Break out group

Management

Sylvester, Declan, FutureEarthSimon,

What are the benefits of adopting WEF nexus as well as the trade-off?

- Benefits: 3 components are clearly inter-linked, must be seen together
- Can foster broader buy-in, collaboration, partnerships
- WEF is a sub-set of Future Earth, of earth system
- Increasingly relevant, sophisticated integrated modelling systems available which integrate the components, integrated models capture flows between sectors, economics, we have tools to capture this
- Nexus is not just about biophysical systems, also governance, relationships, policies. Need to integrate these. Strength but also weakness. Very complex, difficult to move on.

What are the drawbacks?

- Nexus is ignoring other important sectors e.g. mining
- Stakeholder fatigue, another new approach, new ideas
- “Re-packaged”?
- Looking at provisioning services, forgetting about environmental sustainability, regulatory and cultural dimensions of ecosystem services

How are the benefits distributed?

- Benefits: who benefits; gov? local level not benefitting, benefits at different scales. Nexus is there for the mutual benefits of all. Different political powers across the sectors of the nexus, some stronger than others, some levels of gov stronger and higher influence.
- Case studies: examples of both winners and losers
- Nexus framing must look at power relationships and try to reconcile them.

How can WEF management improve the efficiency of food production and water management?

- Look at 3 areas together: food production can be very resource inefficient, identify inefficiencies through energy/water lens, apply different lens to production
- How do we measure the WEF nexus? Kg/ha, kg/m3, what about energy efficiency? What are we measuring? Virtual water and crop production, also crop/m3/kJ – possible integrated indicator. T/ha, also include measure of nutritional value.
- Include energy conversion from fertilisers
- Land and water management: infrastructure as a resource to improve efficiencies

What kind of Earth Observation (EO) data do we need to make decisions?

- Reliable, near-real-time, free
- Forecasts important, planning e.g. in agriculture, firebreak burning, water management etc
- Can use EO to make better decisions on water and food
- We can improve the data, but recognise that we need more than this, Social and economic information also needed.
- What do we have? What capacity? Soft issues e.g. migration, other drivers
- Community level planning. Have information on El Nino, but not planning well enough (strategic). Barriers: getting info from source to policy makers. Day-to-day running, info sent through too late.
- 3 types of decisions: strategic, tactical, operational
- Real-time info, access to data, knowledge of how to use it not always there, develop capacity for smallscale farmers, use ICT to advise farmers. We have enough data, but not making informed decisions always.
- Can't observe governance through EO, missing issues/gaps, link flow of people, knowledge, capacity. EO perhaps not the right approach. Governance important.

How do we make sure that we have enough data to make informed decisions?

- Remove “enough”, maybe “appropriate”. What are we doing with the data we have?
- Cost of data, access, commercial barriers
- Access not always = affordability
- Benefits those that have the capacity to use it, for many others there are barriers to understanding, or capacity to do anything about it. Additional factors needed for effective use.
- Eskom has excellent rainfall data. We don’t have access to this data. Also lightning etc
- Issue with SAWS, ARC, they want to add value, but users asked to compensate to pay for operational maintenance, but they get a grant
- Need assessment of value of not having data. Loss of rainfall stations. How much better would decisions be if we still had that data. Need cost-benefit /risk analysis of not having it.
- Systems must become integrated/inter-operable, easier to maintain
- SAWS are paid well by airline industry etc but then they want students / researchers to pay

What mechanisms can we use to drive the WEF Nexus at regional level?

- Levels of organisation: river basin organisations, SADC water, SADC infrastructure development. What mechanisms? Need impetus into existing mechanisms. Continental: AMCOST, AMCOW, CAADP. African (AU) structures.
- Linked researchers, capacity building and training important, inter-disciplinary approach, new approaches to training
- Regional weather monitoring system, Met Association of southern Africa, SARCOF
- Link through to previous question, what about transboundary, multi-national, trade
- Link to next question (treaties)

What is the role of international treaties within the WEF nexus space?

- Lots of treaties, but are they effective?
- SDGs, Paris Agreement: there has been gov response, they do play a role. Governments have to report. SA Treasury has responded.
- Implementation led by big institutions, no opportunity to plug in experience, local knowledge, no funding. International Treaties perhaps weakening local structures?

What is the role of different actors or non state actors in managing the WEF nexus?

- What is the role of Treaties, how do they operate, how is WEF integrated? Role of international NGOs.
- Hold developed countries accountable for their contributions to the nexus?
- Different actors: role in design
- Foster, enable, capacity building interventions (training programmes)
- Whose role is it to monitor the nexus? Esp. in the value chain.
- Need for new or evolved existing integrative institutions?

What are the benefits of adopting WEF nexus as well as the trade-off?

- Examples: CLEW model, has been applied to look at nexus
- Nexus operates across scales and cultures
- Advancement of IWRM paradigm, identified products of energy and food, sustainability, more tangible
- Outputs of one component become the inputs for the others
- Food is big issue for gov,. Malawi: provide food to the nation, energy and water come afterwards in planning process
- What comes first? Gov budgeting for food
- SA: focus is on water and energy. Emphasis of one over the other varies between countries, and sub-nationally
- Trade-off: def of nexus is not well-defined. Could become a problem, not talking about the same issue. Need to look at the directions between the systems, often misinterr
- Adopting? For what actors? New area, get policy makers to accept as new focus area, get buy-in, bridge science-policy gap
- Can mean many things: policy, science etc
- Missing: sustainability agenda, ecosystem services etc, get away from “mining”
- Nexus is very production-orientated, danger of missing sustainability
- Water: perhaps replace with environment, water for env, also land

What are the benefits of adopting WEF nexus as well as the trade-off?

- SA: 4 departments championing the food security focus, DAFF and Social Dev are at the forefront/visible.
- Trade-offs: nexus explores the trade-offs. Mean what problems: complex, difficult to understand and use, multiple meanings lose the focus, temptation to be superficial. Assumptions made e.g. energy, not just linked to water and food. But energy for cooking? Wood/charcoal, land /biodiv implications esp southern africa
- Dynamic: fluxes changing all the time