Sense of place and culture in the landscape of home
Understanding social-ecological dynamics on the Wild Coast, South Africa

Vanessa Anne Masterson

Abstract

Development for sustainable poverty alleviation requires engagement with the values and cultural frames that enable or constrain communities to steward ecosystems and maintain their capacity to support human well-being. Rooted in a social-ecological systems (SES) perspective, this thesis explores the concept of sense of place to understand how emotional and cultural connections to place mediate human responses to change and influence interventions for development. Sense of place is both the attachments to place, as well as the descriptive meanings to which one is attached. **Paper I** presents an approach and agenda for studying sense of place in SES that emphasizes place attachment and meaning underlying stewardship actions and responses to change.

This is empirically explored through a case study on the Wild Coast, South Africa - an area with multiple contested meanings. In this former Bantustan (an area set aside for black South Africans), Apartheid created interdependence between small-holder agriculture and labour migration, where rural homesteads relied on remittances from migrant household members. Today, the contribution of agriculture to livelihoods has declined and many households rely on income from social grants. Interacting social and ecological factors in this region have resulted in social-ecological trap conditions and circular migration continues to be the pattern.

Community conservation and ecotourism is one strategy for local socio-economic development. **Papers II and III** explore community tensions around a proposed nature reserve declaration. In **Paper II,** a focus on the meanings of locally-defined ecotopes (e.g. forest and abandoned fields) illuminates the interpretations of underlying social-ecological processes. **Paper III** examines the use of place meanings in narratives of change to show tensions in the discourse of win-win conservation. The stalling of this particular intervention indicates the importance of engaging with multiple meanings of place and the cultural importance of nature.

Papers IV and V focus on declining agriculture and continued labour migration. From a theoretical model of people's abilities, desires and opportunities, **Paper IV** develops a typology of responses that may contribute to maintaining or resolving social-ecological traps. For this case study, the model identifies the mismatch between i) cultural expectations that frame the desire to farm, and ii) the decline in opportunities for off-farm income to support agriculture. **Paper V** demonstrates that these expectations are expressed in the idea of *emakhaya* (the rural landscape of home) as well as reinforced through cultural rituals. The paper identifies a place-based social contract between the living and the ancestors that helps to maintain circular migration and agricultural practices. This suggests that sense of place contributes to system inertia but may also offer opportunities for stewardship.

Sense of place is socially constructed as well as produced through experience in ecosystems, and thus constitutes an emergent property of SES. The thesis demonstrates the use of participatory methods to produce an inclusive understanding of place and SES dynamics. The application of place meanings through these methods facilitates critical engagement with imposed interventions. Finally, the thesis shows that sense of place and culture are key for understanding inertia in SES and the capacity for transformation towards stewardship.

Keywords: *agricultural abandonment, circular migration, community lands, Eastern Cape, narratives, place attachment, place meaning, photovoice, stewardship, Transkei, win-win conservation.*

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SENSE OF PLACE AND CULTURE IN THE LANDSCAPE OF HOME

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Cover photograph: AmaXhosa women in traditional attire carry firewood to a cultural ceremony. © Vanessa Masterson

You free me to be grounded in the world, land
Our hoarse handmade wings hang prepared
Into the abyss grounded on land

How succinctly the land speaks to us:
It does not belong to us, we belong to it
Like air land is nobody's

Antjie Krog
From Land Divided, Land Restored, Jacana Media: 2015

For Gavin: Home is where we are together.

Abstract

Development for sustainable poverty alleviation requires engagement with the values and cultural frames that enable or constrain communities to steward ecosystems with dignity in ways that maintain the capacity of ecosystems to support human well-being. Rooted in a social-ecological systems perspective, this thesis explores the concept of sense of place to understand how emotional and cultural connections to place mediate human responses to change and influence interventions for development. Sense of place is both the attachments to place, as well as the descriptive meanings (What kind of place is this?) to which one is attached. **Paper I** sets out an approach and agenda for studying sense of place in social-ecological systems that emphasizes place attachment and place meanings underlying stewardship actions and responses to change.

This is empirically explored through the remaining four papers that centre on a case study on the Wild Coast, South Africa, an area with multiple contested meanings. In this former Bantustan (area set aside for black South Africans), the Apartheid political system created interdependence between small-holder agriculture and labour migration, where rural homesteads relied on remittances from labour migrant household members. Furthermore, interacting social and ecological factors in this region have resulted in social-ecological trap conditions. Today, the contribution of agriculture to livelihoods has declined and many households rely on income from social grants. However, the practice of returning to the rural area (circular migration) remains a common one.

One strategy for poverty alleviation and socio-economic development here is community conservation and ecotourism. **Papers II and III** explore community tensions around one such intervention: a proposed nature reserve declaration. In **Paper II,** a focus on the meanings of locally-defined landscape units i.e. ecotopes (including forest and abandoned fields) illuminates the multiple values and interpretations of underlying social-ecological processes. **Paper III** examines the use of place meanings in narratives of change to show tensions in the discourse of win-win conservation. The stalling of this particular intervention indicates the importance of engaging with multiple meanings of place and the cultural importance of nature.

Papers IV and V focus on declining agriculture and continued labour migration. **Paper IV** develops a typology of responses to social-ecological trap conditions that may contribute to the maintenance or resolution of these traps based on a theoretical model of people's abilities, desires and opportunities. The empirical relevance of this model is demonstrated for the case study, by identifying

the mismatch between i) cultural expectations that frame the desire to farm in the rural community lands, and ii) the decline in opportunities for off-farm income to support agriculture. **Paper V** demonstrates that these expectations are expressed in the idea of *emakhaya* (the rural landscape of home) as well as reinforced through cultural rituals. The paper identifies a place-based social contract between the living and the ancestors that helps to maintain circular migration and agricultural practices. This suggests that sense of place contributes to system inertia but may also offer opportunities for stewardship of this landscape.

The thesis demonstrates how sense of place is socially constructed as well as produced through experience in ecosystems, and thus constitutes an emergent property of social-ecological systems that captures emotional and cognitive aspects of relationships with ecosystems. Furthermore, the thesis contributes to the development of respectful participatory methods to produce an inclusive understanding of place and social-ecological system dynamics. The application of place meanings through these methods also facilitates critical engagement with imposed interventions. Finally, the thesis shows that sense of place and culture are key for understanding inertia in social-ecological systems and the capacity for transformation towards stewardship, especially for interventions for poverty alleviation across rural and urban landscapes.

Keywords: agricultural abandonment; circular migration; community lands; Eastern Cape; narratives; place attachment; place meaning; photovoice; stewardship; Transkei; win-win conservation.

Sammanfattning

För att skapa vägar mot hållbar utveckling är det viktigt att förstå de värderingar och kulturella ramar som kan möjliggöra eller begränsa. Denna avhandling bidrar till sådan förståelse med fokus på utvecklingsinsatser för hållbar fattigdomsbekämpning. Arbetet utgår från ett social-ekologiskt systemperspektiv och utforskar begreppet "platskänsla" (sense of place) för att förstå hur känslomässiga och kulturella band till en plats formar hur människor svarar på förändringar samt skapar förutsättningar för lyckade insatser för utveckling och fattigdomsbekämpning. Platskänsla inbegriper dels hur stark anknytning en person känner till en plats, och dels de beskrivande betydelser ("vad för sorts plats är det här?") av platsen som personen är fäst vid.

Artikel I i avhandlingeen visar hur platskänsla i social-ekologiska system kan studeras, och lyfter fram platsanknytning och platsbetydelser som viktiga faktorer som påverkar hur människors agerar som ekosystemförvaltare samt i respons på förändringar. Detta utforskas empiriskt genom de återstående fyra artiklarna, med fokus på en fallstudie på the Wild Coast i Sydafrika, ett område som har flera delvis motsägelsefulla betydelser. I dessa tidigare s.k. hemländer (områden som reserverats för svarta sydafrikaner), skapade det politiska systemet Apartheid ett ömsesidigt beroende mellan småskaligt jordbruk och arbetskraftsmigration, där jordbruksproduktionen på landsbygden var beroende av inkomster från hushållsmedlemmar som arbetade i städerna. Idag kan dessa områden beskrivas som fast i vad som beskrivs som en s.k. social-ekologisk "låsning", dvs ett läge där flera faktorer samverkar på ett sätt som motverkar förändring, i detta fall att människor finner vägar ut ut fattigdom. Jordbrukets bidrag till försörjningen har minskat och många hushåll är beroende av socialbidrag, men det är ändå fortfarande vanligt att människor som flyttat till städerna behåller nära kontakt med och även återvänder till landsbygden (cirkulär migration).

En strategi för fattigdomsbekämpning och socioekonomisk utveckling i området är ekoturism och naturskydd som involverar lokalsamhällen – ofta beskrivet som win-win. Artiklarna II och III utforskar motsättningar kring en sådan intervention: ett förslag att etablera ett nytt naturreservat. Artikel II visar hur fokus på betydelsen av lokalt definierade typer av ekosystem i landskapet ("ekotoper"), såsom skog och övergivna åkrar, belyser hur underliggande social-ekologiska processer värderas och tolkas på olika sätt av olika aktörer. Artikel III analyserar motsättningar inom så kallade win-win bevarandeprojekt genom att studera hur platsbetydelser används i argumentation för och emot det föreslagna projektet.

Att projektet slutligen stoppas visar på vikten av att se multipla betydelser av plats samt kulturella aspekter av de ekosystem som man vill skydda.

Artiklarna IV och V fokuserar på bredare aspekter - jordbrukets minskande betydelse och varför den cirkulära migrationen mellan stad och landsbygd fortsätter. Artikel IV utvecklar en typologi över olika sätt som människor reagerar på social-ekologiska låsningar, baserat på förmågor, önskningar och möjligheter, och beskriver hur dessa reaktioner kan bidra till att upprätthålla eller bryta upp låsningar. Artikeln visar empirisk relevans i fallstudien genom att identifiera obalansen mellan i) kulturella förväntningar på individer att bruka bygdens gemensamma marker, och ii) de minskade inkomstmöjligheter för att investera i jordbruket. Artikel V visar hur dessa förväntningar kommer till uttryck i idén om *emakhaya* (ung. 'hembygd') och förstärks genom kulturella ritualer. Artikeln identifierar ett platsbaserat socialt kontrakt mellan de nu levande och förfäder, som bidrar till att upprätthålla cirkulär migration och kunskap om jordbruket. Detta visar på hur platskänsla bidrar till en tröghet till förändring i systemet, men också hur det kan erbjuda möjligheter för förvaltning av landskapet som bygger på lokala värderingar, engagemang och kunskap.

Avhandlingen visar hur platskänsla är socialt konstruerat men samtidigt även genereras genom upplevelser i ekosystem. Platskänsla framträder ur social-ekologiska system och kan beskriva emotionella och kognitiva aspekter av betydelse för hållbar ekosystemförvaltning. Avhandlingen bidrar med inkluderande och deltagande metoder för att undersöka kopplingar mellan platskänsla och förändringar i social-ekologiska system. Fokus på betydelse av plats har möjliggjort kritisk reflektion kring ekologiska såväl som sociala faktorer som påverkar hur åtgärder för att minska fattigdom faller ut. Slutligen så visar avhandlingen på vikten av att studera platskänsla och kultur för att förstå tröghet och låsningar i social-ekologiska system såväl som potential för omställningar till bättre förvaltning – särskilt för fattigdomsbekämpning som spänner över både landsbygd och urbana landskap.

Nyckelord: platsanknytning; platsbetydelser; social-ekologiska system; cirkulär migration; hembygd; Eastern Cape; Photovoice; ekosystemförvaltning; Transkei; win-win naturskydd; jordbruk

Isishwankathelo

uPhuhliso olusingisele ekunciphiseni ubuhlwempu ludinga ukubandakanywa kwezithethe nenkcubeko ezithi zikhuthaze okanye zithintele uluntu ekubeni luthathe inxaxheba kulondolozo lwendalo, ukuze ibenokwazi ukuxhasa uluntu kwakunye nokunxulumene nentlalo. Ngokusekelwe kwimbono yezentlalo kwakunye nezendalo, le thisisi iphononga ingqiqo ngemvo ndawo (sense of place), ukuqonda ukuba uxhulumaniso kwindawo ngokweemvakalelo nangezenkcubeko luyichaphazela njani indlela ethi uluntu lujongane ngayo notshintsho, kwaye ingaba luluphembelela njani ungenelelo kwezophuhliso. Imvo ndawo ibhekisele kuxhulumano nendawo, okanye lukwabhekisele kwintsingiselo yeligama (umzekelo, yintoni indawo, yindawo ehlobo luni le). Iphepha I linabisa indlela kunye ne ajenda yokufundisisa ngemvo ndawo kwisixokelelwano (isistim) soluntu nezendalo (social-ecological systems) egxininise ku xhulumaniso nendawo kunye nentsingiselo yendawo engundoqo ekukhuthazeni izenzo ezibhekisele kulondolozo lwendalo, nendlela zojangana notshintsho.

Oku kuchazwe ngentla kunatyiswe kula maphepa mane alendela elokuqala, ngokwe ngxelo yophando olwenziwe eWild Coast eMzantsi Africa. Kulendawo eyayisakwaziwa njenge Bantustan (oko ukuth yindawo ebekelwe bucala abemi bebala base Mzantsi Afrika), inkqubo yezopolitiko yangexesha localu-calulo yadala ukuxhomekeka kulontu lwasemaphandleni ku limo olusakhasayo nakwintlawulo okanye izibonelelo ezivela kumalungu osapho axelenga ezidolophini. Ngaphezu koko, ukusebenzisana phakathi kwemiba yezentlalo yoluntu nendalo kulo mmandla kukhokelele kwiimeko ezithi zinthintele utshintsho kwisixokelwano soluntu nendalo. Kulamaxesha, ugalelo lwezolimo kwimpilo yoluntu luyehla, kwaye amakhaya amaninzi athembele kwizibonelelo zikarhumente (oko eziquka inkamnkam). Kodwa, ukubuyela ekhaya kwamalungu osapho axelenga ezidolophini akusiyonto enqabilyo.

Enye indlela ejongene nokunciphisa intlupheko kunye nophuhliso lwezoqoqosho kulendawo ibandakanya ulondolozo olusekwe ekuhlaleni kunye nokhenketho. Amaphepha II nele III agxile eku phononongeni iimeko ezinokuthi zidale impixano phakathi kwezimvo zoluntu ngokubhekisele kulongenelelo lubandakanyiweyo negntla: eziquka ukucetywa kobhengezo lwendawo ezithile njengesikhululo solondolozo lwendalo. Kwiphepha II, ukugxininisa kwiintsingiselo zengingqi ezithile zomhlaba ezikuquka amahlathi kunye namasimi angasaselinywayo, kuthi kugqamise ukuxatyiswa ngokwahlukeneyo nokuqondisisa inkqubo ezingundoqo kwintlalo yoluntu nendalo. Iphepha III liphononga iintsingiselo nokuthi kuthetha ukuthini

ukusetyenziswa kwendawo ngendlela ethile luluntu, ngokuthu linike inkcazelo nembali ngotshintsho olwenzekileyo, nokuvelisa impixano izithi zibekho kuthethathethanwo ngemeko zolondolozo. Ukumiswa okanye ukuthintelwa kwalenkqubo kubonisa ukubaluleka kokubandakanya wonke umntu nako konke okunothi kuchatshazelwe yingququ ecetywayo kunye nokubaluleka kwendalo kwinkcubeko yoluntu.

Amaphepha IV kunye V agxile kumba obhekisele ekuncipheni kwenkqubo yezolimo kwakunye nokufuduka kwabasenzi okuqhubekayo. Iphepha IV liqulunqa uhlelo olubonisa indlela oluthi uluntu lojongane ngayo neemeko zentlalo yoluntu nezendalo ezingumqobo, ndlela leyo enothi isetyenziswe ekuzeni nesisombululo ngokuthi kuqwalaselwe ubuchule babantu, iminqweno, kunye namathuba ngokusekelwe kwi modeli yethiyori (theoretical model). Ukungqinisisa ukuba le modeli ikulunge ukusetyenziswa kulendawo (Wild Coast) kuboniswa ngoku veza ukubhidana kwezimvo ngokubhekisele   i) iinkqubo zenkcubeko ezithi zidale okanye zithentele umdla wokulima kuluntu lwasemaphandleni,   kunye ii) nokushukuxeka kwamathuba engeniso evela ngaphandle yokuxhasa ulimo. Iphepha V libonisa ukuba ezinkqubo zibokaliswa ngokwendlela ekuqhutywa ngayo emakhaya nangokulandelwa kwezithethe nenkcubeko. Eli phepha (iphepha V) libonisa ukunxulumana phakathi kwabantu nendawo okukhuthazwa ludlelwano nenzinyanya, lonto idala ukuba abantu abaxelenga ezidolophini babuyele emakhaya, kwaye inegalelo nakwezolimo. Oku kubonisa indlela imvo ndawo enegalelo ngayo ukuzinzeni kwesixokelelwano sentlalo yasemaphandleni, kwaye ikwanika amathuba olondolozo lwendalo kuluntu.

