



**Report on the
Resilience Think Tank:
Interrogating resilience in different contexts**



28 March 2019

University of Cape Town, South Africa

co-hosted by the
African Climate and Development Initiative (ACDI) at the University of Cape Town
and the
Centre for Complex Systems in Transition (CST) at Stellenbosch University



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Photos by Ryan Fortune Photography.

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INTRODUCTION

The concept of resilience has recently become much more central to many donor calls and various government policies and strategies. While there have been shifts in the understanding of resilience over the past decade, there is still much debate, contestation, and lack of clarity on: what the term means; for whom; how it can be measured; how it relates to concepts such as vulnerability, well-being, and transformation; and whether it is a useful framework and entry point for responding to the dynamics of global change.

A Resilience Think Tank to explore these questions was co-hosted on the 28th March by the African Development and Climate Initiative (ACDI) from the University of Cape Town and the Centre for Complex Systems in Transition (CST) from Stellenbosch University. This day provided an opportunity for academics, students, and practitioners to share and appreciate varying understandings (both positive and negative) of the concept of resilience from both a theoretical/academic and practical perspective.

The objectives of the Think Tank were to:

- Share and appreciate the varying theoretical and disciplinary understandings of resilience;
- Learn how resilience has been put into practice and the challenges associated with this;
- Open up the conversation and reflect on concerns, issues, and critiques related to resilience;
- Explore the relationship of resilience to similar and alternative concepts; and
- Ensure all participants leave the room with some new perspectives on resilience.



THINK TANK PROCESS AND OVERVIEW

The day began with two scene-setting talks by academics presenting on how they understand and use resilience in their research drawing on social-ecological systems thinking and within the field of psychology. The remainder of the day was structured around two panels of experts sharing on how they understand or use resilience within their fields of research and practice, followed by two sets of guided roundtable discussions that were anchored by the panellists. A detailed programme and the biographies of the speakers and panellists are available at the end of this report.

The first panel comprised five academics from a diversity of disciplinary backgrounds who shared their perspectives on resilience and its use across their respective academic domains, including urban governance, securities studies, disaster risk studies, business studies, and environmental humanities. The guided roundtable discussion explored everyone's reactions to the different conceptualisations of resilience, the perceived strengths and weaknesses of resilience and its different conceptualisations, and how resilience as a concept could be strengthened.

The second panel comprised four speakers speaking on how they have integrated or approached the concept of resilience within their different work contexts, including from a local and regional government perspective and a non-governmental organisation (NGO) perspective. The guided roundtable discussion explored everyone's reactions to the use of resilience in practice, how the application of resilience in different contexts relates to how each participant uses resilience practically, and what everyone's perception is of the concept's practical strengths and weaknesses.

The day ended with individual reflections on what some of the practical, policy, and research implications might be of using resilience as an organising concept for responding to global change, considering the previous discussions and presentations on resilience.

RESOURCES

Presentations from the day and **key readings** mentioned throughout the day can be accessed on Dropbox:

https://www.dropbox.com/sh/d2qzhsy7a7r7kz1/AAB7AM_IA-gdR_CHjzKkaQz3a?dl=0

A short video capturing key insights from the day was produced by Blackhole Productions, to build on the broader narrative of what resilience means in theory and practice. This video can be accessed on CST's Resilience Community of Practice Resource Channel:

<https://www.youtube.com/watch?v=6132eJdwZYA>

Photos from the day were taken by Ryan Fortune Photography and can be viewed here:

<https://ryanfortunephotography.pixieset.com/acdicstresiliencethinktank/>

RESILIENCE IN THEORY: UNPACKING DIFFERENT PERSPECTIVES AND MEANINGS

Reinette (Oonsie) Biggs presented on how resilience is understood from a **social-ecological systems** perspective. Oonsie spoke about the new geological era in which we live, the Anthropocene, and the key challenges and human impacts of this era. The dramatic human-induced changes we are seeing have pushed the earth out of safe operating space, which requires fundamental shifts in how we manage the world we live in due to unprecedented, novel, and rapidly changing conditions. The use of resilience is growing rapidly and has been applied across diverse fields, including beyond academia and into practice. This has resulted in diverse definitions of resilience between and within fields. A social-ecological systems' definition of resilience draws on complexity thinking; it assumes that social and ecological aspects of the world are deeply intertwined, and that social-ecological systems are radically open and subject to emergent effects and non-linear tipping points. Oonsie reflected on some of the commonalities between diverse definitions of resilience, which include the capacity of systems to cope with change and respond to disturbances by 1) withstanding or resisting; 2) recovering; and 3) transforming. Oonsie argued that a system is not considered resilient if it responds by returning to a less desirable state. When determining resilience, judgements need to be made about who or what is resilient; this required careful thinking about the processes people engage in to make those decisions.

