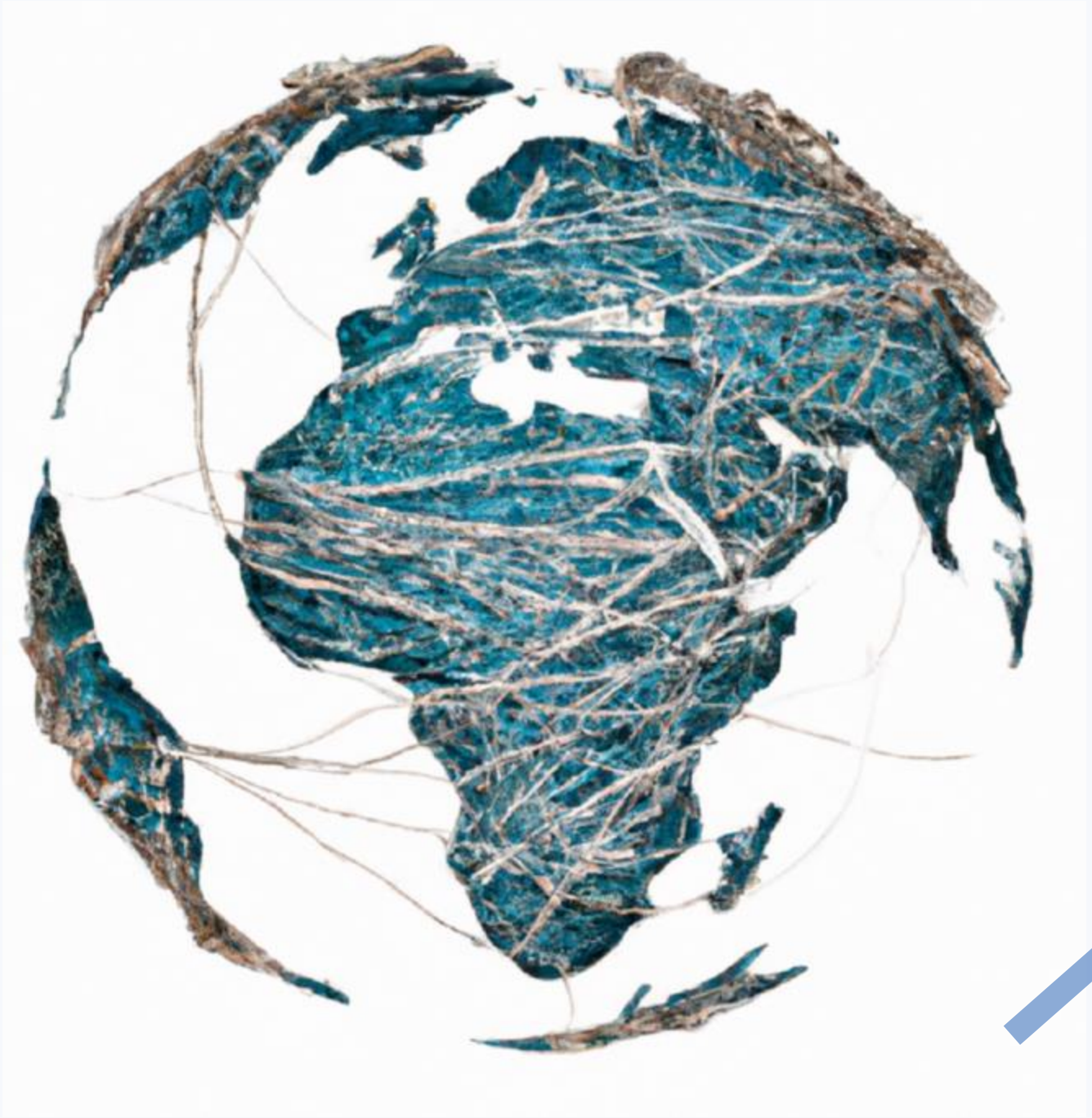
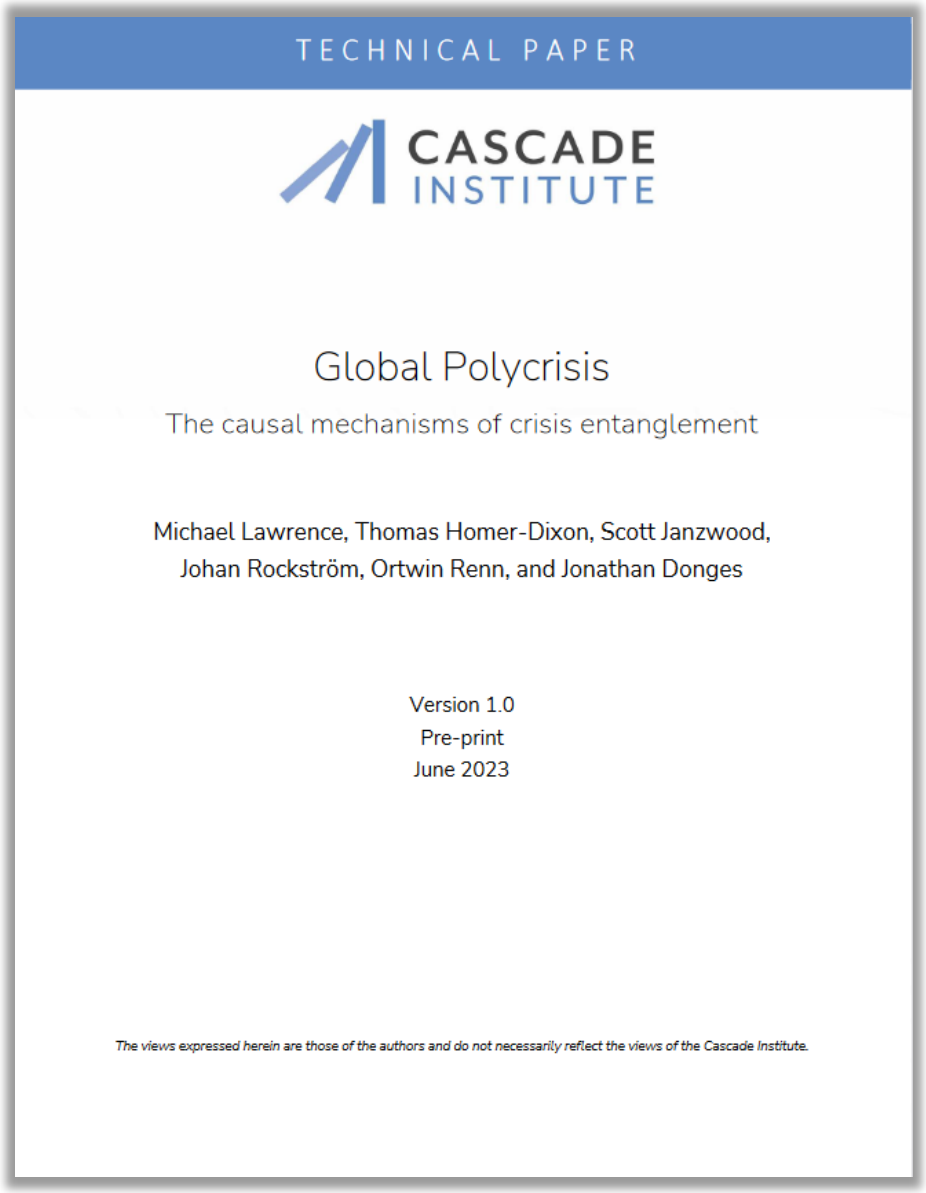