Le thisis ibonisa indlela imvo ndawo esekelwe ngayo kwintlalo yoluntu nangokunxulumana koluntu nendalo, lonto isivezela ukuthi imvo ndawo iyingxenye yezinto ezibangela uxhulumano nodlelwano, ngokwe mvakelelo zomoya okanye ngokolwazi lwengqondo, phakathi koluntu nendalo. Ngaphezu koko, le thisisi inegalelo ekuphuhliseni iindlela zokuqonda jikelele ngentlalo nangeemeko ezahlukileyo zesixokelelwano soluntu nendalo ezinentlonelo kumasiko nezithethe zoluntu. Ukusetyenziswa kwezindlela ekufundeni nasekuqondeni ngendawo kuqinisekisa indlela eyiyo yokulandlela ungenelelo olucetyiweyo noludingekayo. Okokugqibela, ukuqonda nge mvo ndawo kunye nenkcubeko kuyeyona ndela eyiyo yokuqonda ngesimo nangozinzo lwentlalo yoluntu nezendalo kwakunye nokuqonda ngeemeko ezikhuthaza uluntu ukuze lube nokulondoloza intlalo nendalo, ingakumbi ungenelelo olojolise ekunciphiseni okanye ekupheliseni kwentlupheko emaphandleni nase zidolophini.

Amagama angundoqo: ukulahlwa kwezolimo; imfuduko; umhlaba woluntu; EMpuma Koloni; imbali; uxhulumano nendawo; intsingiselo yendawo; ubugosa; Transkei; ulondolozo.

Papers in the thesis

I. **Masterson, V.,** R. Stedman, J. Enqvist, M. Tengö, M. Giusti, D. Wahl and U. Svedin. The contribution of sense of place to social-ecological systems research: a review and research agenda. [Manuscript under review in *Ecology and Society*]

II. **Masterson V**., M. Tengö and M. Spierenburg. Competing place meanings in complex landscapes: a social-ecological approach to un-pack community conservation outcomes on the Wild Coast, South Africa. [Manuscript under review in *Society and Natural Resources*]

III. **Masterson, V.,** M. Spierenburg and M. Tengö. The trade-offs of the win-win conservation rhetoric: exploring place meanings in communi-ty conservation on the Wild Coast, South Africa. [Manuscript]

IV. Boonstra, W., E. Björkvik., L.J. Haider and **V. Masterson**. 2016. Human responses to social-ecological traps. *Sustainability Science* 11(6): 877-889.

V. **Masterson, V**., M., Tengö, M. Spierenburg and C. Folke, Culture and development: social-ecological dynamics in the former Transkei, South Africa. [Manuscript]

Contributions to papers:

I. I contributed actively to the joint formulation and design of the paper. I coordinated the workshop and writing process. I wrote multiple sections of the paper and led the revisions of the manuscript.

II. For this paper I conceived the idea, designed the study with input from co-authors, and I carried out the fieldwork and data analysis. I wrote the manuscript with input and editing from co-authors.

III. I conceived the idea for this paper together with co-authors. I carried out fieldwork, and analysed the data. I also wrote the manuscript with input and editing from co-authors.

IV. For this paper, I was part of the joint-development of the comparative analysis and typology. I wrote the case study text and gave input into the rest of the paper.

V. I was an active part of developing the idea and design, carried out fieldwork and analysed the data. I also led the writing process and wrote the methods, case study, and results, and contributed to the rest of the paper.

Relevant work outside the thesis

A. Barreteau, O., D. Giband, M. Schoon, J. Cerceau, F.DeClerck, S. Ghiotti, T. James, **V. Masterson**, R. Mathevet, S. Rode, F. Ricci, and C. Therville. Bringing together social-ecological system and territoire concepts to explore nature-society dynamics. [Accepted in Ecology and Society in August 2016].

B. **Masterson, V**., S. Mahajan, and M. Tengö. Photovoice for co-producing insights on complex social-ecological dynamics – case studies from Kenya and South Africa. [Manuscript prepared for submission to *Ecology and Society*]

C. Haider, L.J., J., Hentati-Sundberg, M. Giusti, J. Goodness, M. Hamman, **V. Masterson**, M. Meacham, A. Merrie, D. Ospina-Medina, C. Schill, and H. Sinare. The undisciplinary journey: Early-career perspectives in sustainability science. [Submitted to *Sustainability Science* in October 2016].

D. Hamann, M. and **V. Masterson**, R. Biggs, M. Tengö, B. Reyers, L. Dziba, and M. Spierenburg. 2012. Social-ecological scenarios for the Eastern Cape 2012 – 2050. Report. Southern African Programme on Ecosystem Change and Society (SAPECS). Available at www.sapecs.org.

E. Hamann, M. and **V**. **Tuinder (Masterson).** 2012. Introducing the Eastern Cape: a quick guide to its history, diversity and future challenges. Report. Southern African Programme on Ecosystem Change and Society (SAPECS). Available at www.sapecs.org.

Contents

1. Prologue

Stories have been used to dispossess and to malign, but stories can also be used to empower and to humanize. When we reject the single story, when we realize that there is never a single story about any place, we regain a kind of paradise.
Chimamanda Ngozi Adichie

On a Sunday morning in January 2012, I found myself sitting in a shabby classroom in the rural Eastern Cape. My colleagues and I, on our project fieldtrip, had just driven two hours from the tar road, watching the grassy unploughed terraced slopes, and hills that stretch for miles, dotted with colourful round thatched houses ('rondavels' in the South African vernacular). Potholes and gullies and obstinate cattle in the road had made it slow going. People in their yards or walking along the dirt road looked up at the cloud of dust as we drove in the direction of the hotel at the coast – in the direction of all the white faces in big cars before us.

We had been invited to attend this gathering in the classroom where local community members were meeting with conservation officials to talk about a proposed conservation project. Together with thirty members of the community dressed in their colourful Sunday garb, we listened as an official carefully explained the plan to declare a protected area here, fencing off the forest, and some areas of grassy community land. He explained how this project aimed to bring development to these rural areas by providing ecotourism-related jobs and skills training, to keep cash circulating in the poverty-stricken villages. His English words were translated into *isiXhosa* with its resonant click sounds for the community members present, but they were as incomprehensible to me as a suburban South African, as they were to my Dutch and Swedish colleagues next to me. The general mood in the room was positive, but some rapid-fire *isiXhosa* hinted that cracks were forming in the community's veneer of approval. After the meeting we shared lunch together on school desks, taking photographs of one another, and smiling awkwardly to make up for the gulf in our common experience and vocabulary.

During the trip I was reading Zake Mda's 2002 novel[1] 'The Heart of Redness'. In this novel, Mda writes about village life of a remote coastal village on the Wild Coast. A fictional company wants to develop a tourist haven with casino and the community is split between those who desire this 'progress' and those who do not. In the background of the novel is an infamous historical event for the *amaXhosa* nation. In the 19th century, the prophetess, Nongqawuse, commanded the *amaXhosa* people to kill their cattle and burn their crops, promising that once they did, the spirits of their ancestors would rise and drive the occupying British armed forces into the ocean. Many complied and the resulting famine quelled the remaining Xhosa resistance to British armed forces. The split between the believers in Nongqawuse's prophecy and 'Non-believers' is carried through the ages to the present day community in Mda's novel: descendants of the Believers oppose the changes they foresee coming to the village's traditions and culture, and the Non-believers rally behind ecotourism developments as representing progress. One character who supports the tourism plans, epitomises this focus on progress (p 44):

> *To highly civilized people like Xoliswa Ximiya, Xhosa costume is an embarrassment. She hates to see her mother looking so beautiful, because she thinks that it is high time her parents changed from* ubuqaba *-- backwardness and heathenism. They must become* amagqobhoka *-- enlightened ones -- like her.*

During conversations part of my PhD fieldwork, I would later on find out that these words are still sometimes used. *Ubuqaba* is associated with the redness of ochre worn on faces and the colour of traditional attire worn at cultural ceremonies (like in the cover photo of this thesis).

While these differences within communities are dramatized in the novel, it highlights the uncertainty of the future of this region and how changes in the village are framed by the the past. In the context of the scenic beauty, biodiversity and poverty on the Wild Coast, tourism developments, mining proposals, and road infrastructure improvements are all being considered and hotly debated. This thesis is about people in the villages near to that classroom, which is close to the location of Mda's fiction. It is about a sense of place in this rapidly changing region and in the broader context of the developing world.

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[1] This novel draws on the work of Jeff Peires, specifically, his 1989 book *The Dead Will Arise: Nongqawuse and the Great Xhosa Cattle-Killing Movement of 1856–7*. (Ravan, Johannesburg).

2. Introduction

As a South African studying for a degree in sustainability science in Sweden, I have spent a lot of time thinking about the way in which places around the globe are teleconnected and subject to the forces of globalization and environmental change (Adger et al. 2009b, Seto et al. 2012). The interconnected social and ecological issues that face us in the 21st century, such as unprecedented land-use changes, climate change, and inequality, are nothing short of alarming.

In my country of birth, we have seen an increase in social mobility and well-being for South Africans, irrespective of race, over the last 22 years following the transition to democracy. But the inequality gap continues to increase, and in the context of deagrarianization in the poorest rural areas, there is still a dire need for low skilled employment opportunities and better infrastructure. In response to this, the economy of South Africa is growing rapidly on the shoulders of cheap labour for extractive industries. The associated land-use changes with large areas being cleared for mining, housing, commercial monoculture, as well as abandonment and degradation of land under small-scale agriculture land abandonment, follows the development pathways of many countries in the global North.

In Sweden, where I am studying, and in other parts of the developed world, parts of society are becoming increasingly worried about reaching planetary limits (Rockström et al. 2009, Folke et al. 2011). There is an understanding that unsustainable pathways of development which have lead to detrimental local (and connected global) changes, need to be urgently transformed to maintain ecosystems on which our well-being depends (Westley et al. 2011). This calls for societies disconnected from local ecological systems, to 'reconnect to the biosphere' through local cultural values of nature (Folke et al. 2011). For the developing world, this should signal the need to ask the question: what alternative development trajectories can we take and how can we guide these?

It is generally acknowledged that an understanding of cultural change (in terms of values, cultural values and behaviours) is a necessary foundation for the transition to a truly sustainable society (Folke et al. 2011, Soini and Birkeland 2014). Studies have also begun to look to the cultural and cognitive factors that may enable or constrain transformations towards sustainable pathways (Adger et al. 2013). One such factor that has received recent attention in sustainability science is the connection to place, or sense of place. Sense of place brings into focus the meanings and emotions related to places that are subject to ecosystem changes (Adger et al. 2011, Stedman 2016).

Guiding sustainable pathways for development and poverty alleviation through social-ecological changes in the global South also requires consideration of the cultural contexts and values of the local and indigenous communities stewarding vast ecosystems (Brondizio et al. 2016, Mistry and Berardi 2016). The study of interlinked social-ecological systems (SES), acknowledges how in these communities, culture plays an important role in mediating responses to global environmental change (von Heland and Folke 2014, Murphy et al. 2016) including framing the knowledge and learning, management practices and institutions through which individuals and societies adapt to change (Berkes and Folke 1998, Berkes et al. 2003, Tengö and Belfrage 2004, Tengö et al. 2007). Taken together, this work alludes to the rootedness of these practices and knowledge, and that effective stewardship of ecosystems builds on a connection with land, and local peoples' historical intimacy with ecosystem dynamics (e.g. Muchagata and Brown 2000, Barthel et al. 2013).

Von Heland and Folke (2014) document how interventions for improving conditions in these contexts often fail to recognize how culture frames responses to change and the implications for building resilience (von Heland and Folke 2014). In areas where biodiversity conservation and poverty alleviation are both a priority, interventions tend to prioritise economic compensation for the loss of access to natural resources, over the local cultural values and meanings of nature in place (Büscher and Dressler 2012, Chaigneau and Brown 2016). However, these interventions are often mired in conflict over different visions of development. Place is contested terrain and actors have different expectations and desires for a location (Yung et al. 2003). Chapin and Knapp (2015) have suggested that sense of place is a conceptual tool that may assist in unpacking these contested visions of sustainability.

I explore the potential of sense of place as a conceptual tool for understanding the cultural aspects of SES dynamics. In the realm of SES studies, the sense of place concept has been used in a diverse and non systematic way (shown in **Paper I**). Therefore, I look to the field of sense of place for conceptual and methodological tools to explore the importance of a connection to place. Sense of place offers a way to focus on local place as the scale at which cross-scale dynamics are experienced. Cross scale interactions such as climate change, urbanization, and others, manifest locally – they have an effect on local ecosystem dynamics and consequently on people's senses of these places (Wilbanks and Kates 1999, Adger et al. 2011). Sense of place offers a chance to understand the subjective aspects of responding to change (Stedman 2016). Additionally, there is potentially a more direct link between experiences of nature at the local scale and agency to act upon the ecosystem. Furthermore, viewing sense of place from an SES perspective brings the dynamic nature of place to the foreground, rather than a typically static sense of "place".

To explore the role of sense of place in mediating change in SES I look to the community land systems of the Eastern Cape Province, South Africa. This is an area in transition that has been subject to rapid social and ecological changes in the wake of the Apartheid political system of racial segregation. I focus on a case study that is in a region known as the Wild Coast, but that is also part of the former Transkei homeland (a demarcation of the Apartheid era). Here, changes to the ecosystem associated with agricultural decline interact with broad social drivers such as poverty, and circular labour migration. In this neo-traditional context, biocultural connections to land have been neglected by development and conservation interventions. While Cocks and colleagues have shown the importance of bio-cultural connections to the well-being of local people (Cocks 2006, Cocks et al. 2012, Dold and Cocks 2012), there is a need to explore the influence of this connection to place on SES dynamics.

3. Research questions and study design

Two research questions permeate the thesis:
1. How does sense of place mediate social-ecological change?
2. How does sense of place as a concept help to investigate and articulate SES dynamics?
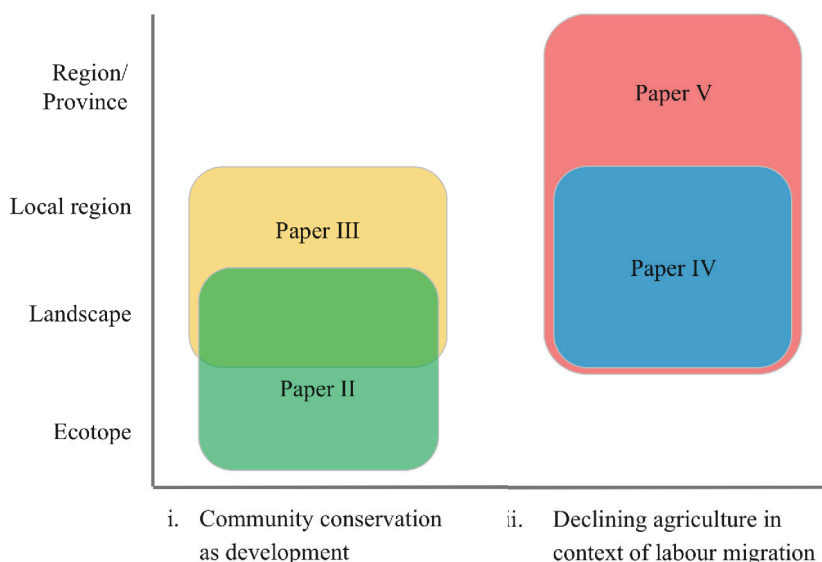
Figure 1. Overview of empirical papers, showing two thematic entry-points into social-ecological dynamics and the scale at which the place meanings are in focus for each paper.

To address these questions, I first engage in a conceptual exploration (**Paper I**), and then carry out empirical investigations of sense of place with respect to two aspects of social-ecological dynamics in a case study in the rural parts of the Eastern Cape Province, South Africa (**Papers II-V**). The empirical papers use two different thematic entry points to social-ecological dynamics in the case study where sense of place may play a role in these social-ecological dynamics and where we may find leverage points for intervention: i) responses to a proposed community conservation intervention for development (**Papers II and III**); and ii) declining agriculture in the broad landscape of home in the context of labour migration (**Papers IV and V**) (see Figure 1). While overlapping, the

four papers focus on different conceptual tools, place at different spatial resolutions: from ecotopes and landscapes, to the local region (the former Transkei, the Wild Coast), and the broader region including the connections between the rural parts of the Eastern Cape with urban city centres such as Cape Town.

