

**REPORT ON**  
**FUTURE EARTH REGIONAL WORKSHOP FOR AFRICA**  
**31 OCTOBER – 02 NOVEMBER 2012**  
**CAPE TOWN, SOUTH AFRICA**

## ***Acknowledgements***

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## ***1. Purpose of this document***

This document is a draft report of the workshop organised by ICSU in Cape Town, South Africa, on 31 October – 02 November 2012. This event is part of a consultation process with the regions on a new programme called “Future Earth – research for global sustainability” launched in 2012.

## ***2. Key recommendations***

Future Earth is an important programme as global environmental change and the transition to global sustainability requires concerted efforts among scientists from all regions of the world, across disciplines and knowledge fields. Furthermore, policymakers and practitioners should be involved from the outset to ensure success of the initiative. In this respect, addressing development challenges in relation to environmental changes should be at the core of Future Earth’s vision.

To deliver Future Earth successfully in Africa, extensive effort is needed to engage stakeholders, to ensure that the Future Earth research agenda reflects local and regional issues and to make knowledge relevant for implementation. In addition to the need for new lines of funding, there is a need for better coordination of funding to scale up transdisciplinary research for global sustainability.

As Future Earth develops in the regions, the diversity of national and cultural contexts needs to be taken into account as this affects institutional capacity and the way research questions are framed. While Future Earth will attempt to better engage with transdisciplinary research approaches, a number of initiatives – including small-scale projects - have paved the way for increased collaboration among stakeholders from diverse knowledge fields and sectors. Future Earth should establish learning processes to build on these initiatives and quickly add value by addressing gaps, and scaling up and scaling out existing and new knowledge.

What would success look like for Future Earth in Africa? Engaging, training and providing opportunities for young scientists in Africa will be a key measure of success. The definition of a strategy for early-career scientists was proposed at the workshop with the leadership of the Applied Centre for Earth System Science (ACCESS) and a network of young researchers working on global environmental change issues was established following the workshop. Similarly, raising profile of interdisciplinary and transdisciplinary research in Africa through scientific awards and other incentives will be instrumental in promoting Future Earth research. The capacity of the programme to produce useful knowledge to inform policies and actions, sustain science-policy dialogues and effectively address development challenges will also be important outcomes. Delivering Future Earth in a “business unusual way” will require the full engagement of African scientists, stakeholders and practitioners at the very outset, in jointly framing research questions and researching sustainability pathways, and thereby also ensure that Future Earth is truly global and reflects the broad range of views in its research and governance.

The meeting concluded on the establishment of an African interim group with an initial term of six months to take these recommendations forward and guide the development of Future Earth in the region.

### ***3. Context and objectives***

Future Earth is a 10-year international programme on Earth system research for global sustainability. The goal of Future Earth is to co-provide the knowledge required for societies in the world to enhance a risk reduction approach to threats, challenges and opportunities posed by global environmental change.

Future Earth has been established by a broad Science and Technology Alliance for Global sustainability including the International Council for Science (ICSU), the International Social Science Council (ISSC), the Belmont Forum of global change research funding agencies, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Environment Programme (UNEP), the United Nations University (UNU), as well as the World Meteorological Organization (WMO) as an observer.

While the scope of Future Earth is global, a number of issues require region-specific approaches to provide robust observations and forecasts of regional environmental changes, assess potential impacts and vulnerabilities, explore mitigation and adaptation pathways, etc. Regions, as early witnesses of environmental change, have therefore a critical contribution to make to assess environmental change and to participate in making the transition towards sustainability. Regions also have a fundamental role to play in implementing sustainability research and facilitating its application, through identifying needs and priorities from researchers and practitioners (including at the national level), stimulating cooperation and partnerships, and promoting institutional coherence.

As a first step in looking at how to develop a regional strategy for Future Earth, ICSU, on behalf of the Science and Technology Alliance for Global Sustainability, organised a set of three regional workshops for Africa, Asia-Pacific, and Latin America and the Caribbean, funded by the Swedish International Development Cooperation Agency (Sida).

These regional workshops were held as part of a broader consultation process, which started at the Rio+20 conference where Future Earth was launched, and will continue in 2013. These regional consultations were timed to coincide with the final phases of design work on Future Earth led by the 'transition team', including proposals for the research framework and a governance structure. These proposals formed a basis for consultation at both global and regional levels. This consultation process seeks to test and refine the initial design proposal with key stakeholders as Future Earth enters its operating phase from January 2013 onwards.

The common objectives of these three regional workshops were as follows:

1. To develop a common understanding of Future Earth, including its vision, research framework and governance among an initial set of key regional stakeholders;
2. To identify regional research priorities (research questions, required capabilities, etc.) that will help shape the Future Earth research strategy in the different regions;
3. To discuss opportunities and challenges for implementing Future Earth in each region;

4. To explore the best ways of establishing a regional interface for Future Earth.

The main target audiences were scientists and science administrators working in universities, research institutes, government departments, development agencies, research coordination and capacity building networks, and funding agencies. The aim was to gather around 40 participants from these stakeholder groups.

