



TEXAS A&M UNIVERSITY
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Energy Institute



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Experiment Station

How Does Effective Governance Accelerate SDGs Implementation for more Sustainable and Resilient Cities?

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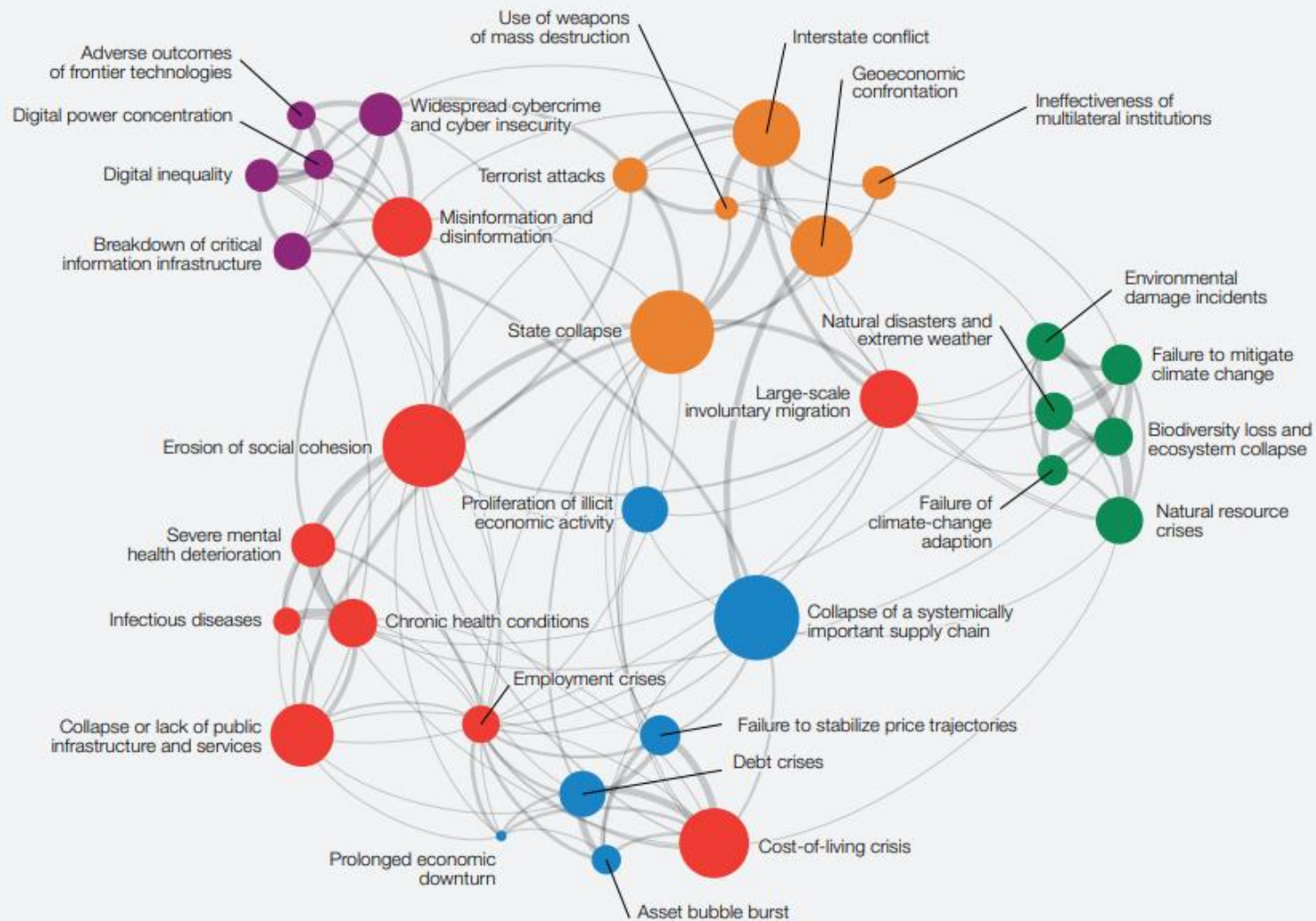
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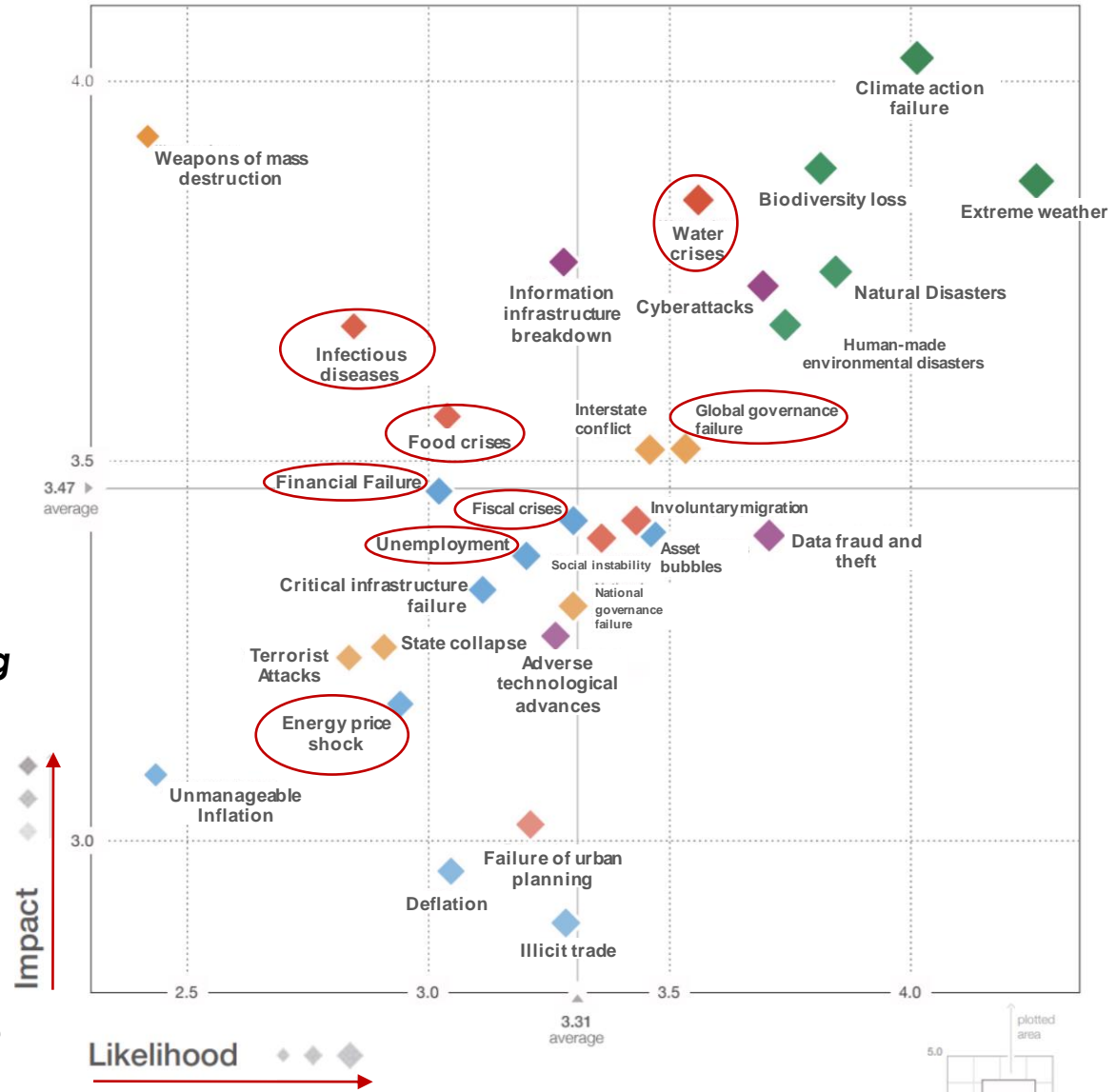
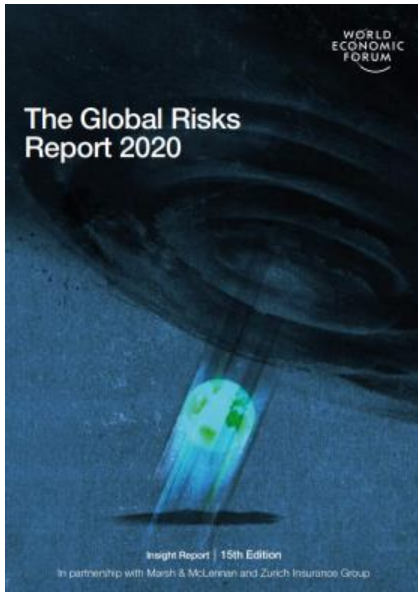
Global Risks Landscape 2023



