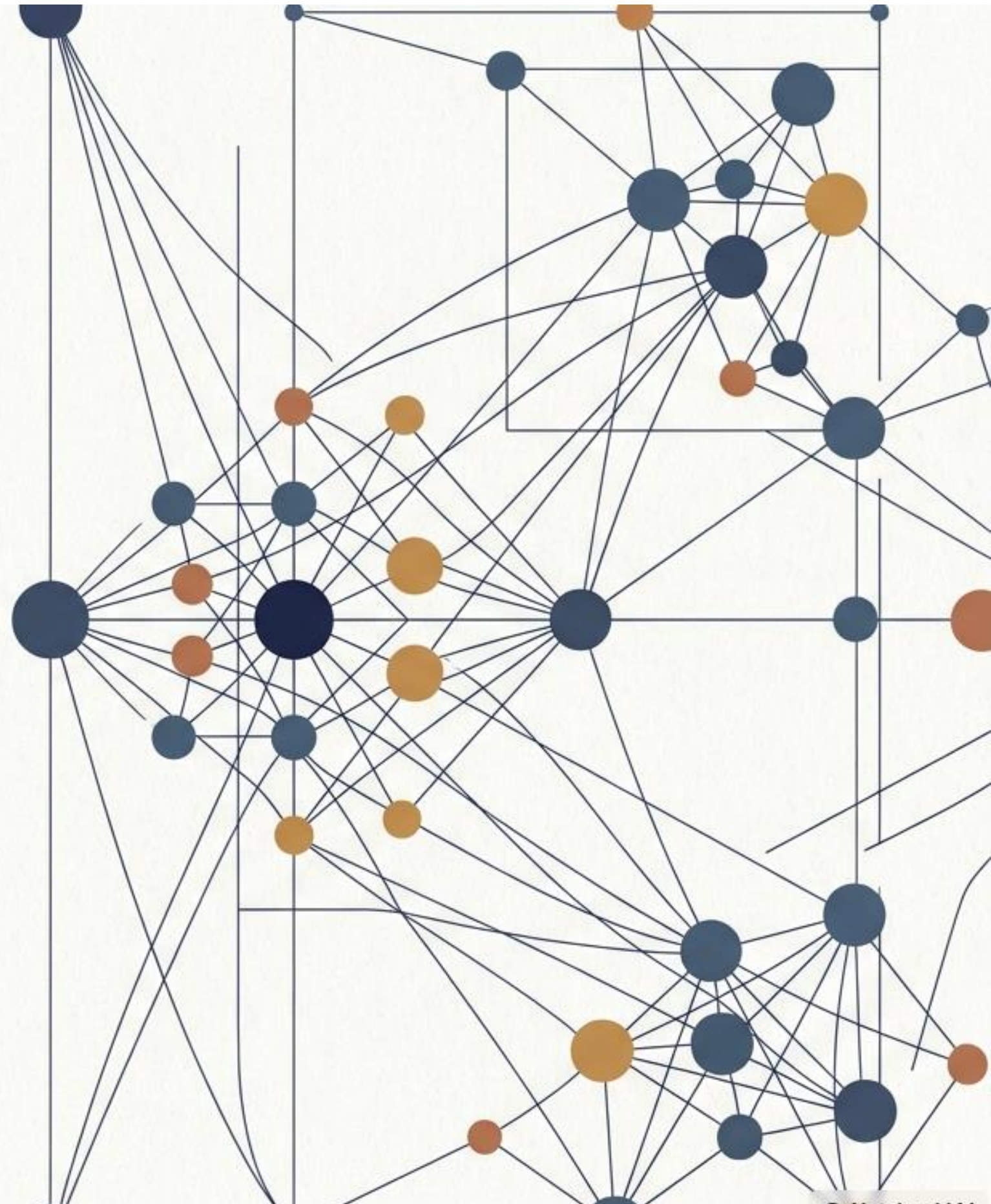


Systems Analysis and Global Scientific Collaboration

Inside the International Institute for
Applied Systems Analysis (IIASA)



The Hub

Based in Laxenburg, Austria, IIASA brings together researchers from across disciplines and borders.

The Network

Supported by member organizations worldwide, acting as a unique platform for international collaboration.

