

Food-Water-Energy Nexus International Workshop: Cambridge 2018

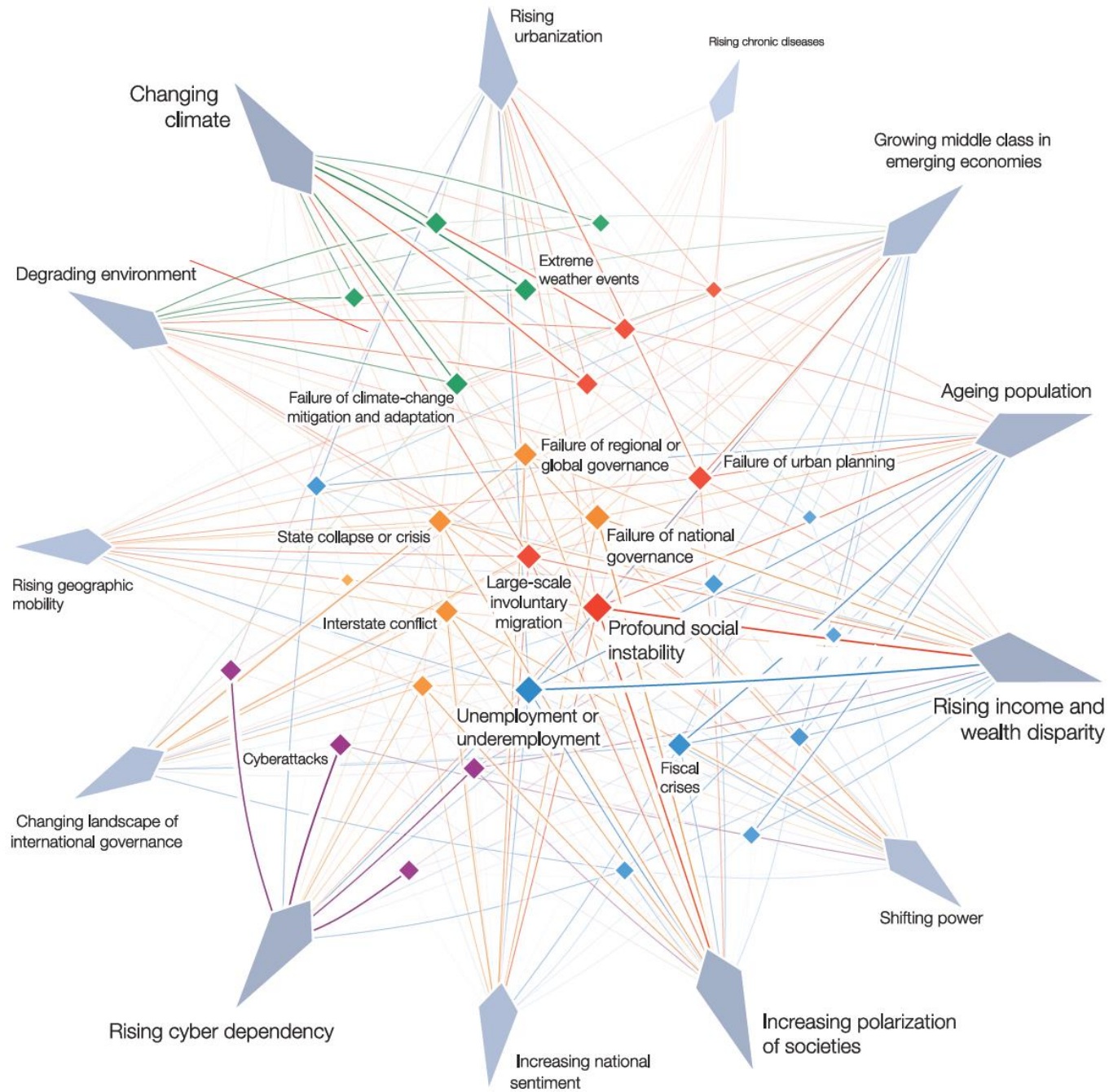
The Brazilian Nexus, stakeholder engagement and pilot action projects

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Global Trends Challenging Sustainable Development

