This once again emphasised the importance of an understanding of the systems in which we operate and the importance of locating and making and maintaining cross-scalar entry (and exit) points into (and from) such systems.

Another interesting area that the systems-approach highlighted revolved around the interrelated processes of analysis and understanding. The project uncovered how rich analyses often exist, but are discarded as the receiving agent or system is unable to absorb and accommodate such information (see Cundill and Fabricius and Roux *et al*., chapters 16 and 18, this volume). Rather than to attempt such accommodation, actors in pursuit of development tended to focus their attention on 'targets' – a response that militates against acknowledging intricacy and the interpretation of information that might suggest different, less mechanistic, directions for action. In this way, linkage, integration and synergy are not considered. What matters most, is getting projects on and off the books and on and in the ground. If a systems approach is to have any meaning, it needs to be located in an approach (and driven by agents) that does this from beginning to end and does not stop at any point short of that end.

Power and what it can destroy or deliver

It has become commonplace in planning analyses to bring Foucault to the party and 'blame all failure on power' (Homann, 2005; Coetzee, 2006). When this happens the result is generally predictable – little more needs to be said, there is a sombre nod, a shake of the shoulders and a suggestion or statement that nothing can be done to circumvent some inevitable outcome. In this project, power reared its head often. On a number of occasions when this happened much of what the project aimed to achieve – i.e. opening up debate, trying something new, probing, not necessarily opting for easy closures – was constrained, closed down and even destroyed.

However, in spite of power imbalances, this project did purposefully engage people on shared interests, values and understanding of social-ecological system dynamics, and was partly successful in steering debate away from a fixation on sectoral interests and the positions of individuals. The project demonstrated that the leadership power, where there was buy-in to the project aims, can be utilised to elicit and advance discussions. It was demonstrated that a recognition and understanding of the systems that create, institute and sustain power relationships and decision-making can prove to be useful (and even employed) in promoting the materialisation of 'true development for all'. Although not framed as a power metaphor, this phenomenon is also described by Wilhelm-Rechmann (Chapter 6, this volume) as a tactic for advancing biodiversity conservation aims.

CONCLUSION

Recognising that planning and sustainability science share the same aim, which is to promote the sustainability of social-ecological systems through innovation, experimentation and collective and shared learning (Lewis, 1994; Roux *et al*., Chapter 18, this volume), this chapter takes the view that sustainability science (and those promoting its aims and exploring its application) can learn from the planning experience. Specifically, the experience gained through the pilot project described her represents a small start in developing and establishing practices that promise to enhance the effectiveness of planning and development decision-making.

As challenging as 're-introducing the future and a sense of hope' in planning and intergovernmental dialogue are, this chapter illustrates how rewarding the successes and possibilities achieved in the pilot study can be. While our story does not paint an ideal picture of the future, or of progress in planning, it provides a glimpse of hope and some practical lessons in application – on what is 'already happening', 'why its happening' and what 'could possibly be (achieved)'.

ENDNOTES

1. The notion of 'modern planning' as developed over the last 120 odd years has found expression in many names, such as 'planning', spatial planning, physical planning, development planning, town planning, urban planning, rural planning and been defined in many ways (see Taylor, 1995 and Oranje, 1998). Essentially, these definitions all share a notion of preparing for action and being driven by a normative wish for a better set of outcomes than the current situation, stakeholder mobilisation and collaboration, a set of objectives, a work-plan for planning; i.e. a set process, data-gathering, analysis, plan formulation, plan testing, adjustment, integration and synergising of plan components, budget allocation, implementation and evaluation and review and plan adaptation.

2. 'Governance' can be described as the complex interactions between state institutions and a diversity of role-players in the management/governing of public affairs (see Flinders, 2002). It has also been defined as, "... the action, manner or system of governing in which the boundary between organizations and public and private sector has become permeable ... The essence of governance is the interactive relationship between and within government and non-governmental forces" (Rakodi, 2001: 216). See Pinson (2002) for a detailed exposition of the differences between 'government' and 'governance'.

3. 'NSDP' refers to the National Spatial Development Perspective of South Africa.

4. This definition was very much in line with the thinking in planning in the international arena at the time (see Oranje *et al*., 2000 and Harrison, 2002).

5. The DFA first made provision for the preparation of Land Development Objectives, the forerunners of the IDPs that were to be prepared in terms of the Local Government Transition Act, Second Amendment Act, 1996 (Republic of South Africa, 1996b) and, thereafter, the Municipal Systems Act, 2000 (Republic of South Africa, 2000).