## ***4. Organisation of the workshop***

### **Participation**

The Future Earth regional workshop for Africa, held on 31 October – 2 November 2012 in Cape Town, South Africa, brought together 56 participants including scientists working on global and regional environmental change across natural, social, and economic sciences in universities and research institutes, early-career scientists, research executives, development actors, capacity development networks, UN



regional representatives, funders and individuals working in science ministries. In total, 15 countries were represented at the workshop, of which 12 were from the African continent.

Although efforts were made to achieve geographical balance, South Africa was strongly represented among the participants. ICSU therefore considers that additional sub-regional consultations on Future Earth are needed.

For more information about participants see the list of participants annexed.

### **Funding**

The workshop was organised by ICSU's Regional Office for Africa (ICSU ROA) located in Pretoria. In addition to Sida's funding, ICSU ROA secured support from the National Research Foundation (NRF), ISSC and ACCESS.

## ***5. Workshop programme***

### **Day 1: What is Future Earth? What should the regional priorities for the research framework be?**

The first day was dedicated to sharing information about the objectives, design process, research framework and projected timeline for implementation of Future Earth. Participants gave feedback on the global design and discussed how to link Future Earth with existing strategies in the region, notably the integrated strategy for GEC research in Africa. They also identified research priorities which are particularly relevant for the region. The day included presentations, roundtable discussions and smaller group discussions chaired and reported by participants.

Mark New, Pro-Vice Chancellor and Director of the African Climate and Development Initiative at the University of Cape Town (UCT), gave a talk in the evening on the global and regional sustainability challenges and the kind of Earth System Science research needed for Southern Africa. This was followed by a reception for all participants.

### **Day 2: How can Future Earth be most effective in the region and with whom should it develop links and partnerships?**

The second day focused on identifying current strengths and gaps as well as key partners in the region to deliver sustainability research. In the afternoon, a midway evaluation of the workshop revealed some gaps in participants' understanding of Future Earth and the need for the region to have more leadership in the definition of its regional priorities. The agenda was changed accordingly. A brainstorming and feedback discussion was held to address gaps in understanding. A presentation of the governance framework for Future Earth was given as part of this session.

### **Panel Discussion at the University of Cape Town**

On the evening of Day 2, a panel discussion on “Global Sustainability in Sub Saharan Africa: Future Earth and the role of science” was held at the University of Cape Town as part of an effort to engage early-career scientists around Earth System research and sustainable development in Africa.

The panel included prominent international and South African scientists as well as distinguished guests, among them Derek Hanekom, South Africa's Minister of Science and Technology.

The event attracted around 150 participants, from a range of local research and capacity building institutions such as the Climate Systems Analysis Group, the African Centre for Cities, the Council of Scientific and Industrial Research, the University of Cape Town, Stellenbosch University, the South African Network for Coastal and Oceanic Research (SANCOR), the South African National Biodiversity Institute (SANBI), ACCESS, the Human Sciences Research Council (HSRC), Cape Peninsula University of Technology, and the Marine Research Institute. The event was also attended by journalists.





The event provided a good opportunity to raise awareness of Future Earth within the local research community and engage the audience in a discussion of what could constitute success for the programme in the region.

### **Day 3: Towards the implementation of Future Earth in Africa: options and roadmap for follow-up**

On the third day, presentations covered the governance framework and the priorities of research and development funders. This was followed by a discussion of funding priorities and opportunities for Future Earth in the region. Participants discussed in breakout groups the coordination needs, the broad vision for a regional node, for example what gaps could Future Earth fill in the region, and key steps for implementation. The workshop concluded by drawing up a set of preliminary actions to develop and implement Future Earth in Africa.

Workshop details are available on ICSU's website at <http://www.icsu.org/future-earth/whats-new/events/cape-town-workshop>

## ***6. Discussion points and key outcomes***

In general, participants expressed enthusiasm about Future Earth, but pointed out that there could be challenges in the region. Some asked how Future Earth was different from other existing endeavours, and how it could integrate with already existing initiatives. Participants wanted to know how Future Earth could add value for Africa, and how to ensure that the programme would be meaningful for the region.

Participants compiled a list of existing initiatives that Future Earth could collaborate with or complement and discussed how African scientists might take part. Some warned that Future Earth should not be another global programme driven by developed countries without the participation of scientists, both natural and social, from the South. By the end of the workshop, most participants concluded that Future Earth represented an opportunity for Africa to:

- enhance collaboration among African countries on global environmental change research, and promote networking among researchers on the earth system
- influence international Global Environmental Change (GEC) research agenda and “lay the track of where the train will go”,
- strengthen regional and national capacities to respond to global research opportunities, and
- engage in a global conversation to scale up learning and research on transformation towards global sustainability and provide African insights into sustainability pathways

A number of participants called for the development of sustainability research by Africans for Africa in order to address the specific development challenges of the continent in terms of poverty alleviation, soil restoration, urban and rural migration, food, water and energy security, as well as protection of coastal zones.



Some suggested that Africa - as a “place where worldviews clash and contrast” - could bring new insights from the “edge” on transformation and disruptive innovation for sustainability, more so than stable systems which predominate in Western countries.