Navigating Global Polycrisis

Michael Lawrence
and Megan Shipman

24 October 2023

CASCADE INSTITUTE



Global Polycrisis: The Causal Mechanisms of Crisis Entanglement

June 2023

Available at: cascadeinstitute.org

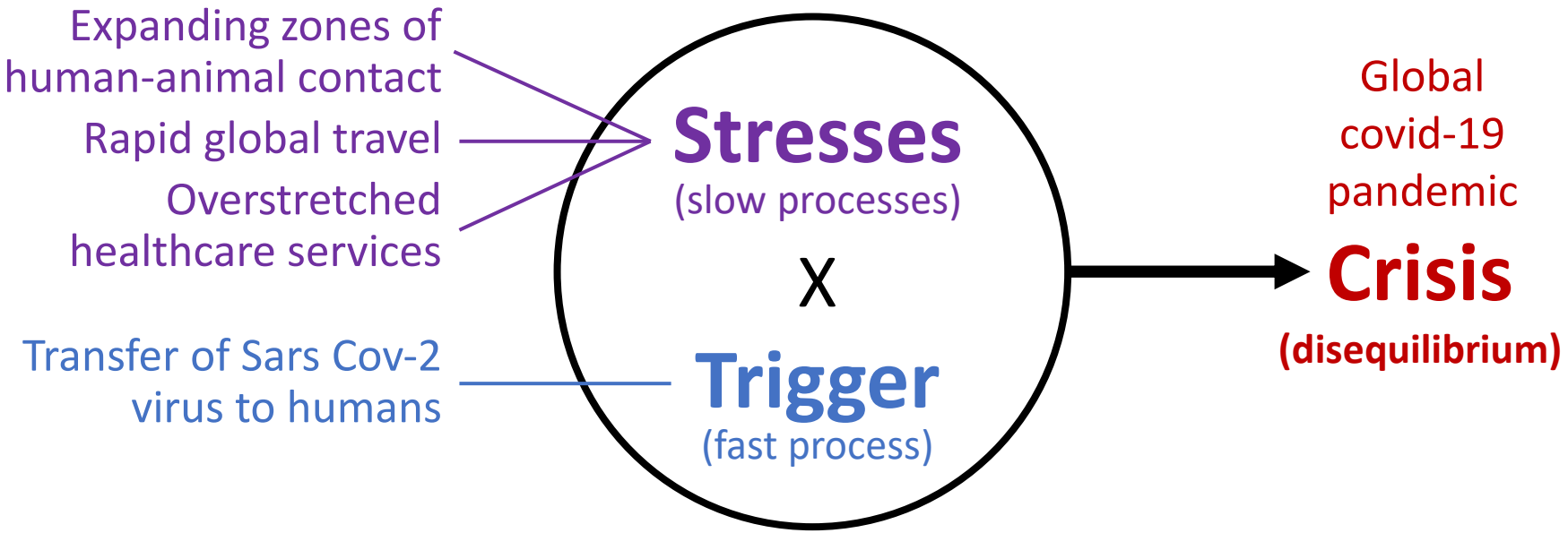
Polycrisis: A Systemic Approach

A **polycrisis** occurs when crises in multiple systems interact in ways that significantly degrade the prospects of affected communities. Together, these crises produce harms greater than they would produce separately, were their host systems not so deeply interconnected.