6. These include, at municipal level, City Development Strategies (longer-term plans), District Growth and Development Strategies, Local Economic Development Plans, Integrated Water Services Plans and Integrated Transport Plans.

7. In countries with federal constitutions, such as Australia, Belgium and Canada, as well as in 'unbundling unitary ones', such as the United Kingdom, one outcome of this has been a move towards the development of intergovernmental agreements between various levels/spheres of government on a wide range of issues affecting more than one level/tier or sphere, or sector of government (Wayenberg, undated; UTS Centre, 2000; Horgan, 2002, 2004; Samson, 2002; McEwen, 2003).

8. See findings from the Draft National IDP Hearings Report (CSIR and DPLG, 2005) and Goss and Coetzee (2007: 46-58).

9. Porter (1998: 17) cited in Asheim *et al*. (2006: 2) defines clusters as: "Geographical concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries, associated institutions (fro example universities, standards agencies, and trade associations) in particular fields that compete but also co-operate".

10. The PCC, which comprises the President, the Minister for Provincial and Local Government and the nine provincial Premiers, seeks to ensure alignment and integration between actions of common interest to the three spheres of government (Department of Public Service and Administration, 2001; Government Communications, 2002). The PCC has over the last few years taken a number of decisions regarding the role and importance of IDPs in the broader system of intergovernmental development planning. Recently, it also called on provinces to complete the review of their PGDSs and to work closer with municipalities to ensure greater coordination, integration and alignment in planning, budgeting, implementation and the monitoring of government programmes.

11. At provincial level, Provincial Growth and Development Strategies (PGDSs) were introduced as strategic plans to plan holistically for 'provincial space' and to guide provincial sector department and district-wide municipal planning, budgeting and implementation; at national level, this role was to be played by the Medium Term Strategic Framework (MTSF). The Medium Term Strategic Framework (MTSF) is both a reflection of government's assessment of, and perspective on, key development challenges at a particular point in time, as well as a statement of intent as to the way it envisages addressing the challenges over the medium (three year) term. This statement of intent is then taken further and elaborated upon in the Medium Term Expenditure Framework (MTEF), which sets out government's resource allocation to address the identified key developmental challenges in the three-year period. Together, the MTSF and the MTEF provide a framework of development objectives and funding commitments in terms of which national and provincial line departments, provincial governments and municipalities have to do their planning and budgeting.

12. This project was initiated by The Presidency and to a large extent co-funded and driven by the GTZ, Development Bank of South Africa (DBSA) and the Department of Provincial and Local Government.

13. This team included representation from key role players, such as the Development Bank of South Africa, and national departments of Provincial and Local Government, Housing, Trade and Industry, Environmental Affairs and Tourism, Land Affairs, and Treasury.

14. The metropolitan municipality of the City of Tshwane was initially part of the project, but withdrew early in 2007.

15. SA Geospatial Analysis Platform, Version 2 Economic Estimates (CSIR, 2007c). Spatially disaggregated and interpolated estimates based on 2004 magisterial district data [obtained from Global Insight's Regional Economic Focus (REX version 2.0c (190)].

16. The participating areas are illustrated in relation to areas in South Africa with significant economic activity and also areas with large numbers of people living below minimum living level (MLL). The Map was prepared by the CSIR and is based on the NSDP 2006 (The Presidency, 2006a)

17. An earlier proposal of having multi-disciplinary teams supported by DBSA, the DPLG and other sector departments, such as the Departments of Trade and Industry, Environmental Affairs and Tourism and Minerals and Energy, did however not realise in most districts.

18. The Geo Spatial Analysis Platform Version 2 (GAP2) was developed by the CSIR, Presidency and Department of Trade and Industry in a collaborative effort. For more information see CSIR, GAP2 (2007b),

19. Project learning was captured in various ways, including interviews with team leaders (as part of the roll-out and adjustment process), reflection sessions amongst representatives of the various districts and provinces and project close-out structured and semi-structured interviews with key role players in the project (CSIR, 2007c).

20. See Cooperrider and Srivastva (1987), Mellish (1999), Hall and Hammond (undated) and Anon (undated) for a concise, easily accessible exposition of 'Appreciative Inquiry', or 'AI' as it is also known.

21. A concept introduced by Tore Sager in July 2007 at the AESOP-Conference, albeit in a very different context/setting.