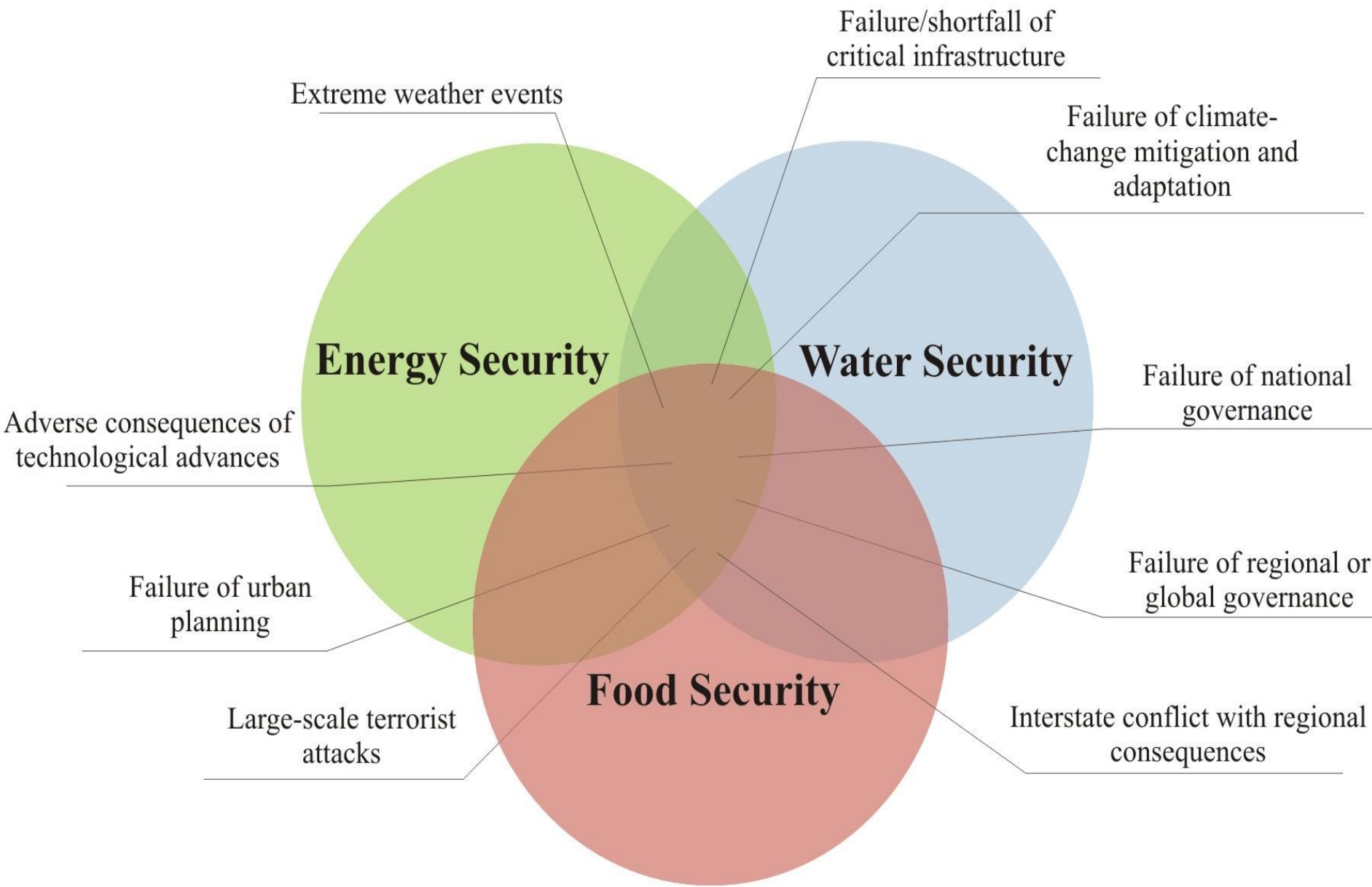
- ❖ Global economic changes;
- ❖ Global social/demographic changes;
- ❖ Global environmental/climate changes.



Global risks impacting the WEF nexus and food security

The Water-Energy-Food Nexus

- ❖ The WEF nexus represents complex interrelations between different sectors and scales, influencing and being influenced by external drivers such as social, environmental and economic factors.
- ❖ Thus, it requires an integrated multi-sectoral and multi-stakeholder approach to analyze the complexities of water, energy and food resources interactions, synergies and trade-offs.



Global risks impacting the WEF nexus and food security

Communities of Practice

- ❖ Communities of practice refer to a group of people with a **common goal** or/and characteristic that debate and **share data, knowledge, experiences and best practices** about some issue or a challenge, **creating solutions for sustainable development** and offering good governance models.
- ❖ When composed by **multiple stakeholders**, it can provide a **powerful governance tool** for sustainable development.

Sustainable Development Goals



Engaging Stakeholders: BRIDGE Community of Practice Initiative - Workshop 2017

- ❖ **120 attendees**, including:
 - ❖ 5 City Counselors;
 - ❖ 10 State Deputies (Legislative Assembly of the State of Santa Catarina);
 - ❖ The President of FAPESC (Research Council of the State of Santa Catarina);
 - ❖ Academics and researchers from Brazilian and international universities;
 - ❖ Representatives of local water, energy, agriculture and conservation organizations and companies.

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Results of the Workshop

- ❖ **Strong alignment between the scientific literature and the results of the Community of Practice (BRIDGE Project).**
- ❖ **Energy:**
 - ❖ 1. Water dependency and difficulty of diversification (as a populated island, Florianopolis rely on water supply from the mainland);
 - ❖ 2. Demand for food and behavior changes as a result of international demand for food, which pressures land water resources in Brazil.

Results of the Workshop

❖ Food:

- ❖ 3. Land use pressures water sources and supply (due to the culture/method of agriculture production);
- ❖ 4. Agriculture production pressures ecosystems and conservation;
- ❖ 5. Agriculture pressures energy demands.