In the iterative process of identifying thematic entry points I was influenced by the debates about future trajectories for this region, which I initially explored through participation in a scenario planning workshop for the Eastern Cape (the subject of **Paper D**). Through this workshop it became clear that urbanization and small-holder agriculture were important for livelihoods in the area. Additionally, ecotourism and the conflicts around conservation interventions were also shown to be important trends in the region. These two thematic areas were further refined through initial exploratory interviews, focus groups and participatory timeline exercises at the case study site (described in detail in the appendix). Declining agriculture, urban migration and the possibility of income and infrastructural development through community conservation were among the most important social-ecological changes described by community members at my study site. Initial exploration also highlighted the use of the vernacular term '*emakhaya*' to refer to the rural areas and which broadly translates to 'the place or landscape of home'. This became a focus of the enquiry into the meanings associated with the landscape and regions via the second thematic entry point.

4. Theoretical background

4.1. Social-ecological systems and resilience thinking

SES and resilience thinking have become a prominent approach and a major conceptual lens for sustainability science and for understanding and navigating change at multiple levels of organization (Berkes and Folke 1998, Folke 2006, Folke et al. 2016). This conceptual framing emphasizes that people, societies, cultures and institutions are embedded in the biosphere and are part of shaping it from the local to the global and across scales (Folke et al. 2016, Folke 2016). A resilience approach draws on the study of complex adaptive systems to emphasize non-linearity, threshold behaviour and surprise in the dynamics of SES (Folke 2006) with a focus on how periods of gradual change interplay with periods of rapid change in intertwined social-ecological systems (Gunderson and Holling 2002). This approach is used to understand how societies, institutions, communities and individuals deal with interlinked social-ecological changes that originate at multiple scales and how capacity can be built to adapt to these changes (Berkes and colleagues 1998, 2003, Folke 2016).

In the realm of SES studies, where my work is firmly situated, issues pertinent to development such as poverty alleviation and the equitable access to ecosystem services, have gained prominence in thinking about transformation. This is evident in the theme of the most recent Resilience Conference, "Resilience and development: mobilizing for transformation." (discussed by Bousquet et al. 2016). It is also evident in a number of papers and books (see Folke et al. 2016, Brown 2016, Folke 2016). From an SES and resilience thinking perspective, possible development trajectories for the future are framed in terms of understanding and managing complex social-ecological dynamics for sustainability and human well-being. As Brown (2016) points out, an SES and resilience lens brings to the consideration of development and poverty alleviation, conceptual tools and a framing to understand and respond to the challenges of our time which are characterised by high uncertainty, globalized and interconnected systems, increasing disparities and limited choices. Again, recognising that social factors of interest to improving well-being such as; poverty alleviation, inequality, power, justice, these all rest on the capacity of the biosphere to sustain life. This is a central tenet of this perspective: "The biosphere provides preconditions for achieving and sustaining dignity in human relations" (Folke et al. 2016).

The interconnectedness of SES creates situations where human actors and institutions interact with ecosystem dynamics in ways that may lock development

and management in unsustainable pathways. An important set of conceptual tools in this arena can be found in the emerging theory around traps and transformations. There are many conceptualizations of traps in sustainability literature and practice (see Brown 2016 and Tidball et al. 2016) for summary). A social-ecological trap is defined by inert behaviour that is undesirable from a sustainability perspective and where social and ecological feedbacks reinforce each other to maintain a system in an undesirable state (Cinner 2011, Enfors 2013).

For this reason, incremental change is not enough to escape and break a social-ecological trap, and a *transformation* may be necessary (Walker et al. 2004). Transformation also has many different definitions across a wide range of disciplines (from anthropology to business) but generally refers to a process of change that profoundly alters a system (Brown 2016). From a resilience perspective, transformational change involves a fundamental change in the state space of the system through the addition or loss of new variables, altering the nature of cross-scale interactions (Walker et al. 2006, Folke 2016). Processes of transformational change can be forced through the interaction changing environmental and/or socio-economic conditions, or it may be a deliberate and guided process (Folke et al. 2010) which may require shifts in attitudes and perceptions towards human-nature relations (Folke et al. 2011). For these reasons, there is a lot of research attention paid to investigating the role of cognition, culture and values (Adger et al. 2009a, 2011, Marshall et al. 2012, Jones et al. 2016, Murphy et al. 2016) in framing and motivating responses to change, and thus enabling or constraining the potential for transformations.

But what are we transforming towards? A key element of the normative sustainability goals that underlie the resilience literature is that a shift is needed in order for societies to become better stewards of the biosphere (Folke et al. 2011) and avoid the destruction of planetary life-support systems (Rockström et al. 2009). *Stewardship* has emerged as an umbrella for types of governance and the active shaping of development trajectories to improve human well-being. This overarching concept encompasses goals for desirable governance, practice and science, that can navigate social-ecological complexity (Chapin et al. 2011, Folke et al. 2011). The use of stewardship as a concept in this research community is emerging, and has not yet engaged in theorising what types of agency might be necessary for stewardship, or questions of equity and power with respect to who manages or stewards an ecosystem. Despite this lack of reflexivity on the normativity of stewardship, the concept has opened up a much-needed space for engaging with care, ethics, emotions and a responsibility in management of SES (Folke et al. 2016). I use stewardship here as a useful way to recognize the role of the biosphere as a precondition for development, but also the empowering engagement of people in processes that allow for self-determination, and create meaning and dignity for sustainable solutions (as Folke et al. 2016 have alluded

to). Stewardship is another research space in which sense of place has been explored - in terms of the role of sense of place in motivating stewardship actions (as we explore further in **Paper I**).

Place based studies have a key role within resilience and SES research scholarship, highlighted for example in the Programme on Ecosystem Change and Society (PECS) which draws on a history of place-based comparative research on social-ecological dynamics of international scope and importance that emerge in the local social-ecological context (Carpenter et al. 2012, Fischer et al. 2014). This in turn builds on early literature on SES that shows how many local and indigenous societies have developed management practices and adaptive institutions that have allowed communities to sustainably manage local ecosystems and deal with ecological uncertainty (Berkes and Folke 1998, Berkes et al. 2000, 2003, Tengö and Belfrage 2004, Tengö and von Heland 2012). The implicit assumption here is that adaptive traditional ecological knowledge evolves through living with nature in a place for many generations (Berkes et al. 2000). Place-based knowledge is thus seen to be preserved through cultural practices that retain a connection with the environment and are thus able to build resilience (Pretty 2011, Barthel et al. 2013).

There has also been more specific acknowledgement that 'people-place connections' help to foster community resilience (Berkes and Ross 2013) and social-ecological resilience (Tidball and Stedman 2013). More recently, work within resilience research invokes concepts directly from sense of place to explore the role of place attachment as an aspect of knowledge and management capacity to steward ecosystems such as urban gardens (Andersson et al. 2007, Barthel et al. 2010.) Place attachment has also been highlighted as contributing to the capacity to adapt to socio-economic or environmental changes such as industry closures, changes in markets, (Sampson and Goodrich 2005, Marshall et al. 2012, Lyon 2014) or, changing conditions under climate change (Marshall et al. 2012, 2016, Fresque-Baxter and Armitage 2012, Quinn 2014, Eakin et al. 2016). Table 1 summarises the range of ways sense of place has been employed in sustainability science. However, as reviewed in Paper I, the use of place-related concepts has been subject to some inconsistency. Therefore, I go into a deeper engagement with sense of place as a field of study to theorize and study connection to nature in place.

4.2. Sense of place

In this thesis I engage sense of place to explore implications for understanding and studying SES. The relationships between people and place have been examined in many different disciplines from anthropology, sociology, geography, psychology and environmental management (Shamai 1991, Lewicka 2011). The diversity of place research has resulted in multiple definitions of place-related concepts (such as place attachment, place identity, place satisfaction, place dependence and sense of place), and unclear relations between these concepts has, in some ways, hampered the development of coherent place theory (Shamai 1991, Scannell and Gifford 2010a, Lewicka 2011). *Sense of place* is often viewed as an umbrella concept or the most encompassing core construct within associated research (see for example (Shamai 1991, Kaltenborn 1998). Williams and Stewart (1998) offer a broad definition of sense of place as "the collection of meanings, beliefs, symbols, values, and feelings that individuals and groups associate with a particular locality" (p. 19). But some theorists use the term sense of place to describe and explore both attachment to place and the associated meanings attributed to place (Relph 1976, Tuan 1977). For many authors (especially those who wish to measure the variability of sense of place through a cognitive approach) sense of place can be viewed as a combination of the two concepts of *place meanings* and *place attachment* (Stedman 2008, Trentelman 2009, Brehm et al. 2013).

Place attachment is described as the emotional bonds that develop between individuals or groups and their environment (Low and Altman 1992) and has been studied in many different ways (see Hernandez et al. 2014 for an overview of different models of place attachment). Place attachment is evaluative (e.g. positive/negative or important/unimportant). Some view place attachment as having two sub-domains (Williams and Roggenbuck 1989): place identity and place dependence. Place-dependence (first mentioned by Stokols and Schumacher 1981) is a functional connection to place and refers to how suitable a setting is for goal attainment in relation to other settings. Place-identity refers to the definition of one's personal identity in relation to a place or to the physical environment through ideas, beliefs, preferences, values, etc. and is a subcomponent of self-identity (Proshansky 1978, Proshansky et al. 1983).

Place meaning is a concept that denotes the descriptive and symbolic meanings that we associate with place (Manzo 2005, Davenport and Anderson 2005, Brehm et al. 2013), i.e. *what a place is*, and *what it is like*. This may also include more symbolic meanings associated with place e.g. home. The creation of sense of place and place meanings in particular, can be facilitated by direct experiences within a place (Tuan 1977): As we attribute meanings to settings, we become attached to those meanings (Stedman 2002, 2003). But these meanings may also be enforced and constrained in the social realm (e.g. Stokowski 2002, Bell and York 2010). While there has been a lot of focus on the positive experiences that

create attachment to place, place meanings may also develop from a range of emotions and experiences both positive and negative where connection to place may feel oppressive and restrictive (Relph 1976, Manzo 2005).

A prevailing view of place meanings as purely social constructions (e.g. Greider and Garkovich 1994) was challenged by Stedman (2003) who showed that the biophysical world may also constrain and facilitate the construction of these meanings. This is important for the study of SES and I use place meanings in this thesis as explicitly including connections to ecosystems. Sense of place and the attributes that facilitate the creation of meanings can be social, and biophysical or a combination of both (Stedman et al. 2004, Scannell and Gifford 2010b). Settings can have multiple and sometimes contested meanings as different people and groups are connected to the setting but can also have collective meanings created through shared experience (Stedman 2002, Yung et al. 2003).

Table 1 shows the wide range of SES studies where there has been a direct engagement with sense of place. These have tended to focus on place attachment as an evaluative measure (Table 1) and neglected place meanings (as indeed have many other studies of sense of place in environmental management (Stedman 2008)). Place meanings are the foundation of place attachment and need to be understood to understand place-related actions and behaviours (Stedman 2008). We tend to protect the places that are meaningful to us (Brehm et al. 2013). Place attachment has been shown to have an effect on attitudes to social and ecological changes, but the mediating factor between attachment and willingness to act appears to be the meaning of the place: i.e. will the threat (or lack of taking action) change the character of the place (Stedman 2002, Devine-Wright and Howes 2010)? The use of place concepts in sustainability science and SES studies has also suffered from a lack of coherence in terms of place concepts and therefore a lack of comparability (I explore this in detail in **Paper I**).

Additionally, I acknowledge the inextricable link between sense of place and culture. Through this thesis I view culture as the historically transmitted pattern of meanings embodied in symbols as a medium through which people attribute meaning to materials and events and a system of shared conceptions by which we communicate and develop knowledge and attitudes to life (Geertz 1973). And in line with von Heland and Folke (2014), I agree that human culture both contains and transmits morality, order and identity, shaping social and ecological relations over generations (Crumley 1994, Taylor 2004, Lansing 2006,). Place is thus viewed as one organizing concept to which meaning is attributed through cultural means.

Table 1. Ways in which sense of place has been used in sustainability science pursuits.

Use	Description/ operationalization	References
Cultural ecosystem service	Providing benefits to people in ecosystem assessments	MA 2005, Butler and Oluoch-kosura 2006, Chan et al. 2012, Daniel et al. 2012, Plieninger et al. 2013, Hausmann et al. 2016
Map values and priorities	Identify priority areas for and-use planning, and conservation	Brown and Raymond 2007, Raymond et al. 2009, Martín-López et al. 2012
Aspect of community / human well-being	Attachment to place or community used as an indicator of community well-being and sustainability	Chamlee-Wright and Storr 2009, Berkes and Ross 2013, Adams and Adger 2013
Factor in transformational capacity	The role of place attachment in willingness to change practices or relocate	Marshall et al. 2012, 2014, 2016, Lyon 2014
Factor in adaptive capacity	Place attachment enhances adaptation to gradual changes through social capital, knowledge	Marshall et al. 2012, Amundsen 2013, Quinn 2014, Eakin et al. 2016
Motivates protective behaviour	Attachment to place may trigger protective action	Folke et al. 2003, Andersson et al. 2007, Biggs et al. 2011, Stedman and Ingalls 2013, Tidball and Stedman 2013
Motivates collaborative stewardship	Common meanings contribute to community cohesion and sustainable actions	Chapin et al. 2012, Chapin and Knapp 2015
Underlies local ecological knowledge and practice	Sense of place matters for local ecological knowledge, social ecological memory	Andersson et al. 2007, Barthel et al. 2010

5. Case study: background

In this section, I describe the background to my place-based case study, and outline existing debates about the two thematic areas of the thesis: i) responses to a proposed community conservation intervention for development; and ii) declining agriculture in the broad landscape of home, in the context of labour migration. In both instances, sense of place may play a role in understanding SES dynamics but also in identifying leverage points for intervention towards sustainability.

5.1. Regional identities: The former Transkei and the Wild Coast

The empirical work of the thesis was undertaken in the context of inequality and the legacy effects of the Apartheid political regime and years of colonial rule in South Africa, which includes land degradation and agricultural decline. I focus on village landscapes and livelihoods within two overlapping spatial units that describe the character of this place (Figure 2). Firstly, the area falls within the former Transkei homeland. The former Transkei homeland was one of nine Bantustan administrative areas created by the Apartheid government under the policy of separate development. These homeland areas were set-aside for black or native South Africans on the basis of 'ethnic' homogeneity[2]. The Transkei was one of two Bantustan areas designated to the Xhosa-speaking people. Influx controls prevented the native majority from settling in white urban centres, and so homelands effectively supplied the mines and urban industry with short-term migrant labour. In parallel, the Bantu Authorities Act of 1951 formalized the allocation of land in the Bantustans to tribal authorities within a communal tenure system, ensuring that every household (and as many households as possible) were entitled to land as an incentive for short-term wage workers to remain committed to the Bantustan areas where they had entitlements (Spiegel 1994). Migrant household members, often staying in urban informal settlements or hostels, would send remittances home to their families who invested these wages in small-scale agriculture[3] (McAllister 2001). Migrant household members

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[2] This political process of racial segregation incorporated people of disparate 'tribal' communities into designated ethnicities, and these ethnicities were further entrenched as an organizing principle throughout the Apartheid era (see Vail 1989).