1) The Stress-Trigger-Crisis (STC) Model: Crisis as harmful systemic disequilibrium

2) The “grammar” of causal interactions among crises in multiple systems

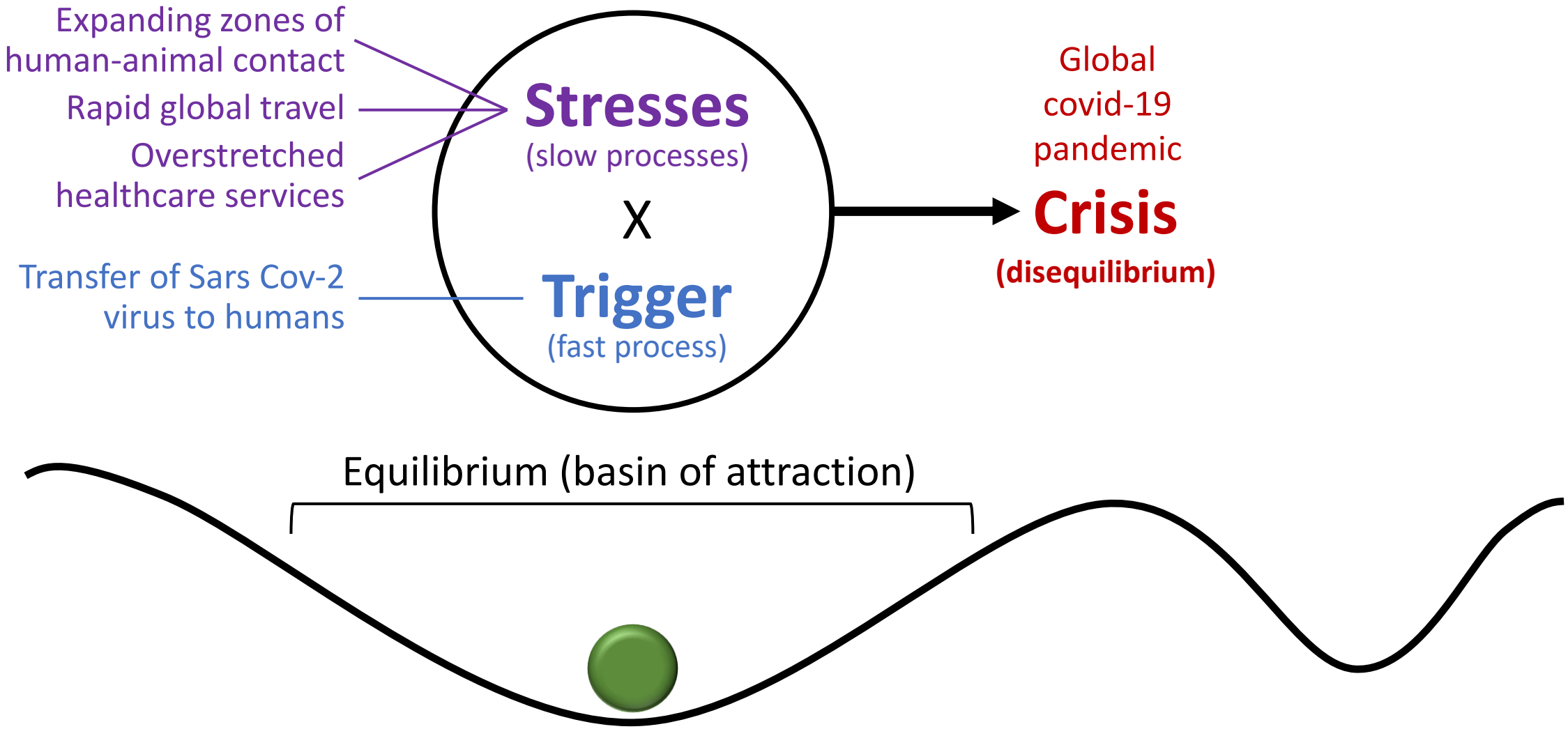
Systemic Crisis: The Stress-Trigger-Crisis (STC) Model



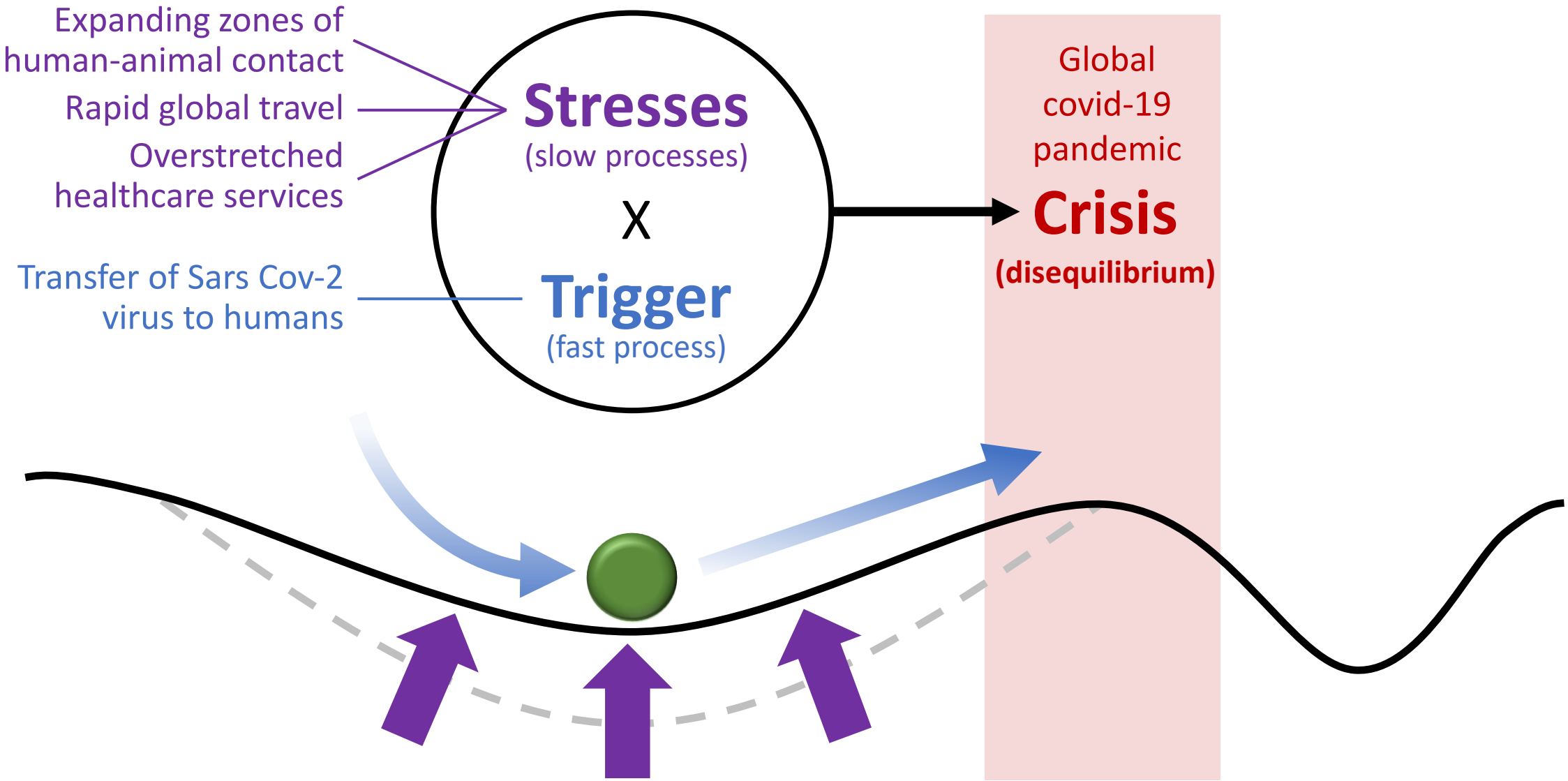
A systemic crisis occurs when system stresses interact with one or more trigger events to push a system out of its equilibrium and into a harmful state of disequilibrium.

