

The Meanings of Sustainable Community Wellness in Grabouw

Exploring intersections of sustainability and wellness
from a complexity thinking perspective

by
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Declaration

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Abstract

An exploration of the integrated nature of sustainable development planning and health care was done in the context of people living and working in the town of Grabouw in the Western Cape. The problem that was investigated was that people working within local government and community health networks treated sustainable development planning and health care as separate issues.

The notion of wellness, as different from health, was used as a central theme in the study. It allowed for an acknowledgement of the multidimensionality and contextual nature of human well-being. The notion of *sustainable community wellness* was used to guide the research, and was viewed as a complex phenomenon. The meanings of sustainable community wellness to people who work and live within local government and community health networks in Grabouw were observed and documented. Complexity theory was then used to discuss the observed perspectives on sustainable community wellness.

Two factors informed the selection of Grabouw as a research site: Firstly, a comprehensive sustainable development programme was being carried out in the town of Grabouw during the research. Secondly, a few community health care initiatives were also being implemented at the time. Community care workers who worked in one of the community health organisations participated as primary research participants.

The research combined conceptual and empirical research. The conceptual research consisted of a literature review of perspectives on wellness in Grabouw. The empirical research methods that were used combined ethnography in the form of participant observation, and participatory action research in the form of participatory photography. The researcher accompanied community care workers on their daily visits to patients. The care workers took photographs of aspects of their surroundings that represented sustainable community wellness, or the lack thereof, to them. Photographs were analysed through focus group discussions and pertinent themes were subsequently identified.

Three meanings of sustainable community wellness were discovered. The first was the structural, governmental meaning that gave importance to health and socio-economic statistics, based on the mortality profile of the area. Wellness was seen from this perspective as a challenge that could be met with strategic planning. The second meaning was the community-based experience of environmental factors in Grabouw that had an impact on wellness, such as water, community forums and living spaces. In this case, wellness was experienced as a rich and diverse set of factors, both social and environmental. The third meaning was observed as instances where the apparent separate entities of local government, the community, and the physical environment were seen as one socio-ecological system, of which sustainable community wellness was an emergent property.

These instances demonstrated the importance of managing the quality of relationships within the system, the need to enhance the autonomy of people working in the system and the potential of community care workers to be agents of sustainable community wellness.

Opsomming

Onderzoek is gedoen na die geïntegreerde aard van volhoubare ontwikkelingsbeplanning en gesondheidsorg in die konteks van mense wat in die dorp Grabouw in die Wes-Kaap woon en werk. Die probleem wat ondersoek is, is dat mense wat in plaaslike regerings- en gemeenskapsgesondheidsnetwerke werk, volhoubare ontwikkelingsbeplanning en gesondheidsorg as afsonderlike sake beskou.

Die begrip 'welstand', wat in betekenis van 'gesondheid' verskil, is as 'n sentrale tema in die studie gebruik, en is soortgelyk aan die begrip 'welwees'. Dit het erkenning verleen aan die meerdimensionele en kontekstuele aard van menslike welwees. Die begrip *volhoubare gemeenskaps-welstand* wat as 'n komplekse verskynsel beskou is, het die ondersoek gerig. Die betekenis van volhoubare gemeenskaps-welstand vir mense wat in plaaslike regerings- en gemeenskapsgesondheidsnetwerke in Grabouw woon en werk, is waargeneem en gedokumenteer. Kompleksiteitsteorie is voorts gebruik om die waargenome perspektiewe op die volhoubare gemeenskaps-welstand te bespreek. Twee faktore het die besluit om Grabouw as 'n navorsingsgebied te gebruik, beïnvloed: Eerstens was daar tydens die navorsingstydperk reeds 'n omvattende volhoubare ontwikkeling program in Grabouw aan die gang. Tweedens was 'n paar gemeenskapsgesondheidsorg-inisiatiewe ook in dié tydperk aktief. Gemeenskapsgesondheidswerkers wat in een van die gemeenskapsgesondheidsorganisasies gewerk het, was primêre deelnemers aan die navorsing.

In hierdie ondersoek is konseptuele en empiriese navorsing gekombineer. Die konseptuele navorsing het uit 'n literatuuroorsig van perspektiewe op welwees in Grabouw bestaan. Die empiriese navorsingsmetodes wat gebruik is, het etnografie in die vorm van deelnemende waarneming, asook deelnemende-aksie-navorsing in die vorm van deelnemende fotografie, behels. Die navorser het gemeenskapsgesondheidswerkers op hul daaglikse besoeke aan pasiënte vergesel. Hierdie werkers het foto's geneem van die aspekte van hul omgewing wat na hulle mening die volhoubare gemeenskaps-welstand, of die gebrek daaraan, verteenwoordig. Foto's is tydens fokusgroepbesprekings ontleed en relevante temas is daardeur geïdentifiseer.

Drie betekenis van die volhoubare gemeenskaps-welstand het tydens die ondersoek na vore gekom. Die eerste is die strukturele, regeringsverwante betekenis wat bestaan het uit gesondheids- en sosio-ekonomiese statistiek, gebaseer op die sterftesyferprofiel van die gebied. Welstand is vanuit hierdie perspektief gesien as 'n uitdaging wat deur middel van strategiese beplanning aangepak kon word. Die tweede betekenis is die gemeenskapsgebaseerde ervaring van omgewingsfaktore wat 'n uitwerking op welstand het, soos water, gemeenskapsforums en leefareas in Grabouw. Welstand is in hierdie geval ervaar as bestaande uit 'n reeks ryke en diverse faktore wat beide sosiaal en omgewingsverwant is. Die derde betekenis is waargeneem deur die identifisering van die gevalle wat die kompleksiteit van die stelsel wat bestudeer is, verteenwoordig het. In hierdie gevalle is die oënskynlike aparte entiteite van plaaslike regering, die gemeenskap, en die fisiese omgewing gesien as 'n sosio-ekologiese sisteem waarvan volhoubare gemeenskaps-welstand 'n ontluikende element is.

Deur hierdie gevalle is daar aangetoon dat dit belangrik is om die gehalte van die verhoudings binne die stelsel te bestuur en om die outonomie van die mense wat binne die stelsel werk te ondersteun. Ten slotte is die potensiaal van gemeenskapsgesondheidswerkers om as agente van die volhoubare gemeenskaps-welstand op te tree, uitgelig.

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CHAPTER 1 BACKGROUND AND OVERVIEW OF STUDY

1.1 Introduction

In the living environment of the poor, sustainable development and primary health care are not separate. The thesis documents an exploration of this statement in the context of people living and working in the town of Grabouw in the Western Cape. The research reported in this thesis captured the perspectives of people involved in community care and municipal service delivery in Grabouw, a town in the Western Cape. The research was focused particularly on populations that live in informal or subsidised housing.

The meanings that various role players in the town gave to the notion of *sustainable community wellness* were explored in the research. The key argument presented in this thesis is that sustainable community wellness in Grabouw emerges from a complex system that cannot be separated into two disciplines of health care and sustainable development. The stories of people of Grabouw who, at the time of writing, were dependent on government for provision of health care, housing and basic services were investigated through empirical and literature based conceptual research. The research aims to add a community perspective that is currently missing from published research about Grabouw.

1.2 Rationale of the research

Grabouw was chosen as research site because it formed part of a national programme, called Sustainable Communities, implemented by the Development Bank of Southern Africa (DBSA) (Hamann et al., 2008a). The town therefore offered an ideal environment in which to conduct research where health and sustainable development outcomes were achieved within low-income communities.

It was expected that the research findings would be valuable to people and organisations in Grabouw for the development of their concept of sustainable community wellness, with potential use elsewhere. In terms of the growing body of planning, research and policy documents concerning the Grabouw Sustainable Development Initiative (SDI), health was identified as a “low-hanging fruit” in the strategic framework of the SDI (Hamann et al., 2008b:18) and as a priority action in the section describing social elements and services in the social accord (DBSA, 2007:14). However, there seemed to be gaps in information about the progress of the role of primary health care in sustainable development, or vice versa, about the role of sustainable development in primary health care. The research examined the need for the recognition of sustainable community wellness as an urgent priority and potentially offers a conceptual perspective on the issue which can be utilised by role players in the town.

It is also suggested that the research may offer valuable lessons about sustainable community wellness to other organisations and researchers who are also interested in the relevance of primary health care and sustainable development.

1.3 Background theory and preliminary literature review

This section demonstrates from a preliminary literature review that wellness and sustainable development relate, and that complexity thinking is appropriate as an analysis approach.

1.3.1 Health, wellness and sustainable development

The research concerned the ways in which the disciplines of primary health care and sustainable development are related. The preliminary literature review showed that primary health care and sustainable development did not only overlap, but that from some perspectives they were never separate (Capra, 1982:340). Consequently, a complex lens was required to investigate this matter (Cilliers, 1998; Max-Neef, 2005). The various efforts for sustainable development in Grabouw had the potential to offer rich lessons in this regard (Hamann et al., 2008a).

The research took place in the town of Grabouw, within the context of the sustainable development initiative launched by the Theewaterskloof Municipality and the DBSA (Hamann et al., 2008a). The literature review sought to maintain conceptual links to the work occurring in Grabouw and investigated published research that had direct relevance to the proposed empirical research, in terms of wellness.

The definitions of sustainability and sustainable development that are used as a guideline in this thesis are the same definitions used in the core planning document of the SDI. 'Sustainable' is described as "capable of being upheld or defended: maintainable" and the related noun 'sustainability' is defined as "a direction and not a goal" (Ravetz, 2000:1, 8). In the research the Brundtlandt definition of sustainable development was used: "Sustainable development is development that meets the needs of the present without compromising the ability of the future generations to meet their own needs" (WCED, 1987:43).

This definition has been qualified as anthropocentric, as it focuses on the needs of people and assumes that the ability of future generations would encompass ecological sustainability (Hattingh, 2001:5). The research conducted echoed this focus on the human perspective of sustainable development, especially the wellness of communities, and primary health care provided to them. In this thesis primary health care and the district-based health care system are discussed in terms of local governmental health care delivery and municipal service delivery.

In the Alma Ata International Conference Declaration (WHO, 1978:3), primary health care is defined as follows:

[Primary health care is] essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-determination.

In the pursuit of sustainable development, human health has been acknowledged in various ways as an indicator or aspect of sustainability. Roseland (2000:87) defines the 'development' component of sustainable development as "a social change process for fulfilling human needs" and then divides needs into material (adequate food, water and shelter) and non-material or quality of life needs such as health and social equity. He goes on to discuss the paradigm of healthy communities as a wise planning direction for planners seeking to grapple with sustainable development and mentions the Ottawa Charter for Health Promotion which recognises that "the fundamental conditions and resources for health are peace, shelter, education, food, income, a stable eco-system, sustainable resources, social justice, and equity" (WHO, 1986).

This relationship of health to wider systemic aspects, which was one of the ideas that guided the current research study, is discussed below. The theme of health in sustainable development also emerges in the discourse on capabilities, where reference is made to Nussbaum (2001:79), who names life, physical health and mental well-being as universal capabilities that all people potentially carry. On a more global, policy-setting level, four out of the eight Millennium Development Goals (MDGs) set by the United Nations Development Programme (UNDP, 2009) directly address health outcomes:

- Goal 1 aims to eradicate extreme poverty and hunger.
- Goal 4 aims to reduce child mortality.
- Goal 5 aims to improve maternal health.
- Goal 6 aims to combat HIV, AIDS, malaria and other diseases.

From a sustainable development perspective, health is also a central discourse that cannot be ignored. The health dimensions of sustainable development, especially from a local governmental perspective, were further researched as a part of the literature review in the current study, with the focus on the most recently published research findings. The circumstances of community care workers at the interface with non-sustainable development were also investigated. Sustainable development plays an important role in health systems in the same manner that health plays an important role in sustainable development.

One example of comment on sustainable development from a health systems perspective was the contribution by the South African Medical Research Council (MRC) to a series of research initiatives on development-related issues in South Africa. This research, which comprised a detailed investigation into the importance of achieving the MDGs for health in South Africa, was published in *The Lancet* medical journal (Chopra et al., 2009). A well-known instance of the relevance of sustainable development for health falls within the discourse of the impact of climate change on human health. Leading up to the COP15 climate change conference in Copenhagen in December 2009, the general secretary of the World Health Organization called for the recognition that the expected agreement on greenhouse gas emissions would be pivotal for global public health: "Let us not forget that the ultimate impact of all climate change threats to environment, economy and security will be on human health" (Chan, 2009). *The Lancet* also ran a series entitled 'Public health benefits of strategies to reduce greenhouse-gas emissions' (Haines et al., 2009). At COP 15, where the United States Congress failed to enter a binding agreement, the US Environmental Protection Agency (EPA) made an important conclusion that greenhouse gas emissions had been declared a health risk, which allowed for their management under existing legislation (The Clean Air Act) without the need for the lengthy process of passing new legislation (Andersen, 2009).

In the African context, from the primary health perspective, recent research has highlighted the dependence of rural AIDS-affected households on natural resources, especially in terms of nutritional security (Oglethorpe & Gelman, 2008) and in some cases it was found that severe food insufficiency led to increased sexual risk-taking (Weiser, Leiter, Bangsberg, Butler & Percy-de Korte, 2007). These examples introduce another area, in addition to the effects of climate change, where primary health is concerned with sustainable development: nutritional and food security. Linkages between sustainable development, nutritional security, health and agriculture have been examined extensively in recent studies (Hawkes, Ruel & Babu, 2007) and represent key areas of research which are becoming all the more urgent due to the effects of climate change (Chan, 2009).

It can therefore be inferred that public health and sustainable development are already strongly related issues that require an interdisciplinary approach, where 'interdisciplinary' means that there is a transfer of method from one discipline to the other (Max-Neef, 2005:6). In Chapter 5 of this thesis it is argued that merging bottom-up and top-down planning was not achieved in some cases in Grabouw. A complexity thinking perspective is provided as a potential 'conceptual lens' through which the systems involved can be understood in a way which acknowledges the linkages between health and sustainable development issues.

1.3.2 A complexity perspective

The current study, which investigated a system of primary health care and sustainable development, required a conceptual framework that was not centered in either of the fields, but facilitated an integration of both.

A preliminary examination of the literature revealed that primary health care and sustainable development were not always separate. This informed the question whether in the empirical study the observation of the research participants' experience would show their inseparability.

The earliest mention of the topic of health and sustainability was found in the text 'On Airs, Waters and Places' of the Greek physician Hippocrates (400 BC). He described the health of people in great detail as being inseparable from the health and balance of the system within which they are located. This text has been recognised as a treatise on human ecology. The viewpoint propagated by Hippocrates goes far beyond a simple assertion that the environment around people has an effect on their health; it describes in detail the fact that people are part of a larger system, and that the health of the larger system determines the health of the people who interact within the system (Capra, 1982:340).

Adding to the theme that human health and sustainability are inextricably linked, Max-Neef (2005:29) comments that "our insistence in artificially and ingeniously simplifying our knowledge about Nature and human relations, is the force behind the increasing dysfunctions we are provoking in the systemic interrelations of both eco-systems and the social fabric". Bearing this in mind, one could state that with the imminent effects of climate change and food insufficiency discussed above, the discourses of sustainable development and health are converging *again*, and that their seeming separateness, in Western medicine, was actually a demonstration of an earlier divergence. This approach also echoes elements of transdisciplinarity, which strives to "reverse divisions" in several fields (Burns, Audouin & Weaver, 2006:381). One of the fundamental axioms of transdisciplinarity is the recognition of complexity (Max-Neef, 2005:14). On considering the viewpoint that primary health care and sustainable development are two aspects of the same system in which a community operates (Max-Neef, 2005:29), the researcher realised that complexity theory, as an axiom of transdisciplinarity, would add a useful paradigm with which to approach empirical research of this system in Grabouw.

In the research, complexity theory was used to interpret data. The notion of general complexity (Morin, 2007:10) was used, and not restricted complexity. Morin (2007:10) argues that "any system, whatever it may be, is complex by its own nature" and regards this notion as general complexity. Restricted complexity operates within certain systems and is often encountered within discourses on chaos, fractals and disorder.

Cilliers (1998:19), who also provides an in-depth description of the qualities of a complex system, names a number of important aspects of complexity thinking. Three of these aspects were used in this study:

- Complex systems are open systems.
- Complex systems are non-linear.
- Complex systems have emergent properties.

In the research reported in this thesis, a socio-ecological system was identified. Socio-ecological systems have been defined as ecological systems that are linked with and affected by social systems (Berkes, Colding & Folke, 2003; Burns et al., 2006:380). A case study exemplifying the notion of a complex socio-ecological system was written by Chu, Strand and Fjelland (2003). It describes the introduction of the Nile Perch fish into Lake Victoria. The example demonstrates that an ecological system interacted with both the social and the economic systems in the area, with various unforeseen effects. The introduction of the species was planned to improve the local fishing economy. The perch firstly decimated all the other indigenous species, and secondly were eventually fished by large companies, thereby effectively destroying the original local fishing economy. The elements of the socio-ecological system described in this thesis echo this quality of bridging social and ecological aspects. The researcher also found that the socio-ecological system that was observed had emergent properties, which are properties that arise due to interactions between the parts of the system, but cannot be reduced to the parts (Burns et al., 2006:380). A complexity perspective applied to the observed system in this thesis showed that community wellness is one of the emergent properties of the system.

1.3.3 Sustainable community wellness

Up to this point in the preliminary literature review, health and sustainable development have been referred to as separate disciplines. To be able to apply the argument that they are in fact not separate disciplines, a single term is required. The term *sustainable community wellness* is used in this thesis to describe the interpretation of wellness that was researched in this study.

In a discussion on the complexity of infectious diseases, Possas (2001) comments on a similar split in thinking and discusses the divide between planning sciences and medicine. Possas suggests the term *social ecosystem health* to define the complex nature of the emergence of infectious diseases, and proposes a transdisciplinary approach to engage conceptually with the associated challenges. In the course of the research I explored a similar theme, but from the three areas of knowledge – sustainable development, primary health and complexity thinking – *sustainable community wellness* appeared to be the most suitable term to use in investigating this theme. The important distinction is that sustainable

community wellness was a property of the socio-ecological system that was observed. In the thesis sustainable community wellness is used as a descriptive term that does not place the phenomenon observed within a discipline but locates it as a transdisciplinary object of study.

A simple motivation for the use of the three terms, *sustainable*, *community* and *wellness* in this thesis follows.

Sustainable: The term *sustainable* is used to describe the interactions and dependencies of community wellness within the larger economic, social and ecological systems. Ravetz (2000:1, 8) interprets *sustainable* as 'being able to maintain an initiative'. The word *sustainable* also acknowledges contextuality, in that an element in a system, and the surrounding context of the element contribute to the sustainability of the element's initiative. A conducive environment is required for an initiative to be sustained.

Community: Pieterse (2008:88) uses the term *community* to describe a diverse and plural grouping of people living in the same geographical area. My use of the term in the thesis keeps in mind the problematic nature of the term, as it is often used to assume solidarity or wholeness, when the reality is much more complex and diverse, and includes different opinions, agendas and much conflict (Pieterse, 2008:88).

Wellness: The meaning of word *wellness* is different from the meaning of the word *health*, as wellness describes the systemic nature of people's maintenance of health, amongst other aspects. The definition of wellness which was used as a starting point in the research is taken from Corbin, Pangrazi and Robert (2001:3), who describe it as "a multidimensional state of being describing the existence of positive health in an individual as exemplified by quality of life and a sense of well-being". The perspective that wellness is a state that is centred on the sense of self, and that this self is affected by and has an effect on the world around it, is an important qualification for the research. This is also supported by Bronfenbrenner's (1999) systems perspective on the notion of wellness which includes an acknowledgement of contextual variables in local, institutional, global and chronometric terms.

As discussed below, the research thesis aimed to contribute to the meanings of the term *sustainable community wellness* as expressed and documented in the context of Grabouw.

A study by Rugalema, Muir, Mathieson, Measures and Stloukal (2009) on the complex nature of re-emerging agricultural disease showed that local perspectives of farmers had rich lessons to contribute. The view from the ground was shown to be important in order to

complement top-down, overarching perspectives with local grassroots experiences (Rugalema et al., 2009). The preliminary literature review revealed that documentation of such local perspectives (from community members in Grabouw) regarding sustainable community wellness were lacking. Following on from the pluralist notion of the term *community* described above (Pieterse, 2008:88), the intention in the research was to document a range of meanings of sustainable community wellness, with a range of people.

Health and sustainability do not only overlap, but are inextricably linked, and a complexity lens was required, in this study, to investigate this interaction. The Grabouw case offers rich lessons in this regard. Previous research on Grabouw, namely two master's theses on the process of developing the Grabouw SDI (Boulogne, 2010; Haysom, 2007), an article in the *Sustainable Cities Magazine* (Hamann et al., 2008b) and a research paper on cross-sectoral collaboration (Hamman, Pienaar, Boulogne & Kranz, 2011), do not address the topic. Sustainable community wellness, as a defined area of research, is not examined in any of the abovementioned research reports.

To ensure that the study is not a duplication of previous research, a Nexus search (Mouton, 2001:31) was conducted on 12 January 2010 with the following search terms: *sustainable* and *health* combined; and *sustainable* and *community* and *health* combined.

The results of the Nexus search yielded no evidence of research on Grabouw in which the above-mentioned terms and complexity thinking were used. Thus the current study contributes to the merging of these discourses.

1.4 Structure of the thesis

Chapters 1 and 2 provide the background, overview and research design of the study. The study endeavoured to explore three meanings of sustainable community wellness. The first was the top-down, structured meaning that local government departments concerned with health depended upon. This is discussed in Chapter 3. The second meaning juxtaposes the first, and is described from the viewpoint of the people of Grabouw. This is documented in Chapter 4. The third meaning of wellness examined the space where these two meanings intersect. This is explored in Chapter 5. Chapter 6 lists the findings and recommendations. A summarised version of the chapter structure and content follows.

Chapter 1 provides an overview of the rationale for the research, and the initial literature review that prompted the approach and design of the study. The background to the research problem is described as a split in thinking between sustainable development planning and primary health care systems.

Chapter 2 explains the research design and methodology. In order to investigate different meanings of sustainable community wellness, a combination of conceptual research,

ethnography and participatory action research was utilised. Participatory photography and participant observation were two important methods of data collection.

Chapter 3 provides an overview of one particular meaning of wellness: that of the local government structures that are implementing the district-based health care system in the area. The use of a particular model of wellness is motivated to interpret this meaning, and a few perspectives on wellness from this structural, local government point of view are then provided. The perspectives are based on data related to mortality, communicable disease prevalence and from environmental health related sections of municipal planning documents.

Chapter 4 juxtaposes the structured meaning described in Chapter 3 with a participatory, community-driven set of perspectives on wellness. Three overarching perspectives on wellness have been identified from the empirical research data. These perspectives involve water, participation in groups, and living spaces. The observations are then discussed in terms of the research participants' interactions with wellness.

Chapter 5 endeavours to explore a third meaning of wellness, from a complex systems perspective, where sustainable development planning and wellness are not viewed as separate phenomena, but where sustainable community wellness is perceived as an emergent property of the complex socio-ecological system observed.

Chapter 6 summarises the research findings and suggests recommendations for future research.

1.5 Conclusion

The study, through empirical research and supportive conceptual analysis, explored the meanings that different roleplayers and institutions in Grabouw gave to the notion of sustainable community wellness. The three meanings of wellness that were presented were informed by the local governmental perspective on wellness, the community perspective on wellness and the complex perspective on the instances where both intersect. These phenomena required a tailored research design. In the following chapter (Chapter 2) the research design of the study is explained.

CHAPTER 2 RESEARCH DESIGN

2.1 Introduction

The research combined conceptual and empirical research. Information drawn from literature was combined with ethnographic and participatory research. This chapter describes the research design. The research problem is described below as a lack of a community perspective on sustainable community wellness in Grabouw. The questions and objectives focus on adding different perspectives on sustainable community wellness in Grabouw to the dominant structural discourse. Ethical implications and the importance of the research problem to certain audiences are then described. The research methods and data collection procedures combined participatory action research methods with ethnographic research methods. These are described, and an explanation is given of how data was analysed. The chapter closes with a brief discussion of the limitations and assumptions that were made.

2.2 Research problem, questions and objectives

2.2.1 Problem statement

The preliminary investigation, and consultation with key informants, suggested that decision makers who were involved with sustainable community wellness in Grabouw regarded primary health care and sustainable development as two distinctly separate fields of engagement. Furthermore these decision makers felt that current planning approaches, dominated by a structural, governmental perspective, would successfully achieve wellness. This perspective influenced actions and decisions taken by actors in various roles related to the town's sustainability and the people's wellness. These decisions and actions included, but were not limited to, the following:

- The utilisation of health care services by community members
- Planning within the district municipality
- Resource allocation by external organisations
- Larger systems of policy and resources like national donor agencies and governmental departments

The preliminary review of general literature in Chapter 1 showed a convergence of the two fields. This challenged the notions that the two fields are distinct, and by implication that local governmental approaches were achieving wellness effectively by only focusing on one approach, namely the structural, planning approach. A Grabouw community perspective on these views had not been documented yet in general literature, nor had a convergence of the two been suggested.

2.2.2 Research questions

In the research questions and the research objectives the word *meaning* is used in the plural. The human settlement section of the strategic development framework prepared for the Development Bank of South Africa is introduced as follows: “Elgin Grabouw is many things to many people [...] including: migrant people, emerging middle classes, upper class residents, foreign and local tourists, local farmers and an established lower-middle class community” (DBSA, 2006).

To engage with the diverse nature of this community, it was assumed for the purposes of this research that sustainable community wellness means many different things to many different people. This acknowledged the contingent and dynamic nature of the system that was to be observed. In order to better engage with the local interactions between different elements in the system this pluralist interpretation was extended to an analysis of the observed system from a complexity theory perspective. Consequently, in the overarching research question, the word *meanings* is preferred. The guiding research question for the empirical research was:

What are the meanings of sustainable community wellness in Grabouw?

Empirical sub-questions were:

- What does sustainable community wellness in Grabouw mean to the research participants?
- How do research participants become aware of sustainable community wellness or the lack thereof?
- Where do research participants become aware of sustainable community wellness or the lack thereof?

The guiding research question for conceptual research that emerged through the literature analysis was:

Which fields of research and policy within public health and sustainable development contribute to the concept of sustainable community wellness in Grabouw?

Conceptual sub-questions to guide the literature analysis were:

- Has sustainable community wellness been described in conceptual terms that are useful to Grabouw?
- How has sustainable community wellness been researched?
- Geographically, where has sustainable community wellness been researched?

- Were some findings pertaining to Grabouw inter- and transdisciplinary?
- How applicable were the findings to Grabouw?

As stated in the preliminary literature review, the term *sustainable community wellness* provided a research lens as an unfinished and initial starting point. It was not defined as an accepted term in published research and consequently this intention to define sustainable community wellness was placed as the first research objective for the context of Grabouw.