### ***Enhancing engagement, collaboration and coordination***

African scientists involved in international collaborative research projects mostly work with scientists based in North America and Europe. Few of them work with scientists from other African countries. This is partly driven by external funding and inadequate institutional capacity in the region. In this context, Future Earth should provide a platform for scientists from the continent working on GEC and sustainability issues across disciplines and fields to meet and work together. Conferences on Future Earth related research could, for instance, be organised in Africa.

Furthermore, Future Earth could stimulate the development of new mechanisms and tools to improve engagement, collaboration, coordination and knowledge sharing among the existing organisations and programmes, in a “business unusual” way, as well as develop regional networks.

Increased coordination is also important to scale up the knowledge and capacity needed to address sustainability challenges, for example through data sharing and concerted efforts on modeling.

The creation of an African Earth Institute could provide an information portal and platform for international and regional research collaboration. The need, format and requirements for setting up such an institute would require further thinking with key partners in the region, including UN agencies (e.g. UNEP is developing an African environment outlook and knowledge centres on specific topics) and organizations such as the African Union (AU) and the New Partnership for Africa’s Development (NEPAD).

### ***The global research framework of Future Earth***

Participants provided valuable feedback on the initial design features of Future Earth and specifically pointed out the need to clarify the boundaries of the global research framework as the current research themes (1) Dynamic Planet 2) Global Development 3) Transformation toward sustainability) are very broad and, to some extent, overlapping.

Regional inputs should also be sought at this early stage for the development of the research framework, in line with the concept of co-design. Providing the space for bottom-up inputs is critical to ensure that Future Earth research is relevant and links to people’s concerns. Comments were also made on the importance of the integration and synthesis of scientific knowledge on global change to inform policy. Participants noted that this important function was not yet sufficiently described in the material provided.

### ***Building capacity***

The development of interdisciplinary and transdisciplinary research<sup>1</sup> under Future Earth will require building institutional capacity to support and raise profile of this research, and develop accountable systems to facilitate international collaboration.

Capacity building is also required among researchers to grow and retain a community of scientists working on transdisciplinary research as there are many good African scientists working outside of Africa. This could include:

- The development of a new generation of broad thinkers through adequate interdisciplinary education curricula, training and new job opportunities,
- The development of scientific awards and incentives (e.g. publications) for African scientists working on global environmental change and sustainability issues.

### ***Funding***

Funding, which provides the enabling conditions and shapes research agendas, was consistently raised as critical for delivering Future Earth research. Currently, most funding for science and R&D comes from outside Africa. Future Earth could therefore play a role in influencing funders, both at national and international levels, to support transdisciplinary research, coordinate funding on a region-wide basis. One idea was that funders could support the creation of a consolidated trust, or international pot of funding, as well as an African funding framework. Similarly, African countries could be more strongly involved in international funding coordination efforts such as the Belmont Forum which at present only includes South Africa.

Among the potential sources of funding identified were development funders such as the African Development Bank, UNDP, the World Bank, Sida but also ministries of Science and Technology and private sector companies.

### ***Stakeholder engagement***

Early-career scientists were identified as a key stakeholder group for Future Earth in Africa. The creation of an African Network for Widening Earth-system research by Emerging Researchers (ANSWER) using social media was proposed by some young researchers at the workshop and was supported. It could serve as an umbrella body under which Earth-System research and activities by emerging researchers in Africa would be showcased. It was also proposed that a strategy for young scientists be developed with the leadership of ACCESS.

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<sup>1</sup> Interdisciplinary research: Research that involves several unrelated academic disciplines in a way that forces them to cross subject boundaries to create new knowledge and theory and solve a common research goal.

Transdisciplinary research: Research that both integrates academic researchers from different unrelated disciplines and non-academic participants, such as policymakers and the public, to research a common goal and create new knowledge and theory.

ICSU (2010). *Earth System Science for Global Sustainability: The Grand Challenges*. International Council for Science, Paris.

Science-policy processes in Africa are under-developed for a variety of reasons. Future Earth could help address this gap by fostering dialogues and developing sustainability indicators. Learning across regions on this aspect would also be beneficial as science-policy linkages have developed successfully in some parts of the world, such as Latin America.

### ***Defining a governance structure***

Participants felt that it was too early to define the form that (a) regional node(s) for Future Earth in Africa could take. A first step would be to draw up an inventory of existing networks, initiatives, research/academic institutions, civil society organisations and other stakeholders working in the region. The Southern African Regional Universities Association (SARUA) said that they had been working on building a database for similar purposes. A stakeholder mapping exercise was also initiated during the workshop to collect participants' knowledge of key organisations and initiatives in the region that could potentially contribute to Future Earth (see annex 4).

Other short-term steps considered include the development of focal points across regions (such as an IPCC like network of scientists) and the identification of "Future Earth champions". Once an active community around Future Earth was established in the region, options to establish office(s) could be explored. The idea of developing a network of centres of excellence, similar to the CGIAR network, was also mentioned. Another model would be to appoint an institution to host and coordinate the activities of a virtual African node.

In developing (a) regional node(s), a number of constraints need to be taken into account including language barriers, and the costs associated with the management of a complex administrative structure.

