


ANNUAL REPORT 2017

Sustainability Research Unit

Science Faculty

<p>This annual report and the audited financial statement were approved by the Faculty Board on the _____ day of April 2018</p>			
	Print name	Signature	Date
Entity leader	Bianca Currie		12 April 2018
Finance			
Chairperson of Advisory Board (If applicable)			
Chairperson: Faculty Board/ Faculty RTI Committee			
Dean	Professor Azwinndini Muronga		
DVC: RE (when applicable)			

1. Mission / purpose

The Sustainability Research Unit's focus is to gather and communicate evidence to promote a better understanding of the challenges facing society and the natural environment in our quest for a Good Anthropocene. We strive to adaptively address these challenges using transdisciplinary complex systems frameworks and participatory learning and action. We build credibility and relevance by listening, asking the right questions, providing reliable information and learning with our stakeholders through action on the ground.

The SRU applies a collaborative inter- and trans-disciplinary approach to face the complex challenge of ecological management in the Garden Route and beyond, and in doing so, value the contribution and collaborative efforts of internal and external stakeholders, co-designing practical solutions to face the complex challenges. The conceptual framework that informs our work has its theoretical foundations in social learning theory, adaptive collaborative management, complex adaptive systems and collaborative adaptive stewardship.

1.1 Alignment with vision and mission of the Nelson Mandela University

The SRU is developing a new generation of scientists who work towards innovating solutions to complex social ecological system problems and in this way aligns itself with the Nelson Mandela University vision of generating cutting edge knowledge for a sustainable future. The SRU plays an important strategic role in generating scientific information, educating student's, citizens and communities, through participatory approaches, to develop the capacity for the sustainable management of natural resources in the Garden Route, nationally and globally. In this way the SRU vision aligns with the Nelson Mandela University vision in that it generates cutting edge knowledge for a sustainable future.

The SRU contributes to the NMMU 2020 vision's strategic goal of becoming a recognised institution for encouraging, supporting and rewarding vibrant trans-disciplinary collaborative research, scholarship and innovative culture by focusing on strategic research through partnerships and networks with national and local institutions and stakeholders. This entity supports the NMMU 2020 vision strategic goal to position the university as an engaged institution that contributes to a sustainable future through critical scholarship. The SRU uses several different engagement techniques such as interviews, focus groups, dialogues and participatory mapping to strengthen existing partnerships with the public and private sector as well as to form new relationships with interested and effected parties. The NMMU 2020 vision's strategic goal to develop and sustain a transformative institutional culture that optimises the full potential of staff and students is well supported by the SRU through valuing and encouraging teamwork amongst staff, students and stakeholders, as well as the monitoring and evaluation of staff, student and stakeholder expectations and experiences through dialogue and reflective sessions during and after engagement activities.

2. Governance structures

The SRU reports to the Dean of Science and the Science Faculty. It has a Management Committee (MANCO) which consisted of Professor Christo Fabricius, Leader; Bianca Currie, Deputy head; Professor Janine Adams; Adjunct Professor, Dirk Roux and Ms. Tatenda Mapeto, the student representative in 2017.

2.1 Governance Structure meetings

The MANCO met twice to address strategic and operational matters during 2017. Significant outcomes are briefly reported on:

Meeting dates	Significant outcomes
10 March 2017	<ul style="list-style-type: none"> Christo Fabricius invited as a visiting professor by Angers University for a three year project. Christo Fabricius awarded a three year post retirement contract. The activation of a leadership succession plan.
27 October 2017	<ul style="list-style-type: none"> Announcing the arrival of new research associates (J Dabrowski and J Dabrowski). The financial sustainability and the active participation of students is a challenge. The Belmont Forum Project has finished and no further funding will be received by the South African Team The MANCO decided to refuse extension of the DEA agreement and discontinue work for the DEA