2.2.3 Research objectives

By answering the above research questions, the objectives of this study were:

- To generate a preliminary definition of sustainable community wellness in Grabouw as a conceptual starting point and ‘research lens’
- To investigate the meanings of sustainable community wellness offered by research participants in Grabouw
- To document instances of sustainable community wellness offered by research participants in Grabouw
- To investigate, over a 3-month period, how the meanings of sustainable community wellness changed and developed for research participants in Grabouw
- To enrich, through the research process, the meanings of sustainable community wellness to research participants in Grabouw
- To compile an easily understandable account of the research outcomes and distribute it to all research participants in Grabouw
- To compile a final exhaustive research report on the meanings of sustainable community wellness in Grabouw

This set of objectives represents both the research interests that the problem statement prompted, and the interests that potential research participants had expressed in initial consultation, prior to the writing of the research proposal.

2.3 Ethical implications

The following are ethical implications that arose from the research design. The measures taken to adhere to the ethical requirements are also discussed.

The researcher was practically involved, albeit indirectly, with the group of research participants as a colleague in the implementation of a project that had relevance to the research topic. This encouraged a methodology that included a participatory focus for observation and data collection. This involvement within the participants’ workplace might have raised an ethical dilemma of participants experiencing pressure to respond in a way, which may have compromised their ability to truthfully represent themselves. The

participatory action research approach ensured that these sessions were conducted at the beginning and at the end of the study period in order to clarify and approve the research themes and outcomes with participants.

The study also utilised participant observation. The following ethical measures for participant observation, suggested by Spradley (1980) were followed:

- Considering informants first
- Safeguarding informant's rights, interests and sensitivities
- Communicating research objectives to informants
- Protecting the privacy of informants
- Not exploiting informants
- Making reports available to informants

An additional ethical issue to consider was the fact that participants in the study were in a position that required them to make decisions about the quality of life of other participants. A Department of Health employee was able, for example, to decide about financial support for community care workers. The research may have affected their decisions if new information was shared. Two factors justified proceeding with the study as planned: firstly the confidentiality of participants was guaranteed between the different groupings and secondly it was expected that new information would only encourage decisions that improve the participants' quality of life.

Written consent was obtained from all participants and research subjects. A sample consent form is attached as Appendix A. All key informant interviews were recorded and transcribed and transcriptions and consent forms are on file and available. These documents will be kept in locked storage for a period of five years before destruction. Only the researcher has access to the documents.

2.4 Importance of the research problem

Groups of beneficiaries or audiences of the research were identified as described below.

Research participants

The participants in the research were intended to be the main beneficiaries and audience of the study, as the research offered them an opportunity to expand and enrich the meanings that they attached to the notion of sustainable community wellness.

Interested research and development agencies and institutes

Three institutions that may directly be interested in the research outcomes are Grabouw Community Care¹, the Development Bank of Southern Africa, and the Sustainability Institute

¹ In order to preserve confidentiality, the name Grabouw Community Care was used as a pseudonym

of Stellenbosch University. All three of these institutions contributed towards the Grabouw Sustainable Development Initiative and may be interested to learn the in-depth lessons that the proposed research can offer.

2.5 Research methods

The research used a combination of empirical and conceptual approaches. The preliminary literature review suggested that the topic of study was a complex phenomenon. Consequently the empirical research took precedence and the direction of conceptual research was based on the empirical findings. The researcher had regular interactions with the research participants over a period of two years, spent three weeks of research-focused contact time in Grabouw with participants, and conducted three half-day focus group discussions and a total of eight hours of one-on-one interview time. The aim of the research was to enrich and develop the meanings of sustainable community wellness in Grabouw. The observation and participation aspects of the research therefore presented threads to be integrated with literature analysis. The discourses of public health and sustainable development are rich with multiple models and discourses. Therefore finding a coherent focus point for the research presented a significant challenge. This approach of integrating literature with empirical research offered the benefit of focusing the literature analysis on readings that were relevant to sustainable community wellness in Grabouw only.

2.5.1 Sampling

The initial group of participants were identified as potential participants in the research due to the fact that they worked at a community care organisation, Grabouw Community Care, and matched the profile of people who were in touch with health care and the natural environment in Grabouw. Following a participatory action research approach, the researcher posed questions to a wide participant group including health care workers and other decision makers. These questions were open to adaptation by the group, within the framework of the research objectives. The group accepted the questions as they were at inception. The sample was created using a snowball sampling or respondent-driven sampling method (Kendall et al., 2008), where an initial group of respondents suggested a second tier of respondents, based on their knowledge of the suitability of the second tier of respondents to the research questions. The 12 community care workers comprised the first tier and they suggested all the other respondents.²

The participant group was composed of local decision-makers and actors within the field of sustainable community wellness as follows:

- Twelve community care workers employed by a community care organisation

² All names of participants and organisations were kept confidential and were not used in the study. The names and contact details will be kept in locked storage for five years.

- Two Theewaterskloof municipality employees
- Two district health facility employees
- Three civil society organisation managers

The research strategies that were utilised were a combination of participatory action research and participant observation in the empirical research, and literature analysis in the non-empirical research section (De Vos, Strydom, Fouche & Delport, 2005:274, 408; Mouton, 2001:150).

2.5.2 Literature review

A preliminary literature review was presented in Chapter 1, and a further literature review was incorporated in Chapters 3 and 5. The literature that was used in Chapter 3 explored structural and governmental meanings of wellness in Grabouw as described in project and government documentation. The researcher therefore depended in part on grey literature, which is literature that has not been formally published (Hopewell, McDonald, Clarke & Egger, 2007). In Chapter 5 literature review was used to contribute to the complexity thinking analysis. The literature review contributed to generating a perspective on the most recent meanings of sustainable community wellness in Grabouw.

When the empirical research was initiated, questions about the term sustainable community wellness required an elementary explanation. The concept was therefore developed using the literature analysis approach to investigate available literature about sustainable community wellness in Grabouw (Mouton, 2001:175). This has been documented in Chapters 1 and 3. Chapter 5 drew on a complexity thinking perspective on wellness in Grabouw.

2.5.3 Participatory action research and ethnography combined

Data collection methods were utilised which maximised the researcher's involved role as an opportunity for research (Graziano & Raulin, 2000:131). A combination of ethnography (De Vos, 2005:274) and participatory action research (De Vos, Strydom, Fouche & Delport, 2005:408; Mouton, 2001:150) was utilised. The participatory action research utilised participatory photography and focus group discussions as data collection methods, and the ethnography utilised participant observation and key informant interviews (see below, section 5). Participants and the researcher were viewed as partners in the research process (De Vos, Strydom, Fouche & Delport, 2005:413). In order to compile a full account, the need was identified to do wider data collection than through participatory research only. The research design process therefore did not only utilise participatory research at every stage of research design, but combined it with an ethnographic strategy. Consequently a combination of participant observation, key informant interviews, participatory photography and focus group

discussions was utilised to allow for fidelity to the original research question and for ethically satisfying participant interests.

2.6 Data collection procedures

Data was collected in four ways. The collection procedures used for ethnography were participant observation and key informant interviews and the collection procedures used for participatory action research was participatory photography and focus group discussions. Each data collection method is described below.

2.6.1 Ethnographic method 1: Participant observation

Yachkaschi (2008:47) suggests a phenomenological approach to participant observation. The phenomenological approach relates to Goethe's notion of delicate empiricism, which offers a way of observation that captures more than the immediately observable or tangible data (Bortoft, 1996:50). Goethe proposed a combination of the faculties of reasoning, feeling and intuition in the scientific endeavour (Max-Neef, 2005:16–18). As suggested in the preliminary literature review, sustainable community wellness is a complex phenomenon. Delicate empiricism fitted well with the proposed research as it provided the opportunity to attempt observation of the whole system and thereby present a more complete picture of the people and situation observed. Yachkaschi (2008) applied delicate empiricism to the observation of relationships between organisations. The current research used a similar approach to observing the relationships between people and their environment. This was consistent with complexity thinking which was used in the analysis of data, and which favours a focus on relationships between elements instead of on separate elements.

Participant observation was conducted at Grabouw Community Care over a period of three weeks. The researcher joined the team of community care workers as a volunteer and spent most of this time with the community care workers. The activities in which the researcher participated most were walking from household to household, joining in the consultation of each patient by their health worker, driving community care workers to areas that were difficult to reach, and doing administrative work at the Grabouw Community Care building.

During the observation, 8 neighbourhoods and 32 patients were visited. Observations were made according to the following list, which is an adaptation of the list of ethnographic observations suggested by Spradley (1980):

- Space: the physical place or places
- Actors: the people involved
- Activity: a set of related acts people do
- Object: the physical things that are present
- Act: single actions people do

- Event: a set of related activities that people carry out
- Time: the sequencing that takes place over time
- Goal: the things people are trying to accomplish
- Feeling: the emotions felt and expressed

This list was used as a general guideline to observe the main elements of each situation. Some “living meetings” (Shotter, 2005) were chosen as focal points and informed the empirical data collection.

2.6.2 Ethnographic method 2: Key informant interviews

Five interviews were conducted with key informants in the town. The interviewees were chosen for their relationship to managing community wellness, and were suggested by the first tier of participants, the community care workers. The interviewees were selected with the intention of creating a collection of interviews that represented in-depth knowledge of perspectives on community wellness in the town. Table 2.1 lists the interviewees, their roles, and the topics that their interviews focused on.

Table 2.1 Key informant interviews

Interviewee	Role in Grabouw	Topics of interview
Interviewee 1	Staff sister at Grabouw Community Care	<ul style="list-style-type: none"> • Overview of Grabouw Community Care • A perspective on health in Grabouw • Forums in Grabouw
Interviewee 2	Convener of the community policing forum	<ul style="list-style-type: none"> • Reasons for crime in Grabouw • High homicide rate • Forums in Grabouw
Interviewee 3	Community development worker for municipality	<ul style="list-style-type: none"> • Health in Grabouw • Forums and participation in Grabouw • History of migration in Grabouw
Interviewee 4	Municipal water quality coordinator	<ul style="list-style-type: none"> • An overview of water-related issues in Grabouw • The art of water purification
Interviewee 5	Coordinator of the TB room	<ul style="list-style-type: none"> • Collaboration between the day hospital, TB room and Grabouw Community Care • The success of the TB room

Transcripts of interviews are available on file.³ Some extracts and comments from the interviews are contained in Chapters 3 – 6.

2.6.3 Participatory action research method 1: Participatory photography

Participatory photography is a method of participatory action research (Wang, Yi, Tao & Carovano, 1998) in which research participants use cameras to document images for research data within a broad theme; in this case, sustainable community wellness. A participatory process is then followed where the research participants, together with the researcher, interpret and define the important themes (Wang et al., 1998). The participatory photography process was conducted for six months. A group of community care workers from Grabouw Community Care volunteered to participate, and then attended an introductory session. The session consisted of an explanation of the research objectives and questions, and a discussion about ethical photography and consent. Five disposable film cameras were handed to the group of twelve community care workers who took a total of 112 photographs during their daily work and at home. In terms of themes on which to focus, the care workers were encouraged to take pictures of anything that represented sustainable community wellness to them. Each photographer also kept a journal where a description of each picture was written down.

2.6.4 Participatory action research method 2: Focus group discussions about photographs

All the pictures were printed to large A1-size posters, and a digital copy of each photograph was saved to the researcher's computer. This enabled discussion about the pictures by viewing all the photographs collectively, on the posters, or one by one on the slideshow. After the pictures were developed, three group sessions were held fortnightly at the Grabouw municipal library. The sessions were structured around the following three goals:

- Session 1: To categorise the photographs according to photographer and caption
- Session 2: To identify important perspectives
- Session 3: To select photographs representative of the perspectives and any other photographs that were important to the participants

All photographs with captions are kept on file, and available upon request, with the photographers' consent. Each photographer and photographed subject completed a consent form. This process was conducted within discussion groups and the researcher acted as a facilitator in each group. The discussion had ground rules to which the group agreed. These were that a) every opinion was important and that b) a decision should represent the group's

³ Transcripts and signed consent forms are in locked storage with sole access by researcher.

views. To enhance this process an Open Space Technology (Owen, 2008) approach was taken and cards were used to facilitate the participation of each member of the group.⁴

2.7 Data processing and analysis

Data that was collected in the above-mentioned ways is summarised and described in Chapters 3 – 5. The topics that were identified during data collection were combined to form perspectives on wellness. The main method of data analysis was a participatory photography group process, conducted with research participants. In three consecutive focus group discussions, participants interpreted photographs and identified topics that were important to the group. (This is described in 2.6.4) . These suggested the main perspectives of the study. The information gained through key informant interviews and conversations during participant observation enriched and legitimised the perspectives identified through the participatory photography process. A detailed description of how perspectives were identified follows in the first section of Chapter 4.

2.8 Limitations and assumptions of the study

The proposed research sought to develop and enrich the concept of sustainable community wellness within the context of Grabouw. The aim was to enrich the meanings and uses of the term within this geographical context, and not to create a generalizable thesis of the meaning of sustainable community wellness that claimed to be useful outside the context. The proposed research has a relatively small sample and did not contain a quantitative survey or analysis element. The findings are therefore not intended to be representative of concepts or theory regarding sustainable community wellness, but to provide a descriptive account of the phenomena observed, within the particular research population. The overarching research question was used as a guideline for the practical ethnography, and once data had been collected, complexity theory was used to interpret findings. The emphasis of the research was on practical observation, more than on a contribution to theory.

2.9 Conclusion

In selecting the research design, the researcher endeavoured to combine methods that would engage with the richness and complexity of the system that was observed. To do this, the study combined both 'wide' and 'deep' methods in order to achieve what Geertz (1973) defines as 'thick descriptions' where ethnography becomes more interpretative, and attempts to generate meaning from "a multiplicity of complex conceptual structures" (Geertz, 1973:9). The research went 'wide' with participant observation and group-driven photography, by

⁴ This is explained further, with results, in Chapter 4.

including a diverse and multitudinous set of observations, with many people, in many contexts, where many topics were encountered. The research also went 'deep' in certain nodes of the system through focus group discussions and key informant interviews, where topics were discussed in depth. This allowed different kinds of data from multiple levels to be synergised into one discussion about the phenomena. Chapter 5 motivates for this by arguing that the data presented was complex, and therefore demanded such a complex engagement.

CHAPTER 3: LOCAL GOVERNMENT APPROACHES TO COMMUNITY WELLNESS IN GRABOUW

3.1 Introduction

In this chapter the notion of wellness is introduced, and then the first set of perspectives on wellness in Grabouw are described; namely the local government perspectives. The use of a wellness approach, and the guiding model of wellness, The Indivisible Self (Myers & Sweeney, 2005), are also introduced. The approach is then motivated by exploring two elements of wellness that are important for the study; namely the multidimensional and contextual nature thereof.

It should be noted that this set of perspectives represents the official or structural interpretations of wellness. Within this set of perspectives wellness is approached quantitatively, and from an overarching viewpoint that endeavours to summarise the district-level information. This is a different viewpoint to the one presented in Chapter 4, which explores perspectives on wellness from the viewpoint of the Grabouw community.

Local government here refers to government departments that are active in the Grabouw area. These include the municipality and the provincial Departments of Health and Social Development. The local government approach is informed by the strategies of primary health care and the district-based health system. The role of community care workers is also explored, since the research participants in the study were mostly community care workers. Recent accounts of some important indicators of the health and social systems of the town follow. These include HIV, tuberculosis (TB) and mortality data. An overview is given of wellness within a central Grabouw sustainable development planning document, and a description of the layout of the town, specifically the health infrastructure and its implications for the distance to health care facilities for patients.

Water management has a direct impact on wellness, and water emerged as an important perspective from the empirical research documented in Chapter 4. The current chapter therefore concludes with an exploration of water quality management in Grabouw and a description of a commercial association that monitors river water quality. All of these elements together describe how some aspects of wellness are approached from the structured, local government perspectives in Grabouw.

3.2 Wellness and health

Wellness was used as an approach that, along with complexity thinking, facilitated the exploration of a multidimensional engagement between people and their social and natural environment in Grabouw.

Wellness, as a paradigm for wellbeing, has recently emerged in the international and local literature, within the field of psychology, and also the field of industrial psychology. It has generally been viewed as a useful approach to combine several aspects of wellbeing, into one comprehensive overarching model usually called wellness. (Corbin et al., 2001:3).

Corbin et al (2001:1) proposed a universal definition of wellness as follows:

'A multidimensional state of being, describing the existence of positive health in an individual as exemplified by quality of life and a sense of wellbeing. Several important characteristics included in this definition are:

- wellness is multidimensional
- wellness is a state of being described as positive health
- wellness is part of health
- wellness is possessed by the individual
- quality of life and well – being are the descriptors of wellness
- health and its positive component (wellness) are integrated.'

The meaning of the word *wellness* differs from the meaning of the word *health*, since wellness includes people's maintenance of health as one element in a set of dimensions that act systemically. It is a state of being that is multidimensional, and that describes positive health. Quality of life and well-being are examples of states of wellness (Corbin et al., 2001:3). The sense of self forms the centre of wellness, and this self and the world around it affect and interact with each other (Bronfenbrenner, 1999).

In South Africa, where the HIV epidemic has become an important focus of the public health response, a similar argument for a multidimensional approach is suggested by Van Donk (2006). The argument proposed calls for 'a broader conception' of addressing HIV prevention, and suggests that if the amount of money from donor funding spent on behaviour change of the individual had been spent on a systemic approach, the HIV prevention campaign may have been more effective. A socio-ecological model for HIV prevention is suggested, with a strong emphasis on the contextual factors related to HIV infection.

This conception of wellness as being contextual was regarded as being important in the current study, as the empirical research attempted to investigate the intersection of social and environmental systems.

In this chapter a model of wellness proposed by Myers and Sweeney (2005), called 'The Indivisible Self', is used.

The Indivisible Self model of wellness suggests that wellness can be defined in terms of dimensions and contexts. According to this model, the dimensions, which are often seen separately, cannot be separated as independent elements (Myers & Sweeney, 2005). This also reflects a quality of a complex system, which cannot be divided into smaller parts that make sense on their own. The parts can be separated, but they lose the meaning that they had as a part of the whole (Cilliers, 1998:21–24).

The model names the *creative, coping, physical, essential and social* elements of wellness as dimensions of one encompassing self. In Figure 3.1 the five dimensions of The Indivisible Self are shown.



Figure 3.1 Five dimensions of wellness (Myers & Sweeney, 2005:275)

The five dimensions of wellness refer to factors from the model that comprised the 'self'.

- Creative Self: The combination of attributes that each individual forms to make a unique place among others in their social interactions.
- Coping Self: Composed of elements that regulate our responses to life events and provide means for transcending their negative effects.
- Physical Self: Refers to the maintenance of physical health through for example exercise and nutrition.
- Essential Self: Incorporates the existential sense of meaning, purpose and hopefulness in life.

- Social Self: Composed of two elements, friendship and love. This could be in close relationships in family or community.

Adlerian theory was used to make sense of the factors in the model. These factors of self were seen as indivisible. (Myers & Sweeney, 2005:273-274).

These dimensions constitute the individual aspects of wellness. Wellness is also contextual. In Table 3.1 the contexts by which people are affected and on which they have an effect, as summarised from Myers and Sweeney (2005), are listed:

Table 3.1 Contexts of wellness

Local (safety)	Family
	Neighbourhood
	Community
Institutional (policies and laws)	Education
	Religion
	Government
	Business / Industry
Global (world events)	Politics
	Culture
	Global events
	Environment
	Media
	Community
Chronometrical (lifespan)	Perpetual
	Positive
	Purposeful

The Indivisible Self model of wellness is useful for the exploration of people's experiences of health, safety and social well-being in Grabouw for two reasons. Firstly, the wellness of a person is viewed as a multidimensional whole. This view acknowledges different dimensions of a person's being, for example intellect, physical health and emotional health (Myers & Sweeney, 2005). Secondly, wellness acknowledges the contexts in which a person moves, for example the institutional or natural environments around the person (Bronfenbrenner, 1999; Myers & Sweeney, 2005). For centuries health has been viewed as embedded in the environments and social systems in which a person lives. An important argument is that health is contingent on the interaction between a whole system and its parts. This is true at two levels: the first is in relation to people as parts within their living environment, and the

second is in terms of the multidimensionality of wellness, with the person as the whole system with smaller dimensions or parts such as physical, psychological and intellectual elements (Ansbacher & Ansbacher, 1967:11–12; Capra, 1982:340).

For the purpose of this study a few aspects of The Indivisible Self model were chosen based on the examples that were observed, and the perspectives that emerged from the empirical research. All of the other dimensions and contexts apply, but would require further exploration. The following aspects of the model were most prominent in the observations:

Two dimensions of wellness:

- Physical health
- Social relationships
- Within three contextual environments of wellness:
 - The governmental environment in institutional and policy contexts
 - The community environment in a local context
 - The natural environment in world event contexts

The model of wellness was presented above in order to create a lens through which to engage the multidimensional and contextual nature of the examples that are documented below and in Chapter 4. The rest of this chapter focuses on physical health and social dynamics within a local government context. This information has been drawn from literature and governmental documents. The researcher endeavoured in the thesis to include both the government and community perspectives, and a perspective on the interaction between the two groups. Therefore the main group of research participants comprised the community care workers of Grabouw Community Care. Chapter 4 discusses the same physical and social dimensions of wellness from the perspective of the research participants within the two remaining contexts of wellness, the community and natural environments. The care workers collaborated with various health-related institutions, organisations and government departments. The approach of the government departments and information obtained from them are described in the rest of this chapter. The discussion is framed around the South African strategy for primary health care delivery: the district-based health system since the district-based health care system is the chief implementation approach to health care delivery in Grabouw.

3.2.1 Wellness and health care

To elucidate the experiences that community care workers have within a town-based health system in South Africa such as the one in Grabouw and to explain the meaning they attach to such experiences, it is useful to sketch some background to the policy influences that affect town scale implementation or a governmental understanding of health care. Three

main components of this viewpoint, primary health care, district-based health care and community care workers, are discussed in the following sub-sections.

3.2.1.1 Primary health care

South African government-supported health provision follows global standards in primary health care (Russel & Schneider, 2000). One of these, the district-based system of health care provision, provides an underlying rationale to the implementation of health provision in Grabouw. This fact is of interest to this study, as it sets the policy foundation for partnerships and collaboration between local government facilities and non-governmental organisations (NGOs). Collaboration between a community and local government health facilities is an important theme that emerged from the data collected in the study. Examples of participants' experiences of such participation are discussed in Chapter 4.

The district-based health system is applied in South Africa as an implementation of an aspect of primary health care. The term *primary health care* originated when the ambitious global goal of 'Health for all' was set at the Alma Ata conference in Kazakhstan in 1978 (WHO, 1978). This goal was to be achieved through health care that acknowledged the social, economic and political elements of providing comprehensive health care. This type of health care was named 'primary health care' (PHC), and in the form as defined at the Alma Ata conference, 'comprehensive primary health care'. Comprehensive primary health care involved the principle of social equity as an important anchor and central tenet (Magnussen, Ehiri & Jolly, 2004). Primary health, as defined by the Alma Ata declaration contained the following eight elements (Tarimo & Webster, 1994:3).

- Education concerning prevailing health problems and methods of preventing and controlling them
- Promotion of food supply and proper nutrition
- An adequate supply of safe water and basic sanitation
- Maternal and child health care, including family planning
- Immunisation against major infectious diseases
- Prevention and control of locally endemic diseases
- Appropriate treatment of common diseases and injuries
- Provision of essential drugs

The declaration was followed a year later by a plan to focus on more practical and readily achievable goals that formed only a segment of the comprehensive spectrum that the Alma Ata declaration originally defined. This plan became known as 'selective primary health care'. The elements of selective primary health care were initially set as growth monitoring, oral rehydration therapy, breastfeeding and immunisation (GOBI) and later family planning, female education and food supplementation (FFF) were added (Magnussen et al., 2004:169).

The five pillars of Primary Health Care provide a strategic set of goals for health system management. These are equity, community participation, a multisectoral approach to health, appropriate technology and a health- promotive and preventive approach (Green, 1992). The Ottawa Charter for Health Promotion (WHO, 1986:1) lists fundamental prerequisites for health as:

- Peace
- Shelter
- Education
- Food
- Income
- A stable eco-system
- Sustainable resources
- Social justice, and equity

A debate was sparked after the Alma Ata conference that lasted more than 20 years. Although selective primary health care has been viewed as successful in some settings, it is important to note, if one is to consider the integration of health and sustainability in Grabouw, that with the focus on selective primary health care, emphasis moved away from the socio-political aspects of equity and health for all, and the development of health systems. Primary health care and the element of community health work, including home-based care in South Africa, followed the implementation of selective primary health care (Sanders, 2003).

3.2.1.2 District-based health care

The WHO proposed the district-based health system (DHS) as a delivery vehicle for primary health care (WHO, 1986). The underlying rationale was the decentralisation of resources and management power to deliver PHC, and an integrated health system that contained one single team that managed all facilities, service providers and dispensaries within a defined geographical area (DoH, 2001; Unger & Criel, 1995).

Initially, the WHO had been ambiguous about the definition of a district, defining it as ‘the lowest fully structured tier of a local government or of a decentralised administration’ (WHO, 1985, cited in Unger & Criel, 1995:124). This was ambiguous because it did not apply to all contexts, for example rural villages that had a thinly-spread population over a large area, or were dependent on traditional or ethnic leadership (WHO, 1985, cited in Unger & Criel, 1995:124). Later on it was refined to a definition that stated that a district should represent units “defined on geographical and demographical grounds, conceived to facilitate the delivery of services and to enable an integration of the resources available” (Paganini, 1989).

The district was identified as the best level at which to merge bottom-up or local and contextually based planning processes, and overarching or top-down planning processes (Unger & Criel, 1995:125). In Chapter 5 of this thesis the researcher argues that this goal of merging bottom-up contextual and top-down overarching planning was not achieved in some cases in Grabouw. An alternative perspective, based on complexity thinking, is provided as a potential way to understand the systems involved, and the practical dynamics of such an intention to merge the two approaches.

In South Africa, primary health care is delivered through the district-based health system. Each province in South Africa is subdivided into several regions, each of which contains districts. This study focused on Grabouw, a town that falls in the Theewaterskloof district municipality, one of the districts that fall within the Overberg region of the Western Cape (English & Van der Merwe, 2009:11). The Overberg health district is depicted in Figure 3.2 as the dark area. The provision of health services is managed by health district units and information was available for the larger Boland/Overberg health district, the smaller Overberg district municipality and local municipalities in the Overberg such as Theewaterskloof. The Boland/Overberg Region is managed from the Worcester office of the Western Cape Department of Health (English & Van der Merwe, 2009:10).