“Resilience has the potential to help reframe our thinking and planning, especially to be better able to deal with change, uncertainty, unknowability, and normativity.”

- Oonsie Biggs

Linda Theron presented next on how resilience is used and understood within the field of **psychology**. Recognising that sub-Saharan adolescents are the fastest growing population in Africa, there is a need to understand and undo the risks that are jeopardising the wellbeing and physical and mental health of Africa's youth. While it is important to understand the risks, it is also important to understand what promotes resilience. One of the methods used to understand the lived experiences of resilience of adolescents is body maps. Linda defined resilience within the field of psychology as the capacity to adapt successfully to the disturbances that threaten the system. Successful adaptation from the psychology field is post-traumatic growth: i.e., people developing insight and some sort of transformation after experiencing a life-threatening or horrible event. It is not about being immune to trauma or challenges, but being able to keep going; “bending, not breaking”. Linda explained how adaptive psychological mechanisms (e.g., agency, attachment, problem-solving, self-regulation, meaning-making) are not only rooted in the individual, but in the ecology, which is the social, political, and community systems that individuals are embedded in. Therefore, families, schools, and communities need to be equipped to work with adolescents and to help build their resilience.

“Resilience is the capacity of a system (e.g., an adolescent) to adjust well to any stressor which is so significant or so severe that it has the potential to disrupt or to change how that system is functioning or developing.”

- Linda Theron

A panel of five academics then presented on how they engage with the concept of resilience within their discipline. Gina Ziervogel from the Department of Environmental and Geographical Science at UCT presented on resilience from an **urban governance** perspective. Urban governance focuses at the city and local level and considers the politics of urban resilience. Urban governance emphasises the importance of power and relations, and how diverse people can participate in key processes and ‘negotiate resilience’.

“Everybody feels they need more resilience. At what cost is that? Trade-offs in resilience Is such an important concept. Who wants to give away power? Nobody wants to give away power, but we have to start shifting it. So how do we engage in those difficult conversations?”

- Gina Ziervogel

Nicholas Simpson from the Department of Public Law at UCT spoke about resilience from a **securities studies** perspective. He explained what resilience policing means in the context of the Anthropocene and cyber-security. Nicholas mentioned how a number of major banks and larger social media companies have started naming their in-house cyber-security units as “resilience units”; this framing views resilience as a type of preparedness and response action needed to manage cyber-related challenges. Examples of resilience policing by civil society were also given, such as climate-gating, which is the process of people going off-grid to build their resilience to climate-related stresses. Pathological resilience was also introduced as a concept to capture examples of an individual’s resilience that impacts negatively on and undermines another person’s resilience.

Dewald van Niekerk from the African Centre for Disaster Studies at North West University explained how resilience is used within **disaster risk studies**. He argued that resilience is no longer seen as the opposite of vulnerability, but that building capacity and resilience can help to offset vulnerability. Disaster risk studies recognises the agency within people when thinking about resilience, and the role that humans can play in preventing and mitigating the impacts of hazards. The challenge of measuring resilience, which can be very subjective, was raised.

Hamieda Parker from the Graduate School of Business at UCT defined resilience from a **business studies perspective**, specifically in the context of organisational and business literature. It was highlighted that empirical studies on resilience within business studies has only been done very recently. Examples of resilience in businesses were presented, including the finding that smaller firms in an African context are often more resilient to economic shocks and stresses.

“Small firms seem to be much more resilient than large firms. Our emerging economy contexts seem to be preparing our firms to be more resilient. Having the resources is not enough; you need the capabilities to understand how to use the resources and reconfigure them. The firms that are the most successful and the most resilient are those that are experimenting.”

- Hamieda Parker

Finally, Lesley Green from the School of African and Gender Studies at UCT shared her thoughts on resilience from an **environmental humanities perspective**. She argued that within social-ecological systems, it is often difficult to think about infrastructure, and social-ecological systems thinking has not found a happy home within social sciences thinking. It was argued that there may need to be a shift from resilience to ‘resourcefulness’, and that resilience is often externally defined.

