

Programme	Title of the Project and research team	Project Overview	Objectives/ Outcomes
	<p>Global Change Social Science Research Programme (GCSSRP V2)</p>	<p>Humanity is facing a time of escalating and unprecedented challenges associated with rapid global change. Global warming, climate change, unsustainable patterns of production, consumption and distribution and the over-exploitation of natural resources are threatening humanity's survival on the planet. These unsustainable patterns exacerbate poverty and inequality, and especially impact on the third of the world's people who are directly dependent on natural resources for their wellbeing (Unmüßig et al., 2012; Falzon et al., 2018).</p> <p>Inequality and unsustainability are not 'natural' processes. They are produced by social histories and systems, cultures, economic models and forms of reasoning. These processes are fostering growth that is exacerbating environmental degradation, and deepening social inequalities. Global change challenges and their resolution are intimately intertwined with people, their histories, actions, values, interactions, relations and cultures (Barry, 2007).</p> <p>In South Africa, the consequences of persistent inequality and unsustainable models of development are visible. These challenges call for fundamental <i>transformations</i> in the ways in which society interacts with their natural environment, so as to achieve a sustainable and socially just future for all South Africans.</p> <p>While there are many diverging views on what constitutes transformation, a general consensus is that it goes beyond marginal or incremental change, is non-linear, and challenges the status quo of existing unsustainable development structures (O'Brien 2012; Feola 2015). Transformation can also be an opportunity to reconfigure the trajectory of development (Pelling 2011). This includes questioning dominant economic and development discourses, the reconfiguration of knowledge and value systems, and the reorganisation of institutions and frameworks.</p> <p>To address the complexity of the "wicked" problems of the Anthropocene (Steffen et al., 2018) and global change concerns as well as their manifestations in diverse places and socio-cultural contexts, a strong engagement with social sciences and the humanities is required. In this concept paper introducing the Global Change Social Science Research Programme (GCSSRP Version 2), we thus make a case for a GCSSRP that forefronts <i>social sciences and humanities</i> approaches, methods and methodologies, including the creative arts and humanities.</p> <p>The GCCSSRP (V2), seeks to address societal transformations and sustainability challenges facing South Africa. In doing so, it responds to the South African National Development Plan (NPC, 2012), the African Union 2063 Agenda (AU, 2014), and the UN 2030 Agenda (UN, 2014) which all underscore the urgency for an approach of sustainability with, in, and for societal Transformations (SWIFT). These development plans, together with the Department of Science and Innovation's (DSI, 2019) recent White Paper on Science and Technology innovation, all emphasise the need for <i>actions</i> that will enable society to cope better with global challenges in order to move towards a more liveable, just and ecologically sustainable future. Since no one perspective or approach can work on its own and both academic and non-academic actors need to co-produce transformative change, multidisciplinary, interdisciplinary and transdisciplinary approaches are required. In this context, the SWIFT approach proposed here aims to <i>catalyse transformative research led by the social sciences and humanities</i>, while also working across disciplines and knowledge domains, enabling social innovation and progress towards social-ecological justice, transformed political ecologies, and well-being for society and their natural environment.</p>	

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GCSSRP V2	<p>1. Off-grid cities: elite infrastructural secession and social justice</p> <p>Research Team: Christina Culwick Fatti (GCRO/Wits), Fiona Anciano (UWC), Charlotte Lemanski (University of Cambridge), Margot Rubin (Wits), Laurence Piper (UWC), Graeme Götz (GCRO/Wits), Samkelisiwe Khanyile (GCRO/Wits), SJ Cooper-Knock (University of Edinburgh), Miguel Isaac (UWC – masters student), Zackeen Thomas (UWC – masters student), Joseph Ngben (UWC – PhD student).</p> <p>Project Start Date: 2021</p> <p>Contact Details of the Project Leader: Christina Culwick Fatti Christina.culwick@gcro.ac.za</p> <p>2. Governance models implemented in biosphere reserves: progression towards social-ecological systems for sustainability</p> <p>Research Team:</p>	<p>- The Off-Grid Cities project focuses on how urban elites are seceding from state-provided infrastructure networks in favour of private hybrid and off-grid technologies. These actions are transforming the provision and consumption of services in cities, with consequences for climate change and social justice. The project builds on the social justice literature and introduces it into climate change scholarship in the global South, recognising that the actions of one social group affect resource allocation in highly unequal cities, and that the infrastructures of elites tend to be absent from urban climate thinking.</p> <p>- UNESCO’s biosphere reserves (BRs) offer considerable insights around how sustainability transitions unfold in context, specifically how BRs provide the platform for the innovative governance and reconfigured institutions necessary to respond to the challenges of the Anthropocene. BRs have</p>	<p>- The core objective of the project is to explore how elite infrastructure transitions need to be integrated into debates on, and practices of, producing cities that are environmentally sustainable and socially just. This will be done through a comparative analysis of electricity and water infrastructure in South Africa, focused on practices of elite households and businesses, as well as the policies and programmes of relevant government stakeholders responsible for this infrastructure.</p> <p>- Objective 1: To describe the range of governance models are represented across the World Network of Biosphere Reserves</p> <p>- Objective 2: To explore the range of governance models are represented in</p>