Figure 3.2: Health districts within the Winelands / Overberg area of the Western Cape (English & Van der Merwe, 2009)

3.2.1.3 Community care workers

The community care workers and the health facilities in Grabouw that participated in the study present an example of the collaboration intended in the implementation of the district-based health system. Following the rationale of decentralised and local health service delivery, district-based government health facilities depend upon and should ideally support service providers and organisations that surround the facility. By increasing the capacity of the whole system to care for patients in their own homes and by assisting health-related entities to improve their service, a significant burden is removed from the facility in a town or village. Within this assistance, the role of the community care worker became increasingly important during the response to the HIV epidemic in South Africa, as the burden of care increased. The perceived solution to a resource-constrained and overburdened government-centred health system was to depend increasingly on community-based resources. In the mid-1990s government support, and later additional foreign aid funding, were provided to NGOs that employed home and community-based care workers (Schneider, Hlophe & Van Rensburg, 2008:180). This community support has increasingly proven to be an important segment of the health system, and was predicted at the time of writing to become increasingly important (Sanders & Reynolds, 2011). A appraisal and review of South African community-based care by Russel and Schneider (2000:20) defined the main models of community care and support as follows:

- Funding, technical assistance and support programmes
- Advocacy and community mobilisation for access to health services
- Drop-in centres/support programmes which provide support groups and counselling and education and often have an income-generating activity (IGA)
- Community home-based care programmes that provide the above-mentioned support and also offer some home visiting
- Comprehensive home-based care programmes that provide the above-mentioned support plus varying levels of nursing care

The group of care workers that was studied falls in the last two categories. They work primarily as home-based care workers, and are an example of the care workers envisioned by the primary health care approach. The set of norms and standards for the primary health care package in South Africa published by the Department of Health in 2000 emphasises the value of equity and the social imperative to strengthen the basic right to health for all people in the country. Some of the norms and standards set for home-based care in this document highlight the collaborative and network-based nature of the system, and the goal to view patients from a wellness perspective more than just a physical health viewpoint. One of the norms suggested by the Department of Health is that “[e]very community provides some home-based care and has access to community-based care through partnership of community-based and clinic-based health services” (DoH, 2000).

A number of the standards that were suggested further emphasise how the health system depends on the community-based care worker, the kind of partnerships that were envisioned, and the wellness-based approach. Some of these standards are:

- Home-based care is comprehensive and holistic, person centered, sensitive to culture, religion, values and respects privacy and dignity and maintains self-esteem.
- Home-based care assists in reducing unnecessary visits and admissions to health facilities.
- Community groups, family, neighbours or volunteers assist with continuing home needs.
- Integrated community home-based services have a mosaic of categories, (medical, counseling, pastoral, rehabilitation and traditional) brought together around the individual and family through professional coordination.
- Clinics, hospices, NGOs and community groups are linked in a network and this can be initiated by the clinic, NGOs or community groups

(DoH, 2000).

On reading the norms and standards it becomes apparent that community home-based care represents a vital link to the integration of health services with community participation and resources. It lessens the burden on health facilities and at the same time provides an opportunity to provide a holistic, wellness-based interaction with clients. A reciprocal relationship exists between the facility and the community-based care workers and social networks surrounding those that require care. While the community networks depend on the facility for vital resources such as medication and access to the broader health system, the facilities depend on the community networks and home-based care-workers for referral, and delivery in order to ensure primary health care reaches as far and as comprehensively as possible (Schneider et al., 2008:180). The role that the home-based care worker plays in the delivery of primary health care through the district health system is an important one, in South Africa both in the context of the HIV and AIDS epidemic and in the broader context of primary health care (Russel & Schneider, 2000).

In order to better understand these priorities and the role of a community care organisation, a brief summary of some health and social statistics for the area is presented below. This highlights what aspects of health and social dynamics are monitored and communicated within the local government environment in institutional and policy contexts. It represents the structural and governmental perspectives on wellness in Grabouw.

3.3 Structural forms of wellness in Grabouw

As previously indicated, Grabouw is a town that falls in the Theewaterskloof municipality, in the greater Overberg district of the Western Cape province of South Africa. The agricultural nature of the town is as old as the town itself. The first farms were established in the Overberg area as early as 1734 (NMA, 2007c:4). The town is typical of a South African farm centre, and demonstrates similar spatial typologies such as the following:

- A concentrated settlement with commercial enterprises and other services such as banking, educational health and religious facilities
- A section of 'bo-dorp'⁵ for upper middle class citizens, retired from farms and managing local authority functions, industries and facilities
- A separate 'onderdorp' or 'township' with off-farm workers, the agri-industrial workforce, town workers and unemployed citizens
- An industrial area, for processing and packaging agricultural produce
- Railway and road links to export and urban markets

(NMA, 2007c:3)

⁵ Translated as Uptown

The population that was included in the study comprised those people that depended on state-provided basic services, especially with regard to municipal services and health care. Consequently the neighbourhoods and people described in this thesis lived mostly in the subsidy housing or township areas.

The estimated population for the whole Theewaterskloof municipality was 93 000 in 2007. Overstrand and Theewaterskloof are the two local municipalities that make the largest economic contribution to the Overberg region. Seventy-six per cent of the residents received piped water in their homes and most people lived in a semi-detached or separate stand dwellings. While access to basic services was relatively good across the region, the greatest number of indigent households was located in Theewaterskloof. In 2005/06 the poverty rate⁶ was estimated at 31% across the Overberg. (English & Van der Merwe, 2009:12)

In 2006, a project team from the Development Bank of South Africa (DBSA) triggered an important series of events, related to the sustainable development of Grabouw (Hamann et al., 2008b). At the time, the chairman of the DBSA, Trevor Manuel, had launched an initiative that identified certain towns in South Africa as vulnerable and in need of support to become more sustainable. He challenged the DBSA to put their resources and expertise towards the sustainable development of these towns. Grabouw was identified as one of these towns, viewed at the time as a pilot project for sustainable development within the Theewaterskloof municipality. This programme led to the municipality launching a sustainable development initiative (SDI). One of the outcomes was a sustainable development strategy document that was commissioned by the DBSA, and completed by a consulting firm, Nisa Mammon and Associates (NMA). Another outcome was the establishment of the Elgin Grabouw Sustainability Forum (EGSF), which had as its guiding document the EGSF Social Accord (DBSA, 2007), signed by representative stakeholders from the town.⁷ The stakeholders included representatives from the health sector.

The anchor for the district-based health care system in the Theewaterskloof municipality is the Grabouw day hospital. The hospital is only open during working hours and does not have a sleep-over facility. It is situated halfway between the two larger facilities of the Somerset West hospital and the Caledon hospital. The services that the day hospital offers are supported and complemented by a network of other institutions such as a hospice, an ambulance service, a mobile clinic service and teams of community care workers.

⁶ Poverty rate is a percentage of households with expenditures less than R800 per month.

⁷ This forum is discussed in more detail in Chapter 4, amongst other forums, in a section about public participation in the Grabouw community.

3.3.1 Primary health care in Grabouw

Information about health was available on provincial, health district and local municipality levels. As shown in Figure 3.2, Grabouw is one of the towns in the Theewaterskloof municipality, in the Boland/Overberg health district in the Western Cape (English & Van der Merwe, 2009:10).

3.3.1.1 Statistical perspectives on health in Grabouw

Mortality data presents an important frame of reference for the planning and assessment of health needs. In 2004 the Boland/Overberg health unit implemented a monitoring system that captures data from mortuaries and the Department of Home Affairs. Based on this data a report was published that listed several indicators and statistics related to mortality, per sub-district in the Boland/Overberg region, for the years 2004 to 2006 (Groenewald, 2007).

In the Boland/Overberg region in 2006 the four top causes of premature mortality were HIV/AIDS-related disease, tuberculosis, homicide and road traffic accidents. These amounted for 40% of premature mortality in the region (Groenewald, 2007: 16). In the Overberg sub-section of the region, the profile looked different. In Table 3.2 the top five causes of premature mortality for 2006 are set out for Overberg, the local municipalities in the Overberg and Boland Overberg (Groenewald, 2007:15).

Table 3.2 Top 5 causes of premature mortality in persons by local municipality, 2006

Boland / Overberg	Overberg	Cape Agulhas	Overstrand	Swellendam	Theewaterskloof
HIV/AIDS (11.4%)	Homicide (12.9%)	Tuberculosis (14.0%)	HIV/AIDS (13.3%)	Homicide (12.7%)	Homicide (13.5%)
Tuberculosis (10.8%)	HIV/AIDS (10.7%)	Homicide (11.6%)	Homicide (12.6%)	Tuberculosis (10.6%)	HIV/AIDS (11.5%)
Homicide (10.4%)	Tuberculosis (10.4%)	HIV/AIDS (5.9%)	Tuberculosis (7.3%)	Road traffic (8.4%)	Tuberculosis (11.0%)
Road traffic (6.2%)	Road traffic (5.8%)	Fires (5.9%)	Fires (4.9%)	HIV/AIDS (7.2%)	Road traffic (6.5%)
Stroke (4.5%)	Ischaemic heart disease (4.3%)	Stroke (4.5%)	Pneumonia (4.5%)	Ischaemic heart disease (6.0%)	Drowning (4.2%)

The cause of death profile was used as a guideline to further explore. Therefore the three most prevalent causes of death namely HIV prevalence, TB prevalence and homicide are now discussed. These are explored as perspectives on wellness, from the points of view of the local departments of health and social development.

Perspective on HIV

HIV prevalence in the Overberg, determined on the basis of antenatal client testing, was estimated at 19.4% in 2007, 15.9 % in 2008 and 20.8% in 2009. Figure 3.3 shows a comparison between HIV prevalence in the Overberg district and other districts of the Western Cape from 2007 to 2009.

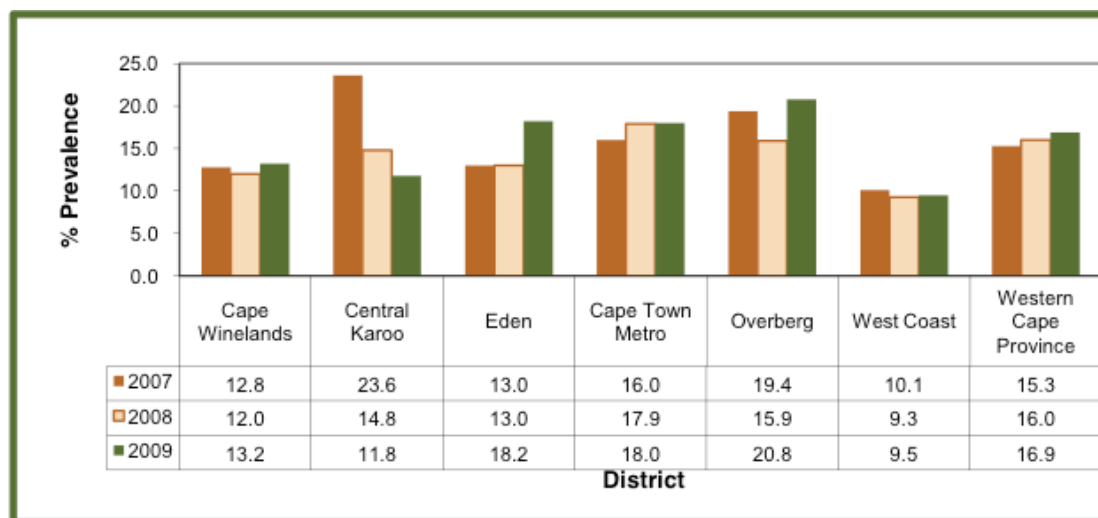


Figure 3.3 HIV prevalence trends among antenatal women by district, Western Cape, 2007 to 2009 (English & Van der Merwe, 2009:40)

The HIV prevalence for 2009 in the Western Cape is depicted geographically in Figure 3.4. The district with the highest prevalence in 2009 (20.8%) was Overberg.

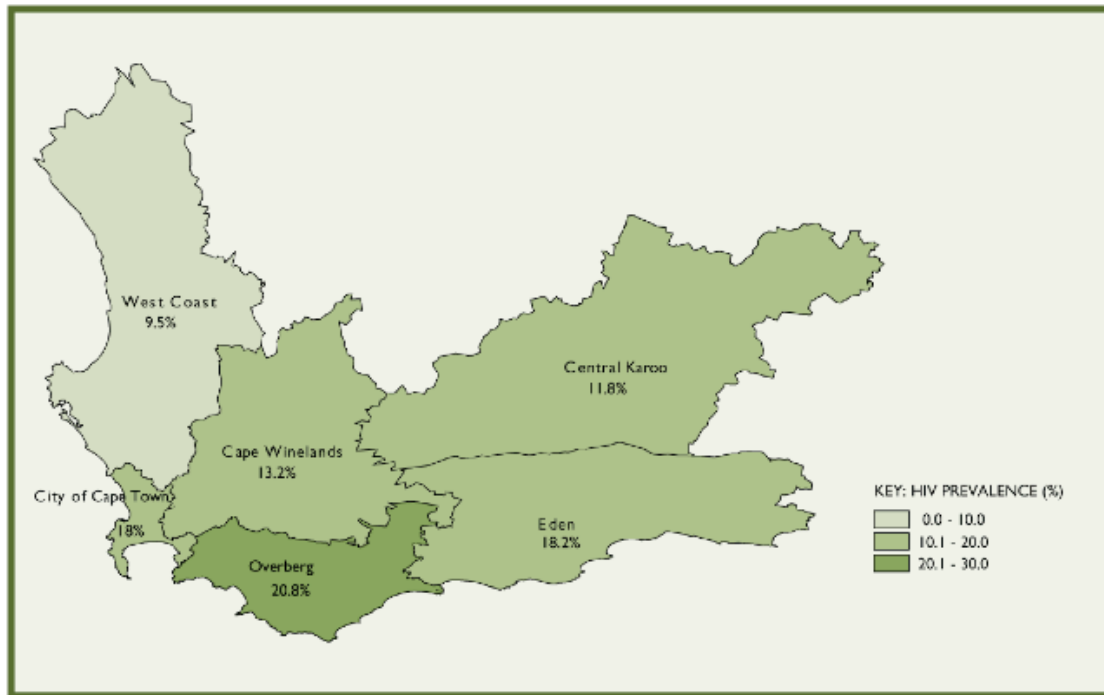


Figure 3.4 HIV prevalence distributions among antenatal women by district, Western Cape, 2009 (English & Van der Merwe, 2009:40)

The Overberg district had the highest prevalence (20.8%) in the Western Cape in 2009, although it was still lower than the 2009 national prevalence of 29.4% (Day, Monticelli, Barron, Haynes, Smith & Sello, 2010: 34, 55). Data on the sub-district of Theewaterskloof was unavailable beyond 2007. One does however see a comparatively high HIV prevalence rate occurring in the Theewaterskloof municipality in 2007. Theewaterskloof and Overstrand were identified as two sub-districts with consistently high prevalence rates for HIV in the Annual Health Status Report for the Boland/Overberg region (English & Van der Merwe, 2009:40). The HIV prevalence for the four sub-districts in 2009 is shown in Table 3.3 below.

Table 3.3 HIV prevalence for the Western Cape by sub-district in 2007, based on area level surveys

Theewaterskloof (Grabouw)	26.6 % (19.8 – 33.3)
Overstrand	25.1 % (18.8 – 31.4)
Cape Agulhas	6.5 % (0 – 14.5)
Swellendam	1.8 % (0 – 5.2)

The report by English & Van der Merwe (2009) that produced these percentages notes that these results should be viewed with caution as the actual numbers of women sampled was small, which may inflate prevalence figures.

Perspective on tuberculosis

HIV and TB have become two concurrent epidemics in South Africa. In 2007 the incidence rate of 805 per 100 000 placed South Africa as fifth in the world in terms of TB incidence (WHO, 2009). The co-infection with HIV is also very high with 73% of people infected with TB co-infected with HIV (Day et al., 2010:129). In 2007 the Western Cape had the second highest incidence (342.6 new smear positive cases per 100 000 people) of pulmonary TB (PTB) in the country. This incidence rate decreased to 328.2 cases per 100 000 in 2008 (Day et al., 2010:256).

Two indicators are commonly used to measure progress against TB. Both definitions are drawn from the Annual South African District Health Barometer (Day et al., 2010).

The first is *smear conversion*. Day et al. (2010:275) explain that the smear conversion rate (SCR) is “the percentage of new smear positive PTB cases that are smear negative after two months of anti-TB treatment and are therefore no longer infectious.” These authors describe the TB cure rate as “the proportions of smear positive PTB patients who completed treatment and were proven to be cured (which means that they had two negative smears on separate occasions at least 30 days apart)” (Day et al., 2010:275).

An extract from the District Health Barometer 2007/2008 (Day, Barron, Monticelli & Sello, 2009:202) about the Overberg reads as follows:

The TB cure rate of 83.1% in 2006 was ranked the highest in the country. It is pleasing to see that Overberg also ranked best on the smear conversion rate, which improved from 73.6% in 2006 to 87.5% in 2007. The challenge now is to get the TB cure rate to over 85% to be in line with WHO targets.

The 2006 and 2007 incidence of TB cases in the Overberg and Theewaterskloof (English, 2009:14, 34) is shown in Table 3.3.

Table 3.3 Incidence of TB in the Overberg and Theewaterskloof

	Municipality	Estimated population	TB cases	TB cases per 100 000*
2006	Overberg	200 626	2528	1260
2007	Overberg	205 961	2409	1170
2006	Theewaterskloof	91 395	1259	1378
2007	Theewaterskloof	93 706	1189	1269
*Calculation: TB Cases per 100 000 = TB cases/estimated population x 100 000				

In 2007, a TB cure rate of 85.4% was achieved (Day et al., 2010) and the Theewaterskloof municipality achieved a smear conversion rate of 85.7% at two months, and 91.5% at three months (English & Van der Merwe, 2009:34). Figure 3.5 shows the Overberg district in a national perspective in terms of number of cases reported per district in 2008.

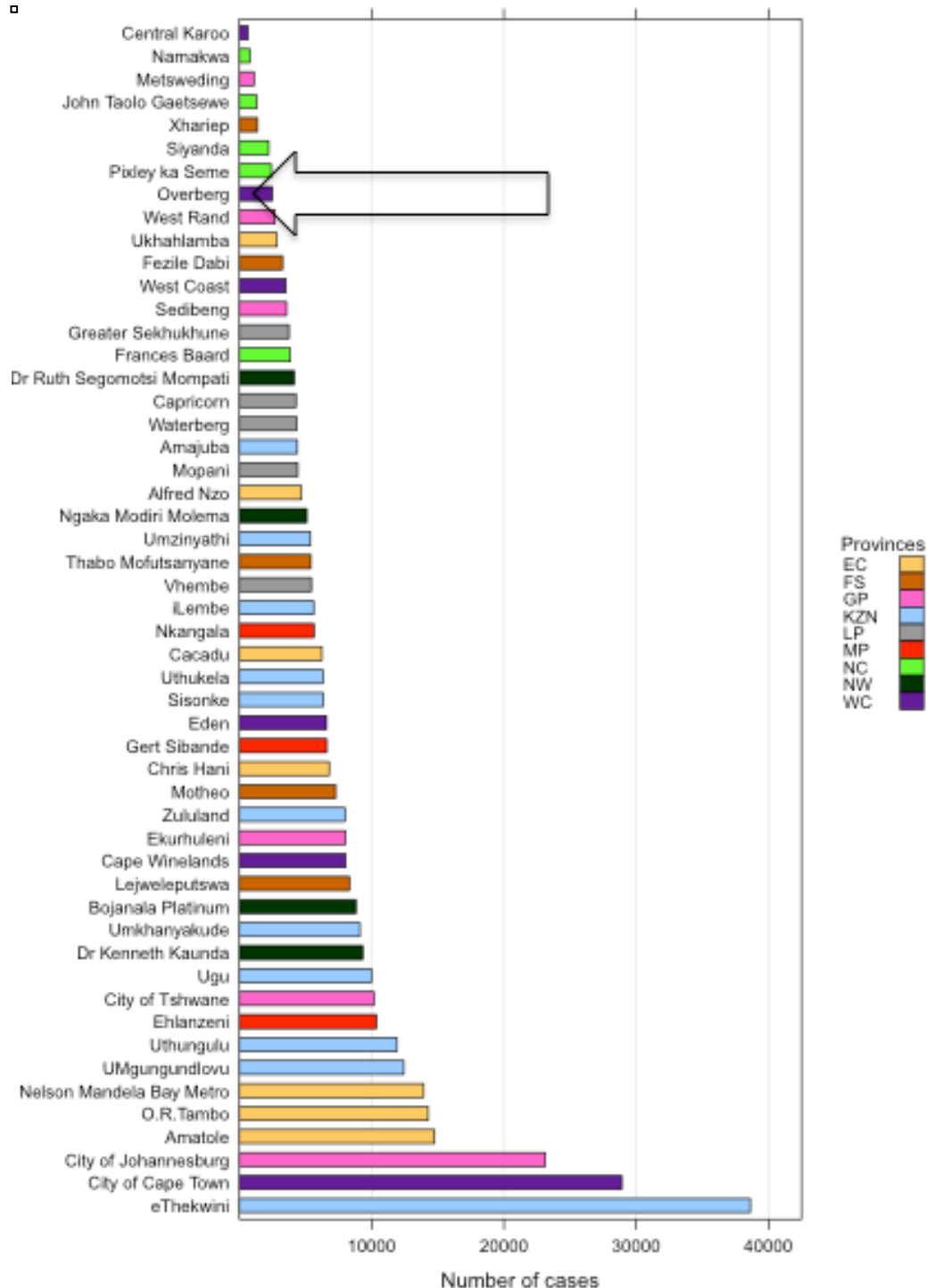


Figure 3.5 Number of TB cases reported countrywide by district 2008 (Day et al., 2010)

In summary: the TB caseload of the Overberg was relatively low in relation to other districts nationally. In terms of performance, however, the Overberg, including

Theewaterskloof, delivered the best smear conversion results nationally as shown in Figure 3.6.

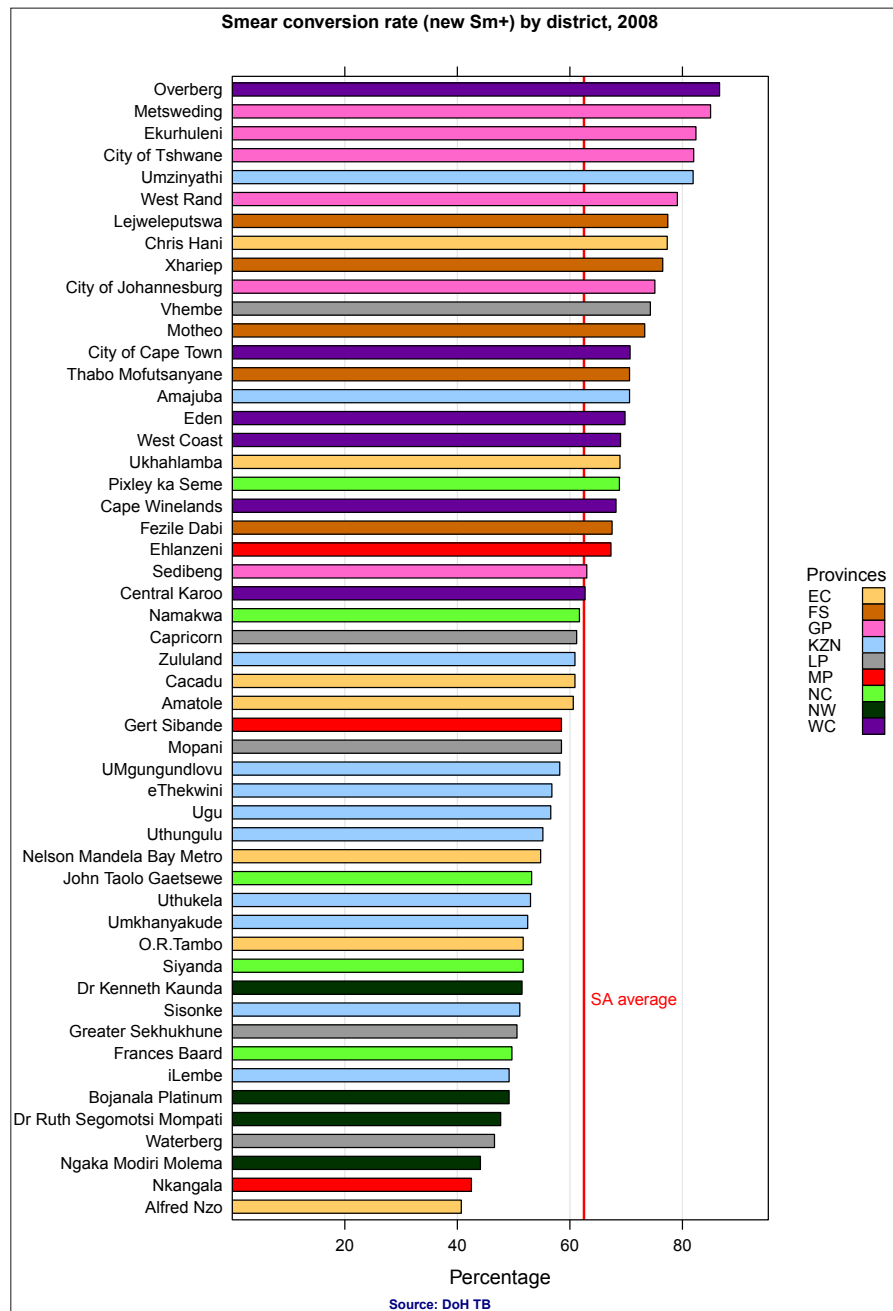


Figure 3.6 Smear conversion rate reported by district 2008 (Day et al., 2010)

The Grabouw Community Care workers that participated in this study collaborated with the TB and HIV units at the day hospital in Grabouw, and formed a vital link in the team effort to reduce TB and mitigate HIV in Grabouw. The success in TB cure rates and the collaboration between the Department of Health, Grabouw Community Care and the community are revisited in Chapter 6. The experiences of the community care workers are documented in Chapter 4. These accounts describe the health workers' significant pride and a sense of achievement in the successful TB cure rate increase. However, the community care workers

worked in a context where HIV prevention and TB treatment, although key goals, were only two aspects of a much more complex and multidimensional reality.

As mentioned in the norms and standards of home-based care listed above, home-based services have a 'mosaic of categories'. The multiple dimensions of wellness beyond physical health such as social relationships within the community environment in a local context are significant aspects for community care workers with which to deal. A look at the cause of death profile of the area highlights the fact that other factors besides communicable disease, such as social contexts and relationships, are important to wellness and how the system engages with wellness.

Perspective on homicide

As shown above, TB and HIV, which are preventable and communicable diseases, present major health challenges in the Overberg region, as in the rest of South Africa. The wellness of the population of Grabouw however depends on much more than the ability to prevent and/or cure communicable disease. Social factors such as crime and risk of accidents also play an important role. A summary of premature mortality in the area presented this broader view of wellness (see Table 3.2). It also draws attention to the inseparability of social dynamics and physical health, as suggested by The Indivisible Self model of wellness (Myers & Sweeney, 2005).

In 2006 homicide was the principal cause of premature mortality in the Theewaterskloof municipality, in which Grabouw falls. Homicide is listed in the top two causes of premature mortality in all four local municipalities of the Overberg, and led to homicide being the top cause of death in the Overberg in 2006. The gender disaggregation of premature mortality in the Boland Overberg reveals two different cause-of-death profiles for men and women. The top three causes of death for men are homicide, TB and HIV/AIDS-related illness, while the top three causes of death for women are HIV/AIDS-related illness, TB and homicide (Groenewald, 2007:13).