In the discussion that followed, questions around power and who makes the decisions about resilience were posed. There were also questions about the principles of resilience and whether they resonate across disciplines. One comment was about how the widespread use of resilience indicates that there is something about the concept that is appealing and therefore being used. However, caution was given to ensure that resilience was defined clearly, and people were explicit about how they were using the concept. Finally, the concept of ‘transformative resilience’ was discussed, as well as a question on where one should intervene in a system to build resilience.



Roundtable Discussion and Reflection on Panel 1

Following the first panel presentations, roundtable discussions and reflections were guided by three questions:

1. What is your immediate reaction to what you have heard?
2. How is resilience useful as a concept?
3. What are the strengths and weaknesses of resilience?

The roundtable discussions allowed different issues to emerge, in response to the panellists’ presentations and the questions guiding the discussions. From the first set of roundtable discussions, the following 7 key themes emerged:

- ***Resilience as a boundary object***
Resilience is seen as the ultimate transdisciplinary tool that could be used as a bridge-builder or ‘boundary object’. Resilience is a useful concept for bringing people together from different disciplines; it is not owned by one group of people. Although there are commonalities across disciplines, we need to be explicit about what resilience means to each discipline/context – resilience of what, for whom, to what, etc. In using the concept of resilience, there also seems to be interconnectedness between disciplines, concepts, scales, and sectors.
- ***Resilience of the individual versus the system***
Two different concepts of resilience emerged from the talks on social-ecological resilience and psychological resilience: resilience of the system versus resilience of the individual. This raised questions of the ethics of building resilience if it is an embodied property of an individual. Is it okay, for example, to come in and build resilience in a system when resilience is very personal and embodied in an individual?
- ***Definitions of resilience***
It emerged that there is still push-back on the concept and that the concept of resilience or even ‘system’ is not agreed upon by all. Resilience is a complex term that has different meanings for different fields, but ultimately the goal should be the same. There has been much emphasis within disaster discourse to identify “vulnerability TO WHAT”, but within resilience discussions, people often forget to say “resilience TO WHAT” – this needs more emphasis.
- ***Resilience in practice***
What does resilience mean on the ground and how do you explain resilience to people on the ground? There seems to be a divide between what is happening in practice versus what is happening in academia. There are challenges and uncertainties with operationalising and measuring resilience. We already have sustainability and vulnerability indicators; what does resilience bring that is unique? When talking about resilience, some found it refreshing that people are talking about power, equity, and inclusion; although some argued that there is still an absence of considering power dynamics in resilience thinking.
- ***Resilience as a pathway***
Resilience is not seen as an end-goal but is useful for thinking through pathways into the future. It is accepted that building resilience is not a straight line. Resilience should be seen as a strategy for navigating a vessel through turbulent waters.
- ***Measuring resilience***
Metrics for measuring resilience are still lacking. Most people felt that you cannot measure resilience - “Can you measure love?” - How do we define what we are looking for? The push for quantitative data is coming from politicians and funders, so it cannot be ignored, but you need to raise questions of what is most useful at the ground level. Again, the issue of ‘who’ is making decisions, resilience of ‘whom’ and ‘to what’, needs to be highlighted. Some felt that the problem with measuring resilience is that it is very context-specific; you cannot measure resilience because you cannot compare different communities’ and cities’ resilience.
- ***Issues of scale and context***
Need to be clear about the scale being used as a baseline and to define the system – individual, community, region, world. What does this mean in terms of short-term, long-term, shifting baselines, definitions, pathways to the future? Important to also acknowledge the temporal scale and how resilience has changed over time. The level of decision-making is also important: state versus community. Resilience is not a one-size-fits-all process; context is important.

RESILIENCE IN PRACTICE: VARYING VIEWS, APPLICATIONS, AND APPROACHES

The second panel comprised four practitioners working with resilience in cities and communities in South Africa and African cities. Cayley Green spoke about the Resilience strategy that the **City of Cape Town** is developing as part of the global 100 Resilient Cities (100RC) network. Resilience in this strategy is defined as the “ability of individuals, communities, businesses, organisations, systems to survive, adapt and thrive, no matter what chronic stress or acute shock they face.” This definition highlights two important themes: 1) it is not just about the city’s government and what the government can do; and 2) resilience is not just about shocks, but also the stresses that undermine when shocks hit. The Resilience Strategy has five pillars: 1) the family and the community (e.g., psychological resilience and trauma); 2) climate and connection (e.g., mobility); 3) the economy (e.g., jobs); 4) shocks (e.g., disasters); and 5) city governance (e.g., planning).