[3] McAllister (2001) has shown how homestead agricultural production in the Transkei is interrelated with institutionalized long-distance labour migration. Wages from labour migra-

would return to the rural home on leave from their contracts or during vacation. In other words, the Apartheid economic system depended on circular migration to ensure cheap labour and thus created a system of interdependency between the rural areas and the urban areas. Post-Apartheid, the broad area, also known as *emaXhoseni* (the place of the *amaXhosa*) continues to be an area of cultural belonging for isiXhosa speaking groups, as it has been for hundreds of years.
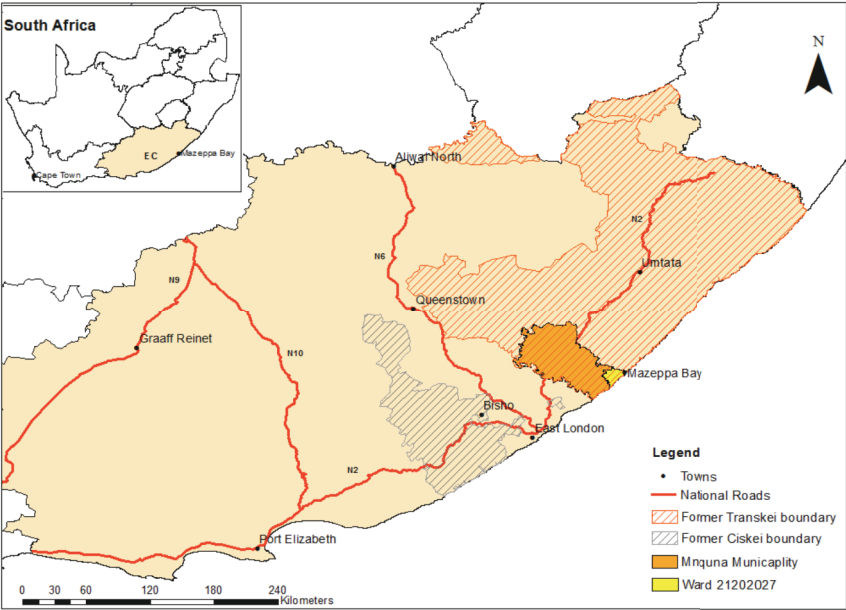
Figure 2. Map of the Eastern Cape (EC) and context of the study area.

The study site is also within the Wild Coast region, which largely falls within the former Transkei (see Figure 2). There are multiple definitions of the Wild Coast (it being a term largely used for tourism purposes) with some focusing only on the coastal region, but others are more inclusive defining it as an area between the Kei River in the south and the Mtamvuna River in the north and between the N2 highway and the ocean. The Wild Coast is heralded as an area of high biodiversity and endemism (it is part of the Pondo-Albany-Thicket bio-diversity hotspot) and has been prioritized by the National Biodiversity Spatial Assessment as a national biodiversity priority area (e.g. DWAF 2004). It is also portrayed as isolated, wild and a place of natural beauty and to attract adventure tourism, and has many hotels and trading posts.

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tion are used for taxes, to invest in children's education, and to purchase agricultural imple-ments, and livestock for a long time.

5.2. Social-ecological change and dynamics

These regional identities allude to the cross-scale drivers at work here. Firstly, Apartheid spatial planning neglected economic and infrastructural development in the former homelands and high levels of poverty still characterise the former Transkei (Ruiters 2011). Urban migration to the cities to find work has increased since the end of Apartheid (Cox et al. 2004) with migrant labourer household members sending money home to rural homesteads in the former homelands. These are therefore translocal households, e.g. some members of the household go to the city to find work and others members remain in the rural areas and maintain the rural homestead (De Wet 2011). Today, 22 years after the first democratic election in South Africa, influx controls have been removed, and the formal migrant labour system has collapsed, but circular migration is still a widespread practice – mirroring a similar trend in other parts of sub-Saharan Africa (Posel 2004, Potts 2010).

Secondly, the homeland areas have always been treated as an agricultural economy of subsistence farming, in contrast to large-scale commercial agriculture[4]. Small-scale agriculture in the former homelands is still neglected in policy, in favour of large-scale commercial agriculture, worsened by the separation of land and agriculture in government ministries (Hall 2009). In this region farming has been an important source of livelihood and food security until recently. There has been a large if gradual decline in agricultural activity in the communal areas. In particular, extensive arable production is declining, with a shift to intensive cultivation in home gardens or abandonment of cultivation altogether (McAllister 2001, Andrew and Fox 2004, De Klerk 2007, Hebinck and Lent 2007, Shackleton et al. 2013, Shackleton and Luckert 2015). This is amidst a general process of deagrarianization in the region and in southern Africa more widely (Bryceson 1996, Hebinck and Lent 2007). For households in the community areas of the former homelands of the Eastern Cape, agricultural produce has a mostly supplementary function for livelihoods and there is a high a reliance on cash income from social grants, remittances and casual labour (Hajdu 2005, Bank 2005, Shackleton and Luckert 2015).

This decline in agriculture can be viewed as a social-ecological transformation (Hebinck and Lent 2007, Shackleton et al. 2013, Shackleton and Luckert 2015). This is attributed to a complex mix of factors including decreased agricultural extension support, lack of access to markets, a lack of labour, destruction of crops by wild animals, and a decline in remittances (Andrew and Fox 2004, Shackleton et al. 2013, Shackleton and Luckert 2015, see Appendix for further

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[4] Ntsebeza and Hall (2007) describe how colonialism and the Apartheid system undermined African agriculture and lead to the current dualism in the South African agricultural economy of subsistence farming in communal areas and white commercial farming.

detail based on local understanding of these changes for our case study). There has also been a decline in livestock production, with herds being concentrated under fewer owners (Ainslie 2002). Locally this decline in livestock production is attributed to disease, and the decline in cultivation has also been linked to the lack of cattle for draft power (Shackleton et al. 2013). Figure 3 illustrates the local understanding of how these changes have occurred over time.

Many argue that the process of agricultural decline began in the 1940s with the relocation of black South Africans to the Bantustans and the marginalization of small-holder farming in favour of subsidization of large commercial white-owned farms (Hebinck and van Averbeke 2007). Another driver of agricultural decline and indeed a legacy of Apartheid policies, is the lack of secure tenure that has prohibited the emergence of a rental market in the communal areas (Kepe and Tessaro 2014). Building on colonial laws that prohibited Africans from owning land, the Bantu Authorities Act ensured that land in the Bantustans was allocated to people by chiefs, with no legal title deeds. In addition to this, the 1960s *villagisation* policy of 'Betterment' in these homeland regions, placed people in villages with land zoned for particular uses, effectively distancing households from their fields which forced many to abandon fields which were too far away to care for (De Wet 1995, Fay 2012).

These agrarian changes are linked to a dynamic process of land degradation. Land degradation issues such as forest loss, biodiversity decline, erosion and uncontrolled spread of invasive alien species have been attributed by scientists to a lack of capable management and planning (Hoffman and Todd 2000, Berliner 2011). The high percentage of forest loss in the last 30 years is attributed to an increasing population, land use pressure, clearing for agriculture and a decline in the powers of traditional authority structures (Berliner 2011). Kepe (2001) argues that the concern for forests stems from particular assumptions about the current mosaic of grasslands, woodland and forest. On one hand, is the older view. This view holds that the forest patches are relics of extensive forests, and occur in a matrix of secondary grasslands that were created by clearing forests for agriculture (Acocks 1953, Kepe 2001). However, there is evidence that coastal grasslands have existed in this region for thousands of years (Ellery and Mentis 1992), prior to the clearing practices of Iron Age farmers (Mackenzie 1989). This demonstrates a move towards understanding shifts between forest, woodland and grassland in terms of non-equilibrium models; but there is still a tendency to refer to unrealistic baseline measures for 're-vegetation' to 'natural states' (e.g. see Berliner 2011).

There has also been a large focus on the increase in woody vegetation in the area. This is often viewed as a negative ecological change. A lot of research attention has been paid to the patterns of increase in woody vegetation cover due to high rates of field abandonment in many different locations across the Trans-

kei (Mackenzie 1989, Chalmers and Fabricius 2007, De Klerk 2007, Berliner 2011). This is linked to the degradation narrative of bush encroachment (O'Connor et al. 2014), where these areas of woody cover are unusually dense areas of *Acacia karroo* (Berliner 2011). However, there has recently been a move towards an alternative framing of this increase in woody vegetation as forest regrowth. For example, Shackleton et al. (2013) demonstrate that pioneer *Acacia karroo* that grow within abandoned fields, are succeeded by other woody species 40 to 50 years after the field is abandoned and that there is revegetation to a species composition similar to that of uncleared forests. Additionally, there is acknowledgement that there is a range of complex factors that may drive increases in woody vegetation cover (e.g. global drivers such as increased levels of carbon dioxide (Wigley et al. 2010, Buitenwerf et al. 2012)). Additionally, the increase in woody vegetation in the area, further marginalizes agricultural production in these regions, acting as a barrier to future cultivation (Shackleton and Luckert 2015).

Collectively, these conditions in the former homelands in the Eastern Cape have been described as 'stuck' or as part of a trap in a number of papers (e.g. Bank and Minkley 2005, Adato et al. 2006), carefully reviewed and discussed in Shackleton and Luckert (2015). They explore how social-ecological changes at multiple scales, including agricultural decline, HIV/AIDS, crime, and erosion of social capital have interacted to effectively decrease the options and capacity of local people to take action to improve their situation. However, there is also recognition that agrarian livelihoods here represents a livelihood system that has neither stabilized nor transformed into a new pattern under the changing conditions of democracy (Bank and Minkley 2005). This is a further illustration that this region is in such a state of transition, and is subject to uncertainty in terms of drivers at a broader scale (e.g. the effects of climate change, and the volatility of the South African economy) and that future trajectories remain unclear (Shackleton and Luckert 2015). Next I present a short description of some of the current debates about how to intervene for poverty alleviation as based on the importance of ecosystems for agrarian livelihoods.
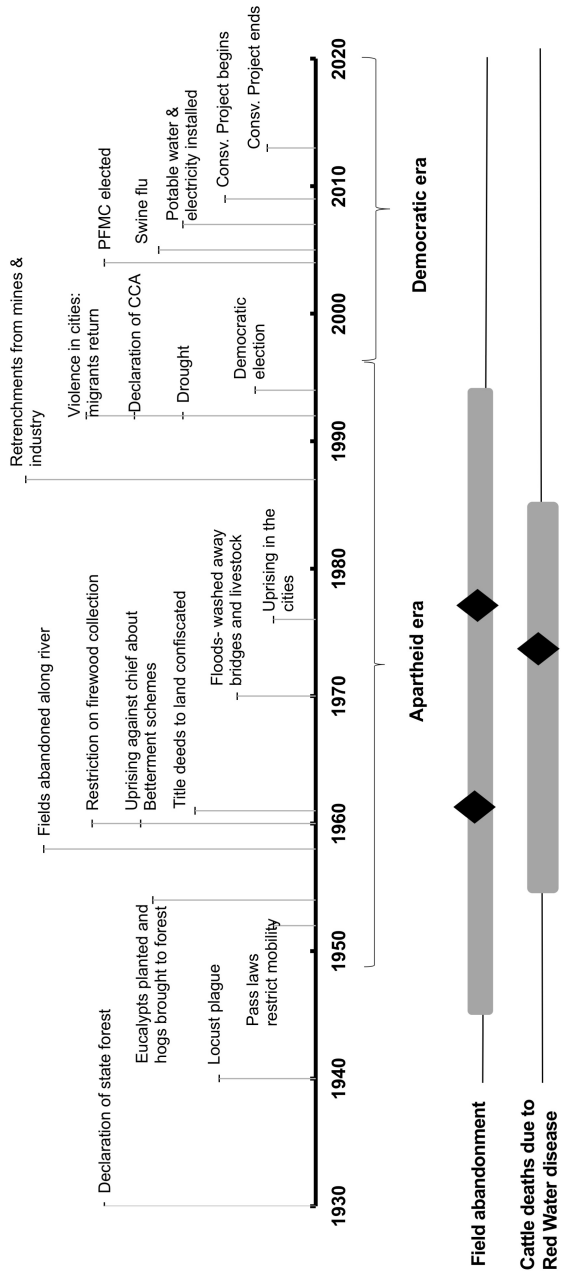
Figure 3. Local perceptions of social-ecological changes in the thesis study area depicted by key events, elicited through historical timeline construction exercises and supplemented with interview data (see appendix and Paper II for details). The occurrence of processes important to local informants including abandonment of fields and cattle deaths are depicted by bars below the timeline with black rhombuses indicating peak periods in processes. PFMC refers to Participatory Forestry Management Committee; CCA refers to Coastal Conservation Zone; and 'Consv. Project' refers to a conservation project in the area.

5.3. Current interventions and debates about future trajectories in the former homelands of the Eastern Cape

In response to the need for development and poverty alleviation, as well as the interlinked social-ecological issues of agricultural decline and biodiversity loss, there has been a lot of debate as to the best path forward. Many of these proposed interventions have been framed in terms of the potential profitability of the environment and resources. Based on both the poverty and underdevelopment of this populous area, as well as the perceived underutilized economic potential of the area, the Wild Coast was declared one focal point of the (then) new democratic government's national development strategy of Spatial Development Initiatives (SDIs) in 1996. The SDIs focused on corridor development within which integrated planning, resource mobilisation and catalytic projects and the main focus on the Wild Coast was to attract investors in ecotourism (Kepe 2001a). The idea behind this was to attract investment for rural people to benefit from employment opportunities, partnerships with investors, income from leasing land, capacity building and improved infrastructure (Kepe 2001a).

The main focus of the SDI on the Wild Coast was on the potential for development through ecotourism. The legacy of this is that 20 years later, ecotourism and development through protected areas is still viewed as a strategy for generating maximum benefits for all stakeholders on the Wild Coast, (Simukunda and Kraai 2009, Kepe 2008, Kepe and Tessaro 2014) and as potentially compatible with community conservation (Ntshona et al. 2010, Büscher and Dressler 2012) in line with the globally popular 'win-win' rhetoric used by the conservation movement (Christensen 2004, Chaigneau and Brown 2016). However, many ecotourism interventions on the Wild Coast have failed to provide inclusive development outcomes as interventions often resort to modes of conservation that focus on protected areas and benefits for people *outside* of these areas (Kepe 2001b, 2008, Ntshona et al. 2010). While many such community conservation and ecotourism initiatives on the Wild Coast have been met with conflict (Palmer et al. 2002, Kepe 2008, Ntshona et al. 2010) the legacy of the SDI is the idea of development potential and the capacity to generate significant economic benefits from the local natural beauty and biodiversity (Kepe 2001). In line with this, the provincial Department of Economic Development, Environmental Affairs has claimed it will continue to focus on nodal development of the Wild Coast (Sherry 2013). Many remain hopeful about ecotourism in this region, despite low levels of international tourism (Ndabeni and Rogerson).

A secondary focus of the SDI and the broad governmental focus on the economic returns from natural resources, was on the potential for development through forestry, agriculture, and even controversial titanium dune mining[5]. Particularly with regards to agriculture, national policy interventions have focused on promoting large-scale commercial agricultural endeavours. Land reform measures post-Apartheid, have shifted away from providing land for subsistence purposes and are oriented towards creating a new class of black commercial farmers on large holdings (Lahiff and Cousins 2005). Small-holder agriculture in the former homelands is still neglected in favour of large scale commercial agriculture, worsened by the separation of land and agriculture in government ministries (Hall 2009). The limited interventions for small-holder agriculture in these former homelands focus on destocking, fencing and rotational grazing. They target communal rangelands, which are still assumed to be invariably overstocked and degraded. These interventions are based on models for large scale commercial farming, and demonstrate little understanding of the variability of degradation drivers of communal rangelands (Palmer and Bennett 2013, Vetter 2013).

In contrast to this, there are a set of scholars who analyse the reasons why peasant farming has not totally disappeared in these former homelands, and highlight the prospects for a 'repeasantisation.' This proposed development strategy in the former homelands of the Eastern Cape, would involve interventions that would support the ability of small-holder farmers to make a living from the land (Hebinck and Lent 2007). But there is a lot of debate about the viability of small scale agriculture which may face many challenges including lack of tenure security (Kepe and Tessaro 2014), and the need for better infrastructure and strategies for farmers to access markets, to name a few (Bank and Minkley 2005, Hebinck and Lent 2007). Additionally, some argue that the small-holder agriculture lifestyle cannot compete with the aspirations for urban lifestyles and employment for young people, suggesting that urban migrants may cut ties with rural areas, depriving small-holder agriculture of cash investments (Hebinck and Lent 2007, Shackleton and Luckert 2015). However, there is also evidence from other parts of Africa and the developing world that urban migrants retain social connections to and land rights in community lands, which they make use of over time and that this is important to consider in strategies for poverty alleviation (Posel 2004, Kay 2009, Potts 2010, Alden Wily 2016).

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[5] A proposed titanium mine at Xolobeni, on the Wild Coast, has caused major conflicts between local communities and the mining company in 2016 (see Bond 2016 for an online analysis of this conflict).