### ***Initial measures of success for Future Earth in Africa***

The following initial measures of success for Future Earth in Africa provide a good summary of the workshop's main discussion points.

- Alignment of funders' priorities with the Future Earth agenda;
- Increased membership (in number and scope) of the Alliance within the coming 10 years;
- Number of young scientists trained and retained in Africa;
- Creation of an African Earth Institute;
- Mobility of students and researchers within Africa;
- Active networks among African global change researchers;
- Effective operation of an accountable institutional science infrastructure, which is better organized, less fragmented, and less dependent on external support from traditional donor countries; and
- Integrated platform for open access to data and information and integrated data sets.

Furthermore, the success of Future Earth will depend on systemic capacity development in the region. It was proposed that a capacity building component be a requirement in all Future Earth-supported projects.

### ***Communications and outreach***

Many participants highlighted the need for African scientists to help Future Earth build a community and develop the programme at the regional level by effective communication. Several important fora where Future Earth could be presented were identified during the meeting, including the African Union and the African Academy of Science and the Network of African Science Academies.

Upon completion of the workshop, a short video with extracts from the workshop and the UCT panel discussion was developed to further promote Future Earth in the region (available at <http://www.youtube.com/watch?v=HnUXS6evK08&list=UUfMN5xloZnOVE-S8b1GqPsQ&index=1>).

### ***Presentations and breakout group reports***

All the presentations made at the workshop and the reports of the breakout sessions prepared by the rapporteurs (identified among the participants) are available on ICSU's website: <http://www.icsu.org/future-earth/whats-new/events/cape-town-workshop>

## ***7. Way forward***

The workshop concluded with an agreement to create an African interim facilitating group for Future Earth with a life span of six months, coordinated by ICSU ROA, in order to take these recommendations forward and propose next steps for the development of Future Earth in the region. It was agreed that the members of the group should reflect the multi- and trans-disciplinarily nature of some of the issues involved in the implementation of Future Earth activities, gender balance, regional representation, as well as include representatives from different stakeholder groups and young scientists.

The outcomes of the workshop, as summarized in this document, will be communicated to the bodies taking forward the design and implementation of Future Earth at the global level during the interim operating phase (2013-2014).

## *Annexes*

## **Annex 1: Workshop evaluation**

At the end of the workshop, participants were invited to submit evaluation forms to provide feedback. A total of 23 forms were submitted. Analysis of these forms showed that most participants were satisfied with the workshop, its content and format. Notwithstanding some challenges at the outset, the workshop succeeded in building a good understanding of Future Earth amongst participants and resulted in a good level of overall engagement.

Some of the positive points which were highlighted included the frankness and openness of discussions, the diversity of representation, the high level of interaction among participants over the three days, and the time and opportunities participants were given to express their views and have an active role through the interim facilitating group.

Areas which needed further work included engagement with the broader scientific community, policymakers and business and industry. Another priority was to provide more clarity on mechanisms and timeframe for involvement in future activities.

## Annex 2: List of participants

### Future Earth Regional Workshop for Africa

Protea Hotel Sea Point, Cape Town, South Africa  
31 October – 02 November 2012

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## Annex 3: workshop agenda

# Future Earth Regional Workshop for Africa

Protea Hotel Sea Point, Cape Town, South Africa  
31 October – 02 November 2012

**Final**

### Organisers



### Partners



UNITED NATIONS  
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**Meeting chair: Elizabeth Rasekoala, Director, Africa-Caribbean Network for Science and Technology**

**Main goals:**

1. To develop a common understanding of, get input on, and identify regional priorities in the research framework for Future Earth
2. To develop elements of a Future Earth strategy for the region

**Expected outcomes:**

1. Collect feedback on the Future Earth research framework and identify links with existing regional research plans and priorities
2. Identify key stakeholders across regions and sectors and explore options for partnerships
3. Develop a set of recommendations on the next steps to implement Future Earth in Africa

## 31 October 2012: What is Future Earth? What should the regional priorities for the research framework be?

07:30 – 08:30 **Registration**

Including registration for the breakout session 2

### Session 1: Opening and introduction to Future Earth

08:30 – 09:00 **Welcome and introduction of the workshop**

Edith Madela-Mntla – Director, ICSU Regional Committee Office for Africa (10 minutes)

Steven Wilson – Executive Director, ICSU (20 minutes)

09:00 – 09:20 **General presentation of Future Earth: history and design process, overall objectives and rationale**

Tanya Abrahamse – CEO, South African National Biodiversity Institute and Future Earth Transition Team member

09:20 – 09:40 **Short question and answer**

*Moderator: Edith Madela-Mntla*

09:40 – 10:10 **Presentation of the Future Earth research framework**

Martin Visbeck – Professor, GEOMAR | Helmholtz Centre for Ocean Research Kiel and Future Earth transition team member

10:10 – 10:40 **Break**

10:40 – 11:10 **Presentation of the integrated strategy for GEC research in Africa and links to the Future Earth research framework**

Coleen Vogel - Independent

11:10 – 11:45 **Questions and Answers session**

With a panel including :

- Tanya Abrahamse
- Heide Hackmann – Executive Director, International Social Science Council
- Jakob Rhyner – Director, UNU Institute for Environment and Human Security
- Martin Visbeck
- Steven Wilson
- Coleen Vogel

