

# Sustainability Research Unit Annual Report: 2010

## Growth during 2010

The major SRU aims for 2010 were to raise student awareness, establish an environmental forum on campus, publish more peer reviewed papers and raise funds for sustainability research.

Strategies included the facilitation of student events such as the Green Campus Awareness Week. This included presentations to the student body and liaising with the media to raise awareness amongst students and the wider community.

The initiation of the Green Campus Forum, managed by the student body, was a milestone during 2010. The forum is a platform for students' environmental goals and concerns. It also provides a forum for student interaction and participation in Green Campus Initiatives.

Fund-raising was partially successful. The [National Research Foundation](#) (NRF) provided R 750 000 over three years for Community Engagement research, including a post-doctoral researcher, two Masters, one PhD and two BTech projects. Additional NMMU funding (R 120 000) for a post-doc researcher was received, and additional running expenses (R30 000). SANPAD has allocated a capacity development grant to Bianca Currie. The scholarship is said to be one of the most valuable in South Africa at a cost of R200 000.

Positive discussions took place with Dept of Water Affairs: NRM about a service agreement for research and capacity development. a joint proposal with Rhodes University was also submitted to the DST Global Change Grand Challenge.

Proff Raymond Auerbach and Victor Mmbengwa joined the Unit during 2010, and members produced six peer reviewed papers, one book and six conference papers, a three-fold increase in peer reviewed papers compared to 2009.



**Dr Guy Preston (left) from the Department of Water Affairs: Natural Resource Management Programmes, keynote speaker at the SRU Launch; and Prof Christo Fabricius, SRU Leader, Nelson Mandela Metropolitan University.**

## SRU Officially launched

The Unit, which was registered in 2009, was officially launched on the 28<sup>th</sup> of September 2010. The focus of the launch event was to bring together decision-makers from various institutions to create a platform to interact and to assist in developing the SRU. The event was attended by more than 38 practitioners, scientists and officials representing all the important organizations in the southern Cape, including Eden District Municipality, Wildlife and Environment Society of South Africa (WESSA), SANParks, Tsiba College, Agri SA, provincial and national government departments and other supporters.

Dr Guy Preston from the Department of Water Affairs: Natural Resource Management Programmes was the keynote speaker at the launch event. He emphasised the need to use natural resources more efficiently, but noted that the social context within which this happens was important. "There can be no green economy without addressing poverty and inequality" he said. He indicated that a multi-disciplinary approach was critical in addressing the challenges relating to the environment and sustainability.

Participants identified priority research projects for the Unit, looked at fund-raising challenges and opportunities, and also identified ways to strengthen the existing network of scientists and practitioners who are concerned about sustainability. Participants agreed that the Unit should focus on applied action research, working closely with decision makers and practitioners, and that a joint project would be initiated in the near future.

Dr. Steve du Toit, Head of Conservation, Wildlife and Environment Society of South Africa Western Cape, said that WESSA fully supports the SRU. "We look forward to a long, vibrant partnership with the Unit, promoting caring for the Earth".

Prof Christo Fabricius, Leader of the SRU and Campus Principal, summed it up by saying that the SRU wishes to "provide a safe space for researchers and practitioners to learn and jointly solve problems". The day ended with a delightful evening of drumming, singing and 'green cuisine'.

# SRU 2010 Activities

The SRU is making a national and international footprint through its activities and outputs. The highlights for the 2010 year were the increase in peer reviewed papers and conference presentations, the SRU's launch, and the allocation of 3 years' NRF funding. The SRU is also making significant progress with community and student engagement as demonstrated by the following outputs.

## Hosting of workshops, conferences and forums

The SRU facilitated and co-hosted events aimed at promoting sustainability such as:

- An international Erosion Control Association Conference,
- two South Cape Wetland Forum meetings, and
- three Garden Route Initiative meetings.
- Prof Mmbengwa convened a workshop attended by a large group of emerging livestock farmers from Thembaletu, where a plan for future collaboration was developed.

All events were well attended by a diversity of national and local entities.

Members also participated in national and regional forums. Prof Christo Fabricius participated in two NRF Complexity Research initiative meetings, in Stellenbosch and Pretoria respectively, and Bianca Currie joined the NRF Akili Young Scholars group. SRU members gave keynote addresses at the Grassland Society of Southern Africa conference in Kimberley (Fabricius), the International Erosion Control Association conference at Saasveld (Fabricius; Roets), a Wetlands Forum (Roets) and a Development Planning conference in Stellenbosch (Roets).