(World Economic Forum, 2023)

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

Global Risks Landscape 2020



- Wide range of **complex challenges**
 - **Highly interconnected** challenges
 - **Hard to predict**
 - Need for **systems thinking**
 - Require **rapid response**
 - Require **high level of cooperation**
- **Infrastructure for improving future resilience:**
 - environments to innovate at the interface of different disciplines; emergence of new disciplines
 - environments to innovate in ways diverse actors cooperate

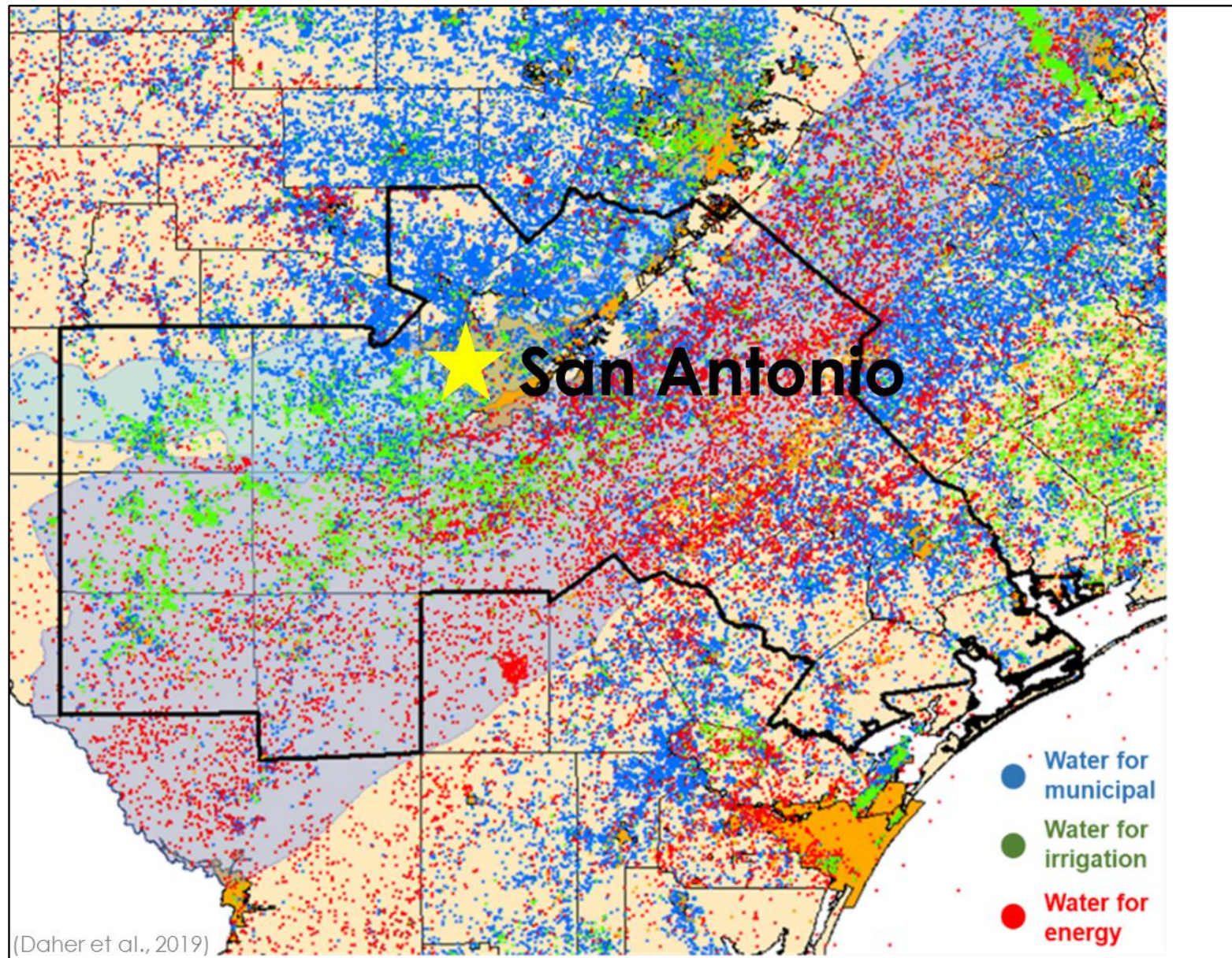
Interconnected Sustainable Development Goals