3. Staff Members

Names and positions of staff members of the entity during 2017

Name	Position
Professor Christo Fabricius	Leader & MANCO Member
Bianca Currie	Deputy Leader & Manco member
Professor Janine Adams	Manco member, Botany Dept.
Ms Jeanette Pauw	Statistician
Professor Dirk Roux	Research Associate, Adjunct Professor & Manco member
Dr Hervé Fritz	Research Associate & Adjunct Professor
Dr Peter Novellie	Research Associate
Professor Robert Fincham	Research Associate
Dr Jeanne Nel	Research Associate
Prof Lyn Snodgrass	Dept. of Political and Conflict Studies
Dr Chloé Guerbois	Post-doctoral fellow
Dr James Dabrowski	Research Associate
Dr Jacqueline Dabrowski	Research Associate
Corita Laoubser	Administrative Coordinator
Luzanne Visagie	Administrative Coordinator (as of 1 September 2017)

The following postgraduate students were supervised during 2017:

Name	Degree registered for
Bianca Currie	PhD Botany
Current Masunungure	PhD Geosciences
Lisa Heider	PhD Botany
Samantha McCulloch	PhD Nature Conservation
Tatenda Mapeto	PhD Forestry
Ntombizanele Hartmann	PhD Development Studies
Sibonokuhle Nontongana	Msc Agriculture

3.1 Human resources issues

Professor Christo Fabricius was awarded a three year contract following his retirement in 2017. Dr Jacqueline Dabrowski and Dr James Dabrowski joined the SRU team as research associates. Dr Herve Fritz received the title of Adjunct Professor. Mrs Corita Loubser resigned as administrative coordinator and Ms Luzanne Visagie was appointed as the new administrative coordinator.

4 Goals / targets for the year under review

On the 20th of January, 2017 a strategic planning exercise was undertaken with members of the SRU. The following strategic goals were formulated for 2017:

- Growing the SRU through strategic partnerships and improving visibility
- Demonstrate thought leadership
- Develop and sharpen the SRU niche
- Develop a capability statement
- Give VUMA to the post graduate program
- Explore funding opportunities

The strategies and actions employed by the entity to achieve the goals that emanated from a strategic planning exercise include:

Objectives	Strategies employed
Growing the SRU through strategic partnerships and improving visibility	<ul style="list-style-type: none"> • Utilised the website as a means to improve our visibility • Local newspaper articles published in the George Herald • Produced a capacity statement • Series of lunchtime lectures • Research Associate symposium • Strong presence at the PECS II international conference in Mexico
Demonstrate thought leadership in interface science for social ecological sustainability	A team of SRU members attended and presented a session at the PECS II international conference in Oaxaca, Mexico in October 2017.
Develop and sharpen the SRU niche	At a strategic planning meeting the SRU research niche was consolidated and the following research focus was determined: <ul style="list-style-type: none"> • Methods and approaches for trans-disciplinary learning • Resilience of systems on the margins, e.g. small towns and townships • Integrated catchment research • People, biodiversity and stewardships • Interface science – systemic, highly engaged place based social ecological research
Promote the post graduate program	Strengthen supervisory capacity (more research associates) Collaborate, recruit in Nelson Mandela University particularly targeting B Tech students Collaborate with Junior scientist programme SNRM's NRM Honours program
Fundraising	All staff to explore fundraising opportunities.

4.3 Output

Teaching and learning activities

On the 22nd and 23rd of March 2017, SRU staff and students went on a field trip from George to Nature's Valley. The trip started with a guided Knysna township tour with tour guide Mawande (Wandu Tours). Insights on the history of the town and the rapid growth it is experiencing and, particularly in the last 20 years were evident.

Furthermore, Professor Christo Fabricius and Professor Dirk Roux taught the B Tech nature conservation freshwater module for the School of Natural Resource Management in 2017. Bianca Currie also teaches conservation communication I and II, game ranch management II diploma modules and the B Tech environmental education module as part of her role in the School of Natural Resource Management. Bianca also taught the social impact assessment component of the B Tech forestry environmental management block course.

Research Capacity Development activities

In an effort to develop research capacity SRU members have supervised several B Tech research projects for the School of Natural Resource Management. These projects are detailed below.

