FUTURE EARTH WATER-ENERGY-FOOD NEXUS WORKSHOP:
“The Water-Energy-Food Nexus and its linkages to the implementation of the SDGs”

November 21-23, 2016
Location: Hilton, Pietermaritzburg, South Africa

Purpose of the Workshop
- Identify the critical issues related to the W-E-F Nexus generally in Africa and particularly in southern Africa.
- Assess information needs and the potential benefits of Earth observations and integrated information systems in the W-E-F Nexus context.
- Identify governance gaps in addressing W-E-F Nexus issues and requirements for information and strategies to improve the performance of the water, energy, and food sectors.
- Assess the role of a W-E-F Nexus approach to support the effective implementation of the SDGs and the potential of the UN SDG process to support the W-E-F Nexus.
- Identify needs and opportunities for capacity building.

Sunday, November 20, 2016: Arrival and informal drinks in the evening

Monday, November 21, 2016

8:30-9:00  Registration

9:00-10:30  Introduction to workshop and theme
1. Welcoming remarks (Graham Jewitt and Sylvester Mpandeli)
2. Introduction of the Future Earth W-E-F Cluster, SWFP, and the purposes of this workshop (Richard Lawford)
3. Keynote on SDGs and the W-E-F Nexus (Stefan Uhlenbrook)
4. Summary of discussion paper on W-E-F Nexus and SDGs (Richard Lawford)
5. The Global Water Partnership and Nexus issues in Africa and the South African Development Community region (Kidane Jembere)

10:30-10:50  Break

10:50-12:20  Panel 1: The problem of sustainability in the W-E-F Nexus, with a focus on African countries

Chair: Sylvester Mpandeli

Each presenter will make a 10-minute presentation (40 minutes total), then the floor will be open for targeted discussions (50 minutes).
12:20-13:30 Lunch break

13:30-15:00 **Panel 2**: Challenges for the implementation of the SDGs (emphasis on Goals 2, 6, and 7) in different parts of the Global South

Chair: Olayiwola Joseph Orunja

Each presenter will make a 10-minute presentation (40 minutes total), then the floor will be open for targeted discussions (50 minutes).

- “WEF/SDG monitoring in the information age” (Graham Jewitt)
- “Expertise: Industry and compliance” (Andrew Motha)
- “Expertise: Energy systems planning” (Fadiel Ahjum)
- “Expertise: Natural and water resources governance” (Gimbage Mbeyale)

15:00-15:30 Break

15:30-17:00 **Panel 3**: The potential of observations, including Earth observations and citizen data, as new information source for the W-E-F Nexus

Chair: Steven Gillham

Each presenter will make an 8-minute presentation (40 minutes total), then the floor will be open for targeted discussions (50 minutes).

- “Water use estimation in agriculture and forestry: Accurate data for improved management and W-E-F trade-offs” (Mark Gush)
- “SANSA Observations to support the W-E-F Nexus” (Clement Adjorlolo)
- “NASA data services to support the W-E-F Nexus” (Rick Lawford)
- “Citizen Science as an enabler for integration and implementation” (Sabine Stuart-Hill)
- “Applications of Earth observations” (Christian Tøttrup)

**Tuesday, November 22, 2016**

8:30-8:45 Summary from Day 1 (Graham Jewitt)

8:45-10:15 **Panel 4**: Governance challenges in the W-E-F Nexus (institutional arrangement, legislation, policy, capacity development, stakeholder involvement, organizational robustness/resilience)

Chair: Itani Norman Tshihatu
Each presenter will make a 10-minute presentation (40 minutes total), then the floor will be open for targeted discussions (50 minutes).