- **Stresses** are the slow-moving processes that gradually, over years and decades, erode the resilience of the system as we know it (e.g., pressures, contradictions, and vulnerabilities).
- **Triggers** are the fast-moving events that, in days and weeks, interact with stresses to push a system into crisis.

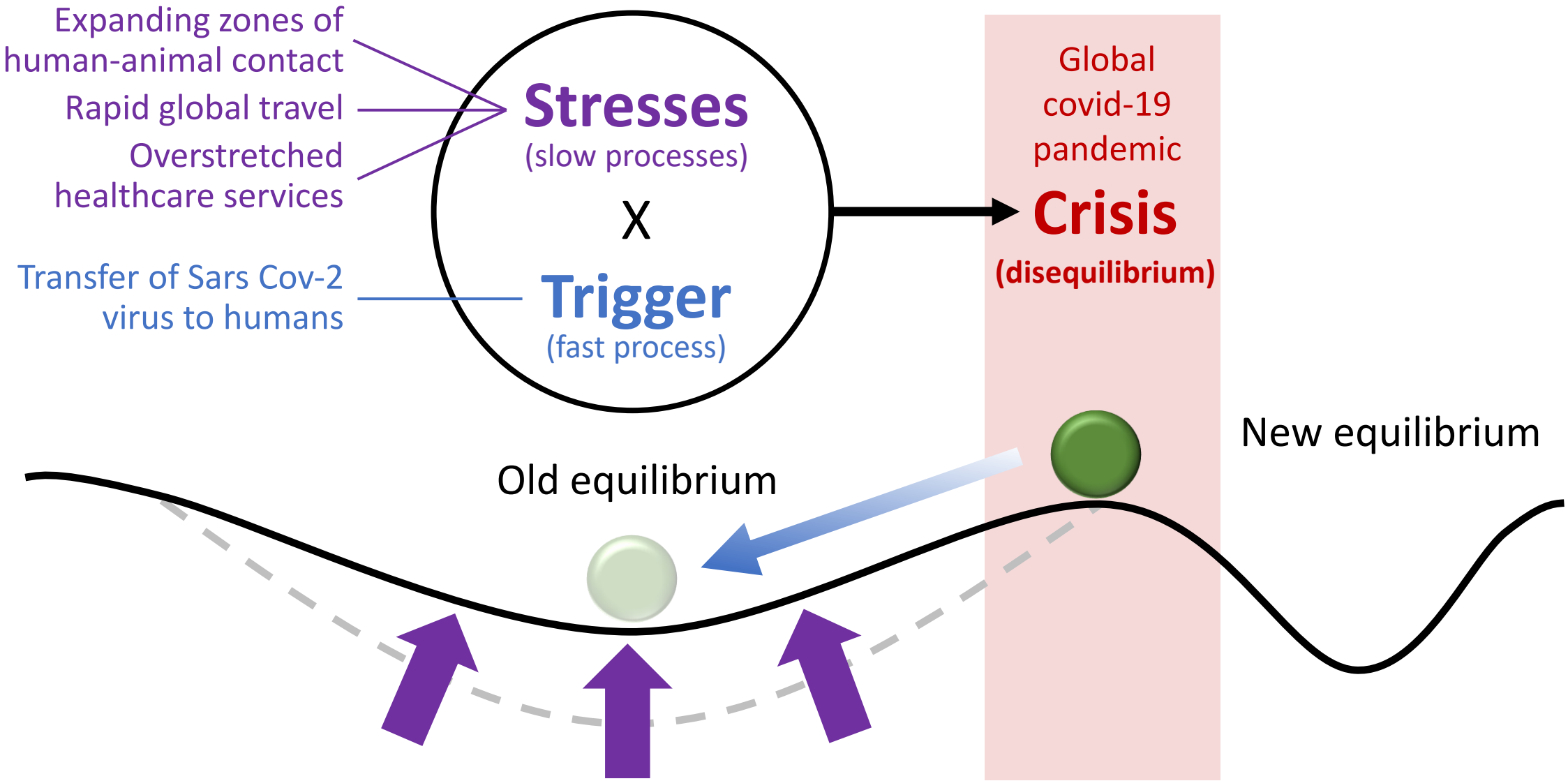
Systemic Crisis: Stability Landscape Diagrams