Results of the Workshop

❖ Water:

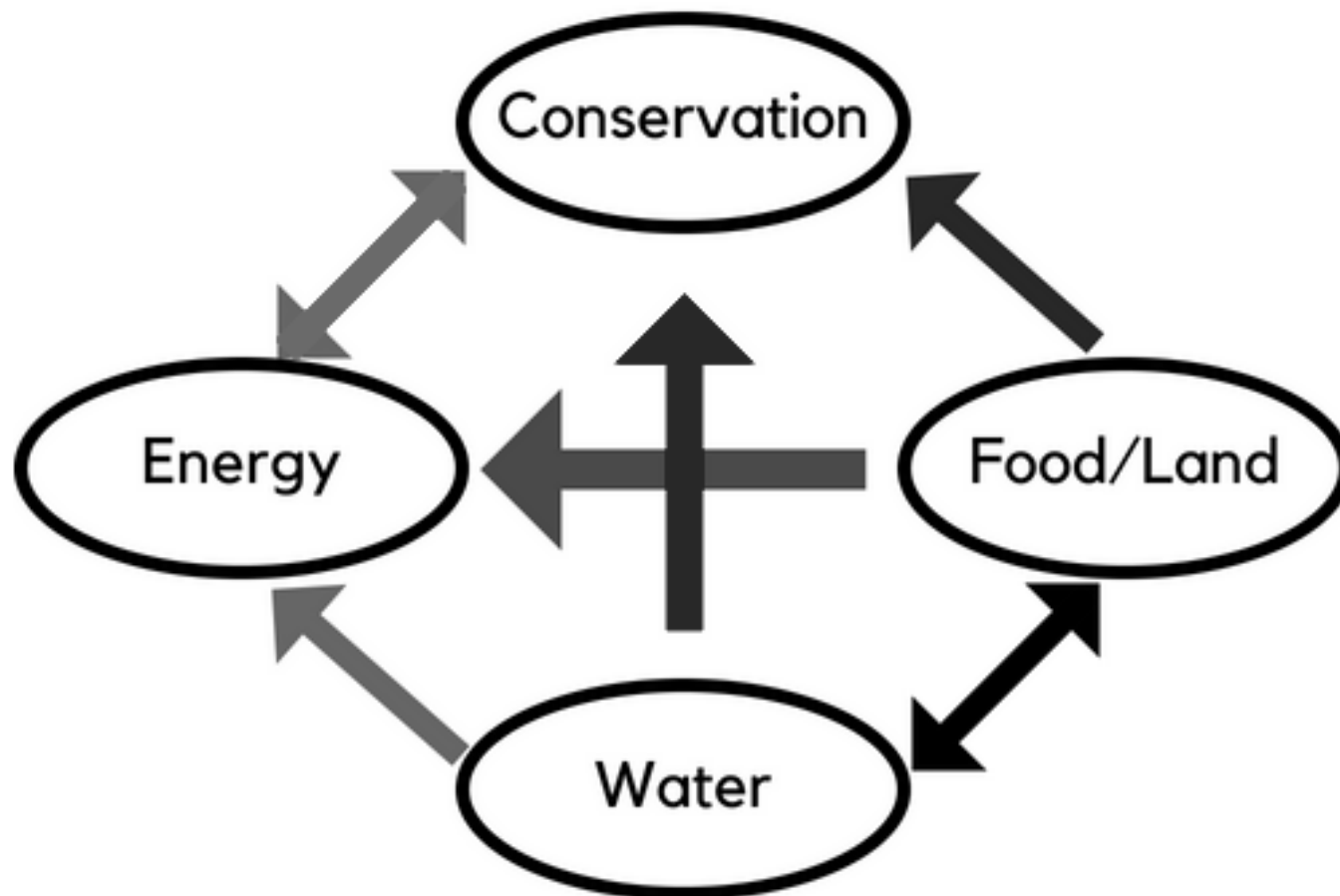
- ❖ 6. Effect of agriculture (deforestation) on the level of dependency of water supply from other regions;
- ❖ 7. Effect of hydroelectricity production on local water supply and land use (possible trade off in the use of water for energy production, human consumption, food production and conservation of local ecosystems).

Results of the Workshop

❖ Conservation:

- ❖ 8. Water contamination/pollution (due to the wastes and effluents of thermoelectricity and agriculture production);
- ❖ 9. The use of waste to produce bioenergy.
- ❖ 10. Land use change (deforestation) due to the expansion of agriculture production.

Results of the Workshop



Results of the Workshop

- ❖ **Recommendations to overcome the challenges of the WEF nexus in Brazil, identified by the Community of Practice:**
 - ❖ Increase access to information, awareness and education;
 - ❖ Inter-sectoral linkages and multi-level approaches at the institutional level of governments and organizations (universities, companies);
 - ❖ Implementation of the legislation on planning for sustainable development, environmental conservation and protection of the rights of native people;
 - ❖ Increase access to technology and financing.

Thank you for your attention!

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