*Moderator: Edith Madela-Mntla*

11:45 – 13:00 **Roundtable discussion engaging the participants: Guidance on initial priorities for Future Earth from regional stakeholders in global environmental change community**

- Leluma Matooane – Director of Earth Systems Science, Department of Science and Technology, South Africa
- Joseph Massaquoi – Treasurer and Member of Governing Council, African Academy of Science
- Chris Gordon – Director, Institute for Environmental and Sanitation Studies

- Neville Sweijd – Director, Applied Centre for Climate & Earth Systems Science (ACCESS)
- Luthando Dziba – Principal researcher, Southern African Program on Ecosystem Change and Society (SAPECS), Council for Scientific and Industrial Research (CSIR)
- Frank Matose – Senior Lecturer, University of Cape Town and member of the Council for the Development of Social Science Research in Africa (CODESRIA)
- Johan Pauw – Executive Director, South African Environmental Observation Network (SAEON)

*Moderator: Edith Madela-Mntla*

13:00 – 14:00 Lunch

## **Session 2: Presentations of regional activities and discussion on the regional research priorities Future Earth in Africa**

14:00 – 14:10 **Introduction of the first break-out session**

Steven Wilson

14:10 – 16:15 **Break-out session 1:** working in parallel on linking the research priorities for Africa to the research framework of Future Earth

All sub-groups will address the following question: What are the initial research priorities relevant for Africa that you would like to highlight within this framework?

Each sub-group include a chair, a rapporteur and a member of the Transition Team

- Breakout group 1: Ekosse, Georges-Ivo (chair), Eric Berefo (rapporteur), Heide Hackmann
- Breakout group 2: Daniel Olago (chair), Joshua Olowoyo (rapporteur), Tanya Abrahamse
- Breakout group 3: Belinda Reyers TBC (chair), Genito Amos Maure (apporteur), Martin Visbeck
- Breakout group 4: Monica Ayieko (chair), Rungano Karimanzira (rapporteur), Steven Wilson

*Tanja Hichert - Professional facilitator, Hichert & Associates (Pty) Ltd*

16:15 – 16:45 Break

16:45 – 18:00 **(1) Presentation by group chairs and (2) Roundtable discussion on gaps and opportunities for integrated research on Earth system in Africa**

- Breakout group chairs
- Coleen Vogel
- Bruce Hewiston – NRF Research Chair in Climate change, University of Cape Town
- Martin Visbeck
- Jakob Rhyner

*Facilitation: Tanja Hichert and Neville Sweijd*

18:00- 21:00 **Networking reception**

Including a keynote address by Mark New, Pro-Vice Chancellor and Director, African Climate and Development Initiative, University of Cape Town:

“What Kind of Earth System Science Research is Most Useful for Southern Africa?”



## 1 November 2012: How can Future Earth be most effective in the region and with whom should it develop links and partnerships?

### Session 3: Breakout group discussion on cross-cutting capabilities

- 08:30 – 08:45      **Introduction: focus and objectives for the day's sessions**  
Meeting chair: Elizabeth Rasekoala
- 08:45 – 09:00      **Introduction of the second break-out session**  
Steven Wilson
- 09:00 – 11:00      **Break-out session 2: working on cross-cutting issues:**
- Breakout group 1: **Observation and Data:** Johan Pauw (chair), Genito Amos Maure (rapporteur), Steven Wilson
  - Breakout group 2: **Integration of disciplines and knowledge fields** – gaps, opportunities and requirements to develop integrated research on Earth system for global sustainability in Africa: Andrew Kaniki (chair), Achuo Enow (rapporteur), Jakob Rhyner
  - Breakout group 3: **Capacity development:** Chris Gordon (chair), Sepo Hachigonta (rapporteur), Heide Hackmann
- Breakout groups will provide inputs on the following questions: what work is on-going in the region? Who are the key actors? How could this set of capabilities be strengthened in the context of Future Earth?
- 11:00 – 11:30      **Break**
- 11:30 – 12:45      **(1) Presentation by group chairs and (2) Roundtable discussion engaging the participants on existing strengths and capability gaps to deliver integrated and solutions-oriented research on Earth system**  
Including breakout group chairs  
*Moderator: Mark New*
- 12:45 – 14:00      **Lunch**

### Session 4: Mapping regional stakeholders for Future Earth

- 14:00 – 14:20      **Introduction of the third breakout session**  
Tanja Hichert and Tanya Abrahamse
- 14:20 – 17:00      **Breakout session 3 (replaced by a Q&A session on Future Earth, brainstorming on the vision for Future Earth in Africa, presentation and discussion around the governance structure of Future Earth and stakeholder mapping)**
- The breakout session will cover:
- identification of stakeholders for the development and implementation of Future Earth in the region (among the research, science-policy, government, funding, development, business and industry, civil society and media communities),
  - discussions on transdisciplinarity, engagement of stakeholders and best approaches to deliver solutions-oriented research

Participants will be identifying stakeholders and value propositions of stakeholders according to their level of interest and their ability to influence during the implementation of Future Earth.