The high homicide rates suggest that in 2006 the health of the people of Grabouw was dependent on more factors than their medical care and exposure to communicable disease. Homicide and other violence, which occurred within the social context in the town, clearly had a severe impact on health.

In terms of wellness, according to The Indivisible Self model, the dimensions of physical health and social relationships apply within the context of safety, in family, neighbourhood and community (Myers & Sweeney, 2005).

So far in this chapter I have depicted the wellness of the people in Grabouw by discussing the two most prevalent diseases and the most important instances in the cause-of-death profile. This highlighted the importance of utilising approaches focused on both health and social factors to improve wellness.

Bearing in mind that wellness is contextual and integrated with the environments through which people move I next explore some other contextual elements that affected the wellness of people in Grabouw. The references to health in the strategic documents for the sustainable development initiative are highlighted and then two aspects that influence wellness are discussed. These are distance to health care and water quality management.

3.3.2 Health care in Grabouw in the Sustainable Development Initiative

The SDI strategy document provides the opportunity to explore health as viewed from a perspective of local governance and planning. It positions health as a social matter, within a broader framework that includes the following sections, each a chapter within the strategy document:

- The biophysical context of the town
- Human settlement patterns
- Movement and infrastructure patterns
- Economic development
- Opportunities and constraints
- Proposed spatial development framework
- Strategic framework for the SDI

(NMA, 2007g)

The SDI strategy document is an informative document for the exploration of sustainable community wellness, as it places wellness within the municipal governance and planning context. The community health work initiatives in Grabouw are mentioned in the human settlement chapter of the above-mentioned document. These initiatives, which are regarded as important to the migrant population of the town who are at risk of HIV infection, are listed among a few other perspectives of what Grabouw means to people who live in the town (NMA, 2007c:20):

To migrant families and individuals from the rural areas, Grabouw is a stepping stone, a gateway to the Cape metropolis where some seasonal work is available, and where cheaper and safer living conditions facilitate establishing a transitional family base

from where temporary work opportunities can be accessed in the Cape Metropolitan Area (CMA) and surrounding areas.

With a rising incidence of HIV infection, there are some 'homecare' initiatives for AIDS patients. Special needs housing opportunities operating within sustainable institutional frameworks are needed for street children, AIDS orphans, the elderly, mentally or physically disabled and abused women across all sectors.

In the chapter on economic development, a baseline of socio-economic indicators is shown, highlighting scores on the Human Development Index (HDI) and City Development Index (CDI) (NMA, 2007e:50). This summary is replicated in Table 3.5.

Table 3.5 Selected socio-economic indicators

Education	Theewaterskloof municipality		Overberg District municipality
Percentage of people over 14 illiterate (less than Grade 7)	32		27
Human Development Index <i>Comprising</i>	Theewaterskloof municipality		Province
	0.71		0.72
Health	0.63		0.63
Income	0.74		0.84
Education	0.75		0.68
City Development Index <i>Comprising</i>	Theewaterskloof municipality		Province
	0.73		0.81
Infrastructure	0.67		0.79
Waste	0.75		0.89
Health	0.68		0.68
Education	0.81		0.86
Income	0.74		0.82
Health measures	Theewaterskloof municipality		Overberg District municipality
Percentage of births under 2500 g	17		16
Proportion under 1 with 1 st measles immunisation %	74		75
TB prevalence per 100 000	1352		1142
TB cure rate %	77		74
Grabouw crime measures (Number of cases reported)	2002/2003	2003/2004	2004/2005
Murder	66	44	64
Rape	141	120	131
Neglect and ill-treatment of children	13	27	9
Drug-related crime	442	747	1079

The main indicator used for the health dimension in these two indices is life expectancy. In both the HDI and the CDI the health measures are equal to the provincial scores. Although health is discussed briefly in the SDI as mentioned above, the integration of health with the planning process forms less of a priority than other planning foci. This suggests a need to place greater emphasis on the community perspective on wellness. The SDI documents do however lay a substantial overarching, conceptual foundation for a sustainable development strategy, with wellness as an element of the broader systemic approach. Synergy exists here

between achieving sustainability and wellness. Systems that enhance sustainability also enhance health and wellness, as stated by Magnussen et al. (2004:171):

Various sectors need to work together. First, because health does not occur in isolation, the various sectors, including those within a national government and among aid agencies, need to work together at every level of practice. The ministry of health is not the sole agency charged with production of health; departments of agriculture, housing, sanitation, and education, along with food distribution, are all involved in achieving health.

The Grabouw SDI and the Elgin Grabouw Stakeholders Forum have been recognised as good examples of cross-sector collaboration (Hamann et al., 2011). In Chapters 4 and 5 of this thesis I explore such cross-sector collaboration, and discuss the approaches to wellness from various perspectives. As cross-sector collaboration is important, it becomes meaningful to investigate how sustainability and wellness are perceived by different sectors. One of the activities that the local government sector influences is the implementation of the spatial development plan for the town. Spatial development is important for wellness, especially in terms of distance to health care facilities (Hall, 2010).

In the section of the SDI strategy that addresses spatial developments, elements of the town are listed under the headings *What we protect*, *What we fix*, and *What we develop*. One of the items in the list of things to fix is 'mixed use hubs'. These are nodes that serve several purposes, including health and social needs. They are circled in the black broken lines in Figure 3.7 (NMA, 2007f). The main health facilities are located in the Industria and Oudeberg hubs.

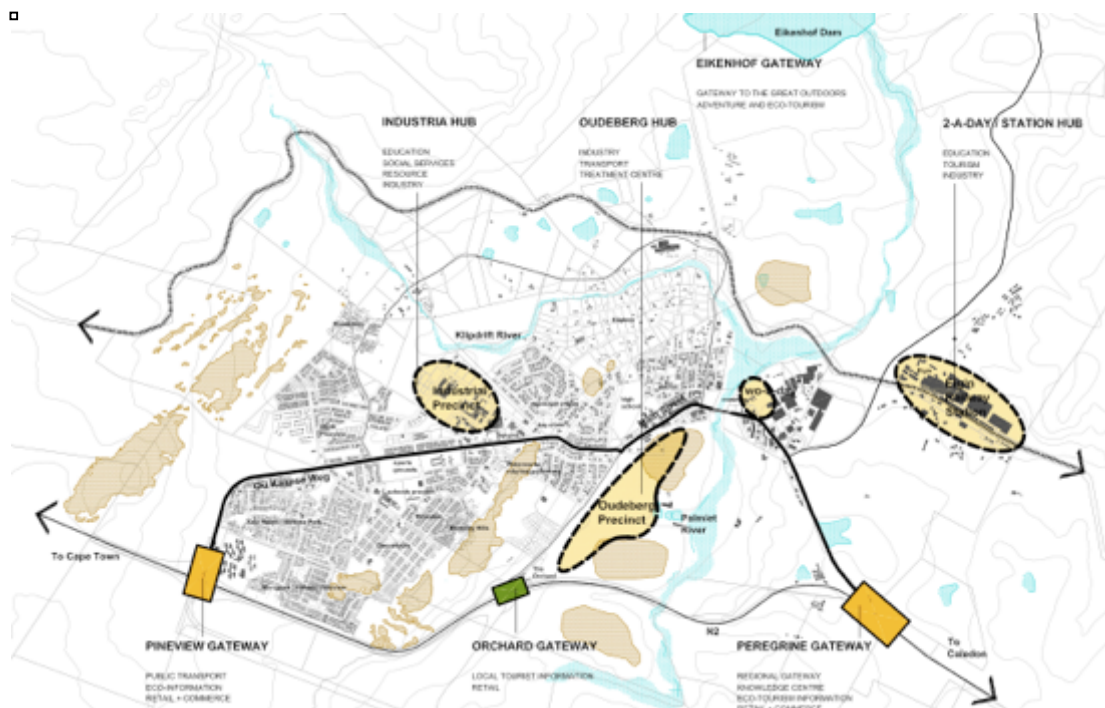


Figure 3.7: Mixed use hubs of Grabouw (NMA, 2007f)

Health system infrastructure is located within a grouping of so-called ‘social infrastructure’ (NMA, 2007f). The spatial development framework section of the SDI strategy document acknowledges the integrated nature of health, and its dependence on effective planning (NMA, 2007f:66):

Access to basic human needs is based on a sustainable livelihoods approach where communities in urban/rural environments require shelter, education and health. Key to this approach are infrastructure and systems planning; transport and mobility; housing and settlement; and land-use opportunities. All of these elements need to be considered in the long-term sustainable development for Grabouw.

The population served by the Grabouw Community Care workers who participated in the study was mostly dependent on walking and public transport to get from one place to another. The care workers’ ability to provide patients with health care, or to bring patients closer to health care facilities, was therefore intimately related to the spatial layout of the health infrastructure in Grabouw, in terms of distance to healthcare facilities.

3.3.2.1 Distance to health care facilities

Figure 3.8 depicts a map of the social infrastructure, as recorded by NMA. It is clear that the existing health infrastructure of the day clinic, numbered 1 in the map, overlaps with the mixed-use hub located in the industrial precinct.



Figure 3.8 Social infrastructure of Grabouw (NMA, 2007f)

A few other points of service provision within the health and social care system are numbered 2 – 4. These highlighted elements in Figure 3.8 are:

- 1 The day hospital, which is the main medical and health facility of the town
- 2 A small community-based day-care centre
- 3 Grabouw Community Care
- 4 A feeding scheme and a family counselling centre

The people of Grabouw are dependent on a few facilities for their health needs. Some private sector health care providers work in the town, but they usually only provide service to patients who are able to pay normal medical fees. In terms of state-provided health care, the facilities mentioned above are the mainstay of health provision in the town. The main hub of health provision in the town is the day hospital with the two additional facilities of a TB room and an anti-retroviral treatment (ART) distribution facility on the same site. Mobile clinics provide basic medical care and treatment to the farm population. Some wellness-related experiences of community members and the facilities mentioned above are described and discussed in Chapters 4 and 5 of this thesis. A perspective that is identified in Chapter 4, from the empirical research, is *Water*. In Chapter 4 the community care workers' experiences of water are discussed. Water is one of the important elements that fall in the intersection of wellness and municipal management. Pathogenic water between informal dwellings is one example of this intersection. The final section of Chapter 3 now provides an overview of the water quality and management within Grabouw, as background to the water-related discussion that follows in Chapter 4.

3.3.2.2 Water quality management

Managing water in Grabouw has several dimensions. Two of these are the provision of clean water for household use in the town and the maintenance of water quality for irrigation. Most of the neighbourhoods in Grabouw had running water at the time of writing. However, not all neighbourhoods had running water in each household, and all of the informal settlements shared taps and toilets. Figure 3.9 shows the different areas and levels of service provision.

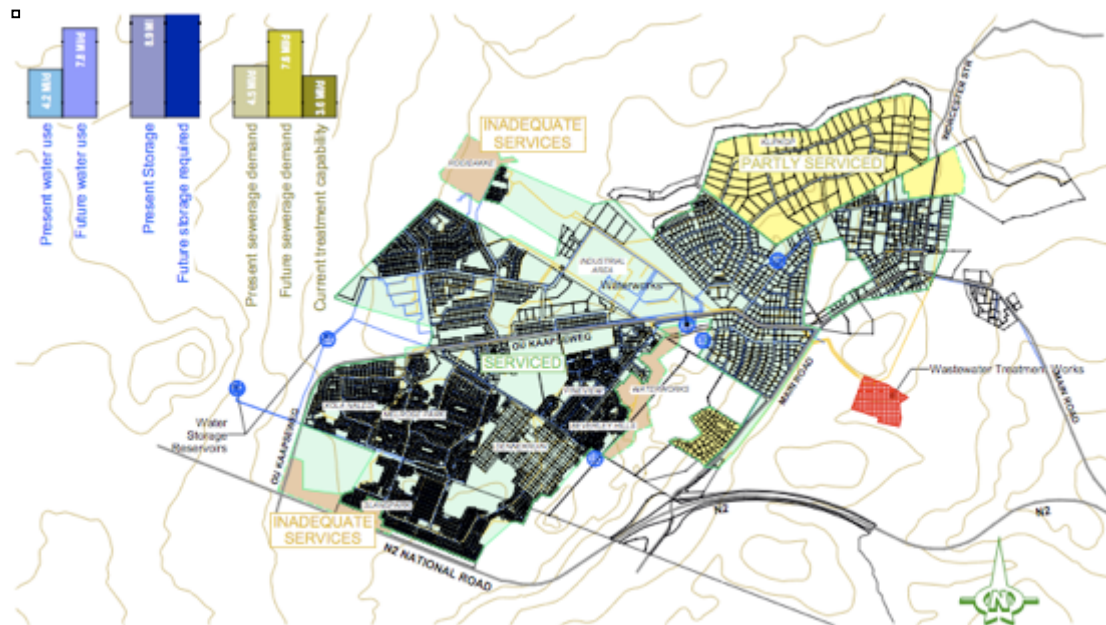


Figure 3.9 Levels of water service provision in Grabouw

The empirical research included an interview with a water quality management coordinator from the Grabouw municipality. He reported that the Integrated Development Plan for 2010 had dedicated 75% of its budget to enhancing water service provision. A project that the coordinator had just completed was the building of a new reservoir that would supply Roidakke and Irak with household water. The economy of Grabouw depends on agriculture. The agricultural area to the south of Grabouw draws most of its irrigation water from the Palmiet River. Along with the municipal service provision and treatment of household water, the commercial farmers that utilised the water from the river also formed an association that carefully monitored the water quality of the river.

This association is called the Groenland Water Users Association (GWUA). The agricultural area where most of the fruit farming occurs downriver from the town centre, is known as Groenland, and depends on the Palmiet River for irrigation.

Two water samples were drawn by Abbott and Associates (2009; 2010). The first was taken in December 2009 and the second in December 2010. The samples showed that the water

quality in the river met the minimum standards for irrigation. The water sample reports showed a chemical and organic analysis. Two organic indicators were quoted. The organism *E. coli* was quoted as a dependable indicator of faecal contamination, and coliform bacteria were noted as “an alert indicator of possible problems”. The water samples showed 00 (zero) parts *E. coli*, and 2 figures for coliform bacteria per 100 parts, the latter indicating a slight rise from 48 to 53 (Abbott and Associates, 2009).

The accompanying letter to the 2009 analysis report by Abbot and Associates stated the following:

We attach our Certificate of Analysis relating to a sample of water, received on 14 December 2009, and tested according to a list of parameters specified by you. The water complies with the Class I criteria for irrigation. Considering potability, the water complies with Class I of SANS 241 (2006), relative to the parameters tested. Bacteriological quality was not good.

The levels of bacteria had remained within the allowed range. A broader assessment of the ability of the municipality to manage water had however shown more cause for concern, when drinking water was assessed. The Blue Drop report of 2010 (DWA, 2010) showed the water quality management performance of Theewaterskloof amongst other municipalities. Table 3.6 shows that the district municipality of Theewaterskloof, Grabouw had scored the worst, with an overall percentage of 51.94% compared to the same municipality's previous score of 77.75%.

Table 3.6 Water supply systems Blue Drop Report (DWA, 2010)

Performance area	Grabouw	Caledon	Riviersonder- end	Villiersdorp
Water safety plan	E	B	E	E
Process control and maintenance competency	G	A	E	E
Efficiency of monitoring programme	D	B	C	D
Credibility of sample analyses	B	B	B	B
Data submission to DWA	A	A	A	A
Compliance with national standard	C	C	C	A
Failure response management	D	C	D	D
Responsible publication of performance	G	G	G	G
Efficacy of asset management	E	B	E	E
<i>Microbial DWQ compliance with national standard</i>	99.99% 12 months data	99.99% 12 months data	99.99% 12 months data	99.99% 12 months data
<i>Chemical DWQ Compliance with national standard</i>	70.80% 12 months data	93.06% 11 months data	88.90% 12 months data	99.99% 12 months data
Blue Drop score (2010) and trend	51.94% ↓	86.63% ↓	55.44% ↓	66.69% ↑
Blue Drop core (2009)	77.75%	95%	79.8%	45.8%

The official assessment and percentages scored for water quality management provide background to the direct experience of water in communities in Grabouw. In Chapter 4 examples of these experiences are described. In the farming area called Groenland, informal settlements are dependent on water from this river for drinking and household use. In these small communities the untreated water has a direct effect on the wellness of the households.

3.3.2.3 The case of Grabouw Community Care

Grabouw Community Care is a non-governmental organisation that works in the Grabouw area. Grabouw Community Care employs the community care workers who participated in the study documented in this thesis. Grabouw Community Care exemplifies an organisation that fulfils this role of a link between the formal, government-based health system and the community. They extend the district-based facilities' reach to the community, and provide a service that is more comprehensive than just physical health maintenance. Grabouw

Community Care workers took the photographs used in the participatory photography process described in Chapter 4, where the community's experience of wellness in Grabouw is explored.

3.4 Conclusion

In this chapter I attempted to provide an overview of wellness in Grabouw from an official, local government point of view. From this point of view, HIV infection, Tuberculosis and homicide present the main foci for wellness management. The intention was to demonstrate one particular set of perspectives on wellness that is presented in government planning documentation and reports. To achieve this aim, some health indicators were discussed, the integration of health within a sustainable development planning document was examined and an overview was given of water management in Grabouw. The purpose of providing such a perspective was to prepare for and balance the more empirical, qualitative discussion that follows in Chapter 4.

The official perspective leaves a few questions unanswered. Firstly, what is the community perspective of wellness? The notion of 'community' is included as an anchor word in community home-based care/community care work and requires an examination. Secondly, how do the community members experience the local government attempts at supporting wellness? In Chapter 4, participation is described in terms of forums or groups that were formed to organise for wellness. Thirdly, how successful were the attempts at integration and collaboration between community members and local government in terms of achieving wellness?

These questions are explored in Chapters 4 and 5, with a description of community experiences and a discussion of the application of complexity thinking to the notion of wellness in Grabouw.

CHAPTER 4: COMMUNITY EXPERIENCES OF WELLNESS IN GRABOUW

I took my own camera and took pictures to come and show them here. The water is rotten and the children are playing in it! (Interviewee response)

4.1 Introduction

This chapter presents various perspectives on how the notion of wellness is understood from the point of view of the community of Grabouw. This represents a departure from the statistical, official governmental perspectives on wellness that were provided in Chapter 3. The observations in the current chapter are grouped according to three main perspectives. The process of perspective identification is described, and includes how perspectives were developed from the participatory photography process, participant observation and key informant interviews. Each perspective is then discussed in detail, with supporting evidence from the methods used, including photographs taken by participants. The three major perspectives that emerged from the data were:

- Water: Direct experiences of water in neighbourhoods are shown and described, including experiences of water service delivery.
- Participation in groups: The different forums of Grabouw are described and discussed, with particular focus on one particular forum, and how it relates to wellness.
- Living spaces: Descriptions are given of different neighbourhoods in Grabouw, and their aspects of wellness. The focus is placed on one particular settlement that burnt down.

Each perspective is discussed in terms of how the phenomena observed affected physical and social wellness. Through listing and categorising some of these observed effects on wellness I then demonstrate the importance for wellness that each theme carried. In this manner a framework for success was created that provides a conceptual platform with which to evaluate success in attempts to achieve wellness.

As previously mentioned, the community experiences of wellness are very different from the perspectives on wellness presented by the government institutions. In this chapter it becomes clear that wellness is perceived in terms of people's lived experience of their natural, social and living environments. This also implies that the meaning of wellness is conceived from a number of perspectives that are different from those identified by the formal government structures.

4.2 Wellness and the environment

In discussing the community members' descriptions of their experiences with regard to wellness and their environment, I make use of specific references to particular neighbourhoods. The geographical locations of neighbourhoods play an important role in

people's exposure to particular environmental and social dynamics. In Figure 4.1 the map of the population groups per neighbourhood clearly shows the segregation present in the town.

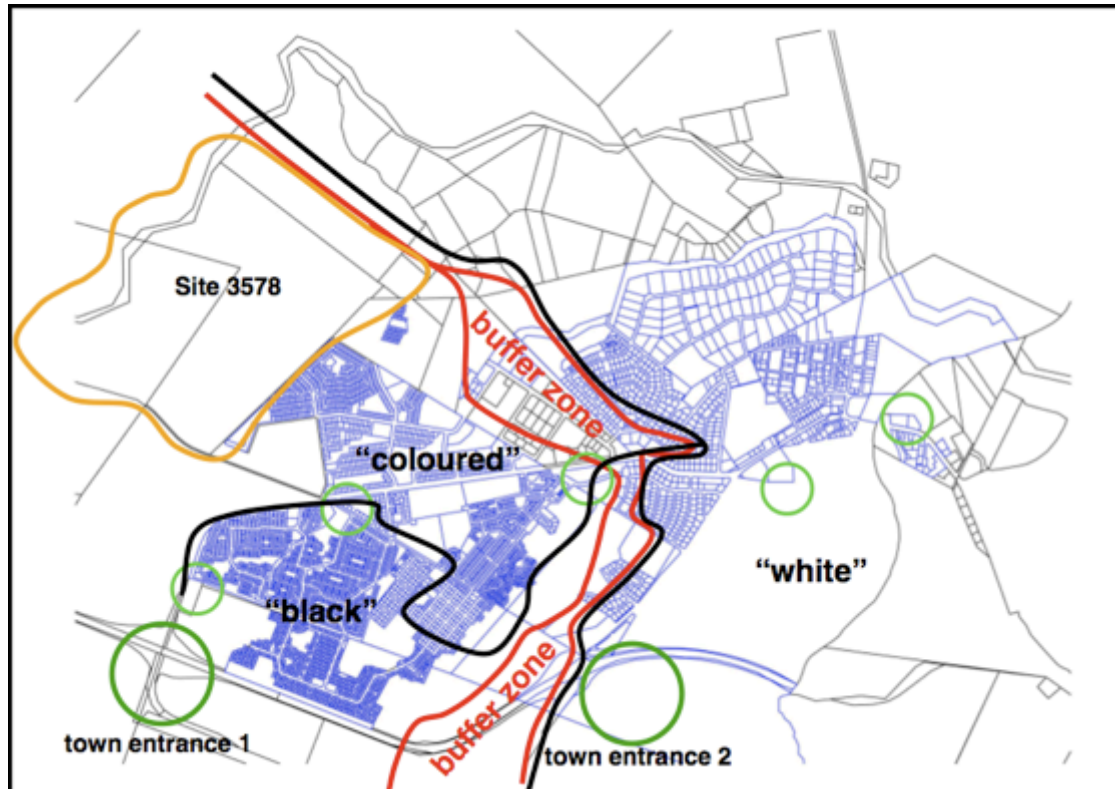


Figure 4.1: Population groups per neighbourhood in Grabouw (NMA, 2007g)

The research population was defined as people that are dependent on government-provided services, including municipal services and health care, therefore the majority of the research participants and observations were conducted within so-called black and coloured neighbourhoods. Figure 4.2 shows a map of Grabouw, with a number assigned to each of the areas that are described in the study. These areas are briefly described below.

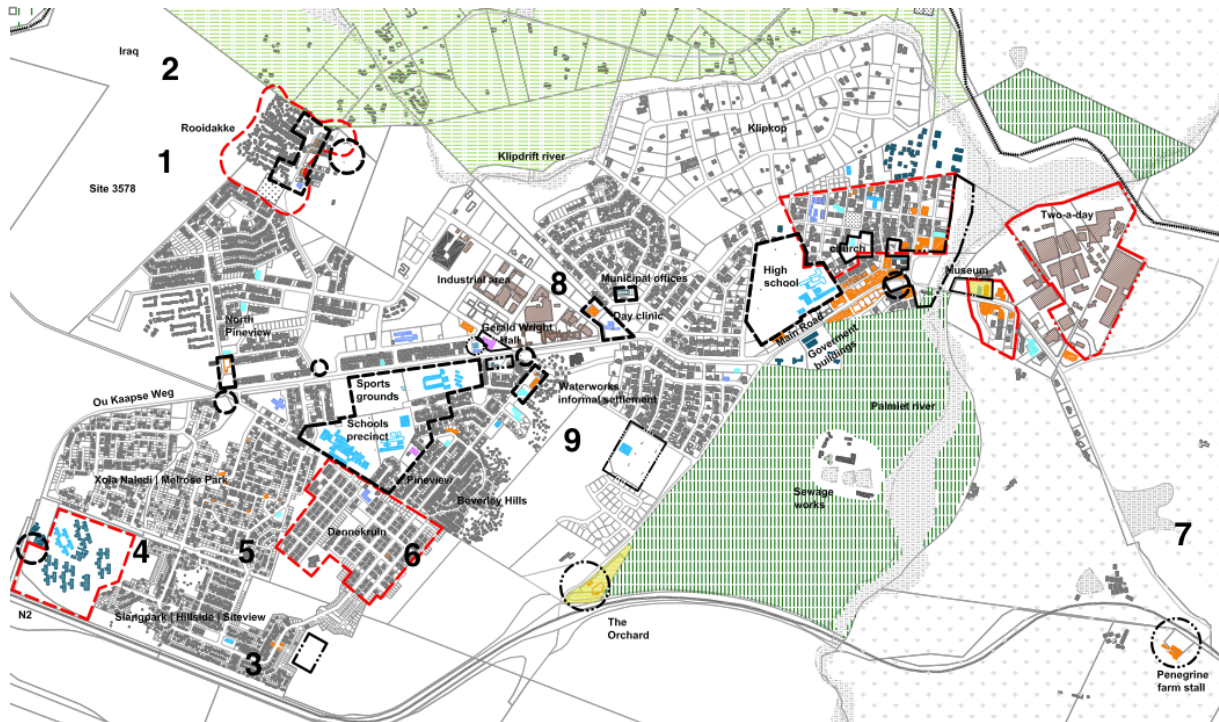


Figure 4.2: A map of neighbourhoods in Grabouw included in the study (NMA, 2007c)

1. *Rooidakke*: Previously an informal settlement, Rooidakke has become the latest housing development site. It is located on the edge of Grabouw against the mountain.
2. *Irak*: Irak is a small, informal settlement that lies above Rooidakke and the railway line that borders the forest. It is the highest settlement in Grabouw and overlooks the town.
3. *Hillside*: A small subsidy housing neighbourhood in slight disrepair, Hillside lies close to the first entrance to the town from the highway.
4. *Darkside*: This settlement is similar to Hillside, but it has no electricity.
5. *Siteview*: A mixed-type settlement consisting mostly of subsidy homes and a small informal settlement, it lies on the slope below Hillside.
6. *Dennekruin*: This is a tree-filled neighbourhood that is situated on the lower plateau of the town, separated from the highway by a small hill.
7. *Groenland*: The major commercial farming area with farms along the Palmiet River lies in this direction.
8. *Day hospital*: The main health care facility in town, it is situated close to the centre of town.
9. *Waterworks*: This is an informal settlement in the centre of the town, across from the day hospital.

4.3 Experiences of wellness in Grabouw

An important principle of the research was that it would be implemented in a participatory manner, and that the perspectives on wellness would be identified through collaboration between the researcher and the participants. The perspectives emerged by identifying the most prevalent topics from each of the data collection methods. An important distinction to note is between *topics* that were identified by research participants through each of the data collection methods, and *perspectives* that represent the dominant three discourses from all three data collection methods.⁸ The primary data collection method that was used was participatory photography. Conversations during participant observation and key informant interviews were secondary methods used to collect data.