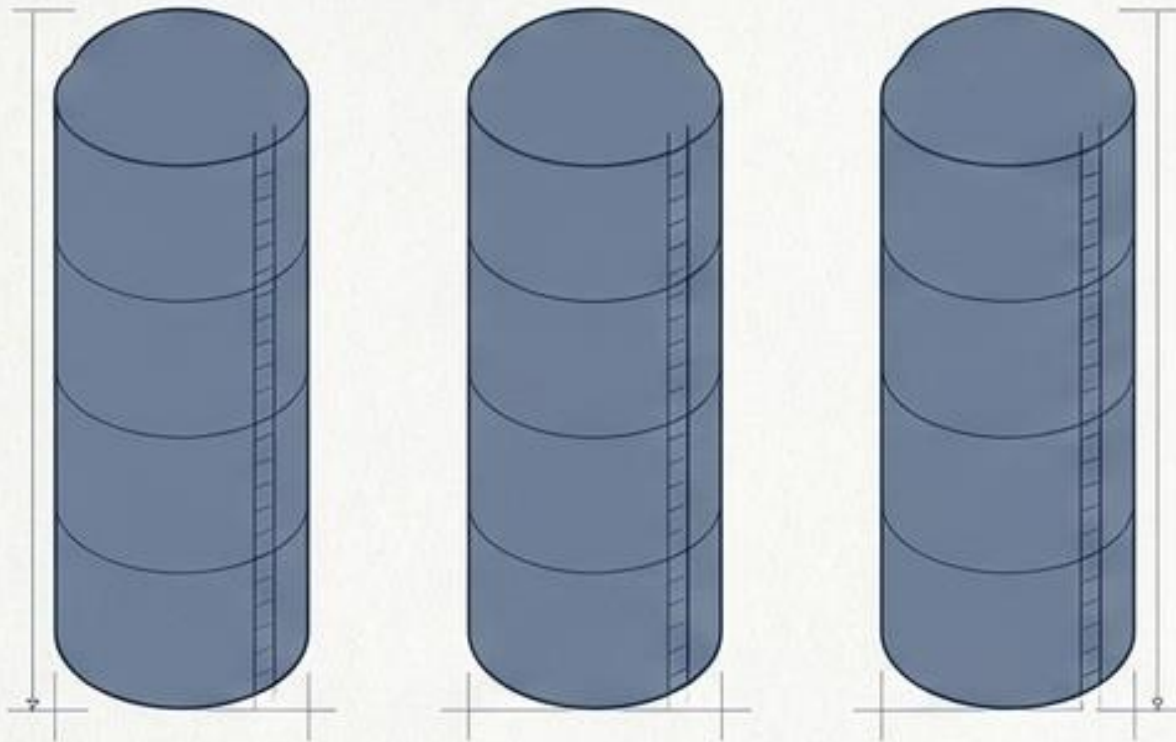
The Mission

Tackling complex global challenges that cannot be understood from the perspective of a single field.

Iran National Science Foundation (INSF)

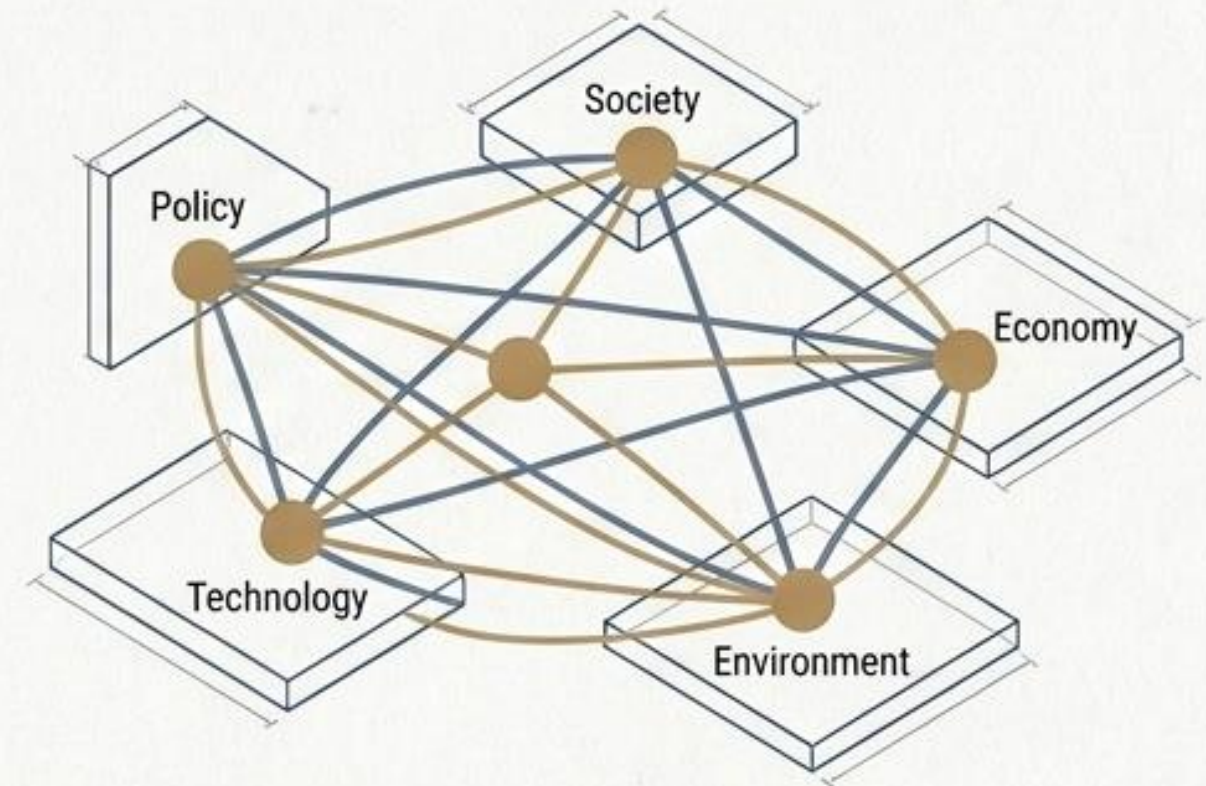
The Paradigm Shift: Applied Systems Analysis