Breakout group 1: Jonathan Matondo (chair), Sepo Hachigonta (rapporteur), Heide Hackmann

Breakout group 2: Joseph Massaquoi (chair), Samuel A Mvondo (rapporteur), Tanya Abrahamse

Breakout group 3: Munashe Shoko (chair), Julius Francis (rapporteur), Martin Visbeck

Breakout group 4: Mark Swilling (chair), Eric Berefo (rapporteur), Jakob Rhyner

*Facilitation: Tanja Hichert*

18:00 – 20:00

**Panel discussion “Global Sustainability in Sub Saharan Africa: Future Earth and the Role of Science”, University of Cape Town**

On November 1, the International Council for Science in partnership with Cape Town University and the International Social Science Council will organise a two-hour panel discussion on Future Earth, global environmental change, and sustainable development within the African context. Specifically, this event aims to engage students, young scientists, as well as the media to discuss Earth System research needs and opportunities for achieving sustainable development in Africa. The event will be attended by distinguished guests and prominent scientists. All workshop participants are welcome to attend this event and transportation will be arranged from the Protea Hotel Sea Point to the event venue.

## 2 November 2012: Towards the implementation of Future Earth in Africa: options and roadmap for follow-up

### Session 5: Global and regional governance for Future Earth: needs and opportunities

08:30 – 08:45	<b>Introduction: focus and objectives of the day's sessions</b> Meeting chair: Elizabeth Rasekoala
08:45 – 09:15	<b>Presentation of the initial stakeholder mapping</b> Breakout session group chairs <i>Facilitation: Tanja Hichert</i>
09:15 – 09:30	<b>The governance framework of Future Earth</b> Heide Hackmann, Executive Director, International Social Science Council
09:30 – 10:15	<b>Presentation of funders' perspective and discussion on funding priorities and opportunities</b>  Andrew Kaniki – Belmont Forum representative and Director of Knowledge Management and Strategy of the National Research Foundation  Neda Farahbakhshazad - Research adviser Swedish Secretariat for Environmental Earth System Sciences (SSEESS), representing the Swedish International Development Agency (Sida)
10:15 – 10:30	<b>Introduction of breakout groups</b> Steven Wilson and Tanja Hichert
10:30 – 11:00	<b>Break</b>
11:00 – 12:45	<b>Breakout session 4: breakout groups working in parallel on options and recommendations to develop Future Earth in Africa</b> Breakout groups working on the following questions: <ul style="list-style-type: none"> <li>– What organisation, structure and partnerships are needed to coordinate Future Earth in Africa?</li> <li>– How can the region best be engaged in Future Earth? Who are the key partners that need to be involved?</li> <li>– What innovative mechanisms can be designed to ensure that a global Future Earth secretariat functions as a truly global, representative and inclusive management structure?</li> <li>– What are the best approaches to identify funding opportunities (at global, regional and local levels)?</li> </ul> Breakout group 1: Rungano Karimanzira (chair), Akeem A Akinwale TBC (rapporteur), Heide Hackmann Breakout group 2: Oonsie Biggs (chair), Jenny Clover (rapporteur), Tanya Abrahamse Breakout group 3: Kinuthia-Njenga, Cecilia (chair), John Colvin (rapporteur), Martin Visbeck

Breakout group 4: Ayieko Monica (chair), Orla Martin (rapporteur), Jakob Rhyner

*Facilitation: Tanja Hichert*

12:45 – 13:45      Lunch

### **Session 6: Towards the implementation of Future Earth in Africa**

13:45 – 14: 30      **Presentations by group chairs of breakout session 4**

Breakout group chairs

*Facilitation: Tanja Hichert*

14:30 – 15:30      **Roundtable discussion engaging participants:** What is success for Future Earth in the region after 10 years? What would be the metrics? How do we get there?

- Guy Midgley – Chief Director and Head of climate change division, South Africa National Biodiversity Institute
- Mark Swilling - Programme Coordinator, University of Stellenbosch and Academic Director of the Sustainability Institute
- Agnes Muthumbi - Lecturer, University of Nairobi
- Julius Ibukun Agboola - Lecturer, Lagos State University
- Coleen Moloney TBC - Director, Marine Research Institute, University of Cape Town
- Pius Z. Yanda - Research and Education, Institute of resource assessment, University of Dar es Salaam

*Facilitation: Tanja Hichert*

15:30 – 15:50      **Summary and next steps**

Steven Wilson

15:50 – 16:20      **Evaluation of the meeting**

Tanja Hichert

16:20 – 16:30      **Closing remarks**

Elizabeth Rasekoala

The Breakout group chairs, rapporteurs and Transition Team members will produce a report of the workshop.

## Annex 4: Initial stakeholder mapping exercise

A stakeholder mapping exercise was initiated during the Cape Town workshop to collect information from the participants on the activities relevant for Future Earth that are taking place in Africa and regional or local organisations that Future Earth should engage.

A table was put on a wall for the duration of the workshop and participants were invited to fill it out. The table below summarise the information collected.