Figure 4.3 shows the two levels of interpretation, namely the topics that were collected through the data collection methods, and the perspectives that were identified as important in all of the methods.

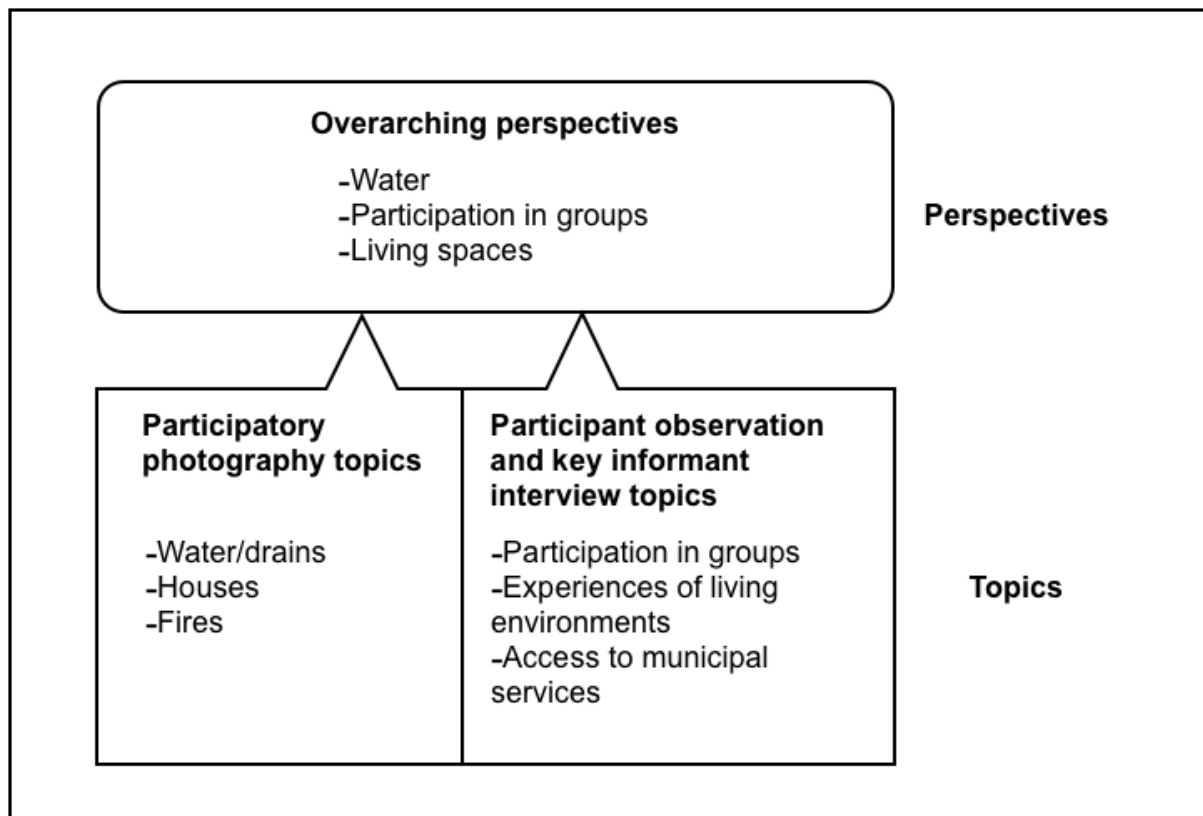


Figure 4.3: Two levels of interpretation: topics and perspectives

During a group discussion session of the participatory photography process, participants viewed the pictures one by one in a slideshow. The slideshow was run through twice. Each participant was asked to write down all the topics that they saw appearing in the pictures.

⁸ In this chapter, statements are made in first person, reflecting the nature of ethnographic community observation.

These were written down on cards, one topic per card. Figure 4.4 shows the number of cards that were produced, per topic in the participatory photography discussion.

□

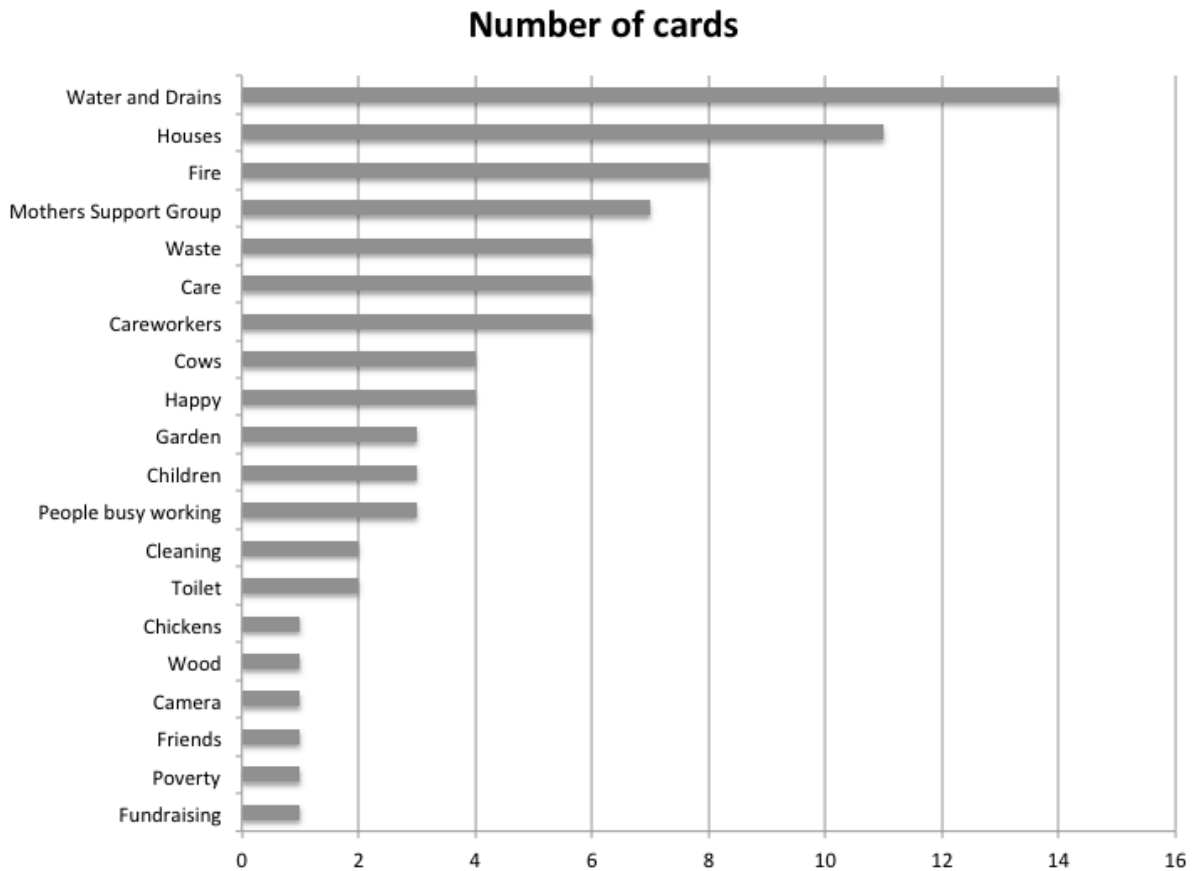


Figure 4.4 Number of cards per topic cluster

After the slideshow, cards were pasted on a wall, and similar words were clustered together as topic clusters. The group participated in this process and the researcher acted as a facilitator. Whether any particular card belonged to one cluster or another was debated until group consensus was attained. The results of this process are listed in Table 4.1.

Table 4.1 Words and topics from card clusters in discussion about photographs

Number of cards	Topic name	cluster	Words appearing on cards
14	Water and drains	and	Water and drains, dirty water, tap and people, drain
11	Housing		Houses, Beautiful house, RDP house, New houses, Broken house, Dirty house, 'Hokkie'
8	Fire		Fire, Fireplace, Rebuild, After fire rebuilding again
7	Mothers support group		Mothers support group, Support group, Mothers, Mothers with children
6	Care workers		Care workers, Happy carers, Carers, Grabouw Community Care staff, Teamwork
6	Caring for patients	for	Care, PCCW Supporting patient, Help, Educate, Observation
6	Waste		Waste, Rubbish, Trash, Dirty, Rubbish in the street
4	Happy		Happy, Excited
4	Cows		Cows
3	People working	busy	People busy working, Digger, Removing
3	Children		Children, Children enjoying playing, Happy children
3	Garden		Garden, Lawn
2	Toilet		Toilet, Toilets
2	Cleaning		Cleaning, Clean hospice
1	Fundraising		Fundraising
1	Poverty		Poverty
1	Friends		Friends
1	Camera		Camera
1	Wood		Wood
1	Chickens		Chickens

Topics were also highlighted through conversations during participant observation and key informant interviews. These topics overlapped with the topics identified during participatory photography, but were slightly different. The two groups of topics, from the photography

process, and from the conversations and interviews, contributed to the development of the overarching perspectives, as shown in Figure 4.1.

An open approach was followed during conversations throughout participant observation and key informant interviews, where participants and interviewees were encouraged to share topics that were important to them in terms of their experience of wellness in Grabouw. The research questions and objectives were used as a guide for the key informant interviews. As conversations developed, probes were used to discover more specific information that related to the perceptions of sustainability and wellness. The key informant interviews were recorded and transcribed.⁹ Notes were taken during the interviews to highlight topics that emerged. Notes were also taken during participant observation conversations and used for later reference. Topics that were mentioned as being important or that re-occurred in different interviews and conversations were used to guide the overarching perspective selection.

During participant observation and key informant interviews, topics that emerged were: participation in forums and groups, experiences of the living environments in different neighbourhoods, and access to municipal services. Topics informed the overarching perspectives, and were observed at a different level than the perspectives.

The topics identified through the discussions with photographers, conversations during participant observation and key informant interviews produced three overarching perspectives: Firstly, various opinions on water emerged from all methods, especially the participatory photography process. Participation in groups emerged as an important second perspective from key informant interviews and participant observation. Finally, the experience of living in particular neighbourhoods and certain types of housing was identified as a third perspective through participant observation. The three overarching perspectives were therefore identified as:

- Water
- Participation in groups
- Living spaces

These perspectives were developed by combining the most important topics that were produced from each data collection method. The three perspectives are therefore different from the particular groups of topics identified from each data collection method. These are now discussed in more detail, with the relevant evidence from each method.

⁹ Transcriptions are available on file, kept in locked storage.

4.3.1 Community perspectives on wellness in Grabouw

The following discussions of the three main perspectives offer the main body of evidence to complement, and juxtapose, the structural and statistical perspectives given in Chapter 3. These discussions represent empirical accounts of observations made and research participants' contributions, especially those collected through the focus groups and photography methods.

4.3.1.1 Water

Grabouw is a wet place and water can be seen in several places throughout the town. The town is positioned on the edge of an escarpment, and is climatically positioned to capture or herd clouds that pass towards the ocean, about 500 m below the town, over the mountain pass. The annual rainfall in Grabouw is higher compared to the rest of the Overberg. The Palmiet River, which passes through the town, plays an important part in the life of the town in several ways. The river feeds the economic mainstay of the area, agriculture, in the sprawling hills that lie further down the river from the town, in the farming area around Grabouw that is known as Groenland (NMA, 2007b:12). On the northern edge of the town is the Eikenhof dam, which feeds into the Palmiet River. There is a pine forest on the one side of the dam and the Grabouw Country Club on the other, with a club house and golf course. To the south-west of Grabouw is the Steenbras dam, a major source of water for the Cape Town metropolitan area and Helderberg. The Steenbras dam also serves as a base for a pumped water storage scheme owned and run by Eskom¹⁰. Grabouw therefore has an important relationship with water in various ways in the larger geographical space. On a smaller scale, between dwellings in the living areas of Grabouw, the community care workers also observed water.

Water in the living environment

The water sources with which the community care workers mostly came into contact were streams of run-off from rain, and from leaking taps. The terrain on which most of the informal settlements in Grabouw were built was usually sandy, with underlying rock, and frequent rocky outcrops. Figure 4.5 shows the typical type of landscape on which most informal settlements in Grabouw were built.

¹⁰ Eskom is a parastatal company that supplies electricity to South Africa.



Figure 4.5: Care workers walking in Waterworks

Running water saturated the sand, and streams or rivulets formed between shacks and ran downwards, between homes, towards the river. This was a familiar sight. Figure 4.6 shows such a stream. In this picture one can see how close the stream is to the nearest dwelling. The water was also not very clean, with plastic wrappers and algae having accumulated. During the rainy season in winter, these streams overflowed.



Figure 4.6: 'The reason I took this picture is that this is where we pass and children are playing there.' (Participant quote)

This situation has two effects: firstly, homes are flooded and the floors are constantly wet or under water; secondly, the spaces between homes become a muddy mess. In the course of the research I observed that a few patients whom I visited had to live in dwellings with wet floors due to this phenomenon. Figure 4.7 shows such a stream that had grown larger. The stream in this picture also shows the collection of solid waste often found in the streams in this area.



Figure 4.7: A stream between houses in Rooidakke

Water affected the community in several ways. One of the patients had lost his house at the time of writing. He had moved to a different shack, and the mattress that he was sleeping on was wet. The community care workers knew about this as the patient was in TB care and was receiving his daily TB injection. The community care workers also mentioned that they were in urgent need of rain-suits and wet-weather boots, in order to reach their patients in informal settlements. They would persevere and wear whichever rain-jacket they could find, but several would inevitably contract colds every winter. According to the team, the muddiest and wettest areas were Irak and Waterwerke (English: Waterworks). Waterwerke is the name that was given to an informal settlement that borders the municipal water treatment facility in the centre of the industrial district of Grabouw. Waterwerke had an informal electricity supply that spanned half of the settlement. Formal electricity supply boxes were opened illegally and wires were connected and fed into households in the informal areas. Figure 4.8 shows a network of electrical wires in the informal settlement named Beverley Hills, which borders Waterwerke.



Figure 4.8: Informal electricity connections

One of the patients visited during participant observation was utilising such an informal supply of electricity. This patient had a surprising number of appliances in his house. It was discovered during the visit that he was one of the people who connected electricity illegally for other shack-dwellers in the area. He was working with a piece of wire when the community care workers paid him a visit. The following were observed in his house: two DVD players, two television sets, a hi-fi radio, a microwave, a fridge and a stove. All of these seemed to run off two single wires running into the shack. When asked about electricity, he said that he connects neighbouring shacks to electricity and maintains some of the wires.

Besides being a fire risk, this electricity network also poses a high risk of electrical shock due to the wetness of the environment. In terms of wellness, the bio-physical dimension of wellness was clearly threatened by the fact that indoor temperature was lowered due to the wet floors, and mud outside the informal settlement housing. The exposed and informal network of electrical wires also added significant risk of electric shock in such a wet environment. Among the informal settlement neighbourhoods in Grabouw, trenches that were intended for excess storm water often accumulated litter, as shown in Figure 4.9.



Figure 4.9: 'I took this pic because people can live like this it is wet and dirty'
(Participant quote)

Children were observed playing in pools of stagnant water among the dwellings. Another trend that I observed as I visited patients was that the shack-dwellers relieved themselves in the bushes around the informal settlements. The answer to the question: 'Which toilet do you use?' was often: '*Ehlatini*: the bush.' The two neighbourhoods where this answer was most heard were Irak and Waterwerke. Irak is the highest settlement in Grabouw. It borders the railway line and pine forest at the top edge of the town. Below Irak a stretch of un-cleared vegetation separated the settlement from the next neighbourhood, Rooidakke. I observed at least two taps in Irak that were broken and gushed water continuously. This water flowed through the vegetation that the people of Irak used as a toilet, and the water flowed out below the bushes, through a trench that ran through Rooidakke. Figure 4.10 shows a broken tap in Irak. The water flowed into the bushes seen in the background of the picture. These were the bushes that were often used as toilets.



Figure 4.10: A broken tap in Irak

Figure 4.11 shows community care workers who were searching for the lower end of the stream that flowed out of the bushes, caused by water that was flowing from the broken tap.



Figure 4.11: The stream running down from Irak

These impressions suggested that there would be a high prevalence of diarrhoea among residents in the area. The community development worker who was interviewed as a key informant (Interviewee 3) shared this concern. She had also noticed it and was worried that in addition to being dangerous to the residents, the dirty water might contaminate the river, thereby adding a larger threat to the agriculture-based economy of the town. In the neighbourhoods of Irak, Waterwerke and Roodakke many pools of dirty and stagnant water were observed. If the river and the potable water supply from the dams were to be contaminated by the above-mentioned pollution, it would have presented a serious public health risk. The following quotation expresses an interviewee's frustration at the delay of municipal delivery. Note that all quotations are presented verbatim and unedited. In the case of an Afrikaans quotation, the English translation is provided in brackets.

Interviewee 3: Kan u enige *development* in Grabouw sien? Hoe lank ken u vir Grabouw? (*Can you see any development in Grabouw? How long have you known Grabouw?*)

Interviewer: So `n jaar. Ek sien die Roodakke huise en ek sien nou die water. (*For about a year. I see the Roodakke houses, and the new waterworks.*)

Interviewee 3: Ja. Kan u nou sien? Dis 2010. (*Yes. Can you see now? It is 2010.*)

However, the real situation was different. The water was relatively clean. Two aspects countered the concern of dirty water in the river and water system. Firstly, an important indicator of infected or dangerous water is usually the number of diarrhoea- and/or cholera-related complaints at public health facilities. In the interviews with health workers neither the supervising sister at Grabouw Community Care nor the managing sister in charge of the day hospital had noticed a high number of diarrhoea cases caused by dirty water. According to them the number of cases was negligible.

Secondly, the community development worker's fear that the river was contaminated also proved to be unfounded. The farmers that utilised the river for irrigation had set up an association that monitored and managed the water quality of the river, as discussed in Chapter 3. This monitoring of the water quality and the collaboration with the municipal water department ensured that the water in the river was, while not drinkable, at least clean enough to be used for irrigation.

Interviewee 4, the municipal water quality coordinator working in the town's municipal water management division, indicated that water quality management was "a fine art", which he had learnt from the municipal water engineer. The quality of water samples and the perfect proportions of chemicals cannot be defined according to an exact formula, but by a trial and error approach, with continuous testing to monitor the quality. He also insisted that it was the municipality's duty to provide the basic water services to all Grabouw residents, whether they were living in formal or informal areas. He mentioned that free basic service was a right. The national Department of Water and Environmental Affairs was also committed to this (RSA, 2011):

Free basic municipal services are services provided at no charge by the Government to poor households. The services currently include water and electricity. These services are provided by municipalities and include a minimum amount of electricity, water and sanitation that is sufficient to cater for the basic needs of a poor household.

In addition to this commitment by the Department of Water and Environmental Affairs, in Grabouw the commercial farmers' association (Groenland Water) monitored the water quality of the main river source.

It was apparent that there was a vast difference between the quality of the water among the dwellings and the quality of water in the river. On the one hand the water that collected around the shacks and flowed through the bushes that were used for ablutions, was very dirty and contaminated; on the other hand, the water that was used for irrigation was carefully monitored and managed by the farmers' association.

Access to drinking water was dependent on water provision by the municipality. The municipal water quality coordinator indicated that access to water was one of the basic services that local government had to supply. At the time of the interview he had just completed the supervision of a new water reservoir that would supply water for domestic use to the Irak settlement. In response to my surprise on hearing that an informal settlement was being provided with formal services, he mentioned that in terms of housing legislation, if someone has lived in a particular area for longer than two weeks, that person was entitled to the four basic services, namely housing, water, electricity and sanitation. Consequently, the municipality had just completed the reservoir in order to provide water and sanitation

services. The municipality provided both financial and political support in this regard. The town manager had identified water provision as a priority and had declared that 75% of his budget in the new IDP for 2010 would be dedicated to upgrading the water and sanitation system of the town.

Water and physical wellness

The following water-related aspects were found to have an impact on especially the physical health dimension of wellness of community members living in informal settlements in Grabouw:

- Broken taps added excess water to the water flowing between houses.
- Contaminated water that flowed past or was close to living environments carried a bacteriological and pathogenic threat.
- Water that flowed through vegetation where people relieved themselves could spread pathogens.
- Waterways attracted and collected solid waste such as plastic, rubble and organic food waste. This had the potential to increase the generation of pathogens.
- Flooded households with constantly wet floors presented an increased exposure to cold-related illnesses such as 'flu or pneumonia.
- Commercial farmers showed strong dedication to keeping the water in the river clean.

These aspects were all related to physical health. The research found however that beyond those aspects of water related to physical health, there were also other aspects in Grabouw that related to wellness.

Water and social wellness

The provision of water and sanitation to informal settlements in Grabouw highlighted an aspect that relates to social wellness. During participant observation, the researcher observed that most taps and toilets in Irak and Waterworks were broken. Most of the taps observed were also made from plastic. The tap in Figure 4.8 above is an example. Public toilets were often damaged, such as the toilets pictured below in Figure 4.12. These were also placed in an area with much waste around it, and their doors faced towards the bushes. Community care workers commented that public toilets were dangerous, especially to women, as women were often sexually assaulted there.



Figure 4.12: 'This the toilets that the community is use.' (Participant quote)

After observing the damage to taps and toilets, I raised a question during key informant interviews and focus group discussions about the reasons why the taps and toilets were damaged. All the respondents gave similar answers. The shared opinion seemed to be that the taps and toilets were due to vandalism by young people who were bored and angry. This did not seem to be logical, as these young people also depended on the services they were damaging. The participants believed that the culprits had stolen the taps in order to sell them, as they had done with the toilet bowls. However, I observed that although the taps and toilets had been damaged, they had not been removed.

In an interview one respondent stated her opinion that there was too much of a cultural shift between farm life and town life, and that community members, after migrating to town, had not been able to adjust to living in town. She expressed a firm belief that this 'culture shock' was at the heart of the vandalism of toilets and taps. According to her the community members suffered from an inability to adjust.

The two services that were damaged by community members, namely clean drinking water and secure sanitation, were two services that were important to the communities. In South Africa, accessibility to safe, clean and dignified sanitation was singled out as such an important issue that it led to the 2011 local government elections being dubbed 'The toilet election' by the media (Rossouw & Dawes, 2011).

The damage to these services did not only threaten the health of community members, but also compromised their human rights; especially the right to basic services. In a focus group discussion, I posed the question directly: "Do you know the names of people who break the toilets and taps?" The community care workers in the group insisted that they knew the particular people responsible for this vandalism. They labelled them as being violent and criminal, and expressed much fear of them. They also insisted that it was best to avoid them.

The damaged toilets in Irak and Beverley Hills contrasted starkly juxtaposed with the locked and well-kept toilets of Siteview. In both areas there were standard, single concrete-enclosed toilets, connected to sanitation piping. In Irak, the doors had been removed, and the bowls had either been removed or broken beyond use. As a result of the damage, the water supply had been disconnected. I observed that – in contrast – the toilets that were used by the community of Siteview were all in working order, and that each door was locked with a padlock. The care worker who was present informed me that several households would share a toilet, maintain it and keep the keys. This example is discussed in further detail in Chapter 5.

Another aspect that was observed was that rubbish collected in the water-trenches. Most waterways were polluted and looked repulsive. All of the pictures taken by the community care workers showed this clearly.

In addition to the aspects of water that relate to physical health, discussed earlier, the importance of the following aspects of water related to the more social dimensions of wellness:

- Important service points were targeted by vandals which compromised both the residents' health and their right to service. Vandalism could be seen as a reverse measure of community cohesion, or solidarity, where high vandalism showed a low level of community solidarity while functioning services showed that the community were protecting their services as a group and hence showed high solidarity.
- The people who damaged taps and toilets were known, and feared. In terms of wellness a psychological dimension was present here where fear was experienced versus safety.
- Public toilets were regarded to be dangerous to women, as they were perceived as places where women were often sexually assaulted.
- The community in Siteview took ownership of their services and protected them. This improved their safety.
- Community members in poor neighbourhoods often passed by waterways that had become ugly. In this case the aspect related to wellness was the effect of being surrounded by an unsightly environment.

These aspects of water in Grabouw demonstrated some of the effects of the community's engagement with water on wellness. This section of the chapter has shown the direct interaction of some members of the community with the water of Grabouw.

The second overarching perspective that was identified in the study was related to how community members interacted with other people in the town, the municipality and their environment. The sustainability of the town and the wellness of people were negotiated by

the municipality and community members in various ways. The spaces where the negotiations took place were very important to both the municipality and the community. The respondents named the negotiations 'participation in groups'. This collaboration, which was initially highlighted by the key informant interviews, became a theme through all of the research methods. It is discussed in the following section.

4.3.1.2 Participation in groups

One of the themes that emerged from the data gathered during this study was participation in local governance, planning and implementation processes. This theme emerged mostly through the key informant interviews and conversations during participant observation.

In Boulogne's (2010) study on Grabouw, participation was acknowledged as an important element of sustainable communities (Boulogne, 2010:38). The Elgin Grabouw Stakeholders Forum (EGSF) was discussed in this study. This forum emerged from the Sustainable Development Initiative that was launched as a result of the partnership between the municipality and the DBSA (DBSA, 2007).

Whereas Boulogne (2010) focused on the participation of community members in local planning for sustainable development, the groups that were identified in the current study were linked to both sustainable development and wellness. People in Grabouw who were involved in this research had organised themselves, or had been organised, around various themes or purposes. They participated in a variety of forums and networks with various goals.

Groups identified during the current research, in which respondents participated, included:

1. Grabouw Health and Welfare (HW) Forum
2. Grabouw Community Policing Forum
3. Elgin Grabouw Stakeholder Forum
4. Grabouw Business Forum
5. Grabouw Sport and Recreation Forum
6. The Department of Social Development's consultative process group
7. Service Level Agreement Forum or SLAAF
8. Groenland Water Users Association
9. The informally organised Christian faith-based network
10. The food gardeners of Grabouw

These groups were a mixture of formal, government-led, civil society-based and informal groups. The groups can be categorised in a variety of ways, for example structured vs.

unstructured, or according to years of operation. Table 4.2 categorises the groups in terms of the sectors and entities responsible for the establishment of the forum or network.

Table 4.2 Forums observed, grouped by sector

Sector	Initiating entities	Group / Network
Local government	Theewaterskloof municipality	Elgin Grabouw Stakeholder Forum
	Grabouw branch of South African Police Services (SAPS)	Community Policing Forum
	Theewaterskloof municipality	Service Level Agreement Forum (SLAAF)
	Western Cape Department of Social Development	The Western Cape Department of Social Development's consultative process group
Community members	Health-related NGOs	Grabouw Health and Welfare (HW) Forum
	Church members and faith-based organisations	The informally organised faith-based network
	Community members from Siteview	The food gardeners of Grabouw
Businesses	Commercial farmers	Grabouw Business Forum
	Commercial farmers	Groenland Water Users Association

In order to explore the relationship between participation in groups, and wellness, one example, the initiative by the Western Cape Department of Social Development, will now be discussed.