Systemic Crisis: The Stress-Trigger-Crisis (STC) Model

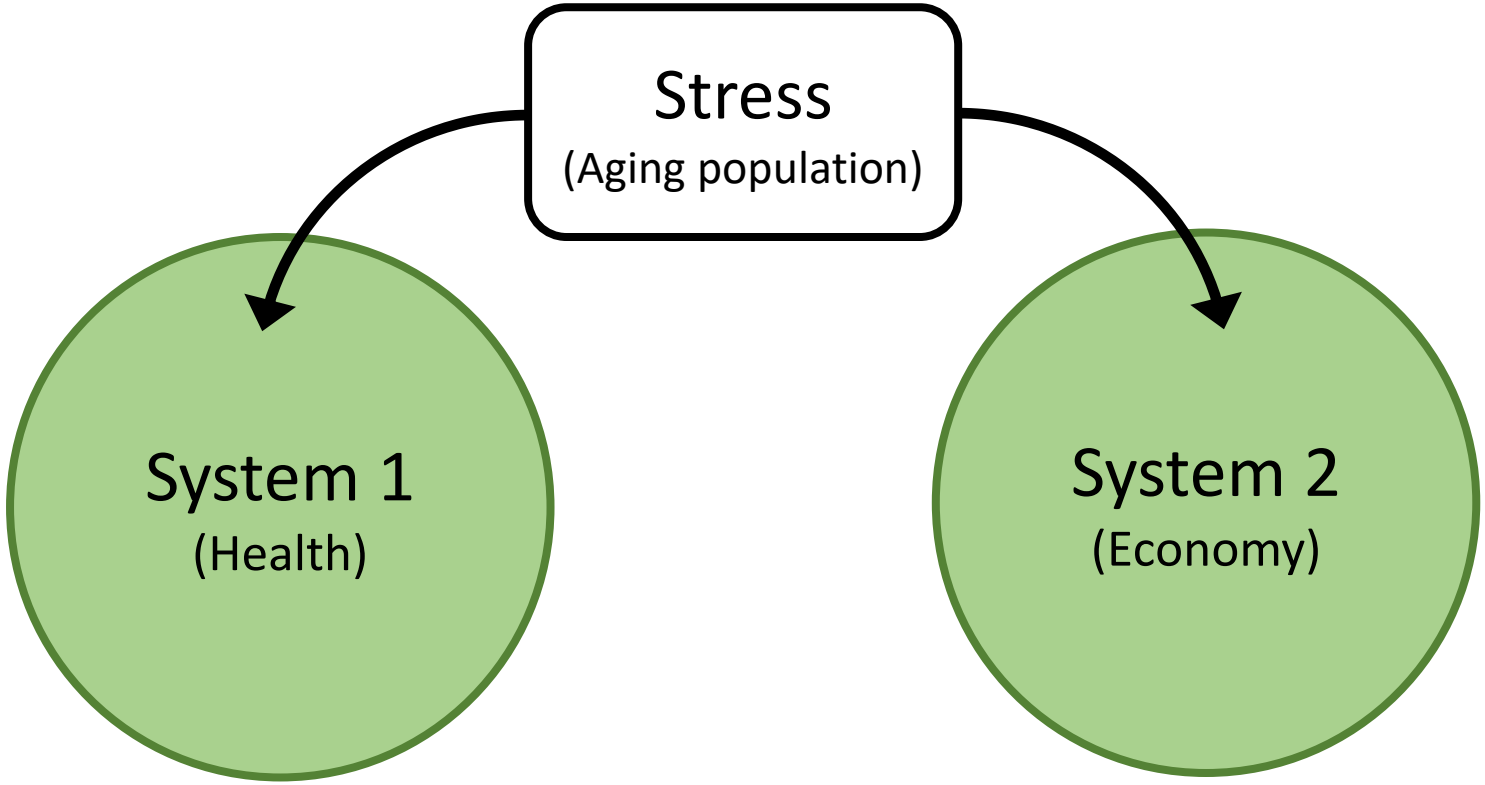


Systemic Crisis: The Stress-Trigger-Crisis (STC) Model



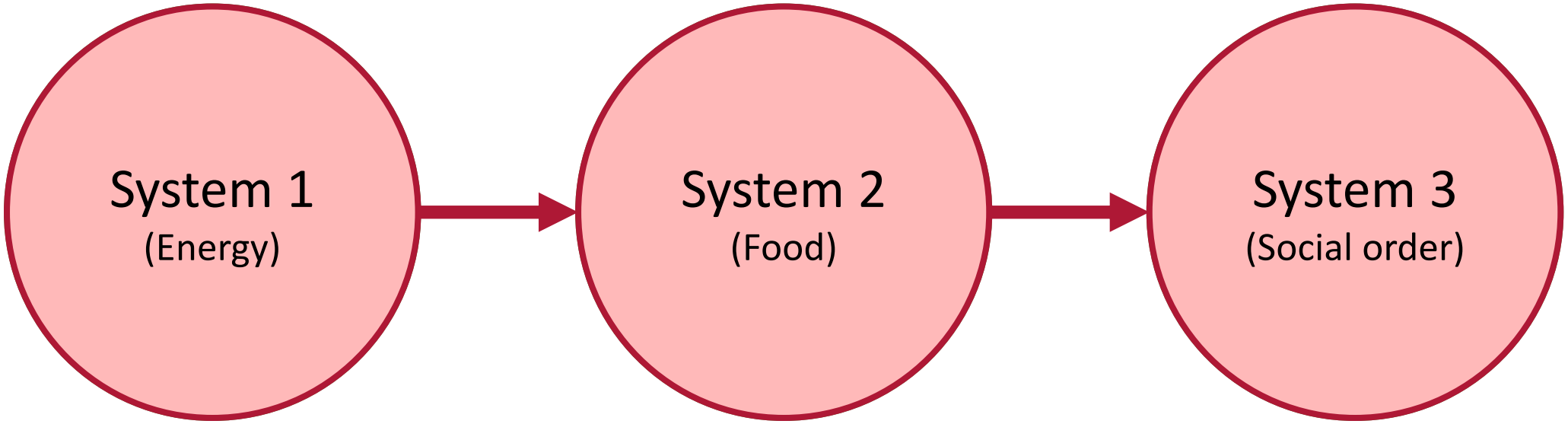
Polycrisis: Causal Interactions Across Systems