Traditional Monodisciplinary Research



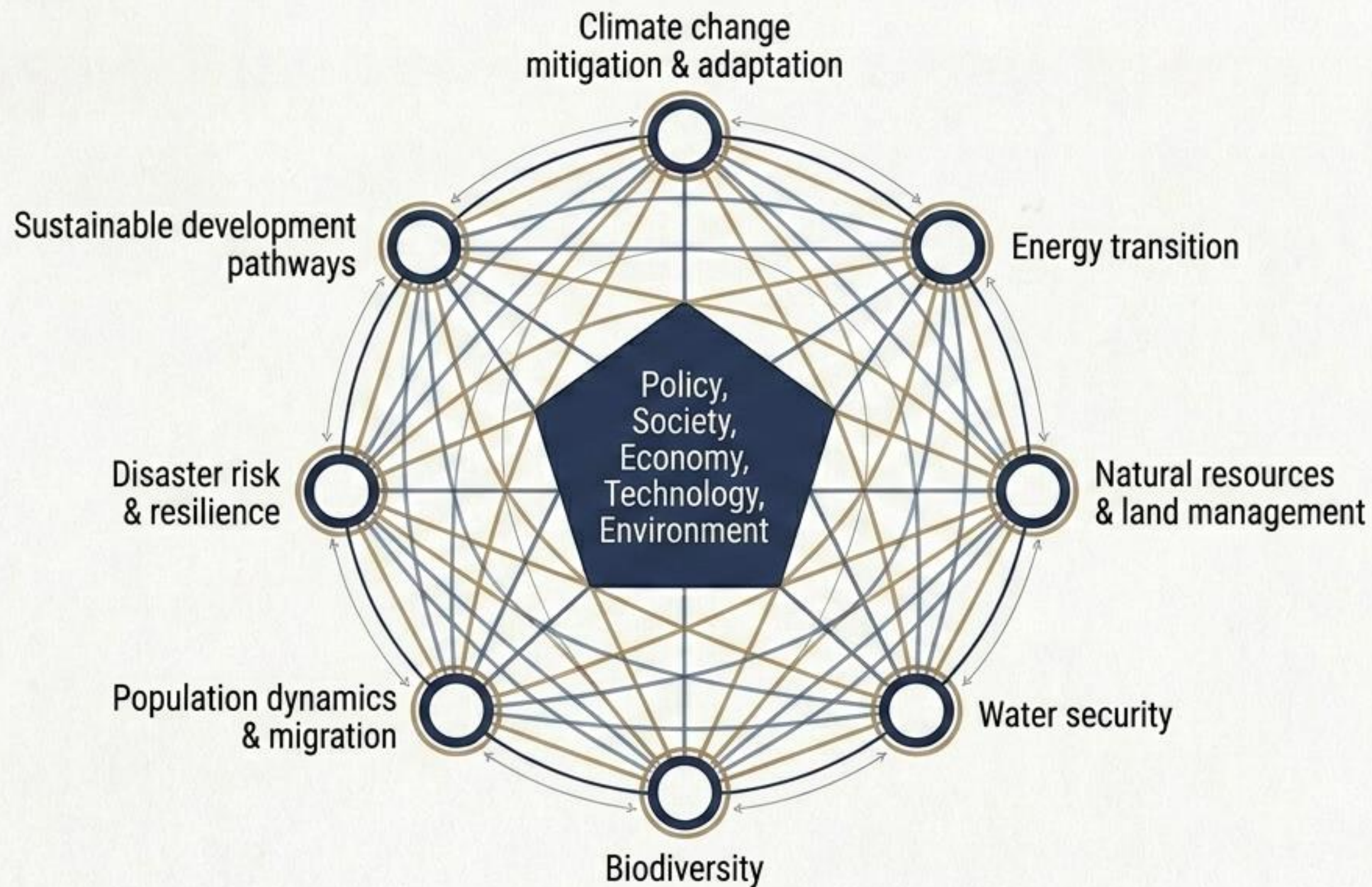
- **Perspective:** Single-field focus.
- **Variables:** Isolated problems studied independently.
- **Output:** Theoretical field-specific discoveries.