“Resilience is not just about the city government. A lot of resilience strategies that are written by governments focus on what we can do as a government. But this is about what all actors operating in the city can do to build resilience.”

- Cayley Green

Nachi Majoe spoke about **ICLEI Africa** supports cities, towns, and subnational governments in their work. Resilience is conceptualised by ICLEI as “anticipating, preventing, absorbing, and recovering from shocks and stresses, in particular those that are brought on by environmental, technological, social, and demographic change, in order to be able to improve their essential basic responses or structures and functions”. When ICLEI go into a city, they help local governments and other stakeholders develop municipal strategies that prepare for new risks. One of the challenges Nachi highlighted is that in many African countries, the money does not find its way back to the local level where there is the interface with shocks and stresses. Another challenge is the lack of mainstreaming resilience into city plans; resilience is often seen as something that is separate; but if it is mainstreamed, then it is possible to get political support and funding.



Charlton Ziervogel presented on how the **Community Organisation Resource Centre (CORC)** supports communities and informal settlement dwellers across South Africa through savings, data collection, exchanges (horizontal learning), and partnerships. Charlton reflected on how the concept of resilience was not on their agenda three years ago, but because of international funding, resilience has become prominent in their work. Resilience is summed up as “the ability of a person to get up again after being knocked down.” Data collection plays a critical role in helping to understand and map resilience in informal settlement communities and influence local government’s strategies. CORC realised that some of the work they already do speak to the concept of resilience and are methods of building resilience.

Finally, Greg Brill presented on the **Western Cape’s Green Economy Programme** and how they started framing their thinking on resilience within the province. Long-term economic resilience requires sustainable resource use, adaptation to current and future crises, and less carbon dependency. Gregg reflected on how resilience is not about returning to the status quo, but about transferring to a state where we are more adaptive and dynamic. He spoke about how an economy that is unresponsive to change may indicate functional and structural rigidity. There is a need to unlock regulations to create more enabling environments. In adopting a transformative approach, Gregg argued that crises may in fact lead towards more desirable states. Finally, there is a need to foster partnerships to overcome silo-based thinking and approaches.

“In many cases, resilience is about the ability of the system to transform; not trying to return to the status quo, but rather becoming a more adaptive and sustainable system.”

- Gregg Brill



Roundtable Discussion and Reflection on Panel 2

Following the second panel presentations, roundtable discussions and reflections were guided by three questions:

1. What is your immediate reaction to what you have heard?
2. How does the application of resilience in different contexts relate to the way you have used the concept practically?
3. What is your perception of the practical strengths and weaknesses of resilience?

From the second set of roundtable discussions, the following 8 key themes emerged:

- ***Resilience in theory and practice***

This panel emphasised that there is increasing engagement between academics and practitioners; although there still seems to be a practitioner-academic divide. Academics struggle with interdisciplinarity but in practice it is happening. Today we heard for the first time about resilience in psychology; in the practice panel however, trauma was raised in the City of Cape Town's resilience strategy – so practice seems to be working with resilience in ways that academics have not thought of. Definition of resilience by practitioners is very different to theoretical definitions by academics – seems also that academics spend too much time in their own heads, debating definitions of resilience, but practice has moved on and is applying the concept in their everyday work. Are academics just over-problematising the concept of resilience? The starting point is not always clear – resilience of what and for whom? Resilience is context-specific; it can be very broad or specific. How can we operationalize resilience to work at multiple scales? What does this mean for funders, citizens, experts, government, etc. If we do our job well at building resilience, we should work ourselves out of a job; we need to embed this way of thinking in all organizations.

- ***Resilience as a buzzword***

Shifting buzzwords are indicative of a learning process; maybe these changing concepts reflect that we are learning as a society. Participants wondered about the sustainability of the focus on funding, research and practice on resilience. Is it not just the next flavour of the month?

- ***Breaking down silos***

Need to break down silos, but still see silos, even in academia – local government not speaking to each other; this is visible in parallel projects. Concept of resilience can be very misunderstood – this has implications for working across departments. Resilience used to frame government engagement. Not all departments are able to or know how to work in partnership. NGOs can be a link between government departments. The need for a “transversal approach”, which is the word used by the City of Cape Town for working with others. There are opportunities for vertical and horizontal partnerships.