- "Some key challenges of governance and management for the W-E-F Nexus in a Southern African context" (Sabine Stuart-Hill)
- “The water-energy-food nexus as a tool for transforming rural livelihoods in southern Africa” (Tafadzwa Mabhaudhi)
- “To participate or not to participate: There is no question that local communities need to be involved in water and sanitation management” (Richard Meissner)
- “A bottom-up approach – a solution to decision making challenges in the water energy food nexus and SDGs implementation” (Hlananathi Fundzo)

10:15-10:30 Break

10:30 – 12:00 Panel 5: International cooperation in the area of water to assist in the implementation of the W-E-F Nexus and the SDGs for international and national basins

Chair: Dhesigen Naidoo

Each presenter will make an 8-minute presentation (40 minutes total), then the floor will be open for targeted discussions (50 minutes).

- “Expertise: Water scenarios” (Simon Langan)
- “Expertise: Groundwater” (Karen G. Villholth)
- “Understanding Nexus dynamics and governance challenges in complex regional systems - Insights from the Berg River Catchment South Africa” (Nadine Methner)
- “Expertise: Biotechnology and Wastewater treatment” (Tamsyn Grewar)
- “Expertise: Water governance and planning” (Faye Balfour)

12:00-13:00 Lunch break

13:00-14:30 Panel 6: Environmental factors and trends influencing the W-E-F Nexus and the SDGs (e.g., climate change)

Chair: Mark New

Each presenter will make a 10-minute presentation (40 minutes total), then the floor will be open for targeted discussions (50 minutes).

- “Food security in Southern Africa in relation to the regional factors driving future social and ecological insecurity” (Marit Berchner)
- “The Danish + 10 Million Tonnes Study – Increasing the sustainable production of biomass for biorefineries” (Morten Gylling)
- “The Biophysical Basis of the WEF Nexus, Now and into the Future, which Informs and is informed by Policy and Governance: A South African Perspective” (Roland Schulze)
- “Gender and climate change” (Oluchukwa Rebecca Goodnews)

14:30-14:45 Break
14:45-15:45  **Panel 7: Governance, Infrastructure (ecological and built), water, energy and decision making**

Chair: Stanley Liphadzi
Each presenter will make an 8-minute presentation (40 minutes total), then the floor will be open for targeted discussions (50 minutes).

- “Coal and the W-E-F Nexus: Policy considerations” (Gareth Simpson)
- “Water, food and land” (Aiden Senzanje)
- “Expertise: Renewable energy” (Zakiwanu Shaibu)
- “Expertise: Hydrologic and climate change modelling” (Stefanie Schütte)
- “Expertise: Natural Resources Management” (Nkobi Mpho Moleele)

15:45-15:55  **Introduction to breakout groups**

15:55-17:15  **Breakout groups** meet. Participants will have the options of joining the breakout group of their preference.
1. Observations and science (Chair: Richard Lawford. Rapporteur: Christian Tøttrup)
2. Governance (Chair: Sabine Stuart-Hill. Rapporteur: Aiko Endo)
3. Management (Chair: Sylvester Mpandeli. Rapporteur: Stephanie Midgley)

17:15-18:00  **Reports from the breakout groups and discussion**

**Wednesday, November 23, 2016**

9:00-9:15  **Summary from Day 2** (Richard Lawford)

9:15-10:15  **Discussion Session**: Ideas for formulating networks with Future Earth Nexus Knowledge-Action Networks and SDGs, SWFP, and potential future collaborations

Chair: Graham Jewitt

10:15-10:30  **Break**

10:30-12:00  **Discussions of:**
2. Recommendations on observations, data systems, science, and related research needs for the W-E-F Nexus (20 minutes): Rick Lawford
3. Recommendations on governance and management and related research needs for the W-E-F Nexus (20 minutes): Sabine Stuart-Hill
4. Recommendations for linking the W-E-F Nexus to the SDGs (20 minutes): Graham Jewitt

Note: For each topic, someone should be identified to have specific recommendations to be discussed (one or possibly two PowerPoint slides for each topic).

12:00-12:35  **Summary discussion**

Workshop summary, follow-up actions, conclusions, and adjournment (Richard
Lawford, Graham Jewitt)

12:35-13:35    Lunch break

14:00    Departure for the Science-Policy Dialogue in Johannesburg

For on-site questions, contact Susan Risko.

Workshop note-takers:

Susan Risko
Ntombi Nxumalo