IIASA's Systems Analysis

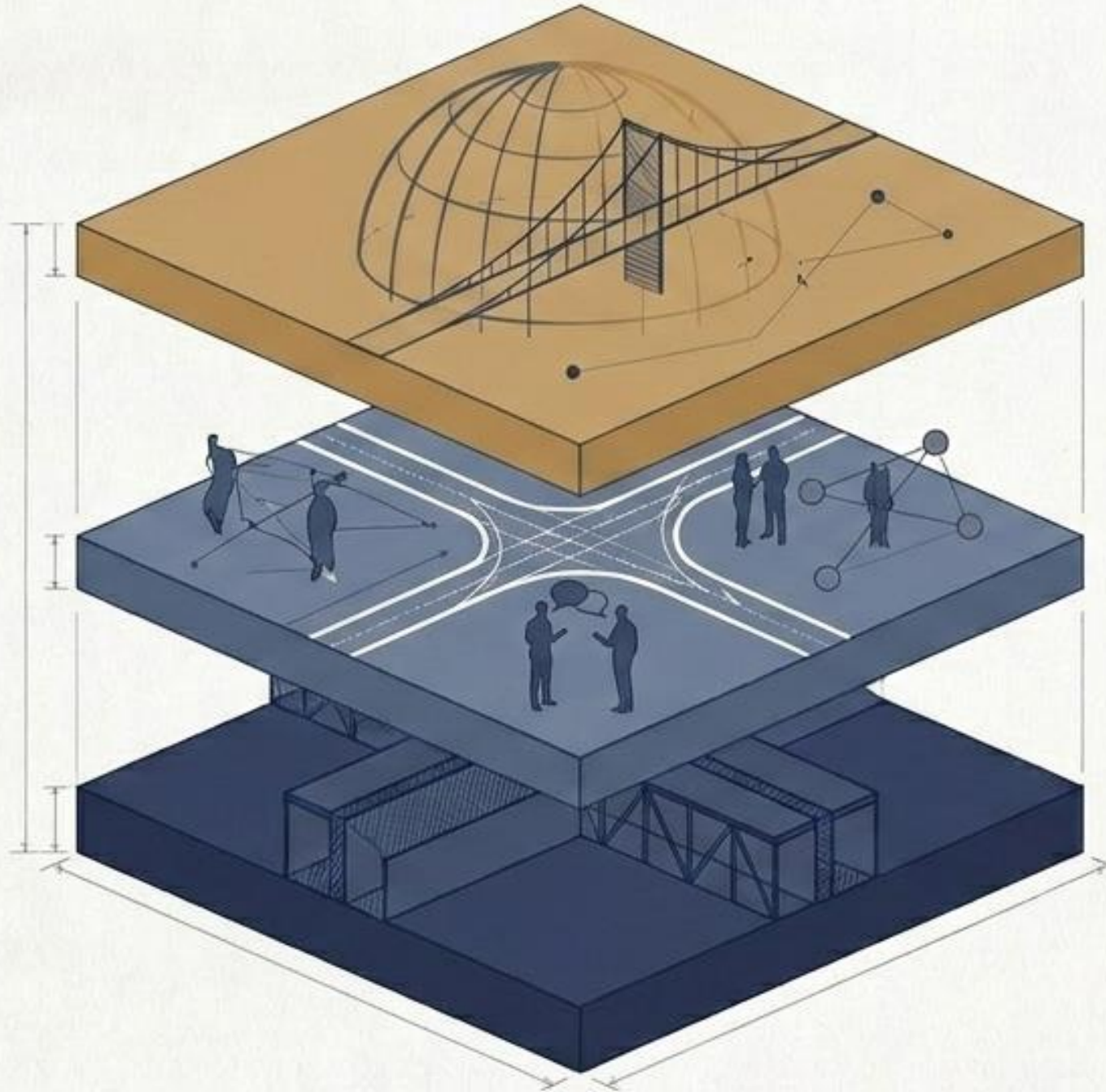


- **Perspective:** Interconnected systems approach.
- **Variables:** Studies how components actively influence one another.
- **Output:** Systematic, policy-relevant solutions.

Designing Solutions for Interconnected Global Crises



Science Diplomacy in Action



Top Layer - Science Diplomacy

Leveraging partnerships (like the INSF) to bridge international divides through shared, evidence-based goals.