Common Stress: the same stress weakens the resilience of multiple systems.



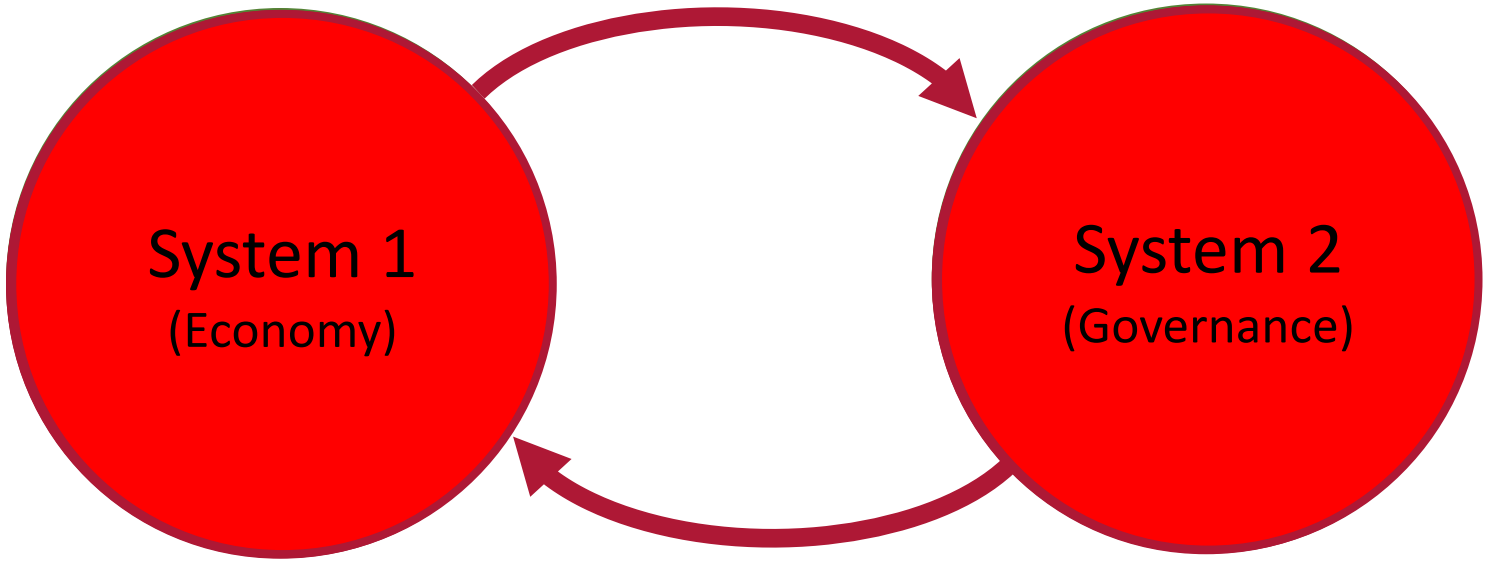
Polycrisis: Causal Interactions Across Systems

Domino Effects: a crisis in one system triggers a crisis in another system (which triggers a crisis in a third system, and so on).