- ***Challenges of resilience***

Challenge of mapping resilience – priority mapping, severity of vulnerability versus number of people affected, very challenging to prioritize. Resilience for whom? People do not necessarily live where they obtain their resources – so mapping resilience is challenging. Are there processes to resolve some of these challenges? Who is making the decisions/assumptions, and are they transparent? Some people use the values, rules, knowledge framework. How do we ensure collaboration? We also need leadership. Often institutional and financial barriers to building resilience. Interesting that funding is driving the ‘resilience’ focus – and this raises questions of

the power behind it. Municipality needs to find other ways of developing revenue; we need to be creative and find new ways to generate revenue. Are there processes to resolve some of the challenges? Who is deciding? Lack of communication between levels of government – and lack of engagement with people on the ground.

- **Resilience versus sustainability**

What is the difference between sustainability and resilience? Some agreed that resilience is placed within sustainability, and that resilience can lead to sustainability. There are feedbacks within and between the two. Relationships between resilience and sustainability - resilience seems to be more about the immediate.

- **Measuring resilience**

Measuring resilience – can measure some aspects of resilience, but not all of it. The need to measure resilience because if something is not measured, it is not valued. Resilience is not an endpoint but allows us pathways. This also has implications for measuring resilience because it is a moving target.

- **Resilience and learning**

Need to have a long-term perspective of resilience; if people can see patterns, then they can engage in dialogue on resilience. Resilience is about building redundancy; creating a level of buffer to future-proof against future shocks and stresses. A learning exchange between cities is vital. Need safe spaces for experimentation, which also means safe spaces for failure. How do we respond to short-term issues with short term and long-term responses? How do we build value for long-term responses? Local knowledge needs to be incorporated. Educating the public about resilience. We should be teaching students practical applications of resilience.

- **Resilience, responsibility, power, and inclusiveness / engagement**

Questions were raised about public participation and engagement with civil society – to what extent is it just a tick box exercise? There is strength in civil society, and this needs to be acknowledged better. Need to empower individual households. Resilience is not the city's responsibility alone. Need transformative change. Need to consider perceptions and salience to local context, in order to get buy-in. The importance of building trust and representation of diverse people and role-players. People at a level of influence need to embody/understand resilience.



REFLECTION: RESEARCH GAPS, INNOVATIVE PRACTICE, AND POLICY OPPORTUNITIES

Nadia Sitas asked all participants to reflect on the day and on the concept of resilience, particularly with regard to key research gaps, some innovative resilience practices, and potential opportunities to influence policy. A selection of responses from participants are provided below.

THE KEY RESEARCH GAPS

- ***Resilience framing***
 - Does the resilience of one system (e.g., a city) matter for the resilience of other systems (e.g., families)?
 - Clarifying the distinction/overlap between capacity, resourcefulness, vulnerability, and capability in resilience.
 - Agreement or clear operationalisation of resilience.
 - Understanding how to integrate psychological resilience into social-ecological systems and governance and social justice.
- ***Scale of resilience***
 - How to implement and connect resilience across scales?
 - We know resilience of individuals matters, as well as resilience of systems; but how do we integrate the two? These are mostly researched separately but their interaction is what matters.
 - Understanding why some are more resilient than others – the individual versus the collective.
- ***Resilience funding***
 - How to build flexibility into government budgeting to allow for pilot projects and innovation, even if that results in failure.
- ***Understanding resilience in theory and in practice***
 - Tighter connection between academic framings of the term and how it is actually used – more empirical and less normative.
 - Learning more across disciplines; e.g., those represented here today.
 - The problem is that academics come in wanting knowledge; what does the community get back? Come back with findings, give back!
 - Interdisciplinary research.
 - Is resilience experienced by different social groups within the same system (e.g., women, children, adults, farmers)?
 - Aligning practice with theory and incorporating a holistic understanding of resilience into definitions.
 - Research as engagement practice.
 - Tensions and trade-offs.
 - False dichotomy between research and practice.
- ***Resilience building***
 - How can we know when and where to build resilience and also to break resilience (i.e., power)?
 - How to create resilient urban landscapes?
 - Resilience in my opinion is only built out of a disaster or a breakdown; resilience must be built for future possible disasters or breakdown.

- Influence of local/national government policies and processes on resilience-building strategies (especially in the South African context).
- Understanding resilience responses/actions in relation to scales – space and time and when these responses/actions work in synergy and then at cross-purposes.
- **Measuring resilience**
 - Comparative measurement of resilience.
 - Whether and when and how to appropriately measure resilience – must be context-specific.
 - I think key research gaps lie around measuring resilience. This includes indicators, ethics of measuring (i.e., whether it should/can be measured).
- **Resilience methods and data**
 - Long-term high-resolution data on changes in ecosystem services and drivers (climate and land-use disturbance) – applied palae-ecological studies to inform land-use management.
 - Systems dynamics modelling of social-ecological systems.
 - Documenting examples of where resilience was strengthened and why.