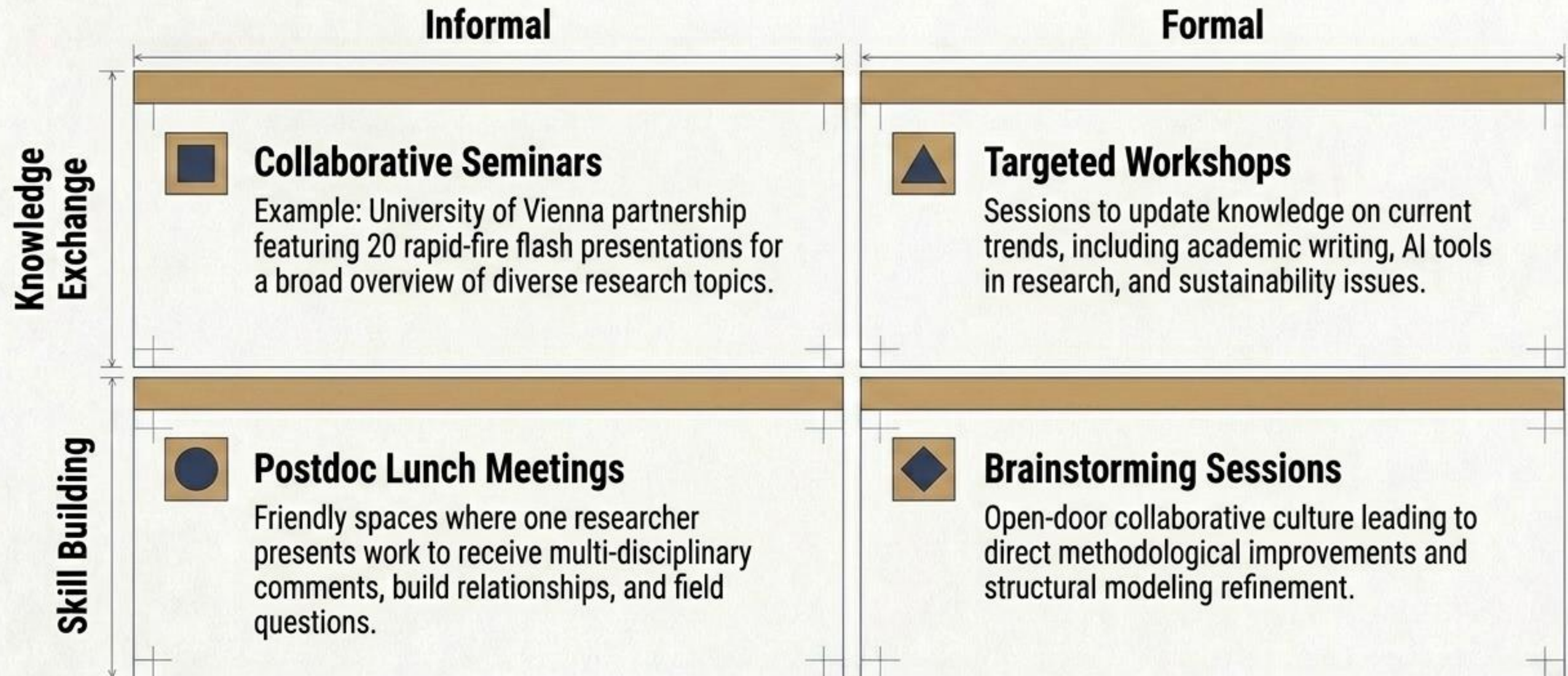
Middle Layer - Cultural Exchange

Daily interactions with researchers from diverse academic and cultural backgrounds, broadening perspectives.

Base Layer - Scientific Research

Beyond individual projects—an open environment for brainstorming and methodological exchange.