Student	Project	SRU supervisors
Laura Bakker	Exploring the role of landscape features in the susceptibility of urban residents to damage by primates: Insights from baboon raids in George, Western Cape	Dr. Chloe Guerbois
Tara Naeser	Comparing multiple stakeholder's perception of ecosystem services provided by the Touw River Estuary and of their impact on ecosystem functions to inform collaborative governance	Dr. Chloe Guerbois and Bianca Currie
Mamagolokwe Malefane	Determining pre-conceived knowledge pertaining to the monitoring and conservation of the Touw River Estuary	Dr. Chloe Guerbois and Prof. Hervé Fritz

Academic engagement activities

The Sustainability Research Unit organised and hosted a series of Lunchtime Lectures. These lectures included:

Event Date	Presentation title	Presenter
23/02/ 2017	Top down predictivist management and bottom up adaptive management	Peter Novellie
28/02/2017	The breeding and community structure response of water birds to shifting water pan characteristics in South Eastern Karango Zambezi	Twanda Tarakini
16/03/2017	Sense of place gives meaning to nature conservation in the Garden Route	Lisa Heider
03/04/2017	The unexpected links between ecology and entrepreneurship	Daan Torien

21/04/2017	The business of eco-labelling, who benefits and who pays the bill? A case study of the Kenyan Coffee Industry.	Jan Willem de Jager
04/05/2017	Ecological and management consequences of increasing elephant populations in Hwange National Park	Herve Fritz
07/08/2017	Biochar Production and Application: An Overview by	Marius van der Merwe (NewCarbon)

Nelson Mandela University Botany Students visited the SRU during a field trip in 2017. The SRU hosted the group for a day informing them of who the SRU is and what we do. A tour of the campus was arranged and the students were introduced to other projects and activities taking place on the campus in the SNRM.

Please see Annexure A for a list of the publication and other outputs emanating from the SRU during 2017.

Community engagement activities

The SRU supported the South Cape Landowners Initiative in 2017. Bianca Currie and a team consisting of Samantha McCulloch, Current Masunungure, Sibon Nontongana and Lisa Heider assisted the Southern Cape Landowner Initiative (SCLI) to co-develop with participants a strategy for the collaborative management of alien invasive plant species in the Southern Cape at a seminar on the 10th July 2017. Furthermore, the SRU Head Christo Fabricius, together with Tiaan Pool and Tineke Kraaij of SNRM, provided a sustainability science perspective through three well-received presentations at a SCLI meeting in Brenton on Sea near Knysna, where the focus was on post-fire recovery of Knysna and other affected places in the Garden Route.

Dr. Chloe Guerbois together with Bruno Bonte and members of his team from the National Research Institute of Science and Technology for Environment and Agriculture (IRSTEA) in France facilitated three workshops in the Garden Route, using simulation games to help communities understand the impacts of land use choices in the Wilderness area. A pilot workshop took place on the 1st of June 2017 followed by two other workshops on the 6th of June and the 18th of September in 2017. The workshops were attended by researchers, conservation and municipal officials, as well as community leaders.

4.4 Self-assessment of achievement of goals/targets

The SRU has grown with the new research associates that have joined the unit in 2017, and our visibility was boosted through the lunchtime lecture series and our presence at the PECSII conference and other event. A capacity statement was also produced providing the SRU with a calling card to help boost our visibility. Our work on human wildlife conflict (baboons / human) has positioned the SRU as a thought leader in interface science for social ecological sustainability. Despite sharpening the SRU niche we have not been wholly successful in promoting the post graduate programme or fundraising in 2017. Our student numbers have not increased in 2017.

4. Highlights and special achievements

The SRU collectively published 18 peer reviewed papers 1 book chapters and 1 Informal articles in popular media during 2017. Our lunchtime lecture series proved to be a useful platform to increase the SRU visibility at the university and in the greater community.