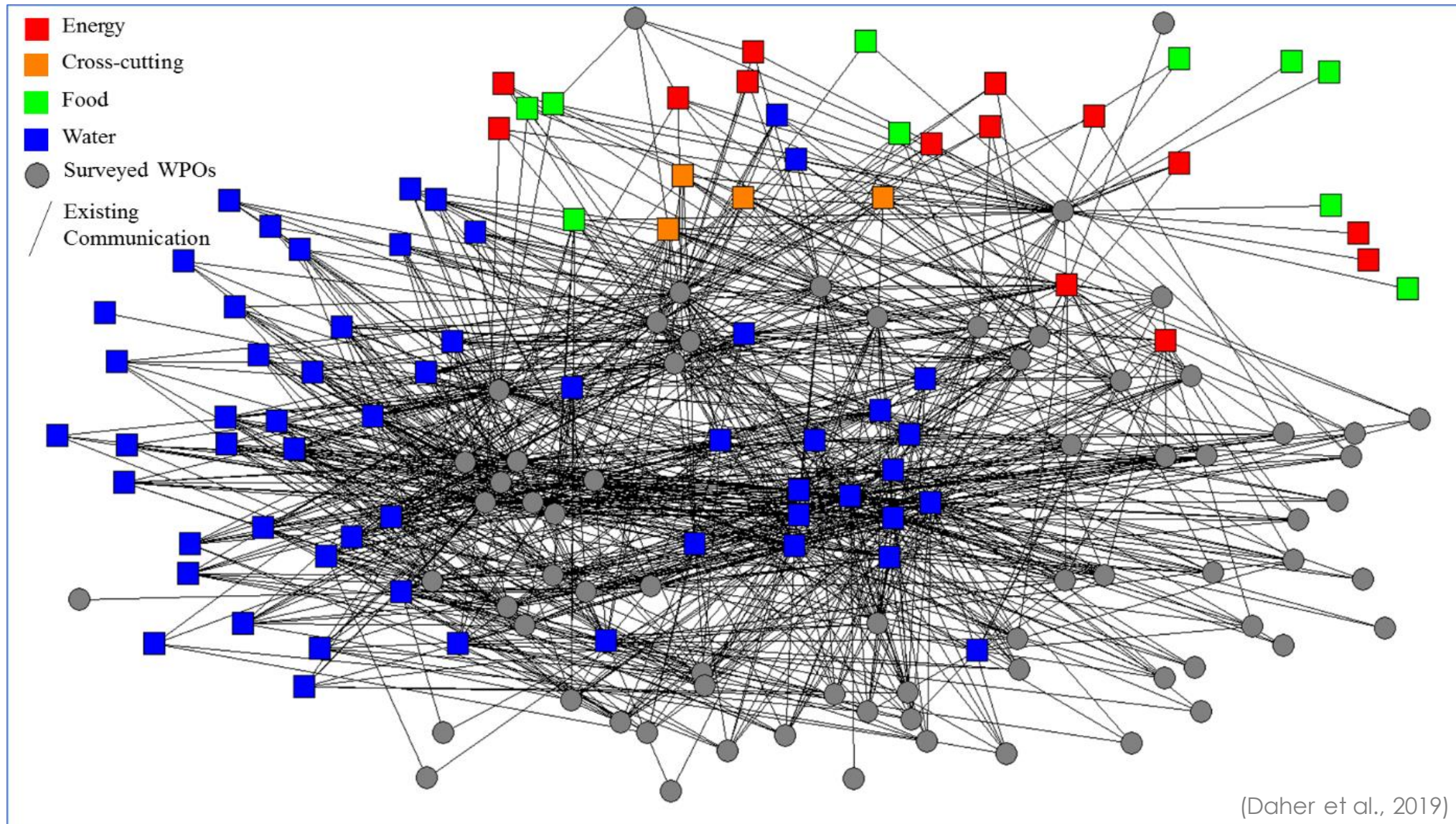
Need to:

- Understand and quantify interconnections
- Develop coordination mechanisms and address barriers for integrative planning and governance
- Develop collective outcomes across different sectors
- Engage stakeholders in decision-making processes

Example: Water-Energy-Food Hotspot in San Antonio, TX



Network Map: any level of communication



90% No communication

10% some level of communication

Stakeholder Engagement Workshop

Barriers to Communication



Stakeholder Engagement Meeting in San Antonio, TX

1. **Legal and procedural barriers:** Institutional mandates and lack of coordination mechanisms.
2. **Financial:** who will pay for the time and effort involved in pursuing increased communication?
3. **Uniformity of Language** (units, abbreviations, syntax and context of problems and solutions).
4. **Planning Horizons** differ for water, energy, and food (10 to 50 years) causing ideological differences and creating barriers.
5. **Different values systems** differ across sectors and organizations.
6. **Competition** between local, regional, global organizations and across industries leads to issues of confidentiality, restricted data.
7. **Self-interest versus collective goals** - Silo mentality
8. **Lack of common goals** and collaborative projects

Localizing SDGs for San Antonio

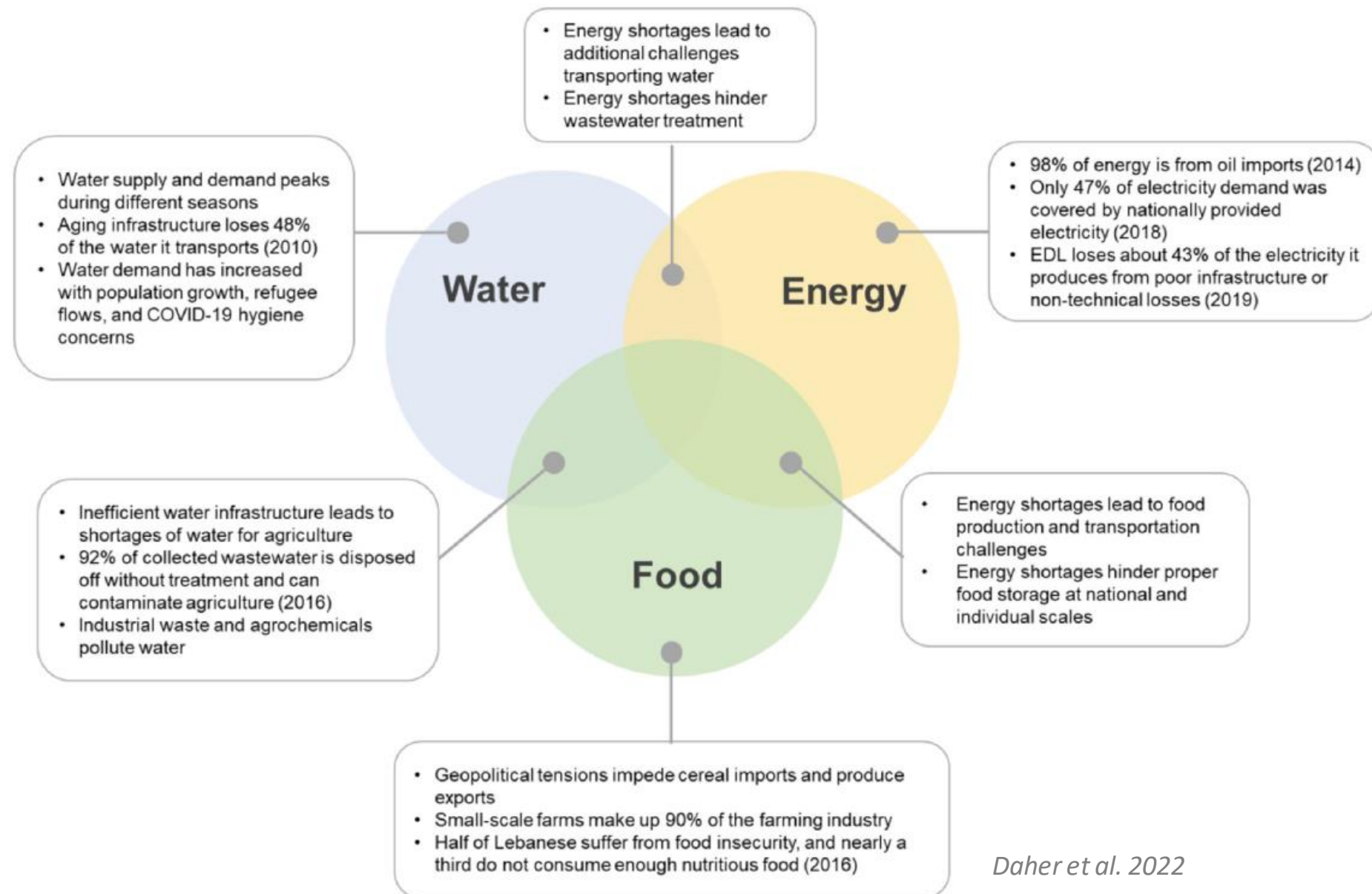
SAN ANTONIO SUSTAINABLE DEVELOPMENT GOALS

WELCOME TO THE CITY OF SAN ANTONIO'S SDG TRACKING DASHBOARD

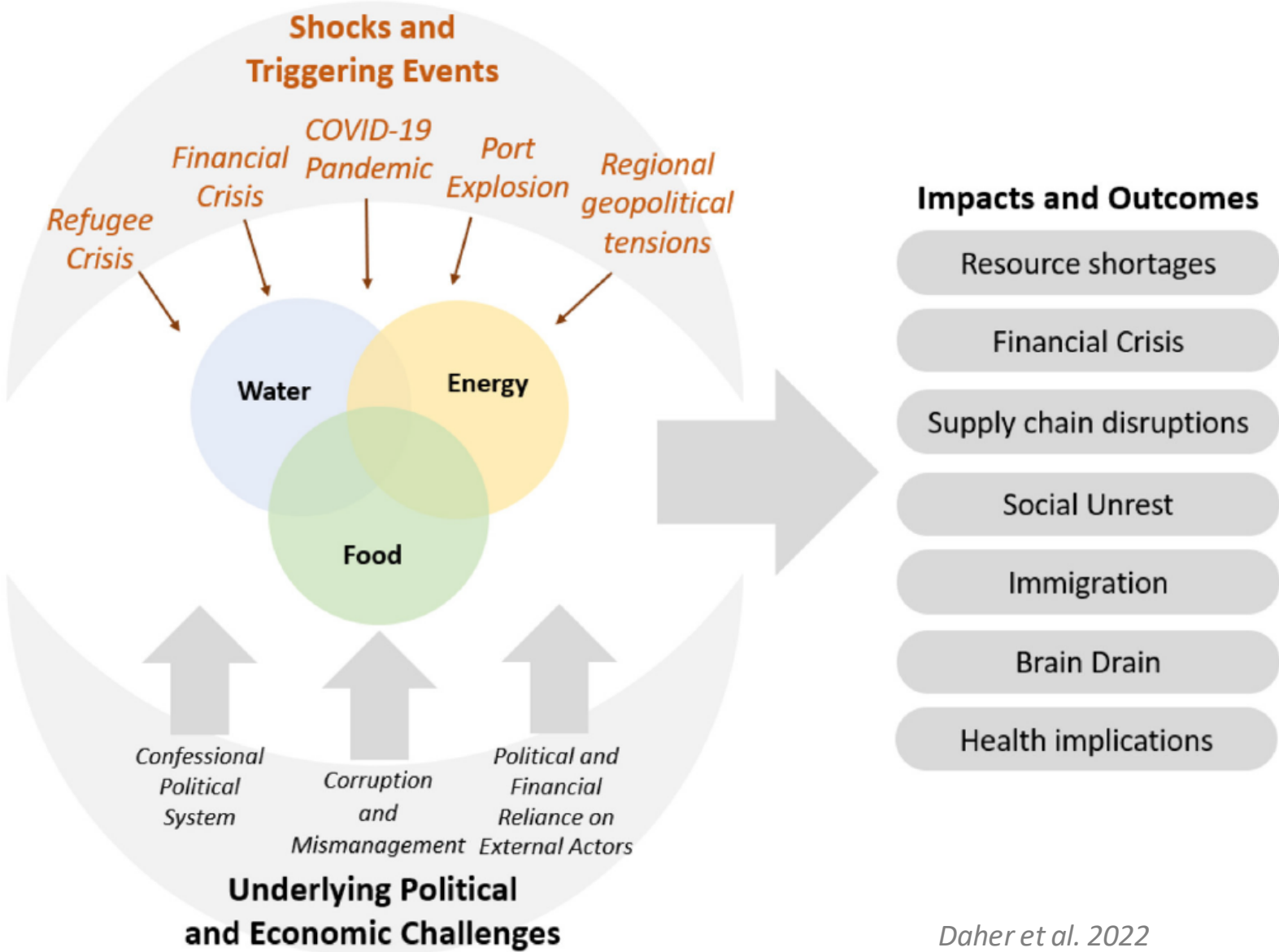


Click on each goal for localized San Antonio sustainable development goals and targets