6. Approach

Understanding the role of sense of place in understanding social-ecological dynamics requires an approach that recognizes and engages with knowledge from multiple disciplines. Inspired by the interdisciplinary mode of working in the linked research communities of the Stockholm Resilience Centre, SAPECS[6] (which I consider my community of practice) and the broader community of transdisciplinary sustainability science, I looked to study the interaction between sense of place and the social-ecological dynamics balancing multiple epistemological perspectives[7]. Similar to the Interdisciplinarity of sustainability science (Kates 2001), the field of sense of place also encompasses a myriad of different analytical approaches Lewicka 2011, Hernandez et al. 2014, Stedman 2016) that range from qualitative phenomenological approaches that focus on the lived experience of place (e.g. Seamon 2000), through interpretive and discursive approaches (e.g. Yung et al. 2003, Di Masso et al. 2014), to approaches that measure place meaning and attachments as an element of attitude with Likert-scale surveys (e.g. Jorgensen and Stedman 2001, 2006). This is partially responsible for the divergence in conceptualizations of sense of place and particularly place meanings (Brehm et al. 2013).

In my initial conceptual exploration of sense of place, there was a focus on approaches that are more quantitative which is reflected in the approach that is set out in **Paper I**. In this conceptual paper, with my co-authors I draw on an approach to sense of place that embraces cause and effect relationships between concepts, prediction, hypothesis testing, and – where appropriate – generalization (see Shamai 1991, Jorgensen and Stedman 2001 for examples). I had initially thought that I would collect data in this way in the field. However, when it came to the empirical work of this thesis, the complex nature of the case study and a desire to understand the values and meanings attributed to place from the perspective of local people in a way that was cognisant of the interconnectivity of human and nature connections, led me to choose an interpretive and inductive approach to study sense of place. Some researchers have favoured interpretive approaches to sense of place that can capture and focus on the multifaceted nature of place and explore the depth of meaning of place. This has been done through, for example; in-depth or semi-structured interviews, discursive ap-

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[6] The Southern African Programme on Ecosystem Change and Society (www.sapecs.org) - a research community of practice to which I contribute through my work and through the research project of which I am part.

[7] In Paper C, we discuss the importance of epistemological agility as an interdisciplinary sustainability science competence.

proaches (Van Patten and Williams 2008), photo elicitation (Stedman et al. 2014) and storytelling (Davenport and Andersson 2005). Like these studies, I have taken an approach to sense of place in the case study that looks to gain a nuanced understanding of 'what places mean to people'. In my broader conceptualisation of place meaning, there is not the same adherence to place meanings as only representing the cognitive elements of place, but an acknowledgement that descriptions of place include also the values and emotions associated with place.

However, **Paper I** notes that the different approaches to sense of place are not as oppositional as they may appear (see the debate between Stedman et al. 2004, Stedman and Beckley 2007, Williams and Patterson 2007), with many researchers choosing combined qualitative and quantitative methods to investigate sense of place (see Hernandez et al. 2014 for a review). This is also the view carried through in **Paper I**. The openness and flexibility of the approach and the ability to take a mixed methods approach while utilising complementary interpretive lenses is demonstrated in in **Papers II, III and V.**

6.1. An in-depth case study approach

The broad approach of the empirical work of this thesis is an in-depth case study (Yin 1994), appropriate in answering 'how' types of research questions and for the investigation of contemporary phenomena in context. The broad project in which I was situated was focused on understanding governance of ecosystem services and well-being in the context of poverty and inequality in South Africa, and particularly in the Eastern Cape. I was therefore certain that I wanted to work in the former Transkei to engage with the poverty and ecological change that was both a legacy of Apartheid and still in a state of transition. I looked for a case study where I could explore the importance of sense of place in mediating ecosystem service use and perceptions (including forest resources and agriculture) in changing rural livelihoods and where a community conservation intervention for change was already taking place. I was aware of the "research fatigue" in some villages in the rural Eastern Cape where a lot of research work had been done but communities had not seen the results of this work. I therefore selected a site where there had not been a lot of research undertaken before. I chose to conduct this case study research in the area around an indigenous state forest reserve where the surrounding communities were involved in negotiations to declare a protected area in their midst. Between 2009 and 2013, an internationally funded project sought to establish a protected area to be co-managed by local communities and conservation authorities, with the express aim of also stimulating development in the area. Additionally, many households here were engaging in cultivation in home gardens (more so than in drier regions further inland), livestock rearing, and making use of non-timber forest resources. I have

chosen not to name these villages in the thesis in order to protect the anonymity of informants.

The fieldwork was undertaken in the three villages adjacent to the forest which were all involved in project negotiations under the administration of one traditional authority. This falls within the Mnquma local municipality, in the Eastern Cape Province. This municipality is 80% rural, and typifies a rural municipality plagued by issues of poverty: with a 42% unemployment rate, a relatively high rural population density of 77 persons/km^2 and high dependency young people and elderly relying on migrant family members and social grants for income (Stats SA 2012). A large portion of these rural areas are under communal land tenure and governed by a traditional authority. Furthermore, people live under informal rights arrangements where land user rights to build a house or to cultivate land are allocated to people by an unelected traditional council (Ntsebeza 2004).

6.2. Fieldwork and methods

To begin working at this site, I obtained permission from the chief and the headman or headwoman of each village, as well as from the Department of Agriculture, Forestry and Fisheries, to work in the indigenous forest reserve. I conducted this field study over approximately 6 months between November 2012 and August 2014. The bulk of this time was spent in the rural villages, including the December 2012/January 2013 period which is when migrant family members return for the holidays and, when many cultural rituals are undertaken (because this is the time of year when most South Africans take leave from work). I also spent three weeks in the townships of Cape Town, meeting with contacts that I made during my work in the rural village, as well as their family members and friends.

As well as part of the theoretical framework, I also use sense of place as a methodological lens, focusing on the meaning of place, and how the nature of place has changed over time through each of the methods employed. I chose an exploratory and inductive approach and used multiple methods in order to explore the range of ways that local people in the case study area may articulate sense of place, as well as to be able to triangulate common patterns in relationships with place and with nature. At the core are semi-structured interviews conducted with individuals identified using a snowball method for purposive sampling (Kvale 1996, Bernard 2011). Interviews were carried out with the help of a local interpreter, in places comfortable to the informant, such as at their house, or at relevant places in the landscape.

In the context of the language and cultural barriers, and the power biases that favour researchers in indigenous or neo-traditional communities, I wanted to include methods of a more participatory nature in order to elicit local perspectives and understandings of the landscape, and the social-ecological dynamics that shape it. I was also inspired by a move towards a more equitable mode of co-producing knowledge and engaging creativity in SES and resilience thinking (Tengö et al. 2014, West et al. 2014). Therefore, I chose to conduct timeline exercises in focus groups (see appendix), transect walks, and participatory photography exercises in addition to semi-structured interviews.

The interviews, focus groups and photovoice sessions, were recorded on a voice recorder to facilitate transcription of important quotations. This is also supplemented with field notes and photographs taken while attending cultural rituals, and other gatherings in the villages. Guiding this work is the acknowledgement that the intricacies of every day life and how it is ordered can be more easily understood and observed by what is referred to by Ybema et al. (2009) as 'hanging out', rather through than formal interviews. Furthermore, I asked for informed consent from interviewees verbally, aware that many interviewees could not read or write.

Table 2. Sources of data for the four empirical papers.

Themat-ic focus	Initial explora-tion	Conservation interven-tion		Declining agriculture in the landscape of home in the context of labour migration			
Methods	Interviews, timeline exercises and obser-vation	Identifica-tion of ecotopes through interviews and transect walks	Interviews with stake-holders to identify narratives	Pho-tovoice exercises	Inter-views with rural residents	Inter-views with migrant family members	Observa-tion rural life and cultural rituals
Paper II	✓	✓	✓				
Paper III	✓	✓					
Paper IV	✓			✓	✓		
Paper V	✓			✓	✓	✓	✓

As I have alluded to earlier, initial exploratory interviews, focus groups and observations in the rural area (described in detail in the appendix) pointed to two thematic entry points for the study (Figure 1), as well as assisted in triangulation of the insights emerging from the other more focused data sources. Table 2 outlines how the different methods and data sets were employed in the four empirical papers. Below I present my approach to identifying narratives and to the photovoice exercises, in further detail.

6.2.1. Identifying meanings in narratives

Places are often contested terrain, imbued with multiple meanings (Williams and Stewart 1998, Yung 2003). These place meanings may define and frame environmental issues and biophysical locations through discourse (Hajer 1997, Yung 2003). I used semi-structured interviews (in combination with observation during informal interactions and community meetings) to inductively identify broad narratives of change related to the project and landscape. I firstly view narratives as accounts that frame environmental problems as well as possible solutions (Yung et al. 2003, Ernstson and Sörlin 2009, Lidström et al. 2015, von Heland and Clifton 2015). Coding the interviews for narrative storylines brought attention to the discursive nature of interviews, and how meanings of place are both created through storylines, as well as based on prior experience in the landscape. Secondly, inspired by Hajer's mode of discourse analysis (1997), I looked to these narratives as coalitions of meanings and ideas produced and reproduced through practices. By coding interviews for categories of actors, narrative category and place meanings, I was able to identify tensions and inconsistencies amongst the storylines and meanings used by individuals and to highlight how local narratives may be mirroring the broader conservation discourse.

6.2.2. Photovoice

Based on initial exploration, I had determined that attachment to the broader landscape of home ('*emakhaya*' in isiXhosa) was important in the context of declining agriculture and continued migration in the area. Photovoice was particularly useful to gain a deeper understanding of the meaning of 'emakhaya', articulated from a local perspective. I was cognisant of the language and cultural barriers between myself and the community in which I was working as well as the power bias that is often present when researchers enter rural indigenous communities. So I chose to use photovoice as a primary method that could help to engage participants on terms where they would be placed in the role of experts regarding their lived experience (Wang and Burris 1997).

Participatory photography methods such as photovoice (Wang and Burris 1997, Blackman 2007) where research participants take photographs and then discuss them, have begun to be embraced by researchers in natural resource management and sustainability science (Beilin 2005, Castleden et al. 2009, Berbés-Blázquez 2012) as a method to equitably include marginalized community and indigenous perspectives in social-ecological studies (this is the focus of our paper in progress, **Paper B**). Photo methods have also been used in place research as a way for participants to articulate sense of place and to facilitate deep interviewing experiences, using the power of an image to convey the rich symbols and meanings attributed to place (Stedman et al 2014, Briggs et al. 2014). I used the photovoice method to acquire a deep understanding of the meaning of

place and identities associated with place: through photos, participants illustrated their sense of place and translated their experience and the meanings they associated with place. The act of taking photographs was very engaging to participants and the opportunity to discuss them in focus groups gave them the opportunity to compare and build on their insights (Blackman 2007, Maclean and Woodward 2013). This ordering, prioritising and captioning of these photos by participants provided the first step in the iterative thematic analysis of this data (Beilin 2005).

While demographics is not a key focus of analysis in any of these papers, I was careful to ensure representation of men and women of a variety of ages in all of the methods, but particularly in photovoice exercises. Aware of the dominance of men in group gatherings in this cultural context, I was careful to arrange photovoice in gendered groups where participants were of similar ages and stages of life. This also contributes to the choice of using photovoice as a method – as a way to facilitate expression from voices in the community who are often marginalized and to explicitly explore their experiences in a safe space.

6.3. Some reflections on the research process

Data collected through conversations and interviews, is affected by how the researcher is perceived by respondents as well as how the researcher perceives the respondents. I was aware that as a white woman carrying out research in isolated villages in the former Transkei homeland and the townships of Cape Town (and in the context of racial inequalities in wealth and education opportunities due to separate development in South Africa) that I may in certain instances be viewed with suspicion or as an outsider. The majority of the people I interacted with informally and through interviews, photovoice exercises and timeline exercises, were *isiXhosa* speakers who spoke little English. I invested time learning basic *isiXhosa* and local songs, to signal my deeper commitment to the knowledge gathering process as being with my interviewees. I had one interpreter with me for all of these interactions and focus groups in both the rural village as well as the interviews in Cape Town. She was a resident of the village and a former school teacher who most people knew and respected, and my association with her helped to build trust in me in general and facilitated informal conversations about the landscape and daily life as they came up. These informal interactions in the village facilitated a shift in my understandings of culturally appropriate actions and questions and this in turn appeared to add to my perceived credibility and trustworthiness in interviews in the less welcoming townships of Cape Town.

Awareness of my positionality also influenced the methods I chose. As described above, I was drawn to exploratory and participatory methods and partic-

ularly to photovoice. Using images produced by participants as a shared reference point was a catalyst for lively discussion and communication across language barriers. This was especially the case with young women for whom there are cultural expectations to be modest and who do not get many opportunities to voice their opinions in community life. Showing photographs that they had taken themselves gave the participants the confidence to speak in the group, and be the expert on their own lived experiences. Repeated photovoice sessions helped to build trust between myself and the research respondents. Photovoice participants used photographs to produce their own posters, and these were then printed and disseminated to the local authorities and schools and displayed in public places around the villages. This easily accessible demonstration of the research insights (as well as the act of returning to continue the research in February 2014 as I had promised) also facilitated trust in my research and willingness to participate in interviews.

Furthermore, being a woman in a patriarchal cultural context affected the data collection especially in the observation of cultural rituals during which men and women are separated. For example, during the stages of the initiation rite of young men, women are not permitted to be near the *kraal* or the *iboma* where some of the ritual takes place. I attempted to account for this by interviewing key male informants about these rituals, as well as relying on two non-local men (a field assistant and my husband) attending these rituals to make observations and take photographs on my behalf (they had permission to do so from the men involved in the ritual). But this positionality was also a strength in that women were comfortable engaging with me and I got to engage with practices and discussions that only women are privy to, and which are not given as much importance in a patriarchal context. For example, there is a very strong focus on the importance of the male initiation rite of passage to become an independent man, but as a woman asking questions in this space I had the opportunity to understand the meaning of this ritual for the mothers and female community members. They told me about how daunting but also joyous it is sending a son into 'the bush' for this ceremony, as well as the financial burdens and social expectations associated with returning to the rural area and hosting a cultural ritual. Additionally, as a woman, I was also shown some less noticeable elements of connection to nature and place (in comparison to the kraal which has strong importance for masculine identities) – for example, the pride associated with the household's woodpile and the enjoyment and camaraderie experienced by women when going to fetch firewood together.

6.3.1. A note on language

In this thesis I have tried to give *isiXhosa* vernacular words pride of place due their importance in ascribing meaning to place and landscape. I refer to Xhosa vernacular words which the interpreter and local interviewees would teach me

e.g. vernacular names of patches of vegetation, species, cultural practices or types of place in the landscape. There is ongoing debate amongst South African scholars of linguistics about the use of prefixes for denoting African languages, for example 'isiZulu' or 'Zulu' (Mesthrie 2003). Through the thesis I choose to refer to '*amaXhosa*' to signify the Xhosa people and 'isiXhosa' to signify the language of the participants I interviewed in the Mnquma municipality, as well as their relatives in Cape Town, because this is how study participants refer to these constructs themselves. Additionally, I refer to the South African English vernacular '*kraal*' for a cattle byre or corral as well as '*rondavel'* to refer to a round traditional dwelling structure commonly found in homesteads in the Transkei. When phrases were translated from *isiXhosa* to English for me *in situ* these South African English words were used, and while they have Afrikaans origins, they are very commonly used in South African English vernacular. The decisions to use these forms of these words and others, stems from the desire to convey the spirit of their meanings, and the situated nature of the interviews and participatory work. In addition to this I refer to *isiXhosa* words or phrases whenever necessary to convey the importance of the literal phrases used and the importance of these phrases to the symbolic meanings they convey.

7. Summary of papers

7.1. Paper I

As a first step to investigate how sense of place as a concept can help to investigate and articulate SES dynamics, I (in collaboration with colleagues) conducted a selective review of the use of sense of place in SES studies, and distilled an approach to studying sense of place out of the sometimes divergent sense of place literature. The paper draws on the rich theoretical and empirical literature of sense of place to describe the relationship between sense of place concepts which have sometimes been conflated. The approach emphasizes sense of place as both the *meanings* and *attachment* to a setting. Place attachment is viewed as an emotional bond between individuals and place, and along with its subcomponents place identity and place dependence, it is an evaluative concept. Place meanings are emphasized as descriptive cognitive statements of what a place is, what it is like, and the symbolic meanings that it may hold. The paper discusses key tenets of sense of place that make this approach compatible with the SES perspective including how sense of place forms through individual experience that is socially mediated; and emerges through interactions with the biophysical environment. Sense of place is subjective but varies in a patterned way, and this may help to predict certain types of behaviour (with implications for adaptive and transformative capacity and the SES).