INNOVATIVE RESILIENCE PRACTICES

- Wayfinder.
- Those that address power relations and engage across a range of actors.
- On the participation/communication principle: the creation of public forums (multi-actor) to discuss ideas, co-construct proposals, and take decisions.
- I think that a best practice thing or even examples of good resilience will be found in small and local communication after disaster.
- Co-creation, engaged scholarship processes.
- Demonstration projects (experimentation that is allowed to fail).
- City of Cape Town – foregrounding trauma.
- Bottom-up resilience strategies – door-to-door to understand contexts – e.g., City of Cape Town.
- Looking at local-traditional past practices.
- Biomimicry – study of natural systems and ability of plants, animals, ecosystem to adapt or bounce back after an extreme event.
- More flexible government funding systems to facilitate inter-departmental collaboration.
- Development of fully-integrated landscape restoration beyond individual projects.
- Bottom-up processes (better at identifying local shocks and stressors).
- Incorporating past (+2000 years) change into the current and future land-use planning and future scenarios – therefore using a historical range of variability to identify safe operating spaces.
- Resilience must be put out into practice on a daily basis; e.g., resilience courses from high school to tertiary - some practical courses would help with understanding resilience better.



POTENTIAL OPPORTUNITIES TO INFLUENCE POLICY

- Collect a wide range of perceptions (from different types of actors) on how to respond to disturbance and co-create alternative paths towards transformation.
- Embedded research with a sociology of resilience.
- Work with policymakers and communities.
- Research and engagement should not be thought of as separate spheres.
- Policy agreement across scales (natural / municipal / provincial).
- Better alignment of policies (e.g., food, water, etc.), especially those related to the achievement of the Sustainable Development Goals (SDGs) and consulting researchers in development.
- Mainstreaming resilience into planning law and prescribing minimum thresholds.
- Need to enhance knowledge on the concept in municipalities.
- At what level? There are plenty of opportunities at grassroots – are we using them optimally?
- Bring funders into processes.
- Videos from today, sharing the wide perspectives on resilience.
- Report back research work to communities – community engagement and getting community's needs and priorities.

CONCLUSION

Gina Ziervogel concluded the day with the following thoughts: Is resilience about transformation or supporting the status quo? Is it about bouncing back or bouncing forward? Is it about academics looking into it or practitioners using it? Is it about building or breaking? Is it about individuals or the system? Is it about now or later? Is it about looking for opportunities or is it hindering us from looking at other priorities? Is it an outcome or a process? Is it something where we can experiment and it's safe to fail, or is it something where we're trying to prove concepts that we're already using?

THINK TANK PROGRAMME

TEA, COFFEE, OTHER REFRESHMENTS AND SNACKS AVAILABLE THROUGHOUT THE DAY

Time	What	Timing	Facilitator
ARRIVAL, WELCOME AND GETTING TO KNOW ONE ANOTHER			
9:30 – 10:00	Coffee and meet and greet	30 mins	Sheona Shackleton
10:00 – 10:10	Short welcome and purpose and overview of the day	10 mins	Sheona Shackleton
UNPACKING RESILIENCE: DIFFERENTIATED MEANINGS AND UNDERSTANDINGS (THEORETICAL FOCUS)			
10:15 – 11:15	Scene setting talks by academic experts covering different theoretical perspectives of resilience 1) Prof Oonsie Biggs: Tackling the Anthropocene challenge: Social-ecological resilience thinking 2) Prof Linda Theron: Innovations in the theory and practice of psychological resilience	60 mins 20 mins each; 20 mins for discussion	Sheona Shackleton
11:15 – 12:15	Panel 1: Five academics share their perspectives on resilience and its use across their different academic domains Panellists: Gina Ziervogel (urban governance) Nick Simpson (securities studies) Dewald Van Niekerk (disaster risk reduction) Hamieda Parker (business studies) Lesley Green (environmental humanities)	60 mins 7 mins each; 25 mins for discussion	Sheona Shackleton
LUNCH 12:15 – 13:10 (please be seated before 13.15 – bring your lunch to the table if you like)			
13:15 – 14:15	Guided round table discussions on Panel 1. Panellists will anchor the tables. Questions for discussion: <ul style="list-style-type: none"> • What is your immediate reaction to what you’ve heard? • How do the different conceptualisations relate to the way you use resilience? • What is your perception of the strengths and weaknesses of resilience as a concept and the different conceptualisations? • How can we strengthen the concept (or can we?)? 	60 mins 40 mins around tables; 20 mins for discussion	Scott Drimie
RESILIENCE IN PRACTICE: VARYING VIEWS AND APPROACHES (APPLICATION FOCUS)			
14:15 – 15:15	Panel 2: Four speakers share their stories of resilience in their different work contexts Panellists: Cayley Green (City of Cape Town) Nachi Majoe (ICLEI Africa) Charlton Ziervogel (CORC) Gregg Brill (DEDAT)	60 mins 7 mins each; 30 mins for discussion	Nadia Sitas
15:15 – 16:15	Guided round table discussions on Panel 2. Questions for discussion: <ul style="list-style-type: none"> • What is your immediate reaction to what you’ve heard? • How does the application of resilience in the different contexts relate to the way you have used it practically? • What is your perception of its practical strengths and weaknesses? 	60 mins 40 mins around tables; 20 mins for discussion	Scott Drimie
WRAP UP AND CLOSURE - WHAT HAVE WE LEARNED?			
16:15 – 16:30	Short learning exercise, summary and closure	15 mins	Gina Ziervogel and Nadia Sitas