Project initiative /	Short description of research	Lead or contact person & contact details	Institution	Location	Sponsor if applicable	Collaboration if applicable	Geographic Scope (Regional, Local...)	Duration	Approach and purpose of research if known	Comment
African Climate Policy Centre (ACPC) & ClimDev Africa	Mainstream climate change into the member states' development strategies		Uneca / ACPC	Addis Ababa, Ethiopia			Regional		Mitigation / adaptation / technology transfer	
Phytoremediation / Organic Farming		Joshua Olowoyo jolowoyo@ul.ac.za	University of Limpopo Medunsa Campus	South Africa						
Phytoremediation	Phytoremediation of heavy metal contaminated soils	Eric Berefo ericberefo@gmail.com	Kwame Nkrumah University of Science and Technology	Knust, Kumasi, Ghana			Ghana	2 years	Making heavy metal contaminated soil (as a result of mining activity) usable.	

SEACHange	Marine ecosystems and change, including human societies	<a href="http://www.sancor.ac.za">www.sancor.ac.za</a>	South African Network for Coastal and Oceanic Research	South Africa	NRF & Dept. of Environmental Affairs & Dept. of Agriculture, Forestry & Fisheries	Among SA universities & government departments & international partners	South Africa (also includes some Namibian and Mozambican research)	5-10 years (in 4th year)	Understanding marine socio-ecological changes / forecasting	
Responsive Forest Governance initiative	Governance in environment across Africa	Dr James Muromedzi	CODESRIA	Senegal	SIDA	IUCN, University of Illinois & 10 African countries	Africa wide networks, publishing including journals	5 years initially	Responsive forest governance	Attendant was Frank Matose (UCT)
South African Environmental Observation Network	Environmental observation system	<a href="mailto:johan@saeon.ac.za">johan@saeon.ac.za</a>	SAEON	Pretoria South Africa	Dept. of Science & Technology NRF	Various, ILTER (?)	South Africa	on-going	Question-driven, site-based. Long-term monitoring	
Africa Environment Outlook (UNEP)	Environment under review - assessments	Frank Turyatunga Cecilia Njenga	UNEP	Kenya & South Africa (Pretoria)		Various centres of excellence in Africa	Regional (Africa) and other regions in the world	2 years	Reviewing state of environment in Africa	
Soil acidity correction		Prof Shoko profshoko@gmail.com	Great Zimbabwe University	Zimbabwe			Local		Liming to correct soil acidity	
Adaptation Climate Initiative (ACCAI)	Building capacity for adaptation	Yoba Sokona & Coleen Vogel			Open Society Foundation	African	Africa Univ (?) support		Adaptation capacity building / transdisciplinarity	

AfroMont	Global change network on African Mountains	Saliou Niassy University of Pretoria	University of Pretoria	South Africa	FAO - MRI	All sub-Saharan African researches	Africa	ending	Promote communication / Facilitating plans	Looking for more funding for the next phase
SARUA Climate Compatible Development Programme	Build capacity for climate compatible development across the SADC Higher Education sector (60 public universities)	Piyushi Kotecha piyushi@sarua.org	Southern African Regional Universities Association			60 regional universities	Southern African (SADC)	5 years		
ACCESS	Research and training in global change	Neville Sweijd nsweijd@access.ac.za	CSIR	South Africa & region	Dept. of Science & Technology, NRF and International			10 years	Global change including climate change	Looking for funding and promoters
TRECCAfrica	Regional doctoral and M studies in sustainability	Mark Swilling	Stellenbosch University	Stellenbosch, South Africa		Universities of Nairobi, Ghana, Nigeria, Stellenbosch, etc.	Regional	4 years	Transdisciplinarity & sustainability	
ATPS	Regional coordinated science policy studies	Kevin Urama	<a href="http://www.atpsnet.org/">http://www.atpsnet.org/</a>	Nairobi, Kenya		28 country chapters	Regional	on-going	Science - policy interface	
Institute for Climate Change and Adaptation	Climate change adaptation community outreach	Daniel Olago dolago@uonbi.ac.ke	University of Nairobi	Nairobi, Kenya			Regional		Adaptation and resilience	

Information on current activities and potential partners was also collected during the breakout sessions. It is summarised below. The aim is not to provide a comprehensive account of all the organisations and initiatives on sustainability-related issues in Africa but to provide an initial mapping of



the diversity and range of activities. The workshop concluded on the need to conduct a more thorough mapping exercise with a view to explore synergies with Future Earth and potential gaps that Future Earth could address. For the ease of reading, broad categories were added to list the various initiatives in this report.