The paper synthesizes the ways in which sense of place concepts and tools may be applied in SES studies to:

- *Identify what underpins protective and restorative actions* by using both measures of place attachment associated with care and action, as well as assessing the meanings to which people are attached to assess the way in which they engage or respond;
- *to map and assess patterns of variation* of place attachment and place meanings with, for example, types of environments or over time,
- *evaluate how sense of place patterns influence the resilience of a system* by assessing how place attachment and meaning influences adaptive and transformative capacity; or how the multiple coexisting meanings of a place may influence collaboration and collective action.
- *Assess stewardship outcomes and priorities* by using measures of sense of place as indicators of how ecosystems produce well-being and identifying priority values and priorities areas for conservation and stewardship in a landscape.

The paper emphasizes the importance of not only evaluating place attachment, but also understanding the meanings to which individuals and groups are attached. Sense of place is linked to *place*-protective but not necessarily *environment*-protective behaviour and therefore, it is important to engage the meanings that people seek to protect in the face of environmental or development related changes. A research agenda for future integration of SES research and sense of place is also outlined. I then take up thee of these areas for future study in subsequent papers:

1. How may dynamic ecology influence place meanings? (which is taken up in **Paper II**, engaging with the place meanings of specific landscape elements)
2. Whose meanings are favoured in interventions and guided transformations and why (which is taken up in **Paper III**, addressing narratives and narrative coalitions in response to a proposed conservation intervention).
3. The contribution of place meanings to systems inertia or transformative change (which is taken up in **Paper V**, using place meanings and cultural practices to elicit how culture mediates change)

7.2. Papers II and III

Papers II and **III** focus on a proposed community conservation intervention at our study site on the Wild Coast to study the role of sense of place in mediating change. While **Paper II** focuses on articulating place meanings associated with specific landscape elements (ecotopes) involved in the conservation project, **Paper III** analyses narratives to illuminate how heterogeneity of place meanings within the community play out during the process of the project. Both papers make use of narratives elicited through interviews as the main data source. The community conservation project under focus aimed to declare a protected area that included a state forest and a plantation, as well as surrounding areas of community land used under customary tenure. The proposal was to fence off this protected area and bring in antelope and buffalo to stimulate tourism and with it, development and employment opportunities for people in the vicinity. However, disagreements in the participating communities delayed the project plans until the project funding ceased, and the proposal was terminated. Through interviews with local stakeholders including community members, traditional authorities, conservation and forestry officials and project staff, three distinct narratives about the conservation intervention are identified (Table 3). Narratives supporting or opposing the project make specific mention of parts of the landscape included in the proposed protected area, and mobilize these meanings in the negotiation around the project.
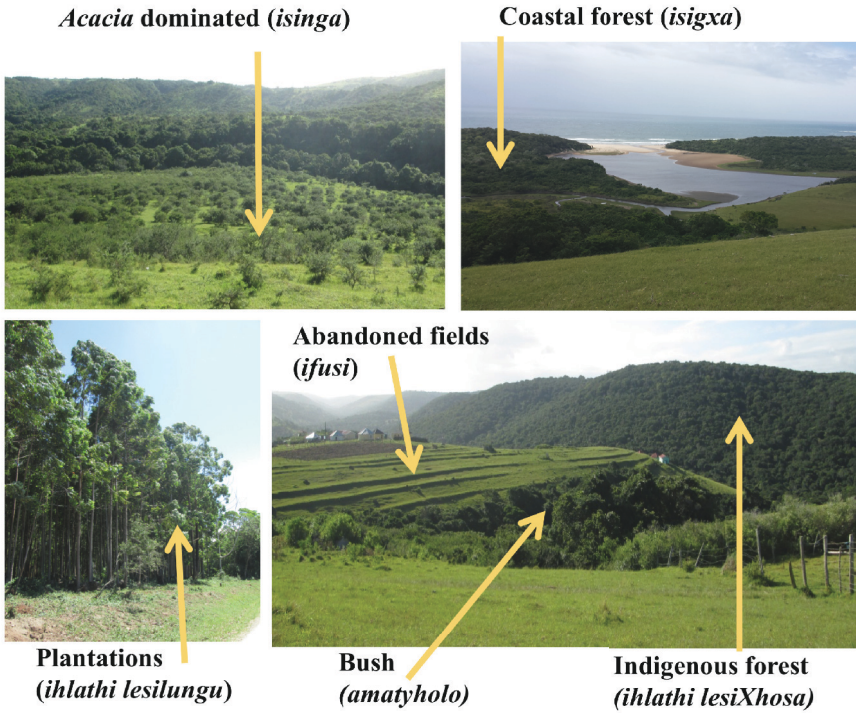
Figure 4. Categories of locally-defined ecotopes

In **Paper II** we use a social-ecological approach to understand local values of the landscape. We identify the six main locally-defined landscape units in *isiXhosa* vernacular (Figure 4) to which people refer when talking about the project in this landscape, all of which are represented within the proposed reserve boundaries. We refer to these landscape units as 'ecotopes' to capture their interlinked social and ecological characteristics: including ecological identifiers such as the presence of key species and canopy cover as well as uses, property rights and access. This categorization is also informed by local understandings of social and ecological history (see Figure 3), which includes the establishment of *Eucalyptus* plantations to provide communities with an alternative source of wood for construction, as well as the gradual abandonment of cultivated fields and subsequent encroachment of *Acacia* species. The meanings that are associated with ecotopes illustrate how different groups of the community, along with conservation and forestry officials interpret and make meanings out of the social-ecological dynamics occurring in the area.

Table 3. Summary of narratives (Paper III).

Aspects of narratives		Narrative 1: Restoration of unique biodiversity and wilderness	Narrative 2: Development and future prosperity	Narrative 3: Exclusion and encroachment
Support or oppose		Support project	Support project	Oppose project
Main proponents		Forestry and conservation departments' staff; project staff; community members trained as forest guards.	Project staff; Participatory Forestry Management Committee and beneficiaries of micro-enterprises; traditional authorities; community members.	Group of older men who have high status in community as cattle owners; chief and advisors; and other community members.
Problem definition		Threat to forest biodiversity from illegal resource extraction & alien invasive species.	Poverty, lack of infrastructure and need for development initiatives.	Land for cultivation and pasture, as well as land for building houses, is limited.
Main arguments		Project offers opportunity for restoration of biodiversity and ecological function through reintroducing indigenous antelope and buffalo, and employing local people to remove alien invasive plants. Fencing the reserve area, and employing local forestry guards will protect the forest from exploitation.	Project offers potential for community income and development through forest guard employment, micro-enterprise activities, ecotourism and spinoff income generation opportunities, as well as the breeding of co-owned buffalo.	Project would perpetuate historical exclusion from sacred forest and fertile land. Opponents are not willing to give up land that could be used for agriculture, in the face of encroachment of forest into this land. Buffaloes imported to the forest would endanger the community.
Place meanings employed	Forest#	• Unique biodiversity refuge. • Wilderness • Vulnerable ecosystem • Protected by law	• Aesthetically appealing and scenic beauty • Development asset • Tourist place • Community's well-being	• Xhosa cultural belonging • Appropriated land • Source of woody vegetation encroaching outward (into community land)
	Community land*	• Degraded land. • Ecological corridor • Habitat for game species	• Bush-encroached land • Neglected fertile land • Equity for community in nature reserve benefits	• Limited communal grazing land • Belonging and ownership (ancestral home and burial sites) • Suited for agricultural lifestyle
	Plantation	• Neglected and no longer of commercial value	• Source of revenue	• White man's forest - appropriated land

\# Includes both indigenous scarp forest and coastal forest   *Includes areas of abandoned fields, bush areas and *Acacia* dominated land, as well as pastures.

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The local counter-narrative's place meanings particularly illustrate the importance of community land to maintain heritage and an agricultural lifestyle, but also show how the expansion of woody vegetation from the forest and bush areas and in encroached abandoned fields threaten these meanings and attachments to limited community grazing land. The paper illustrates how conflicts amongst stakeholders were based on attachment to different place meanings (see Table 3).

Paper III focuses on the process of negotiation of the project and how these three narratives make use of place meanings to argue for or against the project (Table 3). We examine coalitions (shared meanings and constructs of the problem employed for a particular strategy) within the narratives to shed light on how the counter-narrative stalls the project. Actors arguing for the project and nature reserve declaration, from both narrative 1 (restoration/conservation) and narrative 2 (development) connect to the win-win discourse of conservation and development. However, in this coalition, some adopt a storyline or place meaning dissonant with their own values, in order to argue for a desired outcome. This reveals a tension: a focus on the income generating potential of protected areas through ecotourism and wildlife breeding precludes the possibility of co-management through sustainable resource use, by excluding local people from the protected area. This mirrors a broader trend back to 'fortress conservation'. The success of the community counter narrative, despite being up against an evocative and powerful win-win conservation discourse as well as powerful actors backed by the state, illustrates the importance of understanding local place meanings and attachment to land. Our analysis also reveals how actors may hold multiple (sometimes competing) meanings in tension. Therefore, there is potential for finding common ground especially around meanings associated with aesthetic beauty, tranquillity and as a source of well-being associated with the forest, which are held by actors with opposing opinions about the project, across the spectrum of stakeholders.

7.3. Paper IV

In **papers IV and V** we consider the social-ecological dynamics and attachment to meanings of a larger area, the broad area of the rural, often referred to as *emakhaya*. There is particular focus on the interaction of agricultural decline and labour migration, in order to explore the role of sense of place and culture in these social-ecological dynamics.

Paper IV describes social-ecological trap conditions for people living in rural areas of the former Transkei, and social responses to these conditions. By drawing on work in the social sciences that explains mismatches between individual behavioural responses and social or ecological conditions, we present a simple theoretical model of responses that relates abilities, desires and opportunities. Based on this model, we present a typology of responses that may contribute to the maintenance or resolution of social-ecological traps.

My case study of *amaXhosa* rural dwellers is used along with two other case studies (small-holders in the Pamirs and fishermen in the Stockholm Archipelago) to illustrate the empirical relevance of this typology. Using the concepts described above we identify several responses to trap conditions. Inhabitants have a desire to farm in order to gain respect and independence in the community. However, it has become more difficult for people to meet these desires. Job opportunities in cities have declined drastically post-Apartheid, meaning that young men especially, who are expected to work to pay a bride price of cattle, and invest in a rural homestead, are not able to do so. Respondents refer to their inability to find a job and fulfil cultural expectations as the 'will of the ancestors' and this typifies the response of 'resignation' (Table 4). We also observe another type of response where the respondent's strong desire to make a living in the rural area was matched by his ability, resembling the 'innovation' response (Table 4). By using skills and capital gained from construction jobs in the city, and ecological knowledge, he was able to maintain a diverse agricultural livelihood.

7.4. Paper V

In **Paper V** we expand on this understanding of the rural village landscape to further investigate how social-ecological dynamics in the Transkei are interconnected with urban areas, and the role of sense of place in this system configuration. Our findings corroborate other studies and the available statistical data that ecosystems in the former Transkei are not critical for local livelihoods. Instead, they are critical as the landscape of home, with deep meaning for people and a place of ancestral belonging. This is shown to also be the case for migrant family members who return home to maintain ties with the community and their

ancestors, as well as a cultural identity rooted in place and an agricultural life-style. We illustrate how these cultural features of place meanings and retaining connections to home are enacted and sanctioned through biocultural practices including rituals and customs. In this way we expand on the cultural expectations that frame the desire to farm in the Transkei (shown in Paper IV), to show that these expectations are encoded in and revealed in place meanings of the broad region through the meaning of *emakhaya* (the rural landscape of home) as well as sanctioned through bio-cultural practices.

We identify a place-based social contract between the living and the ancestors that connects not only rural residents but also urban migrants to ecosystems in the rural area. This social contract and the associated social expectation to maintain ties with the rural area, may be seen as reinforcing the bond between the rural and the urban, and thus contribute to maintaining a rural-urban interdependence that was created by Apartheid policies. In this way, place meaning and culture contribute to the inertia of the social-ecological system and we argue that this may be reinforcing trap conditions for households (as operationalized in **Paper IV**).

8. Discussion and key contributions

This thesis make has made contributions to the literature of SES by theorizing how sense of place (and key sense of place concepts such as place attachment and place meanings) may be engaged in the study of SES, as well as demonstrating how sense of place may mediate responses to social-ecological change in the case study on the Wild Coast. The thesis has also made contributions to the literature on pathways for development in the rural areas of the Eastern Cape. Here I discuss the results and contributions of the thesis in relation to the two major research questions of the thesis.

8.1. How does sense of place mediate social-ecological change?

8.1.1. Sense of place in mediating responses to change and interventions

Paper I makes the argument, illustrated with examples from the literature, that attachment to place is an important factor in whether or not individuals will respond to change adequately or engage in actions towards stewardship. However, the meanings upon which this attachment is based, are important for understanding how people interpret and react to changes (Vorkinn and Riese 2001, Stedman 2002, Kyle et al. 2004, and also shown in **Papers II and III**). **Paper I** asserts that debates about the future of a place are not between people who are attached and people who are not, but rather between people who hold different meanings associated with that place.

Through a focus on place meanings in narratives in investigating a conservation and development intervention on the Wild Coast, (**Paper II and III**), I have demonstrated that opposition or support for changes to a place is based in part on which place meanings are threatened. I also operationalize the claim that sense of place is a useful tool to unpack conflicts around contested visions of sustainability (Yung et al. 2003, Jacquet and Stedman 2013, Chapin and Knapp 2015) by examining how competing meanings are mobilized through narratives about the conservation and development intervention (**Paper III**).

Paper I also references the importance of assessing both the diversity and range of meanings as well as whose meanings are favoured in interventions or processes of transformation. Similarly, the importance of engaging a diversity of local interests in community conservation and development interventions to

avoid failure of interventions is well established in the literature (Bologna and Spierenburg 2015, Kepe 2008) but, the diversity of local interests is seldom demonstrated or discussed in detail. The social-ecological approach to examining multiple meanings of ecotopes in **Papers II and III**, maps out the diversity of interests in this community. This approach was also able to isolate the importance of cultural connections to place and ecosystems that are often neglected in conservation and development interventions (Büscher and Dressler 2007, Cocks et al. 2012). This is shown to be especially important in this particular conservation intervention, where a local narrative of historical dispossession stalled the project, and the intervention ultimately failed to establish a co-managed protected area. This counter narrative mobilized the meanings of the local forest as a place of cultural and spiritual importance, and the lifestyle value and belonging attached to abandoned fields and grazing areas.

Place meanings are also used to argue for particular interventions. By tracing how place meanings were used and by whom, **Paper III** illustrates that a focus on particular place meanings in narratives about change, such as those associated with degradation of community land and threat to forests, can promote certain development pathways (such as ecotourism through conservation), at the expense of other potentially viable pathways such as agrarian livelihoods associated with heritage value of community land. While more research is needed, the failure of this intervention which favoured a narrow interpretation of the unique biodiversity and an approach that excluded local people from the land, lends support to the argument that engaging with a plurality of place meanings may foster better support for interventions (Williams and Stewart 1998, Stedman 1999, Yung et al. 2003).

Furthermore, this investigation demonstrates that while sense of place does not represent an approach for engaging in issues of power in itself, examining place meanings in this manner is one way to highlight the biases in development and conservation discourses that play out in particular local interventions. While others (e.g. Stokowski 2002, Yung et al. 2003) have also engaged place meanings in understanding community conflicts and power dynamics, I have expanded the use of place meanings in **Paper II** to more holistically capture local understandings of and attitudes to, social-ecological complexity. In keeping with a social-ecological lens, **Paper II** contributes an inductive approach to understanding the subjective values and meanings attributed to landscape heterogeneity through a focus on locally-defined ecotopes (which are shaped by social-ecological processes such as land abandonment and revegetation). Capturing these local understandings and the meanings attributed to social-ecological changes is also shown to be important for the success of development interventions.

8.1.2. The role of sense of place in system inertia

In **Paper IV** I posit that conditions for rural dwellers in the former Transkei may constitute a social-ecological trap. This is corroborated in previous work (Bank and Minkley 2005, Cundill and Fabricius 2008, Shackleton and Luckert 2015) which argues that poor and vulnerable households in the rural Eastern Cape are subject to multiple interacting stressors that make it difficult for them to escape poverty and make choices regarding their livelihoods. The contribution of **Paper IV** is the frame of analysis and model that relates abilities, desires and opportunities at the individual level, and helps to identify additional causes (some other pieces of the puzzle, if you will) of the social-ecological trap situations that may be faced by households. In engaging social science theories about mismatches between the social and the ecological, the paper responds in part to the need to better theorize individual and household responses to change (Brown et al. 2013), and this is useful to identify further mechanisms of social-ecological traps in the pursuit of sustainable intervention strategies. Collective responses to traps have been poorly theorized (but see Enqvist et al. 2016 for an exception) and further research and expansion of the model should focus on how these individual actions may interact for example, through collective action which affects broader social-ecological dynamics.