The Collaborative Ecosystem at IIASA

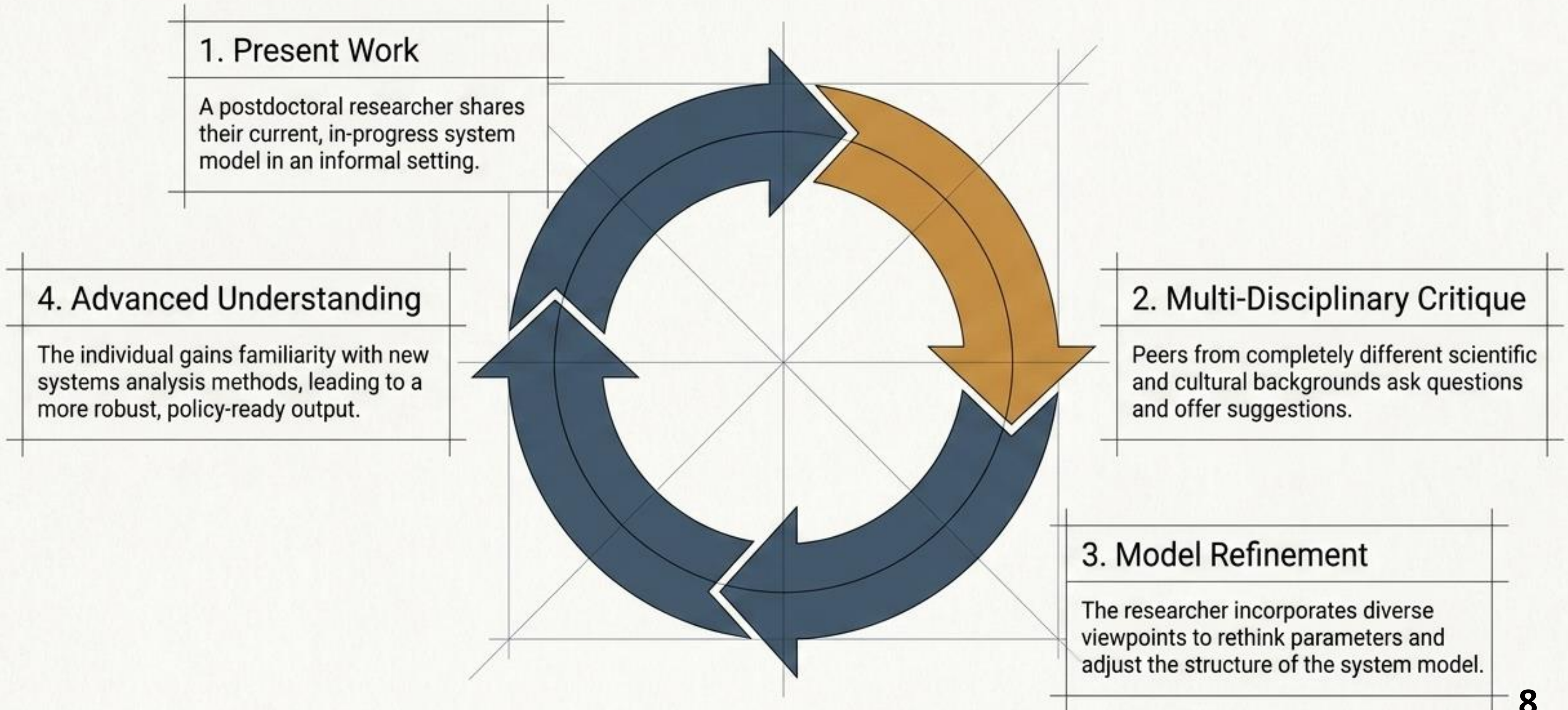


High-density scientific exposure expands research perspectives

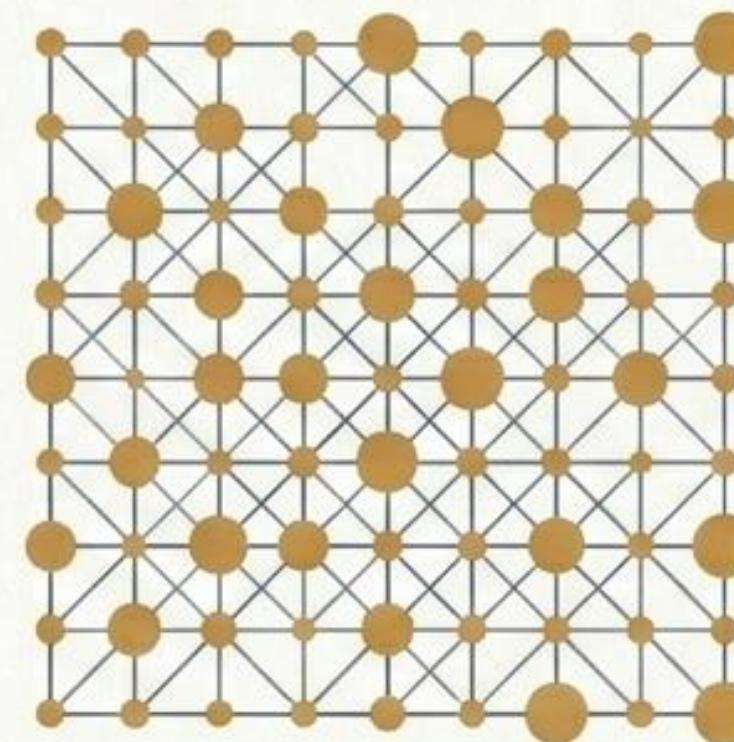


Brief, high-impact flash presentations provide researchers with an immediate, broad overview of the immense diversity of research topics across partner institutions.

The Multi-Disciplinary Feedback Loop



Case in Point: Finding Interaction Between Model Parameters



The Spark

During casual brainstorming sessions, discussions with international researchers revealed blind spots in a traditional modeling approach.

The Solution

The implementation of a Beta Matrix—a method to systematically identify hidden interactions among model parameters.