BIOGRAPHIES: SPEAKERS AND PANELLISTS

About our speakers

Oonsie Biggs: Tackling the Anthropocene Challenge: Social-Ecological Resilience Thinking

We live in the Anthropocene, a new geological era where the scale, speed and connectivity of human activities are profoundly changing the functioning of the Earth, with potentially large consequences for human societies and the Biosphere. Social-ecological resilience is an important emerging field within the broader area of sustainability science that aims to provide insight into this challenge, and inform transformations to more sustainable pathways of development. The notion of social-ecological systems (SES) conceptualizes humanity and ecosystems as intertwined, complex adaptive systems. Social-ecological resilience is seen as an emergent property of SES, focusing specifically on the capacity of SES to deal with change, especially unexpected change, in ways that continue to support human well-being. This presentation introduces the concept of social-ecological resilience, discusses how it has changed and progressed over time, and the assumptions associated with the approach. It then unpacks the different ways in which the concept of resilience is being applied in sustainability research and practice, and gives an overview of the main dimensions and principles that have been identified as important to fostering social-ecological resilience for sustainability.

About Oonsie: Reinette (Oonsie) Biggs holds a DST/NRF South African Research Chair (SARChI) in Social-Ecological Systems and Resilience and is co-director of the Centre for Complex Systems in Transition (CST) at Stellenbosch University (<https://www0.sun.ac.za/cst/>). She is also affiliated with the Stockholm Resilience Centre in Sweden, where she was previously based. Her research focuses on advancing theory and methods for understanding the dynamics of complex adaptive social-ecological systems, especially the dynamics of systemic regime shifts and transformations toward sustainability. She co-chairs the Future Earth Program on Ecosystem Change and Society (PECS), leads the Southern African Program on Ecosystem Change and Society (SAPECS), and serves on the boards of the Beijing Institute of Ecological Economics, the Resilience Alliance, and the South African Global Change Science Committee.

Linda Theron: Innovations in the theory and practice of psychological resilience

The capacity of human beings to accommodate/beat the odds that jeopardise normative development and/or functioning has traditionally been associated with adaptive psychological capacities. To date, these capacities – or resilience-enablers – were understood to be universal, ordinary, and relational. Increasingly, however, social and health scientists are learning that the enablers of human resilience have their roots in human and non-human systems. Further, commonly occurring resilience-enablers will not necessarily be equally facilitative of positive adaptation for all people everywhere. In short, resilience-enablers are sensitive to (i) culture and/or context; (ii) perspective and time; (iii) type or severity of adversity; and (iv) beneficial childhood events. Taken together, the aforementioned encourage a more sophisticated interpretation of what positive human adaptation means in the face/aftermath of significant adversity and advance how mental health practitioners/other service providers might best champion human resilience.

About Linda: Linda Theron, D.Ed. (guidance & counselling), is an educational psychologist by training. She is a full professor in the Department of Educational Psychology / Centre for the Study of Resilience, Faculty of Education, University of Pretoria, South Africa (<https://www.up.ac.za/educational-psychology>). She is also an extraordinary professor in Optentia Research Focus Area, North-West University, South Africa. Her research (which has been locally and internationally funded) and

publications focus on the resilience processes of South African young people challenged by chronic adversity and account for how sociocultural contexts shape resilience. She is lead editor of the book *Youth Resilience and Culture: Complexities and Commonalities* (Springer, 2015). She is also an associate journal editor of *Child Abuse & Neglect* (Elsevier) and of *School Psychology International* (Sage).