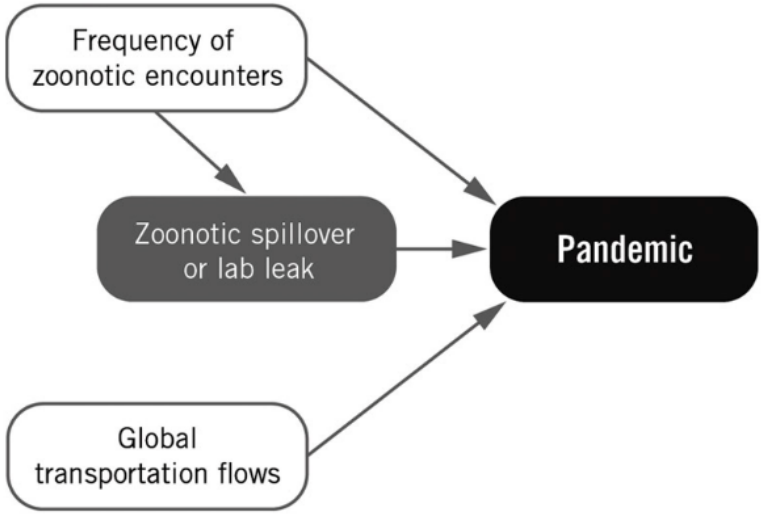


Polycrisis: Causal Interactions Across Systems

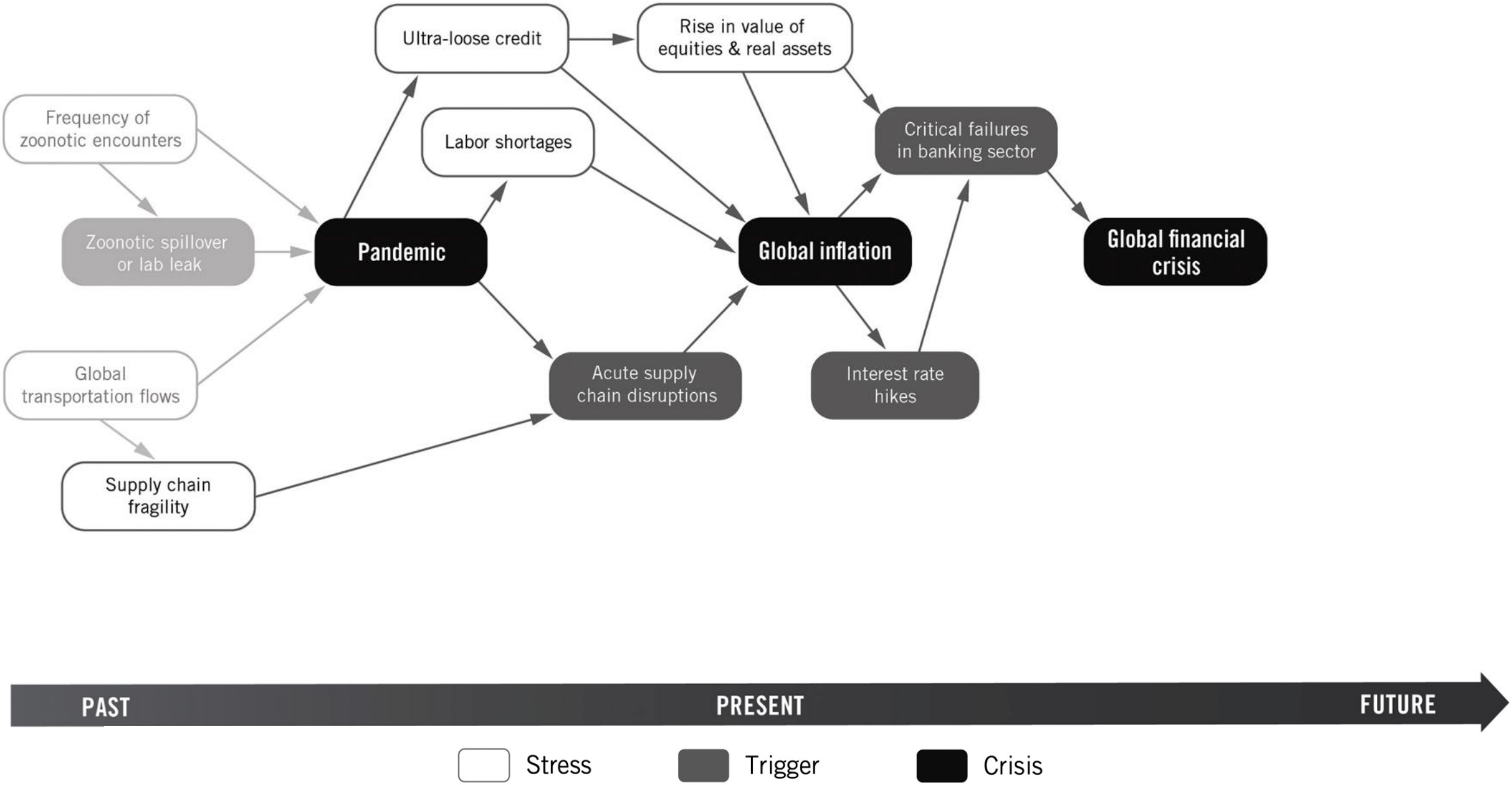
Inter-Systemic Feedback: A crisis in one system triggers or worsens a crisis in another system, which worsens the crisis in the first system (which worsens the crisis in the second system, and so on).