The Result

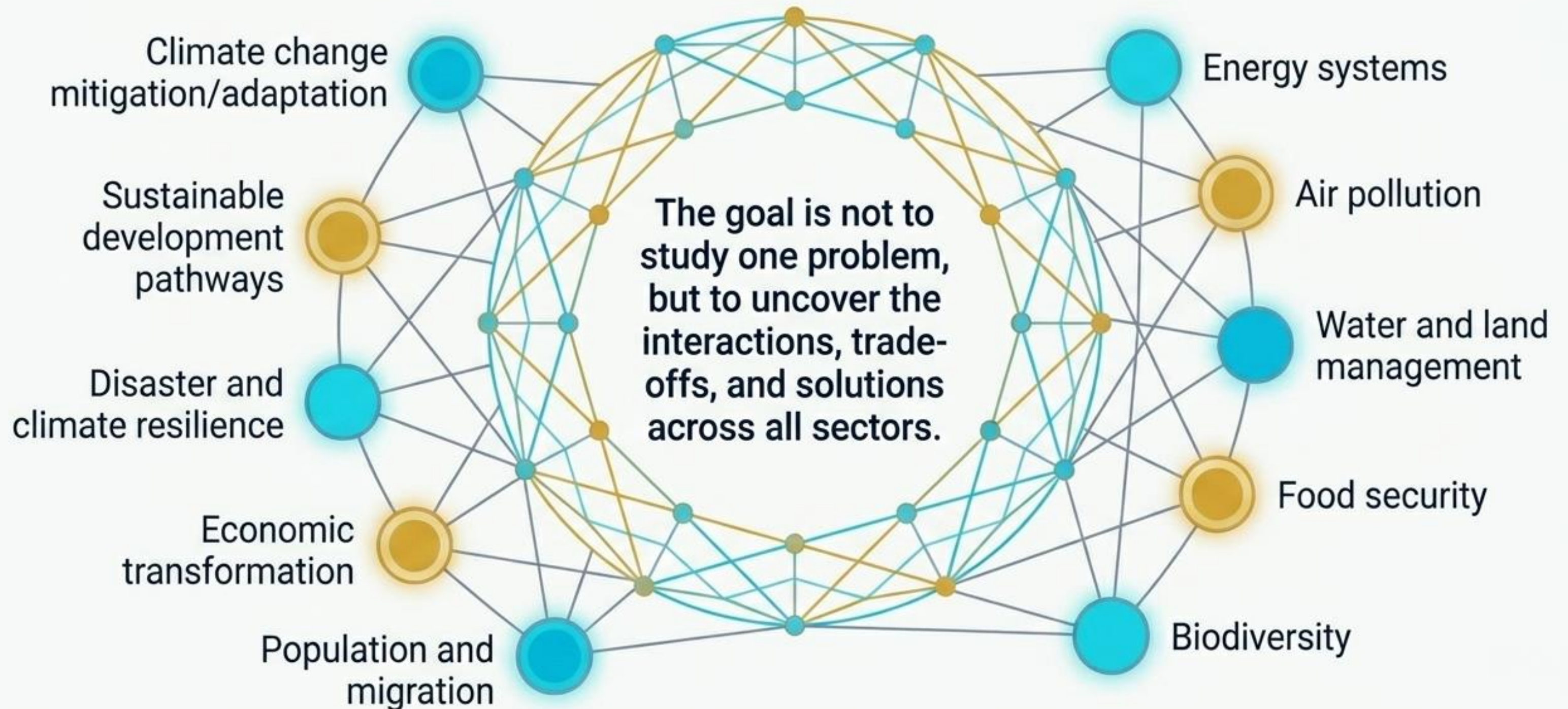
Refined parameters and a vastly improved system model structure, directly born from cross-disciplinary feedback.