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	<p>Dr Kaera Coetzer-Hanack (Global Change Institute: University of the Witwatersrand) Dr Ruida Pool-Stanvliet (Cape Nature, South Africa) Dr Lutendo Mugwedi (Department Of Ecology and Resources Management: University of Venda, South Africa), Dr Bianca Currie (Sustainability Research Unit: Nelson Mandela University, South Africa) Professor Maureen Reed (School Of Environment and Sustainability: University of Saskatchewan, Canada)</p> <p>Project Start Date: 2021</p> <p>Contact Details of the Project Leader: Dr Kaera Coetzer-Hanack 083 479 5420 / 011 717 6099 kaera.hanack@wits.ac.za;</p> <p>3. Turning Incumbents into Pivots of the Just Energy Transition: The ESKOM Case</p> <p>Research Team: Prof Mark Swilling – PI – Stellenbosch University Dr Nthabiseng Mohlakoana (Co-Investigator) – Stellenbosch University Prof Winkler – Collaborator – UCT</p>	<p>not yet met their potential in this regard, and little is known globally how BRs as sustainability organisations operate internally and how this translates into implementation successes. Using South Africa's 10 BRs as case-studies, we will specifically explore BR decision-making structures, specifically the success criteria or challenges faced in implementing the international UNESCO Man and Biosphere Programme (MAB) for local context.</p> <p>- The focus of this project is the 'just energy transition' (JET). The JET refers to the dual process of decarbonising the economy by transitioning to renewable energy, while at the same time achieving the social justice goals of poverty eradication, full employment and reduced inequality. An unjust energy transition (ET) is already underway at the</p>	<p>South African BRs and how are these models enacted in practice</p> <p>Objective 3: To assess how the governance models of South African BRs enable their operation as sustainability institutions in the landscapes they are found</p> <p>- The primary question this project addresses is as follows: Under what conditions can ESKOM as incumbent of the mineral-energy complex become the key pivot of the JET?</p>

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	<p>Prof Ruiters – Collaborator – UWC Dr M Davies – Research Associate – Stellenbosch University Ms N Callaghan – Research Associate – Stellenbosch University</p> <p><u>Project Start Date:</u> 2021</p> <p><u>Contact Details of the Project Leader:</u> Prof Mark Swilling Email: swilling@sun.ac.za</p> <p>4. “Unlocking the Locked”: moving to more engaged, inclusive and generative approaches to climate change adaptation in South Africa”</p> <p><u>Research Team:</u> Prof Mulala Danny Simatele (The Global Change Institute: University of the Witwatersrand) Prof Coleen Vogel Dr Serge Kubanza serge.kubanza@wits.ac.za)</p>	<p>global scale, i.e. decarbonisation via investments in renewable energy decoupled from social justice. The drivers of the ET are often identified as disinvestment in fossil fuels and investments in renewable energy (RE). However, this ignores two inter-linked investments: (a) what is required to ensure that the ET is coupled to social just in order to achieve a JET; and (b) what is required to transform the current providers of fossil fuel-based energy (the incumbents) into the providers of RE. Indeed, the second will determine whether the first can be achieved. This is all particularly true for South Africa where ESKOM is the primary incumbent.</p> <p>- This project is about multi-level engaged governance for change in the climate change arena and specifically on adaptation. There is a gap, we argue, in the governance, mainstreaming and implementation of climate change adaptation in South Africa. This gap is characterized by institutional challenges with constrained capabilities to effectively lead and implement policies in the face of extreme climate variability and economic deterioration. Thus, the broad aim of this project is to investigate the role that state and non-state institutions and actors-</p>	<p>- The ultimate outcome is the establishment of pathways facilitating effective governance, strengthening of institutions and more transformative and transgressive approaches to climate change adaptation in South Africa.</p>