The Western Cape Department of Social Development's consultative process group

During participant observation, I attended a consultative meeting, called by a representative of the Overberg district office of the Department of Social Development (DSD). The session was intended to call together all the various groupings that had some interest in social development in Grabouw. Approximately 30 participants attended the meeting. Since participants constantly arrived and left, the total attendance kept changing, but it was between 24 and 31. Participants included representatives from faith-based organisations, health-related organisations, the day hospital, education-related organisations, saving schemes, youth development organisations and farm-worker development groups. In the meeting the DSD representative mentioned that the DSD had some funding available for civil society groupings in Grabouw. This meeting was intended to provide an opportunity for the various civil society role players to get organised in order to make the funding allocation process both transparent and democratic. Due to the contentious and conflict-laden manner in which the various groupings interacted this exercise proved to be a challenge. Some examples of conflict-laden issues that arose at the meeting are presented below.

- The Health and Welfare (HW) forum felt betrayed by the DSD process: The HW forum had been organised by civil society groupings involved in social development and health. The group was registered as a non-profit organisation and had an elected board and chairperson. The chairperson of the board stated that the DSD process had apparently superseded the HW forum's role. According to her, the few previous HW meetings had been attended very poorly, and HW forum members had attended the DSD process meetings instead.
- Some participants felt that the meeting was not really representative: The meeting I attended during participant observation was the third meeting in the DSD consultative process. Several attendees at the meeting had missed the previous meeting, where sector leaders had been elected. (The sectors were related to various social development areas such as youth development, early childhood development and faith-based organisations.) These participants insisted that the previous meeting had not been announced effectively, and that a re-vote was necessary. During this discussion, some participants arrived late, and others left the venue. In addition to this, a few sector leaders who had been appointed in the previous meeting resigned. The DSD representative pointed out that it would be difficult to decide at any given meeting who is represented or not, and that inevitably someone would feel left out. As a possible solution it was suggested that sector leaders would be elected at this session, and that DSD should declare the decision final.
- There was some suspicion towards the commercial farmers: The commercial farmers of Grabouw only had one representative at the meeting. After this person had left, a man involved in youth work argued that the farms should be contributing their corporate social investment funds towards the social development of the town, to supplement the funding that was made available by DSD. This sparked a very emotional and loud discussion, with participants interrupting each other and raising their voices to be heard. The group complained about the fact that the farm owners were only spending money on the social development of their own labour forces, on their farms, as opposed to the broader community that included central Grabouw. This was perceived as a purposeful, racist conspiracy against the marginalised populations of the town. Several typically 'white' Afrikaans surnames were called out in identifying the perpetrators.
- There was an apparent absence of integration between the DSD process and municipal planning: the DSD consultative meeting did not have a representative present from the municipality. The participants did not mention the municipal Integrated Development Plan, or the Sustainable Development Initiative that was being run by the municipality. The DSD representative explained his role and position in his department, but did not explain how this planning would meet the planning

conducted by the municipality. Although this conflict was not raised at the meeting, it was apparent to me, based on available information provided by the municipality.

This list of issues is by no means exhaustive, as it does not include all the conflicts, but it attempts to identify the main tensions as revealed at the meeting. The group called together by the DSD affected, and engaged with, community wellness in Grabouw. Each organisation that attended, such as the day hospital, or the family-counselling centre, or Grabouw Community Care, worked directly with community members towards wellness.

In addition to this, however, wellness was also facilitated by the collaboration between organisations. For example, the TB nurse at the day hospital referred patients who were unable to earn an income to the feeding scheme as recipients for food parcels. The nutrition- and disease-related aspects of physical wellness were hereby addressed. Failure to communicate effectively, or collaborate efficiently, could therefore potentially have led to the wellness of community members being impacted adversely.

Participation in a forum such as the DSD consultative process could apparently facilitate such collaboration. However, the meeting that I attended seemed to be more divisive than unifying. According to one interview respondent, the difficulty in establishing forums in Grabouw was not a new phenomenon.

This situation highlighted an important aspect in terms of how wellness was affected. A directed, well-planned attempt at establishing a forum for participation on health and wellness matters had failed. The HW forum had been registered as an organisation and had everything it needed in terms of systems and infrastructure, but it lacked participation. This was very different from the DSD process that had a good measure of participation, but not much structure.

A feature that successful forums shared was the involvement of a financial incentive in participation. The two forums that demonstrated the most participation during the study period was the DSD consultative process, which offered funding, and the business forum, which centred on commercial collaboration in the town.

It can be deduced that forums play an important role in sustainable community wellness in Grabouw. The important ways in which participation in groups and wellness interacted, as identified above, are the following:

- Failure to communicate effectively, or collaborate efficiently, could potentially have caused the wellness of community members to be adversely affected.
- The DSD forum was unstructured but well attended; the HW forum was very structured but not very well attended. It was observed that a balance between

structure of a forum, and motivation to participate was important for a forum that supported wellness.

- Participation was encouraged by an economic incentive.

The third perspective that emerged from the research was produced by the participatory photography process and participant observation. The perspective was named 'Living Spaces' and included experiences of living environments, neighbourhoods and the effects of a neighbourhood fire in one particular area.

4.3.1.3 Living spaces

Within the participatory photography process, the second and third most important topics to the group were 'houses' and 'fires'. These topics overlapped with the participant observation topic of 'neighbourhoods'. The photographs and observations included a range of housing types and interactions with housing, from informal shacks built with wood to double-storey subsidy housing. Fire emerged as a topic from two kinds of pictures: the first kind was the need to cook on fires in homes with no electricity, and the second was the devastation caused by a shack fire. The photos and observation also presented a varied set of perspectives on the types of neighbourhoods that people lived in. These three topics were combined to form the perspective of Living Spaces. The discussion follows the names of neighbourhoods, as participant observation and participatory photography captured the community's experiences. The neighbourhoods are all marked in Figure 4.2 above.

Irak

Grabouw has a wide spectrum of house types, from the farm mansions of the commercial farmers, across a range of formal housing and subsidy housing, to various types of informal housing. Figure 4.13 shows an abandoned, half-built house. The community care worker who took the picture commented that "the house is broken, but some people do not have houses".



Figure 4.13: 'This is the house that is broken but there are some people that don't have houses.'
(Participant quote)

During the focus group discussion the community care worker explained that she saw it as unfair that people own a house that was so close to being finished, while other community members in close proximity to this house were desperate for such solid housing. Irak, one of the informal settlements is located on the upper edge of the town, bordering on the railway line and pine forest. Figure 4.14 shows the water service provision of Grabouw. The northernmost section that is highlighted as 'Inadequate services' is the area called Roodakke that lies below Irak.

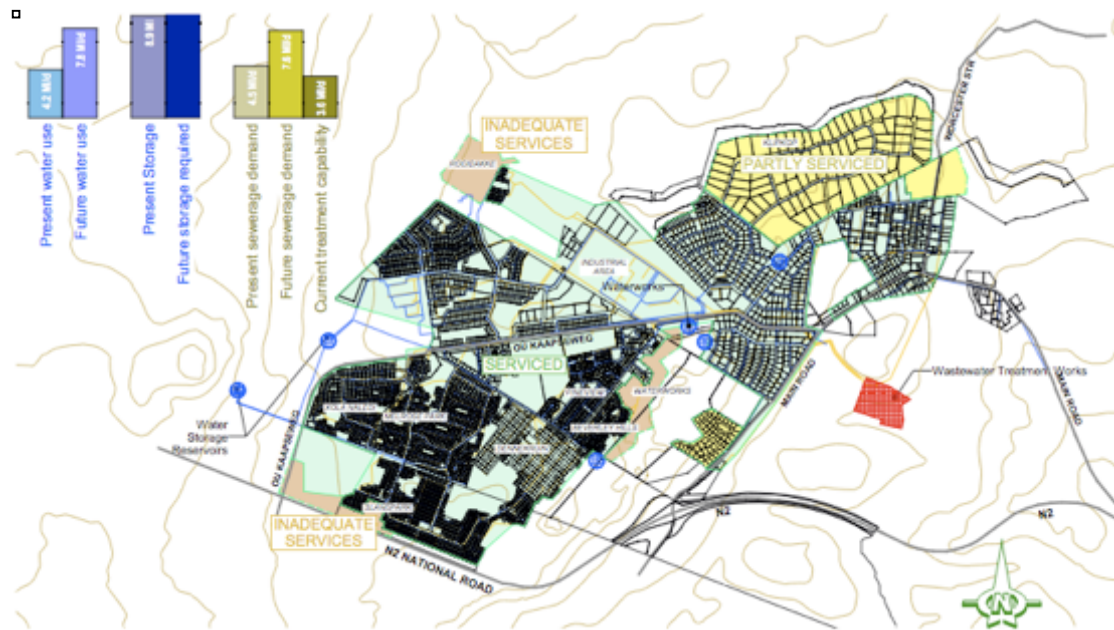


Figure 4.14: Water service provision in Grabouw (NMA, 2007b)

Figure 4.15 gives an impression of the 'most informal' type of house in Grabouw: a shack made from wood. The shacks that were built along the edge of the settlement, against the forest, were predominantly built from wood taken from the forest. Most of the shacks in the Irak settlement at the edge of the pine tree plantation were mainly built from wood.



Figure 4.15: 'Busy to trace a patient but the door is always locked.' (Participant quote)

As can be seen in the picture, the shack stood under a set of illegally connected electrical wires. Plastic was used as a waterproofing layer, and the combination of wood and plastic presented a fire risk. The risk of fire presented a threat to physical wellness.

During participant observation a large shack was visited. No formal electricity was provided but a generator supplied power. The shack was a shebeen and also served as a shop for necessities like soap, tea, coffee and paraffin.

Some of the houses used wood cut from the trees in the forestry plantation as building material. The community care workers indicated that the homes had been built before the trees were cleared. The fact that people were living between the trees had become a fire risk and the forestry department cleared the trees away.

I visited a patient who lived in Irak. This patient was bedridden at the time of the visit and the community care workers were providing TB medication in the format of Direct Observation of Treatment or (DOTs). At the time of the research Irak was also the settlement in Grabouw that lay the furthest away from the day hospital in terms of walking distance. TB treatment regimens strictly require a regular daily dose, since defaulting on treatment poses a significant risk to becoming resistant to the particular regimen of medication. One of the implications of the housing status of Irak for wellness was the fact that the settlement lay on the periphery of the town, and that the residents of Irak, who needed access to the day-hospital, lived the furthest from the facility (See Figure 4.2).

Another aspect that I observed was the prevalence of informal taverns, generally called shebeens. I visited two shebeens that were situated within a short distance of each other. Within the small economy of Irak, the shebeens also played an important role in providing other basic necessities such as soap, matches, candles and flour. The two shebeens were the only dwellings observed that had generated electricity.

A potential impact on social wellness was the fact that the shebeens, that provided alcohol, were the only recreational spaces in the neighbourhood, with sports fields and the community hall far away, located closer to the central part of town. A part of the duties of municipal service delivery is the establishment and maintenance of recreational facilities to the community of Grabouw. The distance to the town centre, the location of the shebeens and their provision of other necessities all contributed to a potentially high consumption of alcohol. The impact of alcohol on health and social wellness was not investigated, but the observation was made that alcohol sales formed an essential part of the economy of Irak. The shebeen owners were also the only residents of Irak that owned cars, and could provide the quickest transport to the day hospital or centre of town.

Irak was a relatively young informal settlement at the time of the study, and therefore service delivery had not yet reached the settlement. The Roidakke housing development that is situated directly below Irak was, however, well under way, and residents of Irak were on waiting lists to move into houses in Roidakke. In the interview with the municipal water quality coordinator, he also reported that he had just supervised the completion of a reservoir dedicated to providing household water for Irak. In other words, the settlement of Irak was in serious need of service delivery, and this was impacting on wellness in the ways named above. The necessary services were however nearing completion.

On the southern edge of Roidakke, a storm-water trench ran down from Irak. On the opposite side of the trench lay a subsidy housing neighbourhood called Smartie Town, after the multi-coloured houses. Foreign nationals owned a few shops on the edge of Smartie Town. Figure 4.16 shows a shop that had extra barbed wire, and was closed, due to xenophobic attacks on the owners, according to the photographer.



Figure 4.16: 'Shop closed because of Xenophobic attacks' (Participant quote)

Grabouw, like other towns in the Western Cape, experienced random occurrences of violence directed at foreign nationals. The social wellness in terms of the context of community was affected in this case. There was apparent fragmentation between members of the community who viewed themselves as locals vs. the foreign nationals from Somalia.

Siteview

The neighbourhood of Siteview lies on the south-western edge of Grabouw. The neighbourhood is unique in Grabouw in that it is a formal, well-serviced neighbourhood, with a small pocket of informal shacks at its centre. As was the case with Irak, during participant observation, patients were visited who lived in houses with rooms that had high exposure to outside weather. The patients who were visited mostly had low immunity due to HIV or TB infection or both, and consequently were more vulnerable to infections as a result of the cold weather. Figure 4.17 demonstrates an open window. The photographer commented on the exposure to weather that comes along with such open gaps in walls and roofs.



Figure 4.17: 'It shows how bad shacks are especially at winter time when it's cold and raining' (Participant quote)

Clearly, the cold and rain had an adverse impact on physical wellness.

Siteview consists of subsidy housing with broad, open streets. This neighbourhood is well maintained, with water, electricity and sanitation services being provided consistently. Most of Siteview is located on the top of a hill and in the eastern part the ground slopes slightly down towards the area known as Dennekruin. The neighbourhood bordered on a few other areas, all of them low-income areas. The southern edge of Siteview ran along the border of the town, along the N2 highway. A community health worker and I visited a patient who lived close to the edge of Siteview, next to the highway.

The patient was an HIV positive woman with a child. She had not yet accessed a child grant and the community health worker spent most of the visit explaining the required steps in gaining access to the grant.

The patient mentioned that the traffic noise from the highway did not bother her. A barrier of sand had been pushed up between the houses in Siteview and the N2 highway. A project manager of a community-based organisation in Grabouw had expressed the opinion that the barrier was intended to hide the unsightly shacks and low-quality housing from the view of the highway. The municipal official that coordinated the Sustainable Development Initiative responded that the barrier was actually intended to protect the houses from the highway noise.

The residents of Siteview benefited from the service provided by the municipality, in building the barrier, or more accurately the berm, due to reduced noise. The berm also added to the safety of animals and children, in providing an obstacle between the highway and the neighbourhood. In general, the atmosphere and neatness of Siteview was better than any other low-income neighbourhood encountered during participant observation. The greater part of Siteview had very neat roads with single storey houses, each with its own yard and

working, clean sanitation services, with a working toilet at each house. The informal settlement in the centre of Siteview also had the use of well-maintained toilets. As Figure 4.18 shows, the informal settlement bordered on the formal settlement. On one of my visits, the community care workers also visited a patient who lived in the informal part of Siteview, but utilised the water and toilets of his sister who lived in the formal part of Siteview.



Figure 4.18: Houses between Siteview formal and informal

This cross-neighbourhood collaboration seems to be in contrast to the fragmentation apparent in the incidents of xenophobia. Both the collaboration and the xenophobia demonstrated one kind of boundary, but Siteview also had a few other observed examples of boundaries, as indicated below:

- The ability of a house to keep bad weather out
- The ability of the immune system of people to keep infection out
- Separating the residential, suburban space from the dangerous and noisy highway
- The boundary of informal and formal housing, and the ability to cross the border for vital needs
- The social boundaries between 'locals' and 'foreigners'

Siteview not only demonstrated these examples of boundaries, but also the importance of healthy boundaries for wellness. Dennekruijn, the neighbourhood adjacent to Siteview, is discussed below.

Dennekruijn

The neighbourhood of Dennekruijn lies further along the southern edge of the town, some distance away from the highway and on the slope of a small hill. On municipal documents, the area is called Dennekruijn. The community care workers however did not recognise the name Dennekruijn, but called the area Bosbou. Bosbou appeared to be a pleasant

neighbourhood, with older, existing houses, and a section of open land with new houses being built. Figure 4.19 shows a new housing unit that had recently been built by the municipality in Dennekruin.



Figure 4.19: 'Photos of new housing development' (Participant caption)

The right to decent housing was being honoured by the housing development projects that provided houses such as these to the community. One of the community care workers at Grabouw Community Care was on the waiting list for such a house at the time of writing. She lived in a shack, just behind the new houses in Rooidakke at the time. Moving from informal housing to formal housing had many implications for wellness. Along with the biophysical benefits of living in a more permanent, drier and warmer structure, the participants in the study also mentioned a few psychosocial benefits. These were: a sense of pride in living in a nice house and a perception of improved social status.

The neighbourhood of Bosbou/Dennekruin also emanated a sense of calm. The health workers mentioned that the income group was similar to that of the people living in Siteview. A unique feature of the neighbourhood was that it was the only lower-income neighbourhood that had older, larger trees. The homes were further away from the road than others, as Figure 4.20 shows. The sense of beauty and calm seemed to enhance the psychosocial wellness of residents in the area. This aspect was not investigated in the current study.



Figure 4.20: A road in Dennekruin

Accessing emergency services

Another aspect that was encountered during participant observation and key informant interviews was the time delay in accessing emergency services. In 2006, the highest cause of death in Grabouw was homicide, as described in Chapter 3, section 3.3.1. A factor in this high death rate was the amount of time that it took for a victim of serious assault to reach emergency facilities.¹¹ The facilities in Grabouw were less than ideal to support quick responses. At first glance, a quick response to a call from Waterwerke, across the hospital, could be made from the ambulances based at the hospital in the centre of Grabouw. Several obstacles to quick responses were however identified by a few of the key informants:

- Permission to send an ambulance was required from the dispatch centre in Bredasdorp. In other words, a telephone call had to be made to the centre, and the dispatch officer in Bredasdorp, over 100 km away, had to check the availability of a vehicle and team, even if a team were on standby in Grabouw.
- Many of the houses in informal settlements in Grabouw were inaccessible by vehicle.
- On a few occasions paramedics on response were robbed or mugged when they were responding to calls into informal settlements. The ambulance team mentioned that some of these calls were fake and were made in order to lure them into dangerous situations.
- The day hospital did not have an emergency room, and critically injured or ill patients were sent to the Helderberg hospital in Somerset West or the Caledon hospital, both approximately 40 km away.
- Two ambulances did not have teams available, and stood idle due to lack of funding.

It was clear that for this situation to improve, collaboration between the local municipality and the Department of Health was essential.

¹¹ The other important set of factors to consider would be the reasons that contribute to the high rate of violence in the first place. This matter is discussed in Chapter 5.

In this section of the chapter I attempted to sketch some of the environmental health factors that residents encountered in the living spaces of Grabouw. The factors that were observed lie at the intersection of the sustainability of the community and their wellness.

In neighbourhoods that did not have consistent electricity provision, a significant aspect of life was dealing with the threat posed by fire. This issue is discussed in the next section.

Fire

An increased risk of fire was maintained by a lack of delivery of safe electricity, water and housing. In a few neighbourhoods, such as Waterwerke, Beverley Hills and Irak, there was no electricity available. The residents therefore had to use fire for domestic purposes such as food preparation and household heating. This posed a fire risk in homes that were predominantly built from wood and plastic. Even shacks made from metal often had an insulating layer of cardboard and/or plastic. Where electricity was illegally connected, the overhanging wires also posed a fire risk. Then when a fire got out of hand and homes were destroyed, significantly more services were required and costs incurred. This would include emergency support and further urgency added to the burden of housing delivery. After such incidents these residents rebuilt their shacks, and the cycle of fire would start again. In Figure 4.21 an outdoor cooking 'solution' can be seen. The black tin on the fire was used to boil water.



Figure 4.21: 'This is how other people cook in the shacks.' (Participant quote)

An obvious wellness-related concern was hygiene. For example, the tin shown in the photograph in Figure 4.21 seemed rusted, and the water that was for cooking and drinking could have contained rust particles. The cooking stand shown in Figure 4.22 was placed indoors, on a sheet of corrugated iron, on top of a plastic floor. This was dangerous due to the indoor fumes, and the risk of the plastic sheet catching fire.



Figure 4.22: 'A fire stand that the patient uses to cook his food' (Participant quote)

Two factors had an impact on the residents' wellness: in addition to the fire risk, inhaling smoke worsened the condition of the patient who had TB. Some residents built a separate 'cooking shack' where they could make fires to cook on that were sheltered from rain. An example is shown in Figure 4.23. While this cut down on the risk of inhaling smoke, it still posed a fire risk, especially as the fires were then more prone to being left unattended.



Figure 4.23: 'I took this pic because people don't have a proper place to cook their food' (Participant quote)

The patient who is partially shown in Figure 4.22 lost his house in a shack fire in Waterwerke in the winter of 2010. Two photographs taken by the community care workers show the results of the shack fire: in Figure 4.24 a man can be seen collecting pieces of building material that could be salvaged. In the background one can see some shacks that were in the process of being rebuilt, and in the foreground one sees the poles that had already been cut and planted to build new shacks.



Figure 4.24: 'People busy to clean up.' (Participant quote)

Figure 4.25 shows a heap of salvaged building material and the new poles planted for new shacks.



Figure 4.25: 'Busy to start build again' (Participant quote)

The two services that would have reduced the risk and impact of fire, had they been available, are dependable, safe electricity and permanent, formal housing. This would have enhanced people's safety, health, and sense of security.

4.3.2 Impact on wellness

The photographs and observations discussed above demonstrated many instances of the impact on wellness that the conditions of living spaces and especially the threat of fire presented. The factors that had an impact on the residents' wellness were:

- Exposure to bad weather due to low-quality housing
- Greater exposure of those with the lowest immunity to bad weather through poor housing quality and distance to health care
- Unhygienic containers for cooking on fire
- Risk of burning

- Risk of loss of property due to fire
- Inhalation of smoke – both intensive inhalation during wildfires and long-term inhalation from cooking over open fires
- Defaulting on important treatments due to distance from health care facilities
- Potential adverse impact on health due to excessive alcohol consumption
- Potential adverse social effects due to excessive alcohol consumption
- Exposure to pathogens due to lack of sanitation
- The observed fragmentation between members of the community that viewed themselves as locals vs. the foreign nationals from Somalia
- The importance of boundaries for wellness:
 - The ability of a house to keep bad weather out
 - The ability of the immune system to keep infection out
 - Separating the residential, suburban space from the dangerous and noisy highway
 - The border between informal and formal housing, and the ability to cross the border for vital needs
 - The social boundaries between ‘locals’ or ‘foreigners’
- A sense of pride in living in a nice house, and a perception of improved social status
- Time delay for emergency medical services

The three perspectives that were presented in this chapter represent some of the lived experiences of the community of Grabouw of their environment and wellness. This chapter presents the complementary perspectives on wellness that were different from the official and governmental perspectives described in Chapter 3. They are different in that they are based on direct observation and experience, and not on overarching planning discourses. These perspectives rather represent localised experiences. The results of the observations presented above produced a list of factors that had an impact on wellness, influenced by the various environments in which the people of Grabouw live. These factors were grouped together to form a framework (Table 4.3) that guided the assessment of whether wellness was achieved in certain examples. In Chapter 5, these examples of attempts are discussed according to the framework. I argue in Chapter 5 that the attempts that engaged better with complexity were more successful in achieving wellness. The next section develops this framework for use in Chapter 5.

The perspectives identified above were:

- Water
- Participation in groups
- Living spaces

The framework (Table 4.3) lists the phenomena observed, the effects of the phenomena and the impact they made on wellness.

Table 4.3 Framework listing factors that had an impact on wellness

Water		
<i>Phenomena observed</i>	<i>Effect of phenomena</i>	<i>Impact on wellness</i>
<ul style="list-style-type: none"> - Broken taps added extra water to the water flowing between houses. Contaminated water that flowed or lay close to living environments posed a bacteriological and pathogen threat. - Water that flowed through bushes that were used for toilets, potentially spread pathogens. - Waterways attracted and collected solid waste such as plastic, rubble and organic food waste. This potentially increased pathogen generation. - Flooded households with constantly wet floors lowered the temperature in the homes. 	<ul style="list-style-type: none"> - There was more pathogenic water closer to homes. - Increased amounts of open solid waste - Reduced temperature of homes 	<ul style="list-style-type: none"> - Reduced immunity - Increased exposure to cold-related illnesses such as 'flu and pneumonia - Increased risk of infection
<ul style="list-style-type: none"> - The Palmiet River is monitored by the commercial farmers' association. 	<ul style="list-style-type: none"> - Macro-effect of maintaining the economy - Micro-effect of cleaner water for people directly dependent on river water for household needs 	<ul style="list-style-type: none"> - Prosperity - Decreased risk of exposure to water-borne disease
<ul style="list-style-type: none"> - Toilets and taps were targeted by vandalism. - The people that damaged taps and toilets were known and feared. - Public toilets were favoured by offenders as sites of crime. 	<ul style="list-style-type: none"> - Community members were forced to use the bushes as toilets. - Health and the right to service were compromised. - Public toilets were places that were dangerous, especially to women. 	<ul style="list-style-type: none"> - Fear versus sense of safety - Unhygienic conditions for toilet needs -
<ul style="list-style-type: none"> - A community in Siteview protected their toilets and taps. 	<ul style="list-style-type: none"> - Toilets were safe, clean and accessible. 	<ul style="list-style-type: none"> - Safety from physical or sexual assault - Hygienic conditions for toilet use - Community cohesion and solidarity

Participation in Grabouw		
<i>Phenomena observed</i>	<i>Effect of phenomena</i>	<i>Impact on wellness</i>
<ul style="list-style-type: none"> - Participation was encouraged by an economic incentive. 	<ul style="list-style-type: none"> - More opportunities for collaboration became apparent through participation. 	<ul style="list-style-type: none"> - Reduced support for wellness of people from their social environment, which included individuals, organisations and government departments
<ul style="list-style-type: none"> - An imbalance existed between structure and participation in forums. (The DSD forum was unstructured but well attended; the HW forum was very structured but not very well attended.) 	<ul style="list-style-type: none"> - Communication and collaboration were harmed. 	
<ul style="list-style-type: none"> - Forums failed to communicate effectively, or collaborate efficiently. 	<ul style="list-style-type: none"> - There was a lack of integration of services, and a delay in doing so. - Resources for wellness and areas of need were mismatched. 	