5. Finances

5.1 Financial review

Since its inception, SRU has been successful in securing income from external and research funds, enabling the entity to operate and provide study opportunities to postgraduate students. Other than the SRU Head's position which was Council-funded, in 2017, the Unit relies entirely on non-council funds for its operational and student funding. Financial sustainability is therefore integral to the SRU's objectives. As of the 3rd of April the balance of the various cost centres are provided as such:

Cost Centre	Purpose/Name	03/04/2018 Balance
H285	SRU	617 715,21
H392	Fabricius C	322 902,82
H991	RTI FAC	11 994,51
N276	Rutherford	17 121,29
N410	DEA	462,43
N438	BGCMA	0,00
N450	SANParks GEF 5	67 677,12
N466	Fabricius C OASIC Project	21 724,52
G640	Roux DJ	41 268,24
G980	Fritz H	17 086,45
L345	Global change/Belmont Forum	478,29
L293	Roux Incentive grant	30 000,00
L307	Fabricius incentive grant	0,00
L321	Fabricius NRF IKS	50 245,41
L472	Dabrowski JM	15 555,00
L451	Nel JL	0,00
3522	Academic engagement fund	0,00

Due to numerous challenges with the DEA during 2016 in terms of communications, deadlines and payments. The SRU MANCO unanimously agreed to discontinue the DEA / NMU agreement and decline the proposed extension.

The Belmont Forum Project has come to an end and because the National Research Foundation has retracted from the project meaning South Africa is no longer a partner, no further funding will be released to the South African Team.

5.2 Financial statements

Please see Annexure B, for the audited financial statement for 2017.

7. Mandatory Summary for Senate

The Sustainability Research Unit's focus is to gather and communicate evidence to promote a better understanding of the challenges facing society and the natural environment in its quest for a Good Anthropocene. This has been achieved through the publication of 18 peer reviewed written outputs and the numerous lectures and presentations given locally through a series of lunchtime lectures, and internationally at the Programme on Ecosystem Change and Society conference in Mexico during 2017. The unit has grown in terms of research

associates but efforts are still needed to boost the post graduate programme and raising funds for the unit which is primarily financed with external, non-council funding.

The annual report must be DATED AND SIGNED by the Chairperson of the Advisory Board (if applicable), Faculty Board, Dean, and Director of the research entity.

**ANNEXURE A
RESEARCH OUTPUTS/ACTIVIES 2017**

OUTPUTS/ ACTIVITIES	NO	DETAILS	STAFF INVOLVED	OTHER (Specify)
JOURNAL ARTICLES				
DoE list of South African Journals	1	Barendse, J. , Basson, J., Petersen, SL and Sink, KJ. 2017. The sustainable seafood movement viewed as a maturing social-ecological issue using a South African case-study. <i>Ocean & Coastal Management</i> . Vol 151: 178-192. https://doi.org/10.1016/j.ocecoaman.2017.08.015		Dr Jaco Barendse (post-doc)
	2	Guerbois, C and Fritz, H. 2017. Patterns and perceived sustainability of provisioning ecosystem services on the edge of a protected area in times of crisis. <i>Ecosystem Services</i> . Vol 28 (B): 196-206. https://doi.org/10.1016/j.ecoser.2017.11.010		Dr Chloe Guerbois (post-doc) Adj Prof Hervé Fritz (research associate)
	3	Rawat, Y.S. 2017. Sustainable biodiversity stewardship and inclusive development in South Africa: a novel package for a sustainable future. <i>Current Opinion in Environmental Sustainability</i> 2017, 24:89-95. http://dx.doi.org/10.1016/j.cosust.2017.03.003		Yashwant Rawat
	4	Mudombi, S., Fabricius, C. , Van Zyl-Bulitta, V. and Patt, A. 2017. The use of and obstacles to social learning in climate change adaptation initiatives in South Africa. <i>Journal of Disaster Risk Studies</i> , Vol 9, No 1 (2017). https://doi.org/10.4102/jamba.v9i1.292	Prof Christo Fabricius	
	5	Roux DJ , Nel JL, Cundill G, O'Farrell P and Fabricius C. 2017. Transdisciplinary research for systemic change: who to learn with, what to learn about and how to learn. <i>Sustainability Science</i> 12(5): 711–726. https://doi.org/10.1007/s11625-017-0446-0		Adj. Prof Dirk Roux (research associate)
	6	Mapeto, T. , Gush, M. and Louw, J. 2017. Southern Forests: a Journal of Forest Science. http://dx.doi.org/10.2989/20702620.2016.1274861		Mrs Tatenda Mapeto (Doctoral student)
	7	Dabrowski, J , Baldwin, DS, Dabrowski, JM , Hill, L, & Shadung, J. (2017). Impact of temporary desiccation on the mobility of nutrients and metals from sediments of Loskop Reservoir, Olifants River. <i>Water SA</i> , 43(1), 7-16. https://dx.doi.org/10.4314/wsa.v43i1.02		Dr Jacqueline Dabrowski (research associate)