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	<p>Dr Kaera Hanack (kaera.hanack@wits.ac.za)</p> <p>Dr Yolandi Ernest (Yolandi.ernest@wits.ac.za)</p> <p>Dr Bright Nkurumah (bright.nkurumak@wits.ac.za)</p> <p>Prof Dillip Kmar Das (DasD@ukzn.ac.za) Dr Leocardia Zhou (LZhou@ufh.ac.za) Dr Ahmed Mukalazi Kalumba (Akalumba@ufh.ac.za) Dr Sonwabo Manziyo (SManziyo@ufh.ac.za)</p> <p>Mr Tlou Ramaru (TRamaru@environment.gov.za) Mr Lindelani Mudau (LMadau2@environment.gov.za) Ms Sibonelo Mbanjwa (SMbanjwa@environment.gov.za) Mr Jonathan Ramayia (jramayia@environment.gov.za) Ms Mikateko Sithole (MFSithole@environment.gov.za) Ms Alinah Mtembu (AMthembu@environment.gov.za) Ms Faith Nkohla (Fnkohla@environment.gov.za)</p> <p>Project Start Date:</p>	<p>operating at different scales (national to municipal) - play in either enabling or hindering ('locking' or 'unlocking') the development and implementation of comprehensive policies and strategies for climate change adaptation. The study applies an innovative set of methodological approaches that draw from the tradition of co-designed, Mode-2 knowledge generation, combining Transdisciplinary approaches, Cultural Theory, Applied Systems Thinking Approaches, Participatory Climate Risk Management frameworks and Rapid Risk and Institutional Appraisal methods.</p>	

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	<p>2021</p> <p>Contact Details of the Project Leader: Prof Mulala Danny Simatele Email: Mulala.Simatele@wits.ac.za Tel No. +27-11-717-6602</p> <p>5. Sustainable Built Environment Higher Education For The Future</p> <p>Research Team: Prof Theo C. Haupt – (Mangosuthu University of Technology) Prof Bankole Awuzie – (Central University of Technology) Prof Kathy Michell – (University of Cape Town) Prof John Ebohon –(London South Bank University) Dr Mariam Akinlolu – (Mangosuthu University of Technology) Dr Ephraim Zulu- (Copperbelt University)</p> <p>Project Start Date: 2021</p> <p>Contact Details of the Project Leader: Prof Theo C. Haupt Email:theo.haupt@mut.ac.za and pinnacle.haupt@gmail.com</p>	<ul style="list-style-type: none"> - The research study is premised by the reality that current built environment higher education is not adequately responsive to the needs and demands of South Africa as expressed in the National Development Plan 2030 and particularly the reality that the unemployment rate is unacceptably high and increasing month on month and the quality of school education for black people is poor. - The study will assess learning as it is currently implemented in built environment education. From this work, a system of synthetic thinking instructional practices and learning outcome standards will be proposed to improve the further application of innovative and transformative learning. 	<ul style="list-style-type: none"> - The outcomes of this research study will guide the advancement of innovative and transformative learning in construction education in South Africa in the first instance, and will set an example for disciplines in engineering and the sciences.

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	<p>6. Transforming relations in the water-society-waste nexus: Localising Global Environmental Change efforts towards just and inclusive sustainability in South Africa.</p> <p>Research Team: Associate Professor Catherine Sutherland (Lead PI)- (School of Built Environment and Development Studies, University of KwaZulu-Natal) Professor Catherina (Rienie) Schenck - (Department of Social Work, University of Western Cape) Professor Shirley Brooks -(Geography Department, University of Western Cape) Dr Jennifer Houghton -(Urban Futures Centre, Durban University of Technology) Mrs Sibongile Buthelezi- (School of Built Environment and Development Studies, University of KwaZulu-Natal) Mrs Duduzile Khumalo- (School of Built Environment and Development Studies, University of KwaZulu-Natal) Dr Marc Kalina- (ETH, Switzerland) Patrick Martel-(School of Built Environment and Development Studies, University of KwaZulu-Natal)</p>	<ul style="list-style-type: none"> - The aim of this study is to understand, analyse and engage with water-society-waste relations, processes and practices in local spaces (sub-catchments), to identify, learn from and co-produce social and institutional processes of change and socio-technical interventions that can improve sustainability, and lead to socio-ecological transformations in the face of global environmental change (GEC). - The study will explore how GEC processes play out in local spaces; how the context of local spaces (socio-economic, environmental and political) shape the outcomes of GEC at the local scale; and how shifts and transitions in local processes can support more sustainable outcomes in the face of GEC, shifting path dependencies. 	<ul style="list-style-type: none"> - These local lessons and outcomes, including experimental governance platforms, new institutional arrangements and socio-technical interventions, will be produced in sub-catchments in eThekweni Municipality, City of Cape Town and rural towns in the city region, in partnership with the state, private sector and citizens, to address GEC challenges.