## NMMU Recycling Pilot Project



**New NMMU recycling depot point outside the George Campus Library.**

The NMMU George Campus recycling pilot project was initiated on campus. This involved the establishment of mini recycling depot points at strategic locations around the campus grounds for example the library and recreational centre. A central recycling depot point was established for the appropriate separation of waste generated on campus. The pilot project also involved staff and student training.

As part of the NMMU George Campus Recycling programme a vermi-culture operation and composting facility was developed with funding from Fairfield Tours. A site for both operations was identified and both a wormery and compost heaps were established. Organic waste generated on the campus grounds and in the kitchens are being used to produce vermi-compost, vermi-tea and compost. Both sites are utilized for teaching and learning purposes as a site for practical les-



**NMMU second year, B Tech students and the Green CAW recycling mascot at the conservation communication stand erected for the Green Campus Awareness Week.**

sons and as a platform for B Tech research projects. The project is also contributing to the sustainable operations on campus.

## Green Campus Awareness Week (Green CAW)

The first student-driven Green Campus Awareness Week was organised on the George Campus. The event included a stand display manned by second year conservation communications students. Some of the activities of the week include, a live radio broadcast, several competitions, pledge wall and a week of invasive alien plant removal on the campus grounds and surrounding areas. The event was well attended by NMMU students and was successful in raising awareness of the Green Campus Initiative and its associated projects (Tierkop Research Project, NMMU Recycling, Men on the Side of the Road Urban Agricultural Project).



**The Tierkop Sustainability Research Project students of 2010**

Data captured throughout the year by students was analysed and reported on. The findings were used to create awareness amongst the students on the NMMU George Campus.

Main findings:

- Installing a solar geyser results in a 26% electricity saving
- Benefits of involving students in monitoring:
  - 85% of participating students would like environmental issues to be included in their syllabus
  - 95% believe that green technologies have a place in the future
  - 68% believe the environmental crisis is under-stated
  - Follow-up lectures and awareness raising

**Advocacy through press releases and radio interviews**

Several pre scripted fifteen minute interviews as well as three, three-hour, fully scripted live broadcasts from the George campus were conducted during Open Day and the Green Campus Awareness Week. The focus was primarily on the George Campus sustainability initiatives, exemplified by the special projects/campaigns of students, Live radio broadcasts of student and staff interviews related to sustainability issues and efforts to improve campus sustainability were conducted.

Several media releases and caption stories were compiled and issued during 2010, all which have been used by the media and posted on the NMMU George website, communicated to staff via the George Noticeboard and staff newsletters.

**Examples of media releases**

- ‘NMMU George students invasive alien clearance’
- ‘Thembaletu Peri-urban Farmers Workshop’
- ‘Recycling implemented at George Campus’
- ‘King of the Compost Heap’
- ‘Seminar on organic agriculture’
- Eden FM live broadcast as part of Open Day event
- Green Campus initiative
- Unique stewardship extension course offered at NMMU George
- Editorial in ‘South’

**Stewardship and extension course**

A second offering of the Biodiversity Conservation Stewardship and Extension Course was facilitated during 2010. The course was attended by stewardship officials from conservation agencies (Cape Nature, Wilderness Foundation, Eastern Cape Parks), governmental departments (City of Cape Town), private consultancies (Londoloza Consulting) and NMMU students from the School of Natural Resource Management. A field trip to Wildcliffe Nature Reserve in the Riversdal area was a highlight of the 2010 course.



Participants in the Biodiversity Conservation Stewardship and Extension Course on a walk through the Wildcliffe Nature

**Men on the Side of the Road (MSR) urban farm project**

Bianca Currie collaborated with a non profit organisation, Men on the Side of the Road (MSR), who focuses on livelihoods of the unemployed in the Garden Route. The partnership is aimed at addressing food insecurity amongst the unemployed in the George area by establishing an urban organic vegetable garden at the MSR site. The project was organised and managed by NMMU B.Tech Nature Conservation students and resulted in the establishment of a garden and the roll out of a training programme for the members of the organisation.

Activities included assisting the unemployed with capacity development, vegetable seedlings, pest control, compost and providing technical support. Thirteen men attended training workshops and a manual and various posters were developed. We thank [Fairfield Tours](#) for gracious financial support.



Carina Becker (B Tech environmental education student) with the MSR members, laying out the vegetable garden at the MSR site.