			Dr James Dabrowski (research associate)
8	Dabrowski J , Oberholster P, Steyl J, Osthoff G, Hugo A, Power DM, van Wyk JH (2017) Thyroid function of steatitis-affected Mozambique tilapia <i>Oreochromis mossambicus</i> from a sub-tropical African reservoir. <i>Dis Aquat Org</i> 125:101-113. https://doi.org/10.3354/dao03138		Dr Jacqueline Dabrowski (research associate)
9	Fritz, H. 2017. Long-term field studies of elephants: understanding the ecology and conservation of a long-lived ecosystem engineer. <i>Journal of Mammalogy</i> 98:603–611.		Adj Prof Herve Fritz (research associate)
10	Schweitzer, C., T. Gaillard, C. Guerbois, H. Fritz , and O. Petit. 2017. Participant Profiling and Pattern of Crop-Foraging in Chacma Baboons (<i>Papio hamadryas ursinus</i>) in Zimbabwe: Why Does Investigating Age–Sex Classes Matter? <i>International Journal of Primatology</i> 38:207–223.		Dr Chloe Guerbois (post-doctoral fellow) Adj Prof Herve Fritz (research associate)
11	Nel JL , Le Maitre DC, Roux DJ , Colvin C, Smith JS, Smith-Adao LB, Maherry A and Sitas N. 2017. Strategic water source areas for urban water security: Making the connection between protecting ecosystems and benefiting from their services. <i>Ecosystem Services</i> 28: 251–259. http://dx.doi.org/10.1016/j.ecoser.2017.07.013		Dr Jeanne Nel (research associate) Adj Prof Dirk Roux (research associate)
12	Smit IPJ, Roux DJ , Swemmer LK, Boshoff N and Novellie P. 2017. Protected areas as outdoor classrooms and global laboratories: Intellectual ecosystem services flowing to-and-from a National Park. <i>Ecosystem Services</i> 28: 238–250. http://dx.doi.org/10.1016/j.ecoser.2017.05.003		Adj Prof Dirk Roux (research associate) Dr Peter Novellie (research associate)
13	Smith MKS, Roux DJ and Hayes J. 2017. Adventure racing enables access to cultural ecosystem services at multiple scales. <i>Ecosystem Services</i> 28: 149–161. http://dx.doi.org/10.1016/j.ecoser.2017.05.017		Adj Prof Dirk Roux (research associate)
14	Dabrowski J , Oberholster P, Steyl J, Osthoff G, Hugo A, Power DM, van Wyk JH (2017) Thyroid function of steatitis-affected Mozambique tilapia <i>Oreochromis mossambicus</i> from a sub-tropical African reservoir. <i>Dis Aquat Org</i> 125:101-113. https://doi.org/10.3354/dao03138		Dr Jacqueline Dabrowski (research associate)
15	Tshipa A., Valls-Fox H., Fritz H. , Collins K., Sebele L., Mundy P., & Chamaillé-Jammes S. (2017) Partial migration links local surface-water management to large-scale elephant conservation in the world's largest transfrontier conservation area. <i>Biological Conservation</i> 215:46-50.		Adj Prof Herve Fritz (research associate)
16	Kushata JNT, Périquet S, Tarakini T, Muzamba M, Mafuwa B, Loveridge AJ, Macdonald DW, Fritz H & Valeix M (2017) Drivers of diurnal rest site selection by spotted hyaenas. <i>Journal of Zoology</i> 10.1111/jzo.12504		Adj Prof Herve Fritz (research associate)
17	Novellie, P. , C. Birss, C. Cowell, G. I. H. Kerley, D. Peinke, M. Pfab, J. Selier, and D. Zimmermann. 2017. Adaptive Governance of Cape Mountain Zebra, Can It Work? <i>African Journal of Wildlife Research</i> 47:79–91.		Dr Peter Novellie (research associate)