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	<p>Anthony Odili- (School of Built Environment and Development Studies, University of KwaZulu-Natal) Fanele Magwaza- (School of Built Environment and Development Studies, University of KwaZulu-Natal) Bahle Mazeka- (School of Built Environment and Development Studies, University of KwaZulu-Natal) Jacob Cloete- (Geography Department, University of Western Cape) Mthabiso Phungula- (Urban Futures Centre, Durban University of Technology)</p> <p><u>Project Start Date:</u> 2021</p> <p><u>Contact Details of the Project Leader:</u> Catherine Sutherland Email: sutherlandc@ukzn.ac.za 083 382 7274</p> <p>7. Engaging South African farmers on climate variability and change through the use of climate services: a behaviour change approach</p> <p><u>Research Team:</u> Lorena Pasquini- (UCT) Christopher Jack- (UCT)</p>	<p>- The overall aim of the research programme is to gain an understanding of how behaviour change strategies can be employed to change climate-related behaviours (uptake and use of seasonal forecasts in agricultural decision-making and related implementation of adaptation options) among farming communities in the developing world</p>	<p>- To define the current and potential access, use and impact of climate services on crop farmers' agricultural development goals; and to explore what barriers and enablers impede or motivate greater uptake and use of climate services by farmers.</p>

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	<p>Olivier Crespo- (UCT) Peter Johnston- (UCT) Anna Steynor – (UCT) Leocadia Zhou- UFH) Jabulile Manyike – (UFH) Andrew Thatcher- (Wits) Sifiso Mlilo –(Wits)</p> <p><u>Project Start Date:</u> 2021</p> <p><u>Contact Details of the Project Leader:</u> Lorena Pasquini Email: lorena.pasquini@gmail.com</p> <p>8. Turning Incumbents into Pivots of the Just Energy Transition: The Eskom Case.</p> <p><u>Research Team:</u> Prof Mark Swilling (Stellenbosch University) Prof Greg Ruiters (UWC) Prof Harald Winkler (UCT)</p> <p><u>Project Start Date:</u> 2021</p> <p><u>Contact Details of the Project Leader:</u></p>	<p>in order to promote more effective responses to the impacts of climate change while achieving more sustainable agricultural growth and development.</p> <p>- There is a global and national consensus that a ‘just transition’ is required. This is referred to in many government policy documents, including the Integrated Resource Plan and the Presidential Economic Advisory Council report on post-Covid recovery. However, like in many countries, SA has a state-owned public electricity utility (Eskom) that relies on coal-fired power generation. SA’s decarbonisation and just transition will depend almost entirely on how Eskom manages the energy transition from coal-</p>	<p>Secondly, to construct different prototypes of seasonal forecasts and agro-indicators, on the basis of the knowledge gained from farming communities regarding the potential effectiveness of seasonal forecasts, combined with insights and techniques from the behaviour change and communication fields.</p> <p>Thirdly, to investigate how particular aspects of the content, design and implementation of seasonal and crop impact forecasts developed through Objective 2 can overcome barriers and change uptake/use of seasonal forecasts among crop farmers.</p> <p>- The project aims to provide Eskom with supportive transdisciplinary research that will enable it to undertake this task.</p>

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	<p>Jacobs, Cornelia Email: cornelijacobs@sun.ac.za</p> <p>9. Building Local Food Economies as a just transitioning practice: Lessons for Vocational education and training</p> <p>Research Team: Presha Ramsarup- (Wits) Heila Lotz-Sisitka- (Rhodes) Lorraine Greyling- (UNIZULU)</p> <p>Project Start Date: 2021</p> <p>Contact Details of the Project Leader: Presha Ramsarup Email: presha.ramsarup@wits.ac.za Tel: 0829063170</p>	<p>based energy generation to a renewables-based energy system</p> <ul style="list-style-type: none"> - This research will explore how transitioning to a sustainable local food system can raise important lessons of just transitioning practices and what the implications for skills development could be by exploring the local skills ecosystem, the challenges and the possibilities for transformation. 	<ul style="list-style-type: none"> - To identify constraints to effective local food economies and food commons work; and to identify what is needed to overcome such constraints from a skills development perspective, but also from the perspective of other relationalities and structural dynamics that are needed to advance a social skills ecosystemic model that connects living, learning and work. [local food economy development supported by social skills ecosystem development] - To investigate how jobs, job roles, work streams and the nature of work can be re-articulated at local levels within a just transitions framework. [just transitions practice] - To contribute practically to the emergence of social skills ecosystem models in the context of 2 case study sites of local food economies and food commons praxis in the Eastern Cape (rural food system) and Gauteng (urban food system), where the case study research praxis will be based.