Living spaces		
<i>Phenomena observed</i>	<i>Effect of phenomena</i>	<i>Impact on wellness</i>
<ul style="list-style-type: none"> - Excessive consumption of alcohol was more evident in informal settlements. 	<ul style="list-style-type: none"> - There were potential adverse health effects due to excessive alcohol consumption. - There were potential adverse social effects due to excessive alcohol consumption. 	<ul style="list-style-type: none"> - Physical effects such as high blood pressure, increased risk of injury, or fighting - Increased risk of violence
<ul style="list-style-type: none"> - The housing was of a poor quality. - Residents had to cover long distances to health care facilities. 	<ul style="list-style-type: none"> - Residents had to make greater physical efforts to travel. - Residents defaulted on important treatments due to the distance from health care facilities. - The time delay until medication could be accessed increased. 	<ul style="list-style-type: none"> - Increased risk of illness
<ul style="list-style-type: none"> - Drinking water was boiled in rusted containers on open fire. - Cooking and heating was done over open fires. - Indoor fires were used for domestic purposes. - Inhalation of smoke – both intensive inhalation during wildfires and long-term inhalation from cooking over open fires. 	<ul style="list-style-type: none"> - Water quality and hygiene might be affected by rust particles. - Potential existed for burns. - Loss of property occurred when homes burnt down. - Inhalation of smoke occurred during wildfires and when cooking. 	<ul style="list-style-type: none"> - Toxic effect of ingesting rusted metal - Increased exposure to weather - Burn-related injuries - Respiratory illnesses, worsening of TB

Living spaces		
<i>Phenomena observed</i>	<i>Effect of phenomena</i>	<i>Impact on wellness</i>
- There was a lack of sanitation facilities.	- Residents were exposed to pathogens from human waste.	- Risk of illness – cholera, diarrhoea
- Xenophobic attitudes and behaviour were evident.	- Violence and crime occurred.	- Increased fragmentation in communities
- Residents moved from an informal housing settlement to formal, more permanent buildings.	- There was a sense of pride in living in a sturdy house, and a perception of improved social status.	- Improved sense of well-being and safety
- The health system transport for emergency responses was ineffective	- Residents experienced a time delay when they needed emergency medical services.	- Increased mortality rate

The third column in Table 4.3 represents the impact on wellness that was made by the phenomena observed. This list is not exhaustive, but represents the most apparent factors that had an impact on wellness. It is expected that a further analysis of data gathered in the research might reveal more impacts. The list does, however, provide an adequate set of examples to demonstrate that a multitude of diverse factors affected the wellness of the residents of the observed areas in Grabouw within different contexts. Thus, wellness is a useful term as it extends beyond physical health to include emotional, social and spiritual dimensions. It also emphasises the contextual and environmental nature of well-being (Bronfenbrenner, 1999; Myers & Sweeney, 2005). This motivated a categorisation of the impacts of wellness observed as follows:

- Impacts on the physical wellness of groups
- Impacts on the physical wellness of individuals
- Impacts on the social wellness of groups
- Impacts on the social wellness of individuals

Under the category 'physical' (Table 4.4) the built and natural environments are included, and under the category 'social' the psychological, social group and economic environments are included.

Table 4.4: Categorisation of impacts on wellness

	Physical	Social
Individual	<ul style="list-style-type: none"> • Illness vs. health • Injury vs. physical safety 	<ul style="list-style-type: none"> • Sense of well-being vs. depression • Anxiety vs. feeling safe • Individual prosperity vs. poverty
Groups	<ul style="list-style-type: none"> • Mortality vs. longevity. • Generalised illness vs. a healthy community 	<ul style="list-style-type: none"> • Fragmentation vs. cohesion or solidarity • Violent culture vs. caring culture • Collective poverty vs. prosperity • Mutual support vs. mutual neglect

This refined set of impacts provides a framework by which to discuss other particular cases of attempts to impact wellness in Chapter 5. The categorisation that Table 4.4 provides, as well as the examples of impacts will be used in Chapter 5 to discuss the failure or success of these attempts to achieve wellness.

4.4 Conclusion

In this chapter I endeavoured to sketch the experience of wellness from the perspective of the community members of Grabouw. Three perspectives were developed that grouped the main topics that were observed together. These perspectives were different from the official and structured perspectives on wellness that were presented in Chapter 3, and they represented a different viewpoint.

In the following chapter (Chapter 5) I use the framework created above and complexity thinking to demonstrate that the structured approach failed to achieve wellness in some examples. Chapter 5 describes a few of the instances where the structured perspectives and the community perspectives were not separate, but interacted in a complex system.

CHAPTER 5: SUSTAINABLE COMMUNITY WELLNESS IN GRABOUW: A COMPLEX SYSTEMS APPROACH

5.1 Introduction

In this chapter I argue that the interactions of the community, their governance and natural environment, as described in Chapters 3 and 4, combine to form a system in Grabouw, and that this system can be viewed as a complex system. As alluded to in the preliminary findings in Chapter 1, section 1.3.2, from a complex perspective sustainability and wellness are seen as never being separate, but in fact part of one open, complex system.

The term *social ecosystem* suggested by Possas (2001) and Berkes et al. (2003) is used to describe this system in Grabouw that includes the community experiences, the natural environment and the local government perspectives. This approach departs from the conceptual split that views these as separate entities and rather applies complexity thinking from a transdisciplinary approach that does not only combine disciplines (interdisciplinary) but steps out of the need to define disciplines (Max-Neef, 2005:6). Morin (2007:10) differentiates between general and restricted complexity. The current study uses complexity in the general sense, which refers to the view that “any system, whatever it may be, is complex by its own nature” (Morin, 2007:10). “Restricted complexity operates within certain systems and is often encountered within discourses on chaos, fractals and disorder” (Morin, 2007:10).

In the first section of this chapter, various examples of observations made during the research suggest the appropriateness of complexity thinking as a way to view the system. Various qualities of a complex system are pointed out, based on the observations made during the research. In this chapter (Chapter 5) the discussion differentiates between modernistic thinking, also named centralised control and an approach that sees the system as complex. A central notion is the differentiation between a multitude of local narratives, and a central, overarching grand narrative. A shift from focusing on elements to focusing on relationships between elements is also suggested.

In the second section of this chapter I examine particular examples of six attempts to achieve wellness. These are grouped according to the three major community perspectives identified: water, participation in groups and living spaces. The first three examples show the limits of modernistic, centralised planning, and the last three contrast this with examples that show the value of a complexity perspective to planning.

5.2 Wellness and complexity

The observations in Chapter 4 show that the community members of Grabouw, who were involved in the study did not differentiate between wellness and sustainability in the three perspectives that were described. Their experience of dirty water, for example, was an experience that qualified both as a sustainability issue as well as a wellness issue.

The community level of wellness, which is explored as a complex system in this chapter, echoes a characteristic of the individual level of wellness. This characteristic is *indivisibility*. Myers and Sweeney (2005) called their model of wellness 'The Indivisible Self'. In this model, with an individual, the various dimensions of wellness, such as social, psychological or physical wellness, were understood as dimensions of one inseparable whole. In this chapter successful attempts to achieve wellness that echo this indivisibility at the community level are discussed. For example, the religious affiliation that members of the food aid network feel is one dimension of a multi-dimensional socio-ecological system. It would not be possible to separate this as one part that caused wellness. It contributed to wellness, but was not solely responsible. It could be removed, but then the nature of the whole system would change (Cilliers, 1998:21–24). In other words, as the fieldwork shows, the indivisible nature of a complex system was found at the community level of wellness, and at the individual level of wellness.

The term *sustainable community wellness*, as it is used in this study, therefore seems to be appropriate in describing a state that community members engaged with in terms of sustainability and wellness. This sustainable community wellness also seemed to be related to the socio-ecological system in a particular way. It is suggested in the next section that this relationship was one of emergence, where sustainable community wellness emerged from the socio-ecological system in certain examples. This echoes the emergent nature of resilience in socio-ecological systems, as discussed by Cilliers (2008).

5.2.1 The complexity of wellness in Grabouw

Before the examples from community experiences are discussed it is useful to provide a brief overview of the use of complexity thinking within the discussion. Complexity thinking is used as a platform from which to view the interactions between the local government and community networks in Grabouw.

The three different perspectives described above (water, participation in groups, and living spaces) and the local governmental structures described in Chapter 3, section 3.3.1 (statistical perspective on HIV, TB and homicide, health in sustainable development planning and water quality management) formed a system of dynamic interactions.

For the purpose of the argument below, this system will be called the 'socio-ecological system'. Through the use of this term I endeavour to demonstrate how the three main perspectives, the structural perspectives on wellness, and the people that carry these perspectives and act upon them, are mutually inclusive. The people that interact within the system are important and in the discussion below they are referred to as *actors* within the system. These are the local government officials, community care workers and wellness-concerned individuals included in the study. In this chapter I argue that actors within the system had in some cases approached the socio-ecological system from a modernistic perspective, but in other cases they approached similar problems with a more complex approach.

Modernistic approaches to science often utilise analytic models. Within a system where it is too difficult to deal with the whole, the system is divided into smaller parts and studied through quantitative, mathematical methods of analysis (Cilliers, 2003:24). A fundamental assumption of modernism is that one viewpoint can explain the whole system, with all of its interactions, problems and solutions. Cilliers refers to this viewpoint as a "unifying, coherent meta-discourse" (1998:113–114) and goes on to describe a post-modern perspective as similar to a complexity perspective. The assumption of a unifying meta-discourse approach often informs developmental planning. However, a trend is emerging that acknowledges that such a top-down, centralised control approach does not effectively deal with real-world situations (Ramalingam, Jones, Reba & Young, 2008:6). This tension between central control and multiple discourses was reflected in the socio-ecological system studied in Grabouw. A similar tension lay in the expectation that a unifying discourse existed; especially within local government planning in Grabouw. The expectation was one of a rule-based systems approach, where one of the three key factors is that centralised control exists over the rule-based system (Cilliers, 1998:15).

A post-modern perspective, however, does not assume an overarching grand narrative, but rather a multitude of local narratives maintained by an unknown number of elements that interact with each other in a myriad of ways. Bauman (1992:vii) states that "[p]ost modernity means many different things to many different people". This makes it impossible to find one solution to each single problem, in other words to find a unifying grand narrative. A local narrative is the discourse that is maintained and prevalent within a sub section of the larger system, and it has limited reach. This quality of local narratives is shared by complex systems and the post-modern approach (Cilliers, 1998:114).

In one of the examples below the local narrative in a sub-group of the population in one settlement was: 'Public toilets should be destroyed.' The local narrative that was present in

another neighbourhood a few kilometres away was different: 'Public toilets should be protected.' The assumed grand narrative present in the planning documents of the municipality was perhaps: 'Deliver more toilets.' From a post-modern perspective, within a complex system this third narrative would be viewed as only one more local narrative. The complex and modernistic approaches consequently had different assumptions about how to engage with the socio-ecological system. In a modernistic approach there is the expectation of a dominant overarching discourse, while the complexity perspective engages in a different manner, without an expectation of an overarching discourse.

The observations made during the study show that the socio-ecological system behaved like a complex system. Acknowledgement of this complexity by actors in the system supported greater success in achieving wellness. The measure of this success was gauged by the impact on wellness that was produced and discussed in Chapter 4 (Table 4.3). Multiple interactions impacted on multiple dimensions of wellness. There was no one project, objective or goal that would achieve wellness, but rather many different interactions between many different elements. Wellness, when viewed from this complex perspective, was no longer just a set of solutions to be achieved by solving the correct problems, but wellness became an emergent property of the system. I use the term *emergent property* here to refer to properties found at a certain level of organisation that cannot be predicted from lower levels of the same organisation (Emmecche, Køppe & Stjernfelt, 1997:1). In certain cases the wellness that emerged was not predictable or planned at the local narrative level. (The exploration of the notion of emergent wellness is discussed further in Chapter 6.)

Some of the characteristics of the socio-ecological system that alerted me, as observer, to the complex nature of the system and the emergent nature of wellness are discussed below.

5.2.3 The socio-ecological system in Grabouw as a complex system

The system in Grabouw is an open system. Several examples show that repeated attempts were made to achieve wellness by focusing on elements that were assumed to be within the actors' control. However, this was not the case, as many elements were not under the actors' control. A complex view acknowledges this, since a complex system is seen to be an open system with a multitude of interactions with other systems that impact upon the behaviour of the elements within the system (Cilliers, 1998:4).

To use one perspective as an example: the water networks described in Chapter 4, section 4.3.1 impacted the town within a defined geographical boundary. Water was managed within this boundary as a closed geographical system. The water quality manager managed the provision of potable water that came from several reservoirs. He was also responsible for

managing the water treatment works. The water was distributed through the service network that served all the water users within the town. Water was drawn from the Eikenhof Dam, and the Palmiet River drained clean runoff. The farm owners who depended on the river monitored the water quality for irrigation. Within this closed geographical boundary, the dam and the water catchment area of the mountains are dependent on rainfall that is determined by weather patterns and shifts in climate. These systems all impact on the 'closed' system of water management in Grabouw. The availability and quality of water also has an impact on the users of the river downstream, in the towns of Kleinmond and Hermanus, where the Palmiet River reaches the ocean. In other words, the 'closed' system of water management in Grabouw impacts on other systems. This was also acknowledged in the strategic framework for sustainable development, drawn up for the SDI, as a reason why the framework should refer to areas beyond the municipal boundary of Grabouw (NMA, 2007a:4).

In addition to the interaction between different geographical or physically located systems and therefore the creation of a set of open systems, from a complex systems perspective the interaction between systems is not limited to the type of system. Different kinds of systems can also interact, and this adds to the open nature of the system (Cilliers, 1998:6). It is not just water-related systems such as dams, rivers and rainfall that interact with the water networks of Grabouw. For example, the water use in Grabouw is, affected by the living spaces of people in Grabouw and the spatial settlement patterns of the town. The water system also affects other kinds of systems like the agricultural industry, which is an economic mainstay of the town.

At the time of the research reported in this thesis, I observed another example of the open nature of the systems, namely the interaction between different health facilities. For instance, a life-threatening emergency such as extensive bleeding due to stab wounds or an accident required that a patient had to be transported from the Grabouw day hospital to the hospital in Caledon or Somerset West for life support. In another case a resident of Grabouw requested that her terminally ill husband be transferred from the Helderberg hospital in Somerset West to the Grabouw Community Care hospice facility in Grabouw, to "come and die closer to home". The day hospital in Grabouw and the Grabouw Community Care were not seen as isolated points of health care delivery but interacted daily with the Caledon and Helderberg hospitals.

The open nature of a complex system is also due to the fact that all the elements that affect the system can never be known. This increases the unpredictability of the system's behaviour.

Municipal officials and health care workers within the socio-ecological system treated the system as if the system was predictable in its behaviour. It was expected for example that people living on farms would be eager to access health care services from a mobile clinic. Unpredictably to the health officials, the patients avoided the mobile clinic, and preferred to travel to town for their medication. This expectation of predictability displayed an analytic or centralised approach to planning, where the effects of causes were assumed to be predictable (Ramalingam et al., 2008:ix). However, the way in which the system behaved was not predictable. An example of a patient in the care of Grabouw Community Care demonstrated the unpredictable nature of the socio-ecological system, as illustrated below.

In the informal settlement of Waterwerke, one of the patients in the care of the community care workers was being treated with his second regime of TB medication. He had defaulted on his first regime and had therefore built up a resistance to the medication and had to move on to his second regime. The indoor fire shown in Figure 4.18 was his cooking fire. As described in Chapter 4, his dwelling was constructed from wood, sealed with plastic sheets, and had no windows. The fact that his dwelling had bad ventilation and that he was cooking his food over an open fire increased his risk of not being cured of TB (WHO, 1999:6). The community care workers had tried to convince him to move to a better home, or to cook outside, but due to the rainy climate, and his unemployed status, these were not viable options. His home was one of the dwellings that had burnt to the ground in the fire described in the living spaces perspective in Chapter 4, section 4.3.1.3, shown in Figure 4.22.

The unintended and unpredictable consequence of this fire was that he was forced to find a new house. The municipality helped victims of the fire with a small once-off subsidy. He had built a new metal shack with this subsidy. During the final stages of the research the community care workers reported that his new house had better ventilation, and that he had been cured of TB. These results (having better ventilation and being cured of TB, in this man's case) that the community care workers had wanted to achieve, but had failed to achieve in their conventional health care delivery approach. From the community care workers' point of view, the shack fire had been unpredictable. It had led to significant loss on the part of the patient, but it had also indirectly caused his housing status to be upgraded. Moreover, it provided a more conducive environment to be cured of TB, which was an outcome that they had desired to achieve.

Within a centralised approach, defined causes have defined effects, and therefore the actor that controls the system should only plan for executing the right set of causes, as separate elements of the system. However, this approach does not acknowledge the interactions

between the elements, and properties that emerge as a result of these interactions. From a complexity perspective, actors are indeed able to predict, but with an awareness that this is only relevant to the causes and effects that can be observed, and that unpredictable, emergent properties are also a possibility, since there will always be elements left out of any description, even observed elements are inevitably left out (Cilliers, 2003:24). In a complex system the interactions that can be observed are a minority, due to the fact that an element can only be aware of interactions that occur locally. Some of the causes and effects are not observed, which makes some of the system's behaviour unpredictable (Cilliers, 1998:4–5).

The system that I observed in Grabouw has non-linear qualities. Within municipal planning, especially in the case of the Integrated Development Plan of a municipality, a linear causality is assumed. This refers to the notion that the planned activities will have predictable results. A process that is usually followed in linear planning is to determine needs, design goals that would satisfy the needs, and then plan to implement activities that achieve those results (DPLG, 2005:1). A planning approach that is often used to implement projects within the social development field is the logical framework approach. A logical framework follows the logic that if one follows the above-mentioned process to identify needs, and then plan to implement activities in order to achieve certain objectives, a predefined vision and mission will be achieved. A linear causality is assumed between vision, mission, objectives, activities and resources available (Bakewell & Garbutt, 2005).

More often than not however, in linear planning the results are not achieved as planned. A solution that is then often suggested is 'to plan better'. This kind of solution is still based on the assumption that linear planning can achieve predicted results (Bakewell & Garbutt, 2005; Ramalingam et al., 2008:24). Complexity thinking, on the other hand, recognises non-linear qualities and stands in contrast to the linear ideal of modernistic, centralised planning strategies. Cilliers (1998:120) acknowledges the non-linear quality of social systems as follows:

The social system is non-linear and asymmetric as well. The same piece of information has different effects on different individuals, and small causes can have large effects. The competitive nature of social systems is often regulated by relations of power ensuring an asymmetrical system of relationships.

This non-linear quality of social systems and the effect of the relations of power are clearly exemplified by the Health and Welfare forum's competition with the DSD process, as expressed by Interviewee 3. The DSD process was relatively well planned, in linear fashion, with a defined goal and an invitation to a set of stakeholders. The fact that the key informant did not receive a personal invitation was however perceived as a direct insult. She

consequently gave up control over the Health and Welfare (HW) forum and asked the chair of the forum to propose that the forum be assimilated into the DSD process. At that point the Health and Welfare forum was a well-established body. It had developed to the point where it qualified for funding, and was a registered non-profit organisation, with the potential of supporting important services. It could have supported the DSD process. The informant admitted that the perceived power of the DSD process led to the demise of the HW forum. The good intention of the DSD official therefore led to a much larger adverse effect than he had expected, from the small action of omitting to invite someone to an introductory meeting.

Complexity thinking acknowledges that the system is an open system, that the interactions within the system are unpredictable, and that an actor, as an element within the system, can never know the whole system. Power differences exist, and small actions can have large effects. All of these qualities contribute to actions and results within the system occurring in a non-linear fashion, and prompt a more engaged, adaptable approach that is in touch with the shifts in relationships that characterise the interactions of the components in complex systems (Cilliers, 1998:3–6; Ramalingam et al., 2008:24).

A complex system is made up of a multitude of elements. These elements are of different types, and not all of them are known (Cilliers, 1998:3). Within the socio-ecological system of Grabouw, relationships between elements were seen to play an important role. The relationships that were mostly observed were between people: they were the relationships between the health workers and their patients, between the patients and the municipality officials, between the community development worker and her clients and several others. People were however only one kind of element in the system. Many other elements formed the system, and stood in relation to people and other elements. Some of these elements are listed below:

- The natural landscapes and environments, such as the rocky outcrops and forest boundaries
- The climate and weather systems particular to Grabouw
- The water systems in the town, both natural and engineered
- The spatial position of settlements such as the farms in Groenland that were far away from the town centre and the Waterwerke informal settlement close to the industrial centre of the town
- The built environments that included different housing types such as wooden shacks in Irak and brick houses in Siteview
- People who lived and worked in Grabouw
- Conditions of poverty and/or prosperity

- Groups in which people participated (described and listed in Chapter 4)
- Local government departments such as the municipal water department and the department of social development
- Policy guidelines for development such as the provincial health strategies and the municipal integrated development plan

Some of the other relationships that were observed between different elements in the system were the following:

- A relationship between a group of farm workers and the community of farm labourers that lived in the town
- A relationship between the quality of water and the economic well-being of the town
- A relationship between the illegal electricity connections and the risk of shack fires

Complexity thinking regards the changes in relationships between elements as important. Modernistic thinking often overemphasises the importance of the elements themselves as isolated entities, with a change in state or number of elements as the important factor. The behaviour of a system can however not just be seen as aspects of separate elements (Cilliers, 1998:106; Ramalingam et al., 2008:12).

An example of the difference in focusing on relationships as opposed to focusing on elements was encountered when community care workers visited a farm in the Groenland area to serve patients who lived on the farm. These patients were living with HIV, TB or both. A few of the patients had been known to walk to town, or take transport to town in order to obtain their medication for HIV or TB, instead of getting it from the mobile clinic. This seemed strange to the community care workers, as the mobile clinic vehicle that is operated by the day hospital visited the farm regularly. The reason the patients gave for avoiding the clinic was a fear of stigma: they believed the clinic signalled to other workers that the patients who depended on it had HIV. The patients requested that the community care workers, who travel in an unmarked vehicle, provide them with medication.

This example demonstrates the importance of the type and quality of relationship between the service providers and the beneficiaries of the service: While the mobile clinic was able to deliver high quantities of medication, the method of delivery proved to be more important to the recipients. The kind of relationship they had with the health workers, and their uniforms and vehicles, made the difference.

Interactions within a complex system often have a short range. The narratives are local, and causes and effects are closely observable between neighbouring elements (Cilliers, 1998:4).

The community care workers could, for example, not control the schedule of the mobile clinic, or the treatment delivery processes of the department of health, but they could control the kind of uniforms they wore, and the vehicles in which they drove. This local nature of the interactions between the actors further emphasises the complex nature of the socio-ecological system.

5.3 Sustainable community wellness

In the above discussion it is argued that the socio-ecological system in Grabouw should be viewed as a complex system, and that modernistic and centralised planning approaches fall short of engaging sufficiently with the complexity of the system. Examples of this limited approach in Grabouw are provided below. It should be noted that centralised planning strategies have a place, and that it is sometimes important to employ a modernistic perspective. Modernistic perspectives are useful for designing concrete, complicated systems like a factory production line, or a new motor vehicle. But when complex systems and especially living complex systems such as a community are encountered, linear perspectives fall short. Ramalingam et al. (2008:11) mention a valuable categorisation provided by Ackoff (1974) that distinguishes between 'puzzles' and 'messes'. Simple solutions that view a situation as a puzzle often overlook the complex "messiness of the situation" (Ramalingam et al., 2008:11).

It is important to note that the above-mentioned observations do not suggest that a complex perspective should replace the linear, centralised modernist perspective, but rather that planning approaches should expand and include methods that are more sensitive to complexity. For example, a budget that links a number of houses to be delivered to a calendar is useful, but a complex perspective can complement such a plan. In addition to the participation process in preparation of the housing delivery, an analysis of the existing important relationships could inform a more nuanced housing delivery that might deliver a more sustainable project, where sustainability is dependent on better engagement with the contingencies of the system.

The observations suggest that the modernistic approach to planning assumed a grand narrative and linear causality. This was limited in effectiveness. What follows below are six examples of attempts to achieve wellness. The first three show these limits of effectiveness in this approach, and the last three show how people moved into more subtle and complex engagements with the needs related to wellness. The modernistic, linear and centralised approach to engagement with the socio-ecological system will henceforth be called 'the centralised approach'.

5.3.1 Simplistic solutions for community wellness challenges

The following section describes modern approaches that reduce complexity by finding simplistic solutions, characterised by centralised approaches.

5.3.1.1 The poor need more toilets

Functional sanitation facilities were important in Grabouw. The people of Grabouw had the right to the basic services being provided, but several informal settlements were obliged to relieve themselves among the bushes in open areas. The planning for increased sanitation services was viewed as a centralised simple solution in terms of budget available and number of toilets provided. For example, in the informal settlement of Beverley Hills, in 2009, ten toilets were installed for a community that previously did not have access to sanitation. Within the discourse of numerical targets to be achieved in terms of sanitation delivery this might be seen as a positive result, but in reality the ten toilets that were delivered were not functional. The 2007 strategic report for the launch of the sustainable development initiative stated that 3 500 households needed to be connected to the sewerage system. In 2001 30% of Grabouw residents still had no flush toilet (NMA, 2007d:45). Figure 5.1 shows the littered location of the ten toilets in Beverley Hills.



Figure 5.1: Location of toilets in Beverley Hills

The toilets faced away from walkways and homes, into the bushes, making it easy for potential offenders to hide behind them to rob a person using the facility. Wellness was compromised in terms of exposure to pathogens, reduced safety and increased fragmentation of the community as was apparent from the vandalism and littering that was observed.

The solutions to reducing the vandalism of toilets were not simple or apparent, and the interactions that led to the toilets becoming a dangerous littering site were rich and

unpredictable. Focusing on the number of toilets rather than their position and ownership created an unexpected result. The toilets were damaged by vandals, and thereby caused a further delay in bringing about a working solution. The actors in the system who caused the vandalism of the toilets also seemed unaware of the adverse impact that their acts of vandalism would have on their own and neighbours' access to sanitation – or they did not care about the consequences of their actions.

5.3.1.2 Grabouw needs another forum

Another example of an assumption that followed centralised lines of thinking was Western Cape Department of Social Development's notion that Grabouw needed another forum. Although this was not written down in a plan, with a linear set of results, an aspect of linear thinking was demonstrated. There seemed to be an idea that a problem, or puzzle, always has a matching solution, and if only one could find the solution or "the Eureka part" (Dekker, 2003:5), the system would function better (Ramalingam et al., 2008:11). In this case the problem was the need to allocate funding to respond to the range of social development challenges of the town. The seemingly obvious solution was to create another forum. However, forums in Grabouw did not have good track records of survival. The majority of the networks and forums described above ceased to exist, or struggled to keep going, as discussed in Chapter 4. Some of the forums had evolved and become robust, like the business forum or the Elgin Grabouw Stakeholder forum, while some had dissolved, such as the HW forum. The DSD intended to establish a new forum to manage a particular set of funding grants. This forum unintentionally competed with the established forums and contributed to the dissolution of the HW forum.

The plan to establish another forum showed an ignorance of the larger system and history of forums in Grabouw. The DSD, as initiators, were in a complex system, where elements are unaware of the other narratives that are not locally present in their immediate neighbourhood of the system. The centralised nature of the plan assumed that since it was the DSD that was organising the process, an appropriate and accurate grand narrative was being applied, and all of the other forum narratives within Grabouw would be included.

A rich and dynamic set of interactions was already in motion, however, and had various effects on the potential of existing and new forums to succeed or fail. It was shown that Grabouw did not need another forum. The forum caused more competition than unification of the various groupings. According to two key informants, wellness was consequently not achieved to the extent that it would have been if the funding process had been driven through one of the existing forums, which would have utilised the local information available to DSD within the system.