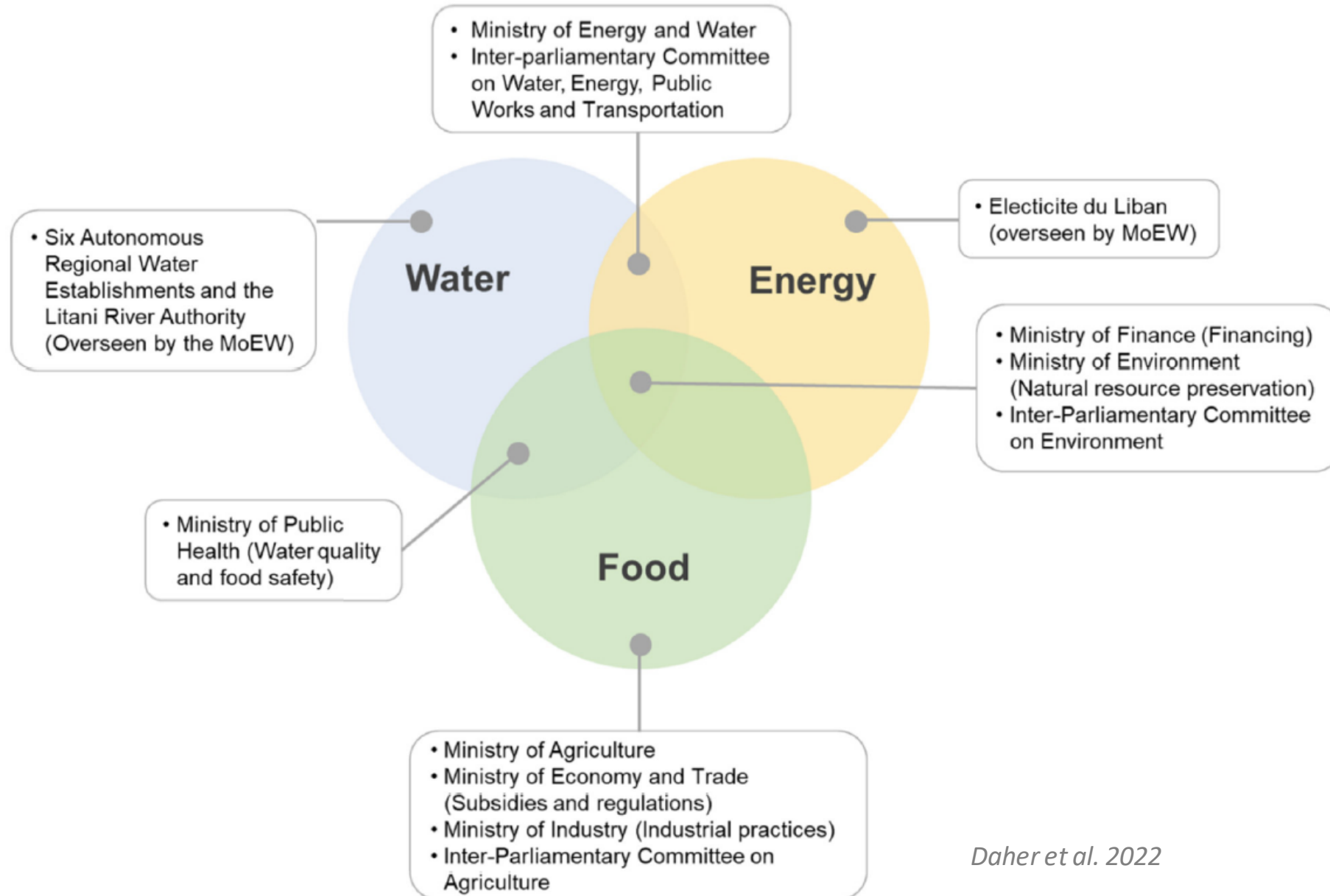
WEF Challenges in Lebanon



Underlying challenge, shocks, and impacts



WEF Key Actors in Lebanon



OPPORTUNITIES



Systems Thinking

- *Create mechanisms that encourage integrated management*
- *Platform for dialogue and planning (linking different sectors and stakeholders, aligning priorities, holistic strategies)*
- *System-level analysis*



Empowering decentralized initiatives

- *Empower local governance and formalize existing local water, energy, and food management systems*
- *They can bypass some of the underlying challenges at national level while being able to tailor solutions to local contexts*



Bridging systems thinking and decentralized initiatives

- *Decentralization doesn't mean fragmentation; benefits from direction at national level to maximize national outcomes*
- *Broad, systems-based reform reflects a top-down management framework that improves resource system resilience at the national level, while decentralized initiatives improve resilience from the bottom up.*

Key Messages

- Addressing complex challenges such as climate change and biodiversity loss **requires collaboration across sectors and stakeholder groups**
- Improving the management and resilience of interconnected resource systems requires an understanding of **underlying conditions** and **shocks** and **their impact**
- **Engaging diverse stakeholder groups** in governance processes can lead to more inclusive and equitable decision-making
- An **effective governance framework** is one that:
 - ensures **collaboration** and **coordination** among stakeholders, including government, civil society, and private sector, for efficient resource allocation and implementation.
 - promotes **transparency**, **accountability**, and **citizen participation** in decision-making, ensuring that the needs and priorities of all stakeholders are considered.
 - facilitates the **integration of SDGs into local policies, plans, and regulations**, enabling mainstreaming of sustainable and resilient practices in city development.
 - provides a **framework for monitoring and evaluation**, enabling regular tracking of progress and identifying gaps and challenges that need to be addressed for successful implementation of SDGs in cities.

Thank You

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