In **Paper V** I illustrate that place meanings relating to the agricultural character of the village landscape remain strong and largely unchanged despite the changes to the landscape such as the gradual decline in land under cultivation and consequent forest revegetation and, a decline in reliance on agricultural products for livelihood security as described in e.g. (Hebinck and Lent 2007, Shackleton et al. 2013, Shackleton and Luckert 2015). This provides some support for the claim in **Paper I** that sense of place (and culture), may change slower than some economic or ecological changes. This, in turn, provides support for the notion that culture and meanings may be slow variables in the system (Folke et al. 2010, Murphy et al. 2016). Whether or not an ecological threshold (for example in terms of cover of woody vegetation in abandoned fields) or other change, may affect these meanings in the future, remains to be seen and warrants further investigation.

The combined findings of **Papers IV and V**, illustrate how both positive and negative attachment to rural areas and particular meanings of *emakhaya* (the rural home landscape) are enacted through biocultural practices as well as sanctioned through a social contract with the ancestors. The papers illustrate how this may be reinforcing the bond between the rural and the urban, and thus contributes to maintaining an interdependent set of rural-urban relations that was created by Apartheid policies. The place-based social contract with the ancestors acts to stabilize the existing configurations, e.g. potentially reinforcing the trap conditions faced by households as summarised in Shackleton and Luckert

(2015) and discussed for our case study in **Paper IV**. In contrast to the findings of von Heland and Folke (2014), who describe how the social contract with the ancestors for the Tandroy in Madagascar maintains the sustainable flow of eco-system services, the desirability of the SES state for livelihoods in the Transkei is questionable. In this way, sense of place tied to a shifting political context and cultural expectations may be seen as another factor that contributes to the inertia and stability of the social-ecological system configuration.

What can these insights about how a strong and rigid attachment to place may reinforce traps tell us about transformative capacity? Some evidence presented in the review in **Paper I** suggests that while strong place attachment may support adaptation to incremental changes (Marshall et al. 2012, Amundsen 2013, Eakin et al. 2016), it has also been shown to be a barrier for change when more fundamental changes are required i.e. for transformational change (Marshall et al. 2012, 2016, Marshall and Stokes 2014). More research is needed to theorise and operationalise transformative capacity and characterise the general patterns of attachment, but these findings suggest that these meanings of place may not be conducive to supporting development interventions based on Western models of societal transformation that assume a traditional industrialization based model of urbanization.

8.1.3. Place meanings and culture as seeds for stewardship and for identifying alternative development pathways

The literature reviewed in **Paper I**, illustrates that sense of place may also inspire and motivate collaboration and stewardship (e.g. Yung et al. 2003, Chapin 2012, Chapin and Knapp 2015) and the case study of this thesis offers some support for this notion. **Paper V** illustrates how the place meanings and attachment associated with *emakhaya* provide a sense of well-being to residents and migrants (which is shown especially to be the case in terms of access to experiences in nature and a place-based connection with benevolent ancestors and community). As the paper alludes to, and as also shown in other literature (Cox et al. 2004, Shackleton et al. 2007), the rural home also provides a safety net for people in terms of supplementing livelihoods during times of crisis. Despite the challenges facing households, agrarian practices are maintained in 'pockets' in the Eastern Cape, as livelihood support but also as examples of innovative entrepreneurship (illustrated in **Paper IV** by the example of the entrepreneurial farmer, Sandile, who invests income from construction work into maintaining agriculture, but has also experimented with different modes of cropping and beekeeping). Biocultural practices and many of the meanings and attachments associated with *emakhaya* (e.g. solace in nature, and independence through agriculture) may also encode important local ecological knowledge (as **Paper V** alludes to but which is also supported by the rich body of work that Cocks and

colleagues (Dold et al. 2011, Cocks et al. 2012, Dold and Cocks 2012) have produced). As has been argued for other parts of the world where bio-cultural practices are maintained in isolated pockets, attachment to these meanings and practices may be useful for forging new sustainable livelihood options in the future (Barthel et al. 2013) based on care and responsibility.

Paper II and III also illustrate that mapping out the multiple place meanings associated with a landscape and a development intervention may offer an understanding of social-ecological connections and assets on which to build alternative visions for sustainability. **Paper III** illustrates how place meanings mobilized through narratives, may provide clues to the types of development pathways that could build on stewardship of the aspects of landscape that local people care about. Place meanings are connected to the ideas of what is legitimate use and what a place *should* be too (Yung et al. 2003). In the case study of the development and conservation intervention on the Wild Coast, many community members appreciated the co-management proposal as congruent with the meanings of the forest as beautiful, sacred and as a place of unique biodiversity. However, the particular mechanism for creating revenues through this protected area (i.e. the import of large game such as buffalo which required a fence) excluded community members from the protected area and the tangible and intangible benefits they derived from the forest. This paper shows how this is reflective of a trend back to the fences and fines of 'fortress conservation' (Brockington 2002) under the guise of 'win-win' conservation. The place meanings recorded for the landscape illustrate that there are cultural connections to the landscape in the Transkei, many of which have been previously neglected, but which may be harnessed to stimulate alternative and bottom up development trajectories, such as small-scale agriculture, or community-run ecotourism projects. While it is beyond the scope of the thesis to assess the viability of these interventions, the failure of exclusionary ecotourism and conservation in the context, suggests that alternative interventions should be considered. Alternative trajectories will need to empower the engagement of people in processes congruent with their meanings and attachments and that foster dignity for long term sustainability (Folke et al. 2016).

8.2. How does sense of place help to investigate and articulate social-ecological dynamics?

8.2.1. Sense of place as an emergent property in social-ecological systems

Paper I posits that sense of place represents a moment of 'coupling' in coupled SES. It represents a social-ecological construct that demonstrates the inextricable links between individuals, society and the physical reality and dynamism of

the ecosystem. **Paper I** argues that sense of place and in particular, place meanings, are not only created through individual experience to produce highly personalized meanings, but are also constrained in the social realm. The paper shows how the social nature of experience includes social expectations associated with identity and roles constrain experiences of a place as well as power relations that limit experiences of meaning making. I have illustrated the social constraints on sense of place through **Papers II and III**: place meanings are both mobilized through narratives for particular agendas that mirror the broader discourses of place (e.g. the discourse of win-win conservation that also seeks to stimulate development on the Wild Coast).

Additionally, **Paper I** argues that sense of place is not purely socially constructed, but emerges from interactions with the biophysical world. Therefore, sense of place allows us to capture emotional and cognitive connections to ecosystems that are not well represented in SES (Stedman 2016). **Paper I** identifies the need to expand the static and simplified 'biophysical' referred to in sense of place studies, to include ecosystem dynamics. Through **Paper II,** I have demonstrated how sense of place relates to ecological complexity by exploring how place meanings are attributed to ecotopes that vary based on ecological characteristics. These characteristics are also the product of social-ecological dynamics that include the interaction of field abandonment, encroachment of abandoned fields, and colonization and revegetation towards a species assemblage associated with forests. Eliciting meanings attributed to ecotopes, allowed us to understand local conceptualizations and valuation of social-ecological complexity and change. This is important because there is still a sense that in looking to understand intertwined social-ecological dynamics, many studies still separate the social from the ecological and often underestimate how historical uses shape the landscape.

Engaging with the concept of sense of place guided us to methodological innovation to assess and capture the emergence of values in a way that fully acknowledges intertwined SES. In the thesis I have demonstrated three ways in which to capture and inventory social-ecological connections situated in place:
- Eliciting the diversity of place meanings (through narratives and interviews in **Paper II**, and through photovoice in **Paper V**);
- recording indigenously defined ecotopes (**Paper II**); and
- biocultural practices and rituals (**Paper V**).

Expanding the logic of social-ecological inventories (Schultz et al. 2007), this may be useful in identifying the range of culturally sensitive and holistic assets or indicators on which to draw for enabling and facilitating stewardship of ecosystems.

8.2.2. Reflections on the utility of sense of place in multiple approaches to sustainability science

Sense of place is inherently interdisciplinary: multiple disciplines have contributed to understanding the nature of place and our relationships with place. In this thesis I have approached sense of place from multiple perspectives to shed light on social-ecological dynamics. Through **Paper I,** I have engaged with the systematic variation of the subjective through an approach to sense of place that embraces cause and effect relationships between concepts, prediction, and hypothesis testing. Through this approach, place meanings are the cognitive, descriptive elements of an overall attitude toward locations and can be engaged in comparative analysis using Likert-scale surveys to assess dimensions of place meaning (e.g. Jorgensen and Stedman 2001, 2006, Brehm et al. 2013). Place attachment is similarly viewed as the emotional component of sense of place as an attitude and also measured through Likert-scale surveys. **Paper I** argues that this epistemological approach to sense of place may be (and has been) more readily incorporated into SES research.

However, in the case study on the Wild Coast, I use sense of place to guide an interpretive investigation and analysis, demonstrating the flexibility of sense of place and particularly, place meaning, as a concept. **Papers II, III and V** focus on a broad definition of place meanings (akin to Yung et al. 2003) and to a lesser extent the attachment to place meanings. In my interpretive investigation of sense of place in the case study; emotions, values and meanings attributed to place were intertwined. In contrast to the approach of **Paper I**, it was not useful to tease apart values, emotions and cognitions, as I was interested in capturing the interconnectedness of these elements of sense of place. It was particularly important to be open to interpretations of nature and place from a neo-traditional or indigenous worldview, given the specific cultural context. In this way, sense of place and place meanings are used broadly in ways that are complementary and mutually reinforcing.

Furthermore, identifying place meanings as part of narratives **(Papers II and III)**, demonstrates an approach to place meaning as something that has been created discursively through the interview and through community discussions, but also through drawing on a repertoire of meaning as personally experienced in the landscape. Engaging with place meanings through narratives has facilitated my engagement with a more critical research stance concerning the consequences of scientific work and discourse on power balances and social justice (**Paper III**). In related work outside of this thesis that sought to compare and bring together the human geography lens of *territoire* and a SES lens (**Paper A**), we argue that the tradition of SES research has tended more towards an action research approach at the expense of reflexivity about potential inequities that may be propagated through conceptual choices in science that affects decision

making (Barreteau et al. in press). In **Paper A**, we suggest that sense of place may offer a bridge between these different stances in sustainability science. The flexibility of sense of place and in particular, place meaning as a concept, demonstrated in this thesis supports this assertion. Additionally, I would hypothesize that the exploration of sense of place from multiple epistemological approaches may be complementary and strengthen the analysis of human/ nature interactions.

Furthermore, the utility of sense of place for SES scholarship is demonstrated through the use of sense of place as a methodological lens in this thesis. There is increasing acknowledgement in sustainability science that in order to elicit local knowledge and perspectives, research should incorporate complementary knowledge systems that contribute to an enriched picture of a system, providing a platform from which to build consensus (Tengö et al. 2014, Brondizio et al. 2016). This requires methods and approaches that are able to engage cultural groups who have historically been marginalized in management processes (Bosak 2008, Castleden et al. 2009, Maclean and Cullen 2009) and may capture the pluralism of perspectives within communities (Cook 2015). Much of the sense of place research that has occurred within the field of sustainability science has been conducted in a Western and developed country context. However, a focus on sense of place and in particular, a broad definition of place meanings (in what is this place, what kind of place is this) was, in my experience, an evocative question in this cultural context. The application of place meanings as an analytical concept in a novel developing world setting with a unique and specific culture, was a good fit, where *isiXhosa* nouns describing ecotopes are also descriptions of place (**Paper II**). The focus on place meanings also facilitates the capture of ambiguities in this different cultural context, including both 'negative' and 'positive' attachment to meanings. This is especially the case in in **Paper V** (also emphasized by Manzo (2005)). Lastly, using sense of place as a focus for application of the photovoice method (with a heritage of facilitating expressions of local issues of concern (Wang and Burris 1997) and eliciting indigenous conceptualizations of nature and change (Maclean and Woodward 2013)) enabled the expression of a local sense of place. Sense of place as a lens for photovoice provided a platform for mutual understanding of social-ecological landscapes and change as well as enabling culturally appropriate and equitable coproduction of knowledge (discussed in more detail in **Paper B**).

9. Future research directions

Through Paper I, general arenas and questions for future engagement of sense of place concepts in SES research have been identified. These include, for example:

- Further attention to the dynamics of ecology on sense of place:
  How does ecosystem change, both gradual and rapid, affect sense of place? How do changing patterns of interactions with nature in places (e.g. through urbanization) alter meanings and attachment that may underpin stewardship?
- Scaling up stewardship behaviour from the individual to the global level:
  Sense of place is dominated by research being undertaken in a local context at a small scale. How do sense of place and stewardship scale up? Can attachment to a local place promote stewardship at a more general level, in a kind of 'rooted cosmopolitanism' (Chapin and Knapp 2015)?

Furthermore, the question of how to nurture stewardship of ecosystems in tele-connected rural-urban landscapes remains an important one. The exploratory approach to sense of place in this South African case study identified some of the ways in which a connection to the rural village (especially to nature and land) may provide a sense of well-being for urban household members undertaking circular migration. My data thus far suggests that access to cultural ecosystem services in rural community lands may be important for migrants to cope with the hardships of urban life, but more research is needed to understand how positive connections to place may support multiple aspects of human well-being, as well as motivations for stewardship actions. Additionally, more research is needed to characterise the generality and patterns of this emotional attachment to rural community lands in South Africa. The prevalence of circular migration between urban areas and community lands, suggests that it would be worth exploring these issues for other community lands in many previously-colonised and/or developing countries. The first step to answering this question could be achieved by conducting interviews and surveys sampling the population of urban dwellers. As shown in **Paper I,** sense of place also lends itself to assessment through quantitative measures of place attachment (e.g. through place attachment scales that include place dependence and place identity (Williams and Roggenbuck 1989, Jorgensen and Stedman 2001)) which could be engaged to test how place attachment and particular meanings (Jacquet and Stedman 2013) associated with the rural areas correlate with measures of well-being or quality of life measures (e.g. with scales used by Møller 2006).

The thesis findings suggest that attachment to ecologically-based place meanings may be a repository for ecological knowledge which in turn may be important for stimulating stewardship activities in the future. Future work should examine how knowledge may be stored and transmitted through cultural practices, beliefs and meanings associated with e.g. the rural *emakhaya*. In this case study, this could even focus on testing this hypothesis through surveys assessing place attachment, and place identity and the association with local ecological knowledge about particular species, agro-ecological practices or processes (e.g. land-use change as assessed by Chalmers and Fabricius (2007)).

Through this thesis I have suggested that investment in small-scale agriculture may be one potential pathway forward in this region. This is based both on a critique of the structural neglect of small holder agriculture during Apartheid but also by the democratic governments, as well as on the meanings of agriculture for cultural and individual identity that are identified through this thesis. Many people still describe themselves as farmers. However, like many authors working in this region (e.g. Bank and Minkley 2005, Hebinck and Lent 2007, Shackleton and Luckert 2015), I am also cognisant of the concerns of respondents – that many young people are no longer interested in farming. Is it worth investing in small-holder agriculture? What other development pathways might be combined with an attachment to the rural community lands and dissolve trap conditions? What level of bush encroachment in these areas makes returning to cultivation no longer economically worthwhile? To begin to answer these questions requires further investigation into both the motivations and aspirations of young people, as well as the factors that affect the abilities to engage in entrepreneurial small-holder farming. Again, survey data across multiple village landscapes would help to identify the patterns and potential thresholds in these motivations.

10. Conclusion

In conclusion, the five papers presented in this thesis contribute to the rich conversations about the role of values and cognitions in guiding transformations, that are currently taking place in sustainability science. The thesis has demonstrated that engagement with sense of place and culture is key for understanding inertia as well as transformative capacity in SES. By bringing some conceptual clarity to the use of sense of place in the study of SES, this thesis has contributed to building a platform from which to engage further with sense of place and culture, especially in the context of poverty alleviation and development work, where sense of place has not been explored much beforehand.

In the particular context of poverty alleviation and development interventions in South Africa, this thesis makes a statement about the importance of nature for culture and sense of place in the context of poverty. This insight may also be extended to other community-based land arrangements in Africa that are subject to the legacies of separate development and condescension towards local management capacities. Cultural connections to place contribute to a system's inertia and stability, but these connections are also dynamic and responsive and thus offer potential for supporting more inclusive pathways to well-being and dignity through stewardship.