1. Broad continental platforms
<p>a) science</p> <ul style="list-style-type: none"> <li>• African Academy of Sciences (AAS)</li> <li>• Council for the Development of Social Science Research in Africa (CODESRIA)</li> <li>• International Council for Science Regional Office for Africa (ICSU ROA)</li> </ul> <p>b) policy</p> <ul style="list-style-type: none"> <li>• African Ministerial Conference on the Environment (AMCEN)</li> <li>• African Ministerial Council on Science and Technology (AMCOST)</li> <li>• African Ministers' Council on Water (AMCOW)</li> <li>• African Union (AU)</li> <li>• United Nations Economic Commission for Africa (UNECA)</li> <li>• The New Partnership for Africa's Development (NEPAD)</li> <li>• United Nations Development Programme (UNDP)</li> <li>• UNEP's African Environment Outlook</li> <li>• World Bank Knowledge for Development special initiatives</li> </ul>
2. Sub-regional platforms
<ul style="list-style-type: none"> <li>• Commission des Forêts d'Afrique Centrale (COMIFAC)</li> <li>• Common Market for Eastern and Southern Africa (COMESA)</li> <li>• East African Community (EAC)</li> <li>• Economic Community of Central African States (ECCAS)</li> <li>• Economic Community of West African States (ECOWAS)</li> </ul>

<ul style="list-style-type: none"> <li>• South African Development Community (SADC)</li> <li>• Southern African Regional Universities Association (SARUA)</li> <li>• Union du Maghreb Arabe</li> </ul>
3. Multi-stakeholder forums
<ul style="list-style-type: none"> <li>• African Forest Forum (AFF)</li> <li>• Environnement et Développement du Tiers Monde (ENDA)</li> </ul>
4. Research initiatives
<p>a) Biodiversity and Ecosystems</p> <ul style="list-style-type: none"> <li>• South African National Biodiversity Institute (SANBI)</li> <li>• Southern African Programme on Ecosystem Change and Society (SAPECS)</li> <li>• University of KwaZulu-Natal (UKZN)</li> </ul> <p>b) Climate</p> <ul style="list-style-type: none"> <li>• The Climate for Development in Africa Programme (ClimDev Africa)</li> <li>• African Climate Policy Centre (ACPC)</li> </ul> <p>c) Coastal Zone</p> <ul style="list-style-type: none"> <li>• University of Cape Town Marine Research Institute (UCT MA-RE)</li> <li>• Wild Coast Project</li> </ul> <p>d) Earth system science</p> <ul style="list-style-type: none"> <li>• African Network of Earth System Science (AFRICANESS)</li> <li>• African Network of Earth science Institutions (ANESI)</li> </ul> <p>e) Energy</p> <ul style="list-style-type: none"> <li>• Global Framework for Climate services</li> </ul> <p>f) Forestry</p> <ul style="list-style-type: none"> <li>• World Agroforestry Centre (ICRAF)</li> </ul> <p>g) Health</p>

- Animal Health and Environment – veterinary (AHEAD)
- Medical University of Southern Africa (Medunsa)

h) Lake and river basin areas

- Lake Victoria Research (VicRes) Initiative
- River Basin studies

i) Land and agriculture

- African Institute of Agrarian Studies (AIAS)
- Climate Change, Agriculture and Food Security (CCAFS)
- International Institute of Tropical Agriculture (IITA)
- International Livestock Research Institute (ILRI)
- PLAAS - Institute for Poverty, Land and Agrarian Studies
- UNU Institute for Natural Resources in Africa (UNU-INRA)
- West African Science Service Center on Climate Change and Adapted Land Use

j) Marine

- Oceans research
- Western Indian Ocean Marine Science Association (WIOMSA)

k) Megacities

- African Centre for Cities

l) Mountains

- Research Network on Global Change in African Mountains (AfroMont)

m) Technology and innovation

- Council for Scientific and Industrial Research (CSIR)

n) Water

- Collaborative Water Research Network
- IWMI – International Water Management Institute
- UNESCO Groundwater Centres of Excellence, UNESCO Water Institute
- Water Research Commission

<ul style="list-style-type: none"> <li>University of the Witwatersrand</li> </ul>
5. Funders
<ul style="list-style-type: none"> <li>African Development Bank (ADB)</li> <li>Development Bank of Southern Africa (DBSA)</li> <li>National Research Foundation</li> <li>Swedish development agency (Sida) / Krusenberg II</li> </ul>
6. Data
<p>a) Global</p> <ul style="list-style-type: none"> <li>ETCC - DMI</li> <li>Intergovernmental Panel on Climate Change – Data Distribution Centre</li> <li>LandScan</li> <li>NASA Sat Port</li> <li>World Bank Knowledge Portal</li> </ul> <p>b) Regional</p> <ul style="list-style-type: none"> <li>African GeoSat Initiative</li> <li>Africa Reference Frame project (AFREF) using using Global Navigation Satellite Systems (GNSS)</li> <li>BIOTA Africa</li> <li>Coordinated Regional Climate Downscaling Experiment (CORDEX) climate data</li> <li>Intergovernmental Authority on Development (IGAD) Climate Prediction and Applications Centre</li> <li>Regional Centre for Mapping of Resources for Development (RCMRD)</li> <li>South African Environmental Observation Network (SAEON)</li> <li>VEGDA?</li> </ul>
7. Capacity Development

- African Capacity Building Foundation
- AfriCAN climate
- African Climate Change Adaptation Initiative (ACCAI)
- African Network of Scientific and Technological Institutions (ANSTI)
- Climate Change Adaptation in Africa (CCAA)
- CODESA?
- GARP?
- Marine and Coastal Science for Management (MASMA)
- Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)
- global change SysTem for Analysis, Research and Training (START)
- Transdisciplinary Training for Resource Efficiency and Climate Change Adaptation in Africa (TRECC)
- World Bank Capacity Development Resource Centre