The Insight-to-Impact Equation

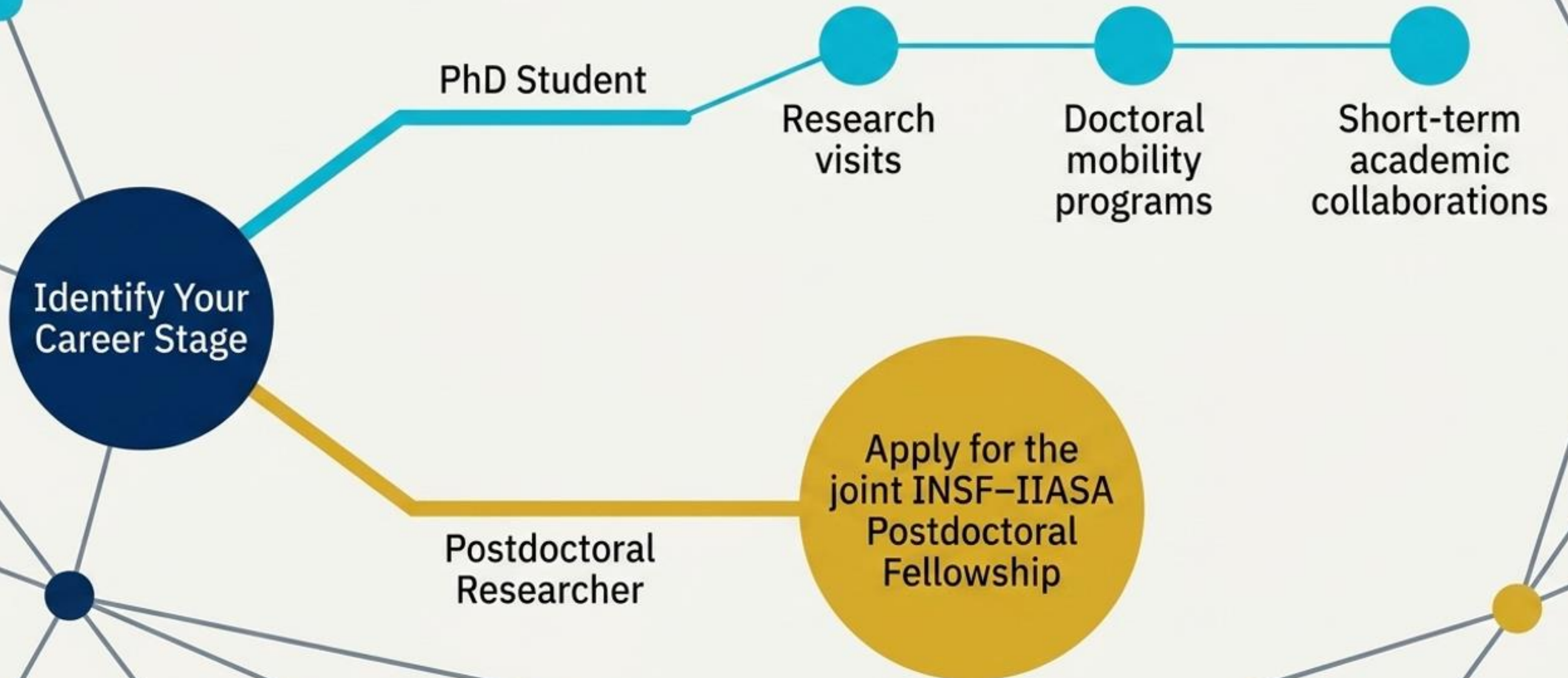


Studying interactions across sectors through an international lens is the only way to advance sustainable development and resilience.

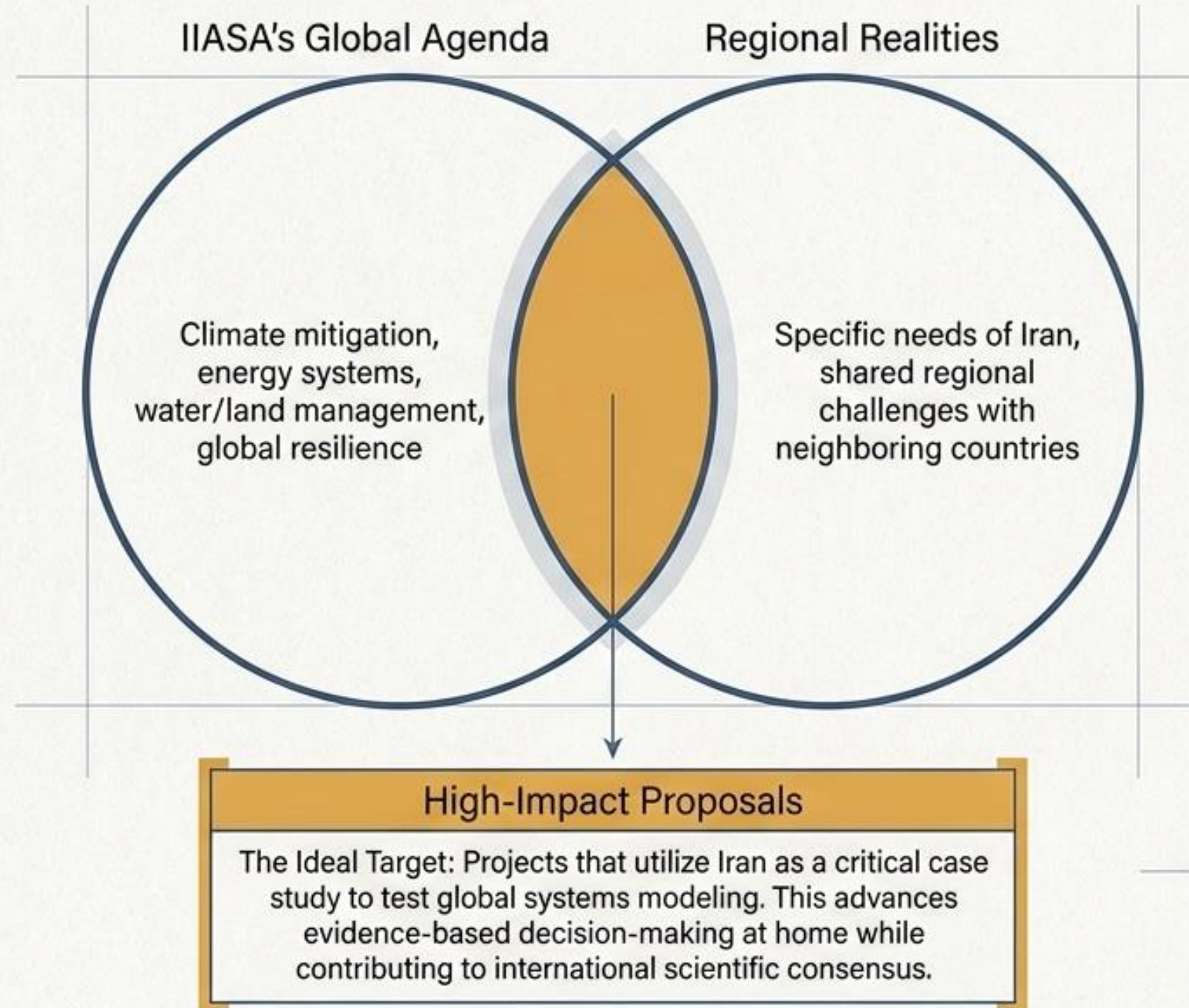
The systems perspective unites diverse global and regional challenges



Pathways to integrate into the IIASA scientific network



Finding Your Research Sweet Spot



Advancing evidence-based policy through broader perspectives

International and interdisciplinary collaboration fundamentally alters how we view our research. By improving our modeling approaches and embracing diverse perspectives, our scientific work directly shapes real-world policy and sustainable development.



Thanks for your attention!