It is my hope that the importance of attachment to agrarian lifestyles and cultural practices located in place that I have demonstrated can inform local debates about appropriate and inclusive poverty alleviation interventions. I also hope that it can inform debates about future livelihood trajectories in the former homelands and how this place attachment is connected to the well-being of urban labour migrants. The diversity of place meanings illustrated through this thesis both for the regions of the Wild Coast and the former Transkei, and the values associated with specific parts of the landscape, suggests that promoting multiple interventions would facilitate recognition of the plurality of values and maintain flexibility for households and the region.

Furthermore, I hope that these findings, generated through deep engagement with diverse local senses of place, can inform growing scholarship on the importance of culture and subjectivity for understanding traps and transformations, and further encourage respectful and empowering transdisciplinary collaboration.

11. Epilogue

On a short trip back to the fieldsite in December 2014, I had a small taste of what it might be like to return to this place as a migrant labourer, confronted with the familiar things you grew to love and the things that are hard to face. I am greeted warmly by familiar faces, who caught me up on news in the village. I pass by my favourite view of the river, noticing homesteads where a new structure has been built, or a satellite dish had been installed. I feel anxious at seeing the unploughed gardens. The rains were late, and I worry about how climate change may further marginalize livelihoods here. Young people tell me about how they want better roads, running water, good schools and jobs at *emakhaya*. While some of these amenities have come to the village, others can still only be found in the cities. There appears to be the political will and the economic means in South Africa to break the cycle of entrenched poverty in the former homelands. But I am conscious of how many poverty alleviation schemes have failed to be inclusive. The recent murder of a prominent critic of a mining project in Xolobeni (also in this region) and the highly publicized disputes that have ensued, add to a sense of growing anger at the failures and corruption of the current government regime.

Thinking back to Mda's novel, I remember the tensions between the fictional Believers and Non-believers. Non-believers trustingly accept a vision of progress and development. And the Believers stand in their way, suspicious of schemes that will only enrich certain people while restricting access to parts of their environment. Through this dramatized polarization of beliefs, Mda explores what progress and place really means to people. I am reminded of the tears of an informant when she told me how disappointed she was that the conservation project had been discontinued and that the opportunity for development had been lost. She blamed the failure of the conservation project on the 'backwardness' of the village and its people and their adherence to tradition. But, I also remember how proud she was of her cow-dung floor, and the big pot of *umgqusho* (samp and beans) on the fire. We sang together, ululating and dancing with the other women on the edge of a beautiful ridge, to send off her nephew to the initiation ritual - all of us emboldened by *umqombothi* beer. And it occurs to me again that these connections to land and culture are complex but enduring. For better and for worse, they have been formed through generations of experience with this land and shaped in the specific context of the last two centuries' separatist politics. In the face of global change, will future generations have the opportunity to develop a sense of place and steward the natural beauty and cultural rituals that form part of this place? Will they want to? Now more than ever, we need to embrace and fully engage with this plurality of values to find constructive and dynamic pathways forward for this fledgling democracy.

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14. Appendix

In this appendix I present the methods and data obtained from the initial exploratory pilot work conducted at the beginning of this study. The results illustrate the local understanding of social and ecological changes as well as significant events and drivers that lead to current trap dynamics. A portion of this data is presented in the appendix of **Paper II**, but the insights from this data contributed to the selection of themes and methods for **Papers II, III, IV and V**.

14.1. Initial exploratory approach: methods

Firstly, short **semi-structured interviews** were conducted with 38 rural residents in November and December 2012. Interviewees were identified by a snowball method selecting interviewees who were considered knowledgeable about agriculture, and forest resources. These interviews explored general perceptions of environmental and social changes in the area, perceptions of home, whether family members were working and where, whether or not families were involved in farming, ecosystem service use, etc. This is supplemented by observations and informal conversations in the course of exploring the area (Bernard 2011).

Secondly, we conducted **group timeline exercises** (in a manner similar to Bunce et al. 2010, Resilience Alliance 2010) to explore general perceptions of significant social-ecological changes, in these three villages and the area beyond, three formal focus groups were conducted (one in each village). We conducted three focus groups (one in each village) and each group included 14 participants (men and women, the majority above 45 years) who were considered knowledgeable about history, and/or the environment. Within these focus groups, smaller groups of participants discussed social and environmental events and changes that had affected life in the village. Participants wrote events or changes on a card and put these onto a paper 'timeline' which became the basis of a group discussion about changes and responses to social-ecological changes. Insights into the local understanding and importance of the agricultural decline, and the pre-eminence of development interventions focusing on small-scale agriculture as well as conservation projects, is carried through the rest of the empirical work. These insights are supplemented with a literature search and presented here in the Appendix. Additionally, key social and ecological changes from the three focus groups are presented in one timeline for the area as supplementary material in Paper II.

14.2. Key social-ecological changes experienced at the study site

The key social-ecological changes and events shown in Figure 3 of the Kappa represent the perceptions of the local people in the study, articulated through the timeline construction exercises. Approximate years of events are depicted when the dates varied slightly amongst the three villages, taking cognizance of diverse levels of literacy amongst the groups. Where large discrepancies among the data from the different villages occur, I make reference to those in this text. The data demonstrate an implicit understanding of cross-scale drivers as participants mention how events at the national level affect life in the village. I have also included data and insights from the literature that put these perceptions into context.

The oldest participant was born in 1927, but the majority of participants were born between 1940 and 1960. None had first-hand experience of events earlier than the 1930s, but had been told by elders that people first settled in the area in the mid to late 1800s. There was mention of chiefs and their successors, and of the cattle killing as a result of a prophecy made by teenage woman, Nong-qawuse, in the late 1850s, as well as two locust plagues in the 1930s and early 1940s, as historical events that framed the social-ecological context of life in the villages.

The first key period of experienced change (1950s to late 1960s), is the period in which participants began to perceive the impact of the Apartheid regime on their lives in the villages. During this period (and after), companies in need of labour (especially from the mines), would recruit young men in the villages and the men that joined up and went to work were known as '*amajoini*'. The participants also reference the introduction of the '*dompas*' as a result of the Apartheid pass laws that meant that one had to have a pass in order to work in the city, on the mines, and outside of the homeland.

Around the same time, another important effect of the new political regime is described by the participants: a forester was sent to the indigenous state forest (managed by the state forest, used by local residents for non-timber forest products) to oversee the planting of large stands of *Eucalyptus grandifolia* and *E. cloeziana* around the border of the indigenous forest. This was perceived by participants as the beginning of the invasion of other non-indigenous plants such as *Lantana camara* in the forest which participants (especially those from the village downstream of the forest) link to a reduction in productivity of indigenous trees, as well as reduced surface water availability for cattle. Locals also view the forester as liable for an increase in the forest hog population that began the abandonment of nearby fields. Restrictions were set by the provincial forestry department on harvesting of indigenous wood resources that locals perceived

to be their own. In 1960 the local chief was wounded in conflicts around proposals for Betterment planning in the area, locally understood as *itrasti:* government reforms that would limit yard size and relocate people so that their homes would be closer together. Participants spoke with pride of their resistance to Betterment plans through this conflict, and how Betterment schemes were never adopted in these specific villages. Participants assert that around the same time, their title deeds to land were confiscated.

There is also evidence of these events in the literature. The woodlot at this forest was established in 1957 by the Department of Forestry (Cocks et al. 2000), as one of many woodlots established near to communities in the homelands from the late nineteenth century to the 1980s. Authorities assumed that these woodlots would take the pressure off of indigenous forests in the Transkei in providing fuelwood and building material (Ham and Theron 2001) but this top-down solution was met with apathy in the communities (Cocks et al. 2000). Furthermore, publication of the Tomlinson Commission report of 1955 which highlights overcrowding and it's impacts on land degradation in the 'Bantu' areas renewed the villagization project (Betterment schemes[8]) of the government, in the Bantu areas of the Union of South Africa. Resistance to these schemes was also based on restrictions on livestock numbers (Hebinck and Lent 2007). The violent resistance to the local chief consenting these Betterment plans in the community, occurred in the same year as the Mpondo revolts, in Pondoland (north of the study site) where protests against the Bantu Authorities and Betterment schemes spanning many years, culminated in police opening fire on and killing 11 protesters (Kepe and Ntsebeza 2011).

Participants also mentioned some changes in labour migration to the cities and the mines during this period, and mention that many of them took the 'join' i.e. were recruited by labour agents to work on the mines in Johannesburg and surrounds. Southall (1994) shows how the number of migrants recruited on gold mines between 1965 and 1968 increased from 115,777 to 425,230.

The next phase is heralded by floods in the early 1970s (focus groups differed on the exact year) which cost many people their lives and their property (livestock, fields and houses were washed away). At the same time participants report a peak in cattle mortality from Red Water disease (*amanzi abomvu* in Xhosa, or *Bovine babesiosis*). Participants recognize that the disease had been present in the cattle population at low levels since the late 1950s, but perceived a

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[8] Three million people in the homeland areas were removed from their small clusters of houses to a single villages to facilitate more efficient land-use, and to increase soil conservation and agricultural development (de Wet, 1995). But it has had negative social, economic and social effects in many places that it has been implemented (Wet 1995, Hebinck and Lent 2007).

peak in about 1972/1973. Retrenchments after the uprising and riots in the cities in 1976 caused some migrants to return to the villages, and the reduced income decreased families' ability to plough. Participants also link the decline in herd sizes to an increase in field abandonment as many families no longer had enough oxen to plough large fields. In addition, participants mention bush encroachment of *Acacia karroo* in the abandoned fields around this time. Participants in one village also refer to a decline in vultures, cattle egrets and cranes, as well as thatching grass around this time.

De Klerk (2007) also describes a similar pattern for nearby Nqabarha area where a Red Water epidemic devastated cattle herds between 1975 and 1978, falling to 60% below the pre-disease numbers resulting in an estimated average of between 3 and 6 cattle per household these perceptions through a (De Klerk 2007). The effects in Nqabarha were particularly bad as grazing was in short supply after drought years of between 1972 and 1975 (De Klerk 2007) which does not fit with participants' perceptions in our case study. Andrew and Fox (2004) also mention how traders and trading companies left the Transkei in the 1960s and 1970s, affecting the demand for agricultural products and access to the markets.

In the next phase, there is mention by one village group of another peak in cattle deaths, and another flood, but this is not verified by the other groups. However, all groups mention the retrenchments from the mines in the late 1980s during which many migrants had to return home. This is closely followed by violence in Johannesburg and mining areas, particularly amongst IFP and ANC members in the run-up to the 1994 election, and forcing many migrants to return home during this time, some injured. The return home of so many men is linked with anger at not being able to provide for families and being unable to plough. Similarly, De Klerk (2007) summarizes the sharp decline in migrant labour opportunities for Transkei residents, from the mid-1980s beginning with a collapse in the value of the Rand due to political unrest and a the drop in the gold price (Southall 1994, De Klerk 2007). The closure of many industries in regional centres such as Butterworth (Bank and Minkley 2005) and the domestic political crisis in the early 1990s mean that more migrants lose their jobs and are unable to find alternative work.

In the last phase, the democratic era brought hope of new job opportunities to the participants as well as greater freedom of mobility to people who sought jobs in the cities. Aspects of democracy highlighted by participants included the ability to vote, and the freedom to establish entrepreneurial projects such as farming cooperatives. This is in line with literature about the area, for example, De Klerk (2007) identifies this as a period of livelihood diversification and increasing cash circulation in the villages. Broader access to social welfare grants was mentioned as an important change by one of the three focus groups. This increase in the proportion of people with access to social welfare grants is re-

garded as an important change in the livelihood dynamics of the area by many researchers (Posel et al. 2006, De Klerk 2007, Shackleton et al. 2015). Tension over the role of the traditional authorities in the new democracy was also mentioned as was dissatisfaction with restrictions on marine harvesting rates. Older participants also complained of negative lifestyle changes since the beginning of democracy including a sense that youth are too concerned with rights and are irresponsible, which they link to a perceived increase in crime in the rural areas. This era is also associated with reliance on purchased food, and an awareness of high incidences of hypertension, HIV, and diabetes. The establishment of the first high school in the area in 1995 and the introduction of electricity infrastructure and potable water in the form of communal taps in 2008 were perceived as drastically increasing quality of life.

Further exploration of the events of this timeline showed that the biggest social-ecological changes were due to the interaction between agriculture and labour migration. Here we briefly describe local's perceptions of changes in agriculture in relation to labour migration. These perceptions are also supplemented with insights from the literature.

14.3. Labour migration and the multiple causes of deagrarianization

The decline of agriculture that respondents emphasize in the timeline, has occurred in multiple ways and due to multiple and often interacting causes. Firstly, participants observe that cattle numbers have declined and that it is more common to own goats and pigs than cattle. Andrew and Fox (2004) demonstrate the same trend for a nearby municipality by showing that the size of livestock enclosures in nearby village, Shixini, declined but that many households gained small livestock enclosures between 1942 and 1982. Studies also show that cattle ownership in the former Transkei has become more concentrated under few cattle owners (Beinart 1992, Ainslie 2005).

Secondly, field abandonment has occurred on a large scale, at different rates, and for different reasons at different times. Respondents indicate that the abandonment of fields occurred for the first time in the 1950s, explaining how fields at the river and near the forest, were abandoned due to destruction of crops by hogs from the forest and unsupervised cattle. Participants also link the decline garden cultivation and abandonment of fields to death of cattle, from late 1950s and particularly after the Red Water epidemic in the 1970s. Andrew and Fox (2004) report a similar substantial decrease in the area of fields (49% between 1962 and 1982) when field area between 1942 and 1962 had remained fairly stable (only 3% decrease) in Shixini. Respondents in our case study villages,

attribute field abandonment to a lack of labour for ploughing due to household members engaging in migrant labour (also shown in Beinart's (1992) finding of an increase in migration from the Transkei in the 1960s and 1970s). Respondents also describe how abandonment at this time is attributed to more youth attending school than before, and neglecting to supervise livestock who then destroyed crops.

Respondents, especially older men, used to send remittances to their homes, every two months, when they were employed in the cities and mines during this era. The family members who remained in the rural home would be responsible for the everyday running of the household, for the cultivation of the family's field or garden and for the care of the livestock. Migrants also sent extra money for agricultural inputs such as seeds, tractor hire, cattle, or if the household had decided that they wanted to build another structure at the homestead. Migrants returned home for a few weeks to a month, often in December, when they had leave from their jobs, sometimes also bringing purchased livestock with them.

The loss of jobs around 1976 in conjunction with the flood damage, and the decline in field cultivation and cattle ownership, meant that many families faced financial hardships. The years between 1985 and 1994 marked a scarcity of work for many respondents due to loss of jobs in the mining and industrial sectors as well as violent conflicts and the political instability that accompanied the end of Apartheid. In the wake of the collapse of the formal migrant labour system at the end of Apartheid, has coincided with urban migrants taking up poorly paid insecure contract work in (Cox et al. 2004, Todes et al. 2010). Fewer secure jobs for migrant household members has then been accompanied by field abandonment, shown by De Klerk (2007) who found that field area decreased by 76% from 1972 to 1995. Participants have also emphasized that this large scale abandonment of fields during different periods, has resulted in a patchwork of *Acacia karroo* revegetation and encroachment in the derelict fields (*amafusi*), at different levels of succession from grassland to woodland (Berliner 2011, Shackleton et al. 2013).

Nevertheless, when extensive fields some distance from homesteads were abandoned, many homesteads switched to cultivating gardens. Gardens are adjacent to homesteads, and smaller in size, and mostly consist of maize, intercropped with beans and/or pumpkins. Studies in nearby villages in the Transkei show that while field abandonment decreased, garden size increased substantially in the 1960s and 1970s (Andrew and Fox 2004, De Klerk 2007). While the overall area under cultivation has decreased, Andrew and Fox (2004) show that the switch to garden cultivation represents intensification. They illustrate that yields from gardens are much higher due to the effective use of limited resources and the intercropping with legumes that increase soil nitrogen.

Respondents in our study were concerned that many people had also begun to cultivate smaller portions of their gardens, or not at all, especially in the preceding few years. Reasons given for this include the high cost of inputs such as pesticide and fertilizer (as many people no longer have access to cattle manure), the expense of hiring one of the three tractors in the area, the uncertainty whether one would be able to reserve time with the tractor, and the costs of replacing fences that would keep hogs, and livestock from destroying crops.

A dominant trend in agriculture in the former Transkei, especially in the literature, is one of agricultural decline and deagrarianization in which rural livelihoods are reoriented towards non-agricultural livelihoods and occupations (Bryceson 1996). We observed some evidence of the diversification of livelihoods mentioned by other studies in the area (De Klerk 2007, Iiyama 2009, Hajdu 2005) where local people who operated taxis, ran tuck-shops from their houses and engaged in construction of houses in the village.

14.4. Literature Cited

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