About our panellists

Dewald Van Niekerk is a Professor and the Director of African Centre for Disaster Studies at North West University (<http://natural-sciences.nwu.ac.za/acds>). His research is motivated by a desire to reduce the possible impacts of natural hazards and unknowns like climate change on communities most at-risk. His interests include community-based disaster risk management, disaster risk assessment, disaster risk governance, building institutional capacities for disaster risk reduction, and transdisciplinary disaster risk reduction.

Gina Ziervogel is an Associate Professor in the Department of Environmental and Geographical Science at UCT (<http://www.egs.uct.ac.za/egs/staff/academic/ziervogel>) and a research chair at the African Climate and Development Initiative (ACDI). She researches issues related to development in a context of climate change and has worked on municipal adaptation strategies, adaptation governance, institutional barriers and enablers to adaptation and transdisciplinary processes for urban transformation.

Nicholas Simpson is a postdoctoral fellow with the Global Risk Governance programme in the Department of Public Law at UCT (<http://www.grgp.uct.ac.za/node/1219910>). Nick's current research interests focus on resilience, particularly as the concept is framed, understood and used in the various emergent 'worlds' we live in today: the novel socio-ecological world which has seen significant bio-physical and climatological change as a consequence of the Anthropocene, the 'world' of cyberspace and artificial intelligence, and the cyborg-like existence driven by the internet of things. Nick aims to gain a deeper understanding of these changes and explore the new normative agendas and institutional arrangements that are emerging in response to them.

Hamieda Parker is an Associate Professor in the Graduate School of Business at UCT (<https://www.gsb.uct.ac.za/hamieda-parker>). She has an engineering and business background and is interested in business operations; supply chain management; entrepreneurship; innovation and new product development.

Lesley Green is deputy director of Environmental Humanities South. She is Professor of Anthropology in the School of African and Gender Studies, Anthropology and Linguistics at the University of Cape Town, South Africa, and was a Fulbright Fellow at the Science and Justice Research Centre at U C Santa Cruz in 2018. Her work focuses on the intersection of science studies, anthropology, philosophy and research methods in the Anthropocene. Her book on six fields of environmental management sciences in South Africa — "Rock | Water | Life: Ecology and Humanities for a Decolonising South Africa" — is currently in press with Duke University Press. <http://www.envhumsouth.uct.ac.za/lesley-green>.

Cayley Green (<https://www.linkedin.com/in/cayley-green-098b2735/?originalSubdomain=za>) is the Senior Resilience Analyst in the City of Cape Town, working to develop Cape Town's first Resilience Strategy as part of the 100 Resilient City's network, an initiative pioneered by the Rockefeller Foundation. She has previous experience as Director of Parliamentary Operations for the official opposition party in South Africa, with a demonstrated knowledge of the public policy sector.

Nachi Majoe works at ICLEI Africa – Local Governments for Sustainability (<https://www.linkedin.com/in/nachi-majoe-b2895630/?originalSubdomain=za>) where she leads on urban systems and strategic alliances by providing African cities with technical support and advice on, amongst others, circular development, urban governance, resilient development through resource efficiency and re-localization of resource flows and the localisation of global and regional sustainability agendas such as the Sustainable Development Goals (SDGs). She has extensive experience in local government research, policy and practice and has worked extensively with politicians and officials in municipalities.

Charlton Ziervogel is the Managing Director at the Community Organisation Resource Centre (CORC) in Cape Town (<https://www.sasdialliance.org.za/about/corc/>). CORC is an NGO that supports the social processes of community-based organizations that want to work for themselves, by facilitating engagements with formal actors like the State. They are a partner in the SDI South African Alliance.

Gregg Brill is the deputy director of the Green Economy Programme within the Provincial Department of Economic Development and Tourism. He is responsible for developing projects and programmes that aim to increase economic water resilience in the Western Cape, including the development of financial mechanisms and models toward improving economic water resilience at municipal level, sustainable water management plans, the enhancement of economic options along the Berg and Breede Rivers, the implementation of ecological infrastructure options and many more. He has a PhD in Environmental and Geographical Science from the University of Cape Town. <https://www.linkedin.com/in/gregg-brill-45757813/?originalSubdomain=za>.

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