Bianca Currie being interviewed by Eden FM in a live broadcast from the NMMU, George Campus

# SRU 2010 Research Outputs

## Conference papers

- Fabricius, C. 2010. Building the adaptive capacity of farmers at the threshold. Invited keynote address: Grassland Society of Southern Africa conference, Kimberley
- Fabricius C. 2010. Slowly losing ecosystem services: the troll under the bridge. Invited paper, International Erosion Control Association (IECA), George
- Fabricius C. 2010. Capacity Development for Ecosystem Management. Garden Route Initiative Inaugural Meeting, George.
- Roets W. 2010. Climate Change - Wetlands - Healthy Aquatic Ecosystems. Paper presented at the Southern Cape Wetlands Forum, NMMU Campus. 2 September 2010.
- Roets W. 2010. Climate Change: Implications for Erosion and Sedimentation. Paper presented at the Annual Conference of the "International Erosion Control Association Southern Africa Chapter" (IECA-SA), NMMU George Campus, 29 September to 1 October 2010.
- Roets W. 2010. Development Planning in response to Climate Change. Paper presented at Development of Coastal Setback Lines, Stellenbosch Seminar/Workshop - 21 & 22 October, University of Stellenbosch: Civil Engineering, 21-22 October 2010.

## Peer reviewed papers and books

- Cundill, G. and **Fabricius C.** 2010. Monitoring the Governance Dimension of Natural Resource Co-management. *Ecology and Society* 15 (1): 15. [online] URL: <http://www.ecologyandsociety.org/vol15/iss1/art15/1>.
- Fabricius C.** and Cundill G. 2010. Building adaptive capacity in systems beyond the threshold: the story of Macubeni, South Africa. In: Armitage D. and Plummer R. (Eds). *Adaptive capacity in Environmental Governance*. Springer Verlag
- Lagabrielle E., Botta A., Dare, W.; David, D., Aubert S. and **Fabricius, C** (2010). Modelling with stakeholders to integrate biodiversity into land-use planning - Lessons learned in Réunion Island (Western Indian Ocean). *Environmental Modelling and Software* 25 (11): 1413-1427.
- Lombard, A. T., R. M. Cowling, J. H. J. Vlok, & C. **Fabricius**. 2010. Designing conservation corridors in production landscapes: assessment methods, implementation issues, and lessons learned. *Ecology and Society* 15 (3): 7. [online] URL: <http://www.ecologyandsociety.org/vol15/iss3/art7/>

**Mmbengwa, V.M.**, Jan A. Groenewald, Mazuru B. Gundidza, Herman D. vanSchalkwyk and Azwiangwisi N. Maiwashe, 2010. Critical assessment of the performance and sustainability of Land Bank customers among emerging farmers in South Africa. *African Journal of Business Management* Vol. 4(13), pp. 2753-2762

Shackleton, C.M., Shackleton, S.E., Gambiza, J., Nel, E., Rowntree, K., Urquhart, P., **Fabricius, C.** & Ainslie, A. 2010. *Livelihoods and vulnerability in the arid and semi-arid lands of southern Africa: exploring the links between ecosystem services and poverty alleviation*. Nova Publishers, USA.

## The year in retrospect

During 2010 the SRU focused on two key objectives: creating the impetus for a broader student Green Campus movement, producing more research outputs and raising additional enabling funds. Significant progress was made with establishing national and international research networks with good prospects for additional funding. The SRU was highly successful in community and student engagement, with five talks on the local community radio station (Eden FM), hosting several community workshops on sustainability, and publishing at least 15 press releases on sustainability issues, all of which found their way to the SRU web site [www.nmmu.ac.za/sru](http://www.nmmu.ac.za/sru). SRU members published five peer reviewed academic papers and one book chapter during 2010, and co-organized one international and two national conferences. Five conference presentations were delivered by members, including one keynote address at a national conference and an invited paper at an international conference.

During 2011 the Unit will focus on strengthening its research collaborative networks, submitting additional funding applications, and recruiting post-doctoral researchers. One of the key objectives is to establish the Garden Route as a 'laboratory' for trans-disciplinary research, in collaboration with other research-oriented organizations.

## SRU members

- \* Prof Christo Fabricius (Sustainability Science; SRU leader);
- \* Prof Suzanne Milton (Botany)
- \* Dr Wietsche Roets (Aquatic Biology)
- \* Dr Laurence Watson (Zoology)
- \* Prof Raymond Auerbach (Sustainable Agriculture)
- \* Ms Jeanette Pauw (Statistics)
- \* Prof Victor Mmbengwa (Agriculture)
- \* Ms Bianca Currie (Sustainability Science; research assistance)