	18	De Vos A, Cumming GS and Roux DJ . 2017. The relevance of cross-scale connections and spatial interactions for ecosystem service delivery by protected areas: insights from southern Africa. <i>Ecosystem Services</i> 28: 133–139. https://doi.org/10.1016/j.ecoser.2017.11.014		Adj Prof Dirk Roux (research associate)
REPORTS, PLANS & STRATEGIES				
	1	Fabricius, C., Currie, B., McCulloch, S. and Masunungure, C. 2017. A stakeholder engagement strategy for the Breede Gouritz Catchment Management Agency. Breede-Gouritz CMA, Worcester, 36 pp.	Prof Christo Fabricius Ms Bianca Currie	Ms Samantha McCulloch (Doctoral student) Mr Current Masunungure (Doctoral student)
CONFERENCES				
International Conferences (Published Papers)		A SRU team attended and presented at the Resilience 2017 Conference in Stockholm. Dirk Roux presented a paper in a well-received session titled “Protected Areas, Resilience and Sustainability”. Chloé Guerbois presented on bird stories about environmental change’. Lisa presented a paper about “stewardship and sustainability in the Garden Route”, and Christo Fabricius coordinated and chaired a session on ‘Effective adaptation to global change in coastlines” which included 11 presentations and a synthesis on the findings of their Belmont Forum project called MAGIC (Multi-scale Adaptations to Global change In Coastlines). Christo Fabricius and Dirk Roux’s sessions are culminating in two special issues in international journals (<i>Ecosystem Services</i> , and <i>Regional Environmental Change</i>).	Christo Fabricius, Chloé Guerbois, Lisa Heider, Jeanne Nel and Dirk Roux	
International Conference (presented but not published papers)		Programme on Ecosystem Change and Society II. An SRU team facilitated a workshop titled “No more silos: reconnecting researchers, policy makers, ecosystem and society. The workshop also consisted of several presentations given by SRU members. Lyn Snodgrass presented on “Dismantling silos: a conflict resolution perspective”. Dirk Roux presented on “The role of adaptive management in defragmenting conservation knowledge”, Chloe Guerbois presented on “Grasping vulnerability transfers in global change adaptations combining fun-mindfulness exercises and serious games”. Christo Fabricius presented on “ Knowing when to break down silos: principles for enhancing the transformative capacity of social ecological systems”. Lastly Bianca Currie presented on “Social learning as a method of engagement”.	Christo Fabricius, Lynn Snodgrass, Chloe Gurbouis, Bianca Currie	
BOOKS AND BOOK CHAPTERS				
Book Chapter		Kingsford RT, Roux, DJ , McLoughlin CA, Conallin J and Norris V. 2017. Strategic Adaptive Management (SAM) of Intermittent Rivers and Ephemeral		Adj Prof Dirk Roux (research associate)