5.3.1.3 Darkside needs electricity

On the western edge of Siteview, a sub-section of the neighbourhood Hillside had been dubbed 'Darkside'. The name was derived from the fact that the rest of Hillside had electricity, but Darkside did not. Darkside, like Rooidakke, was a site that had been selected for new housing development. The agreement that the municipality had established with the provincial government was that electricity would be installed before the housing development began. The contractors were contacted, and electricity was installed (Figure 5.2) and connected to the Eskom power grid, before the housing development began. However, a fault had crept into the planning.



Figure 5.2 Electricity installed for single-storey houses in Darkside

The electricity was installed on poles that allowed for single-storey housing, while double storey houses – like those built in Rooidakke and Dennekruin – had been planned for the new housing development., Figure 5.3 shows double-storey subsidy housing in Dennekruin.



Figure 5.3: Double-storey subsidy housing in Dennekruin

The conflict in planning delayed both the delivery of housing and the delivery of electricity, and the community of Darkside had to endure another winter without proper housing or

electricity. Again, as in the forum-related example above, the officials planning the various services were ignorant of the behaviour of the whole system in which they were embedded, or that the system was an open system, with various contracts being determined by different departments – a situation that could affect the delivery of housing or electricity. The local narratives of the housing and electricity departments were not close enough. The apparently small cause of not comparing two lines of specifications between two departments had a much larger effect of compromising housing and electricity for several months. Wellness was compromised in terms of the sense of well-being and safety associated with housing, as well as an increased risk of illness due to exposure to bad weather conditions and extreme temperatures.

These three examples show where attempts by the system to achieve wellness had failed, due to a modernistic, centralised and linear planning approach that did not extend to include an acknowledgement of complexity. These examples of limits mostly related to an inability to acknowledge the local narratives that were present in the sub-sector of the system.

The delivery of toilets to Beverley Hills with a pure numeric target in mind did not enter the local narrative of Beverley Hills. A more appropriate relationship with the location of people and dwellings was also not developed. The goal to establish another forum did not acknowledge the local narratives that had already established some forums, but instead tried to create an overarching grand narrative that did not fit. The situation regarding the power lines in Darkside demonstrated that differing narratives occurred within government departments.

It should be noted again that this argument does not propose that modernistic planning should be replaced with a complex approach, but just that modernistic planning strategies have limits. Modernistic planning strategies strive to gain the correct point of reference, in order to gain centralised control, while complexity thinking argues that it is impossible to gain a centralised perspective. In order to compensate for the ignorance of other narratives, in the examples above, a modernistic approach would attempt to gain a higher or more inclusive perspective. A complex approach would however acknowledge that there would always be more narratives that are unknown, and instead look for ways to work with what *is* known.

5.3.2 Approaching community wellness challenges with complex thinking

This section demonstrates three examples that show where an acknowledgement of complexity was implemented as a complementary and supporting action to the linear planning narratives.

5.3.2.1 Water-related example: Siteview toilets

As described in Chapter 4, section 4.3.1, at the time of the research Siteview was a hybrid neighbourhood with a small informal settlement on the one edge of the neighbourhood. The boundary between the formal and informal living areas had a short row of six toilets, each enclosed in the standard concrete boxed enclosure. These toilets were different from the toilets observed in Irak or the ten unused toilets of Beverley Hills described above. The toilets in Siteview were well kept.

The plumbing of each toilet was intact, a metal door was attached to the front, and the door was locked with a padlock. The entrances to the toilets faced towards a path that led to the informal settlement and the first row of dwellings. A communal tap was also positioned in front of the toilets and it had a working tap head. The toilets were not vandalised.

The community health worker explained that the reason the toilets were so well kept was that several homes shared a toilet, and that they kept each other responsible for the condition of their toilet. They also kept keys for the toilet. The toilets were positioned in consultation with the community, and then households grouped together to share access. The health worker mentioned that the most important reason the toilets were in a good shape was that there was ownership of the facilities. It was also important that the toilets were positioned towards the spaces where people moved, as this enhanced their visibility. The tap was a central gathering point and people would walk past it regularly. The toilets were close to the community's regular daily walking space. This visibility reduced the risk of crime or vandalism.

In terms of the applicable quality of complexity; time was spent in preparation of the delivery of the toilets to determine the best relationship that the toilets should have to the community. Two qualities of relationship were present in addition to the 'normal' placement of toilets to achieve numerical targets. These qualities were ownership and visibility. Neither of these needed more money, just better engagement with the system, in terms of accessing the local narratives of landscape and community movements.

Wellness was enhanced through access to clean and hygienic sanitation facilities, clean drinking water, and safe access to toilets. Although privacy was slightly compromised through placing the toilets in view of homes and the tap, the residents appeared to value the fact that their safety was enhanced the safety and that they could take ownership of the facilities.

5.3.2.2 Participation in Grabouw example: The informal Christian network

The researcher attended a prayer meeting in a small informal settlement in Grabouw. The settlement consisted of about 40 households. The people who lived there had a unique dilemma: they were landowners, but had no financial capital to improve their homes or living

conditions. The municipal official who was coordinating the SDI in Grabouw had noticed the settlement, and realised that it was a neglected community that was not receiving services as it was not on municipal land. The official established the goal to develop the settlement. The first step that the official took towards the development of the community was to ask leaders in the Christian faith to pray for the settlement. Most of the community members were Christian. During the participant observation time, the municipal official had organised a prayer meeting and the researcher was welcome to attend. Twelve community members attended the service.

After the prayer meeting, outside the venue, a small group of people were standing together and discussing the needs of the settlement. A car arrived and a worker from the feeding scheme stepped out. She joined the group and a few introductions were made. She was doing her rounds to deliver food parcels. She was very excited about the fact that a prayer meeting had taken place, and mentioned the names of a few other pastors and leaders in the community that could join the prayer network. She also recognised the researcher and spontaneously gave him a hug. The municipal official and the feeding scheme worker mentioned a few times the sense of 'connection' and 'destiny' that they felt and how important it was to them to have met within the context of faith-based work.

This brief meeting revealed a community-wide network of churches and prayer groups. This network included people from the more formal forums and networks within the community, but existed as a network in itself. The informal Christian network was very pervasive in the community, and had access to all of the other groupings. All of the groups listed in Chapter 4, section 4.3.1.2 had members who were linked to the network. In addition to the coordinator of the SDI, a municipal water quality coordinator that worked in the water services department had also attended the prayer meeting.

The informal Christian network acted to some extent as a legitimisation of good intent, and affiliation. One example of this was how the food aid worker viewed me. She had previously viewed me and my research with careful scepticism. After she realised that I had attended the prayer meeting her demeanour changed in an instant and she welcomed me warmly.

In terms of complexity, this case once again demonstrated that the type of relationship was more important than the number of people involved. The group present at the prayer meeting were a nexus of various networks. This was not a formally organised meeting where an agenda and a chairperson were necessary, yet the synergy and shared goals of the group were tangible, much more than was experienced in the meeting that was attempted by the DSD. The Christian network held a narrative that was unique to the network, but pervaded

other narratives. It was unpredictable, had links that were much wider than the known system, and was relatively small with large effects. Wellness *emerged* from the faith-based network, although the overt goal of the network was not to increase wellness, but to improve spiritual fellowship, if a goal could be named. This goal was also not maintained in any centralised sense by anyone in the network, but was viewed differently by different groupings within the network.

The informal Christian network had two main aspects that were important in terms of wellness. Firstly, to community members the faith-based network offered several access points to wellness, with each access point presenting a range of wellness dimensions. For example, the network offered a space for enhancing spiritual wellness, but it also often offered other dimensions of wellness such as nutrition, education and municipal representation. Secondly, the network impacted on the planning and delivery of services within the community in an informal, unofficial, and flexible way. The fact that a prayer meeting was held in the settlement had provided an opportunity for the coordinator from the water services department (Interviewee 4) to inspect the sanitation and water provision on site. The time available to this coordinator was valuable and it would have been unlikely that he would have visited the site if not for the meeting. The coordinator's solidarity with the faith-based network as a fellow Christian could also have played a role in his viewing the community's needs as a priority.

Beyond the above, and in terms of the impacts of wellness identified in Chapter 4, the faith-based network had social effects in terms of improving a sense of well-being and safety among individuals. Among groups the network increased mutual support and a caring culture. Although the network had improved solidarity within the network itself, it is possible that it may have increased fragmentation between the network and other groups that did not affiliate with the Christian network.

5.3.2.3 Living spaces example: Cynthia's day-care centre

A housing development had been planned in the neighbourhood of Rooidakke. The informal settlements of Rooidakke and Irak would benefit directly from the planned expansion of subsidy housing. The area is shown as area 'A' in Figure 5.4. This housing development was a part of the Sustainable Development Initiative launched in 2006 (NMA, 2007c:33).

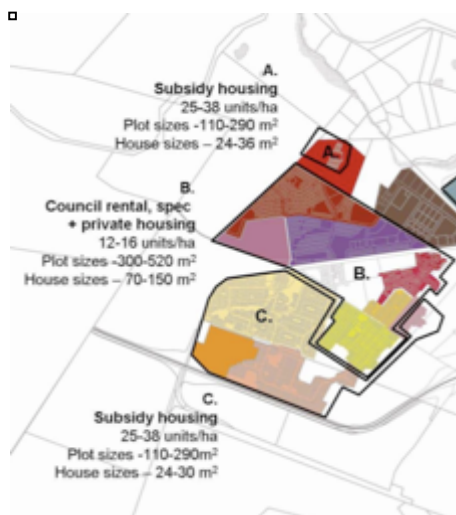


Figure 5.4 Diagram of housing in Grabouw (NMA, 2007c)

On the site where new homes were to be built, a small brick building was the only permanent structure. The rest of the space was filled with trees, bushes and a few informal dwellings. The building was a day-care centre for children from the informal settlement, and also served as an office for a team of community care workers. It was known, as 'Cynthia's day-care'.¹² This centre took up space that was necessary for the housing development, and prevented the building process from starting.

During a conversation with the town manager after the housing development had been launched, and homes had been built on the site where Cynthia's day-care centre had stood, the town manager commented about the day-care centre. He fondly stated that Cynthia's centre had not just been moved, but that the municipality had in fact found supplementary funding to set up a better facility than the previous one. A new day-care centre was built with the purpose of caring for children, and it was located in a central position, close to the new housing development's main access road. The new day-care centre is shown in Figure 5.5.



Figure 5.5 Cynthia's new day-care centre

¹² Not the real name of the centre.

The project of finding a new site and supporting an improved facility for Cynthia's day-care was not an objective in the development plan of the municipality. The original location of the centre was initially an obstacle to the delivery of houses. This presented a complex, unpredictable challenge to the town manager. The removal of the centre would also have removed a service from a group of people who lived in the area, and may thereby have elicited negative feedback from the beneficiaries of the day-care centre. However, the town manager responded in a manner that displayed an understanding of the system upon which the project was impacting, the local narratives surrounding the centre, and an ability to adapt and respond with a suitable adjustment to the original plan. This example shows that the town manager successfully engaged with the complexity of the system by regarding the relationships with and within the system as important. Some of the relationships that were acknowledged by this were between:

- The centre and the municipality as service provider or funder
- The families in the area and the centre
- The families in the area and the municipality
- The spatial orientation of the old centre and the new in relation to the new housing development.

As discussed earlier, the risk of centralised, modernistic planning is that the objectives to be achieved or the state of the elements, such as a certain number of homes to be built, take precedence over the relationships between elements (Cilliers, 2003:5; Ramalingam et al., 2008:8).

Wellness was enhanced socially in terms of the group through more solidarity, caring and mutual support. This in turn supported the health and physical safety of the group that lived in the area; especially the clients of the community care workers and the children who used the centre.

These three cases exemplify the nuanced engagement that is possible when dealing with a complex reality. The toilets of Siteview were delivered within the local narrative, with awareness of the various interactions of the area. The toilets became part of the existing complexity of the neighbourhood, and not an imposed set of objects that were adherent to an overarching discourse.

In terms of the Christian network, the lesson for acknowledging complexity would not have been to add a budgeted segment that deals with faith-based networks to the municipal plan. This would once again be a modernist response. The lesson would be to allow actors within

the system legitimisation and access to move in a wider set of narratives, as part of their work. This would allow a greater sensitivity to the local narratives that are present in a community where services are to be delivered. This was echoed in terms of the case of Cynthia's day-care, where the town manager was aware of more narratives and relationships than his own duties as a municipal implementer. He realised that the set of interactions around the day-care centre was an important narrative, and when he engaged with it accordingly, the system shifted, but he managed to improve the wellness of those dependent on the centre, and simultaneously met his overarching objective to deliver a set of new houses.

5.4 Conclusion

Chapter 3 described local government policies and information related to health and sustainable development. In Chapter 4, community members' experience of wellness informed a list of impacts upon wellness, caused by different phenomena observed. The community experiences were grouped according to three perspectives. This chapter attempted to view the socio-ecological system, and the three perspectives, from a complexity thinking perspective. This was done by highlighting a few examples of modernistic and centralised planning approaches, and contrasting these with actions that entered the complexity of the system more successfully.

These actions impacted upon wellness, and played an important role in whether the system achieved increased wellness. In the cases where there was successful engagement with complexity, the actions were not directed at improving wellness in a linear fashion, but rather engaged on several levels with the system.

An emerging property of a system is one that is produced by the interactions of the system. These properties cannot be reduced to some component or element within the system (Cilliers, 2003:5). This suggests that wellness is an emerging property, where the focus is on understanding local narratives and building relationships, within the unpredictable, non-linear and evolving system. In addition to the structural perspective in Chapter 3 and the community perspective in Chapter 4, a third meaning of sustainable community wellness was hereby explored, as the emergent property of the complex socio-ecological system.

In the final chapter (Chapter 6) I integrate wellness as an emergent property of the socio-ecological system towards a few starting points for complementing linear planning approaches in Grabouw with an understanding of complexity.

CHAPTER 6 FINDINGS, RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

The research study explored the meanings of wellness in Grabouw from three perspectives: the governmental perspective, the community perspective and the integrated complex perspective. These perspectives emerged from the research in response to the research question: What are the meanings of sustainable community wellness in Grabouw?

This final chapter summarises the main findings of the study and recommends a few steps and pointers for future research.

The three above-mentioned perspectives were recognised as elements within a system that was referred to as the socio-ecological system of Grabouw. A discussion that used complexity thinking followed and explored the nature of the system. Examples of attempts to achieve wellness were discussed, and it was emphasised that those attempts that were more successful were those that engaged better with complexity. Three narratives on the meaning of wellness in Grabouw were identified.

The first narrative was a structured, official governmental view on wellness that was driven by linear planning and statistical analysis. The second narrative was a community perspective on wellness, and the third narrative viewed the previous two as one complex system, with wellness as an emergent property.

Three recommendations are suggested to actors within the system in order to make the planning and implementation responses for sustainable community wellness more sensitive to complexity. Recommendations are given for future research focused on systemic approaches to engage with wellness, legitimate ways to improve cross-sectoral collaboration relationships and the role of community care workers as cross-sectoral agents. The chapter concludes with a brief comparison between the findings and the dynamics of responding to large scale environmental emergencies.

6.2 Findings

The guiding research question for the empirical research was:

What are the meanings of sustainable community wellness in Grabouw?

Empirical sub-questions were:

- What does sustainable community wellness in Grabouw mean to the research participants?

- How do research participants become aware of sustainable community wellness or the lack thereof?
- Where do research participants become aware of sustainable community wellness or the lack thereof?

The study found three narratives on the meaning of sustainable community wellness in Grabouw, as set out below.

6.2.1 Wellness in Grabouw as determined by statistics and strategic planning.

Chapter 3 described the local governmental approaches to wellness where important factors that created meaning in terms of wellness were the homicide, HIV and TB statistics. The way infrastructural and sustainable development planning was approached also contributed to how wellness was perceived and understood. From this understanding of wellness, it could be defined a priori in terms of measurable outputs and implemented with structured, predictable programmes.

6.2.2 Wellness in Grabouw as determined by community experiences of their environment.

In Chapter 4, community experiences of sustainable community wellness were documented. Three perspectives that influenced community members' understanding of the concept emerged: water, participation in groups and living spaces. These were suggested and confirmed by research participants who worked within the health care system of Grabouw. An important finding was that their lived experiences of wellness did not propose the same factors that the structured perspective in Chapter 3 proposed, but rather referred to their experiences of their immediate social and physical environments. HIV and TB prevention and treatment was important to them, but when asked, they indicated that issues connected to water, participation in groups and living spaces were at least as important as these factors to them, in terms of wellness. From this perspective, wellness can only be defined in terms of an intimate knowledge of the community's lived experiences of their everyday interactions. It also means that their definition of wellness is unique and dependent on the contingency of their situation. Within this lived experience of wellness, a direct engagement with the sustainability of Grabouw was also apparent. Through the participation in groups, and the direct experience of living spaces and water, the research participants directly engaged with the social and environmental dimensions of sustainability. The definition of sustainability that was provided at the research design stage by Ravetz (2000: 1,8) as 'being able to maintain an initiative' is reflected in the experiences documented above. These show important aspects of maintaining wellness, but more importantly it was found that this is inseparable from what is important to maintain the town of Grabouw. The example of Cynthia's day care echoes the Brundtlandt definition of Sustainable Development as development that uses

resources for current generations without compromising the ability of future generations to use the same resources (WCED, 1987:43), through showing how the next generation, young children, are engaged with by the municipality.

6.2.3 The socio-ecological system could usefully be viewed as a complex system of which wellness is an emergent property.

In Chapter 5, this system of interaction with wellness was named the socio-ecological system of Grabouw. Chapter 5 showed that the system could potentially be engaged more successfully if it was viewed as a complex system. Based on the findings, I propose that both of the first two perspectives be included in the meanings of sustainable community wellness, and that these meanings be approached from a complexity perspective.

It should be noted again that, although complex engagements achieved wellness more successfully in certain cases, engaging with complexity is not a new formula or recipe to be followed, but more of an awareness or attitude. It would be a modernist, centralised response to use complexity as a new way of finding simple solutions. An understanding of complexity rather suggests that there are no simple solutions or single parts to be found to solve complex problems.

Some examples of success from Grabouw, such as the placement of toilets in Siteview, engaged with complexity at the local level, and found locally relevant relationships. There was no predictable plan to follow, just the openness to engage with the local narratives of place and movements. Cilliers (1998:119) points out that Lyotard calls this approach “entering the agonistics of the network”. It is not an easy process, but a useful one.

From such an engagement with the community it became clear that wellness is an emergent property of the socio-ecological system of Grabouw that was studied. It also showed that sustainability of Grabouw was a direct experience of the research participants, who lived in the socio-ecological system, and as such was inseparable from wellness.

In the context of the Grabouw study, wellness was not seen as a state to be achieved by solving the correct problems only, but it became understood to be an emergent property of the system. Hannigan (2006:139) assigns the qualities of process, flow adaption and flexibility to emergence. He refers to an early definition of emergence by Johnson (2001), who describes emergence as self-organisation of an interconnected system of relatively simple elements; towards more adaptive, higher level behaviour. In my study, it appeared that while wellness was compromised for the other victims of the shack fire, one patient who was described benefited from a new house. The placement of toilets in Siteview, the informal Christian network and the new day-care centre of Cynthia's were all examples of events that contributed to an emergence of wellness, for certain sections of the community environment

system. The qualities that were shown in these actions, namely creativity, improvisation and responsiveness to contingency, were possible as the actors in the relevant situations had autonomy to act outside the boundaries of centralised control. This situation is similar to what Murphy (2004) calls a dance between humanity and nature, where each makes a move that prompts a response, the other reciprocates, and a continuous 'dance' emerges.

The environmental influences, government-led programmes and community movements led in several cases to an emergence of wellness, where actors in the system had the ability to 'dance' with what the community environment system presented. This kind of autonomy and creativity built relationships that enhanced an understanding of wellness that can be defined as emergent. This 'dance' comes about due to the nature of interactions between different components of the system and how the system is constituted in terms of its environment.

6.3 Recommendations

From the observation, documentation and analysis reported in the thesis, the following recommendations are made, possibly to enable actors in Grabouw in future to engage more effectively with an emergent understanding of wellness:

- It is suggested that increased autonomy be given to actors to form relationships within the system.

As in the case of the municipal water quality coordinator who attended a prayer meeting, it may be useful to allow actors in the system to meet with each other, along different affiliations than their collaborative goals. Other avenues or qualities for engagement would hereby be accessed that might add to the emergence of wellness.

- It is proposed that planning processes could include ways of engagement other than speaking.

Participatory planning often depends on meetings where individuals speak in a group about their experiences. The photography process allowed other kinds of sharing of experience, beyond verbal communication. This allowed usually quiet participants to contribute, and also presented a direct and different kind of representation of the experiences of community members. It was relatively inexpensive, and could be easily added to public participation processes. It is therefore recommended that planning processes include ways of engagement other than speaking, which allow for better group participation, such as written contributions in a group.

- A final recommendation is that existing forums be strengthened and not replaced.

As described in the thesis, Grabouw at any given time had several forums that met for various reasons. Based on how many new forums were being formed and then fell apart, it

could be useful to attempt working with existing forums on new initiatives, thereby strengthening their capacity, as opposed to creating new competitive forums. Assigning the new initiatives to new members of forums could satisfy the ambition or power needs of participants that were previously satisfied by creating a new forum. The inevitable conflicts could potentially be engaged with and transcended within existing forums rather than between them.

6.4 Suggestions for future research

Based on these findings and recommendations, a few suggestions are now made for future research.

Firstly, it is suggested that future research could investigate complex, systemic approaches to engage with wellness. Wellness has been documented and researched on an individual level, in a variety of fields mostly focused on psychological spaces. The systemic nature of health and health systems approaches has also been recognised as being important in public health research. An example such as the Spectrum of Prevention from the Prevention Institute (Cohen & Swift, 1995) assists actors in systems to coordinate systemic responses to wellness-related issues.

As the research in Grabouw has shown, complexity thinking adds value, to a systemic perspective. One suggested avenue of research is the investigation of the applicability of complexity thinking to develop approaches to working with emergent forms of wellness in South Africa.

Secondly, it would be useful in future research to explore ways of legitimately enhancing relationships.

Public participation is important within the South African local government planning approach (Boulogne, 2010). The theme of participation in groups in Chapter 4 also showed its importance in Grabouw. Magnussen et al. (2004:174) highlight the fact that "[s]ystems characterized by the absence of democracy and by corruption are breeding grounds for inequities in health". The need for collaboration between different sectors linked to health has also been recognised (Hamman et al., 2011; Magnussen et al., 2004:171). Cross-sectoral collaboration and participation form new relationships. The findings of this research suggest that while the forming of new relationships is important, the ways in which these relationships are formed and maintained are equally important. Hamman et al. (2011:2) included the Elgin Grabouw Stakeholder Forum in a study of successful cross-sectoral collaboration. Some factors identified as influencing success were the role of social capital and informal accountability mechanisms, leadership that is conducive to interest-based negotiation, the embracing of tensions as catalytic and the importance of dialogue and implementation. In the current research, autonomy was found to be important in order to form appropriate

relationships of the system.

The scope of this thesis has been limited to an introductory engagement with complexity theory and related ways of conducting developmental planning. Elsewhere, authors such as Ramalingam (2008) have provided more in-depth analysis of the tensions between centralised planning and using complexity theory in planning. The suggestion is therefore made here that future research include a more in depth analysis of the implications of complexity theory specifically for planning in South Africa, juxtaposed with a further analysis of centralised planning as a Modernist approach.

Further research, such as the study about cross – sectoral participation by Hamman et al. (2011), is suggested to investigate ways in which relationships that influence planning outside centralised governmental control can be strengthened, but with legitimate methods that do not lead to corruption or favouritism. One potential method is Outcome Mapping, which explicitly focuses on changing relationships and behaviour, rather than on achieving changes in state or quantity (Earl, Carden & Smutylo, 2001). It is suggested that in future research the applicability of such methods could be explored in terms of contributing to emergent wellness.

It is predicted that in future the South African health system will increasingly depend on community care workers as an important prevention and early intervention level of health care. The current complement of approximately 65 000 care workers is expected to increase to between 700 000 and 1 300 000 (Sanders & Reynolds, 2011). This group will carry a significant burden of care, with tasks being shifted from over-burdened health facilities to the community level of response (Sanders & Reynolds, 2011). The community care workers in my study showed two characteristics that, if recognised and supported, could be valuable in strengthening the future health system of South Africa.

The first characteristic is the ability to work across sectors. Within a context of cross-sectoral collaboration, community care workers are ideally placed to engage with different kinds of populations and information. As the photographs above showed, community care workers are often in touch with municipal service delivery matters such as water, waste and living conditions.

The second characteristic is the relative autonomy that care workers had, compared to governmental officials. They often work for civil society organisations and therefore have the freedom to move in a variety of sectors, and enrich relationships in a variety of ways (Sanders & Reynolds, 2011).

As the new South African health system is implemented, it is likely that it will increasingly encounter complex systems similar to the community environment system described above.

It is suggested that future research could be done to explore the cross-sectoral movements and autonomy of community care workers as useful platforms to engage with similar complex systems related to wellness.

6.5 Conclusion

Environmental health and sustainable development intersect in a complex socio-ecological system. It was evident in the past decade in several large-scale natural disasters and other non-natural disasters such as the terrorist attacks of 9/11 in New York city, that the autonomy of response teams, rather than centralised control contributed to more lives being saved (Hannigan, 2006:139). Where rescue workers were qualified, and took action, with confidence, more lives were saved. Where teams were waiting for orders or were prevented from acting by centralised control units, lives were lost.

This dynamic is echoed in the accounts of successful attempts to achieve wellness in Grabouw, where care workers and actors within the community environment system had the autonomy and confidence to act in the best interest of their beneficiaries.

Viewing a socio-ecological system as complex, and being able to act in an adaptive and flexible way is valuable within the short term, particularly in dealing with immediate emergencies such as the disasters mentioned. This research has shown that it also applied in Grabouw over a longer term. Although such an approach was seen to be slower, the impact of strong relationships and autonomy on the lives of people of Grabouw was not less important. My argument does however not advocate for the weakening of necessary local government control measures, but rather suggests that the process that engages with the complexity of the system be further acknowledged. Similar to the dance that Murphy (Hannigan, 2006:139) identified between humanity and nature, a dance was witnessed in Grabouw. If the dance were to be studied further, and the balance found between structure, movement and the prompts of the natural environment, new understandings of wellness might have the chance to emerge.

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Addendum A: Example of the consent form used in the study

**School of Public Management and Planning
Sustainability Institute**

**Participant consent form
(for participants aged 18 years and older)**

STUDY TITLE: *The Meanings of Sustainable Community Wellness in Grabouw*

I, _____, hereby consent to participate in this research, through participating in participant observation by the researcher, participating in the participatory photography project, attending focus group discussion about pictures taken and unstructured interviews about the research topic. I also give my consent to be photographically and audio recorded and for this material to be used as data in this particular study.

With full acknowledgment of the above, I agree to participate in this study on this _____ (day) of this _____ (month) and this _____ (year).

PARTICIPANT DETAILS:

Participant name: _____ Signature: _____

Participant contact no: _____ Date: _____

RESEARCHER & SUPERVISOR SIGNATURE:

Researcher name: _____

Researcher signature: _____

Date: _____

Supervisor name: _____

Supervisor signature: _____

Date: _____