		Streams. In: Datry T, Bonada N and Boulton A (Eds), Intermittent Rivers and Ephemeral Streams: Ecology and Management, Academic Press, Burlington. Pages 535-562.		
POPULAR ARTICLES				
Newspaper article		Study focuses on human-baboon conflict. George Herald Newspaper, 4 May 2017		Dr. Chloe Guerbois.
ACADEMIC ENGAGEMENT				
SRU Research Associated Symposium 16 May 2017		The SRU's second Research Associates Symposium took place at the Nelson Mandela University George Campus on 16 May 2017. This year's Symposium was attended by a congregation of enthusiastic undergraduate and postgraduate students, academics, civil society representatives and conservationists.		
Garden Route Interface Meeting 19-20 September 2017		<p>The inaugural Garden Route Interface Meeting was held during September 2017 at Pine Lake Marina near Sedgfield.</p> <p>This meeting aims to facilitate networking and dialogue among practitioners and researchers interested in understanding and managing (or navigating) social-ecological systems and their complex interactions and feedbacks. The Interface meeting attracted 75 delegates in its first year and proceedings included 24 oral presentation, 14 poster presentations and 2 dialogue sessions. The main discussion themes were on the establishment of long-term social ecological research sites, methods for and challenges in studying social-ecological systems, sustainable resource use, adaptations and transformations in SES, ecosystem services and benefit flows, ways in which people connect with nature, and advice for bridging science-management divides.</p>		
Lunchtime lecture series		<ul style="list-style-type: none"> • 23/02/ 2017 -Top down predictivist management and bottom up adaptive management by Peter Novellie • 28/02/2017 - The breeding and community structure response of water birds to shifting water pan characteristics in South Eastern Karango Zambezi by Twanda Tarakini • 16/03/2017 - Sense of place gives meaning to nature conservation in the Garden Route by Lisa Heider • The unexpected links between ecology and entrepreneurship by Daan Torien • 21/04/2017 - The business of eco-labelling, who benefits and who pays the bill? A case study of the Kenyan Coffee Industry by Jan de Jager 		Peter Novellie Tawanda Tarakini Lisa Heider Daan Torien Jan de Jager Prof Herve Fritz

		<ul style="list-style-type: none"> 04/05/2017 - Ecological and management consequences of increasing elephant populations in Hwange National Park by Prof. Herve Fritz 07/08/2017 - Biochar Production and Application: An Overview by Marios van der Merwe from NewCarbon. 		
Arizona State University visit and lecture (24 May 2017)		Arizona State University visit and lecture on the Decision Theatre. Technology for unlocking the Southern Cape Ocean Economy by Prof Jon Miller.	Roy Marcus	Rob Fincham Bianca Currie
COMMUNITY ENGAGEMENT				
South Cape Landowners Initiative	1	Bianca Currie and a team consisting of Samantha McCulloch, Current Masunungure, Sibon Nontongana and Lisa Heider assisted the Southern Cape Landowner Initiative (SCLI) to co-develop with participants a strategy for the collaborative management of alien invasive plant species in the Southern Cape at a seminar on the 10 th July 2017	Bianca Currie	Samantha McCulloch, Current Masunungure, Sibon Nontongana Lisa Heider
South Cape Landowners Initiative	2	the SRU Head Christo Fabricius, together with Tiaan Pool and Tineke Kraaij of SNRM, provided a sustainability science perspective through three well-received presentations at a SCLI meeting in Brenton on Sea near Knysna, where the focus was on post-fire recovery of Knysna and other affected places in the Garden Route.	Christo Fabricius	Tiaan Pool Tineke Kraaij

INCOME STATEMENT OF SUSTAINABILITY RESEARCH UNIT

ENTITY NAME : SUSTAINABILITY RESEARCH UNIT

ENTITY LEADER : PROF C.FABRICIUS

COST CENTRES : L307, L293, L345, H285, H392, G640, L321, N276, N410,
3522, H991, N438, N450, N466, G980, L472, L451

INCOME STATEMENT FOR PERIOD : Year 2017

Opening Balance	1,464,496
INCOME	1,246,332
NRF funded income	939,299
Council research funds	53,919
Interest Received	62,602
Research Grants	-
Private Grants Unrestricted	190,512
EXPENDITURE	1,455,327
Operating Expenses	879,596
Bursary Awards External Funds	380,900
Salaries	141,129
Equipment	40,000
Program Admin/Agent Fee	13,702
Surplus/(Loss) for the year	(208,995)
Closing Balance	1,255,501

Signed off by Finance Dept.

Name : Rheinard van Onselen

Title : Accountant Research and Third Stream Income

Signature :

Date : 16-04-18