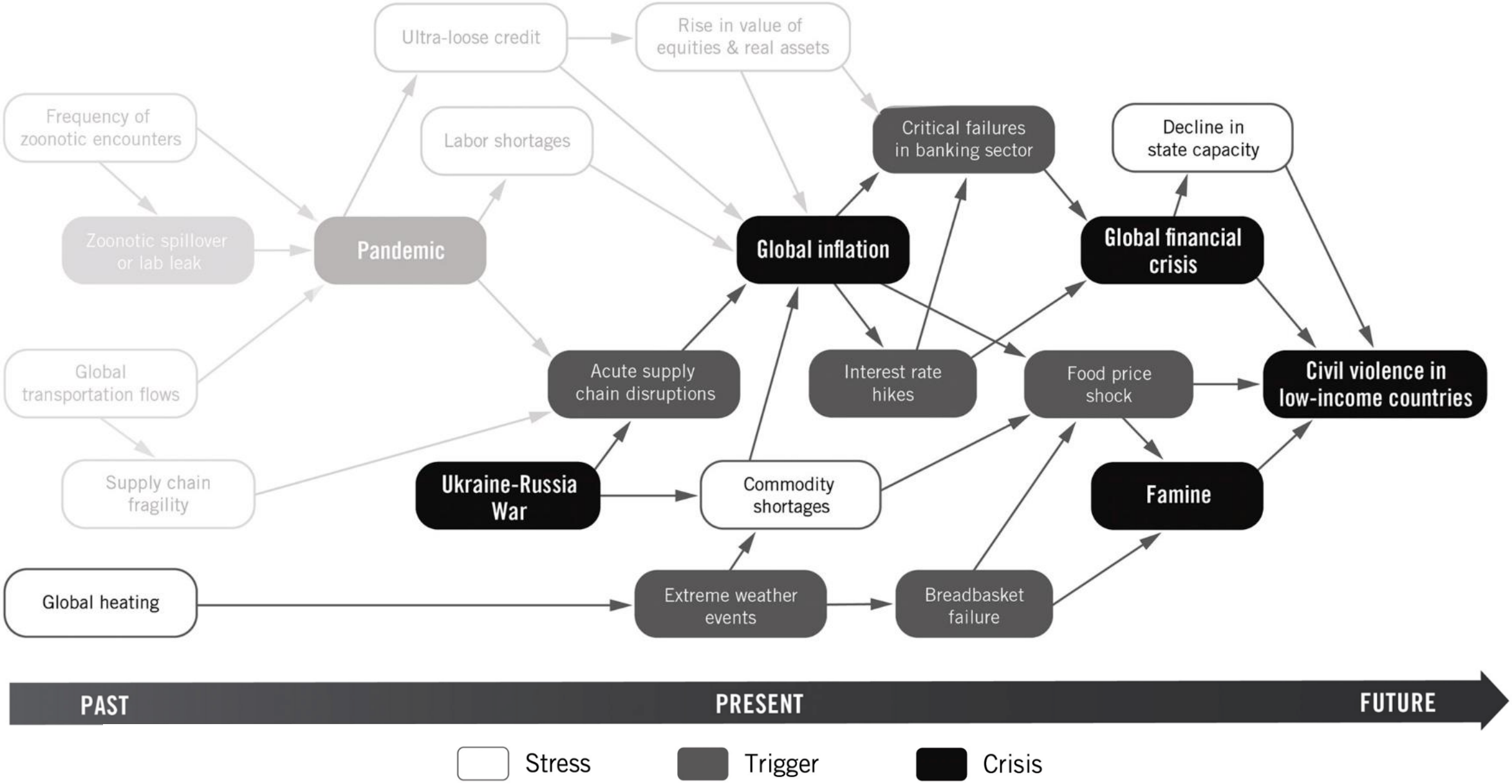
Domino Effects Diagram



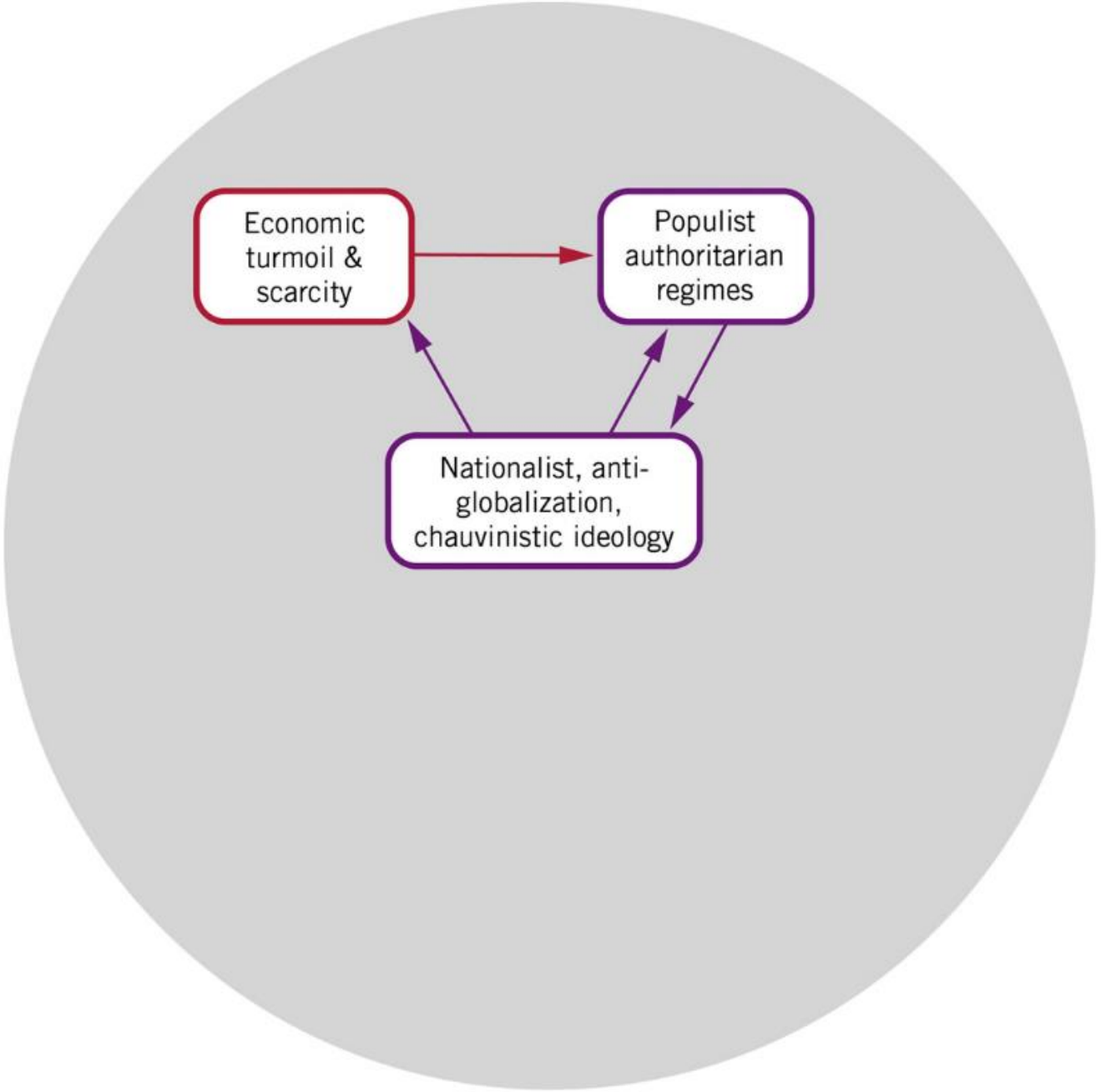
Domino Effects Diagram



Domino Effects Diagram



Inter-Systemic Feedbacks Diagram

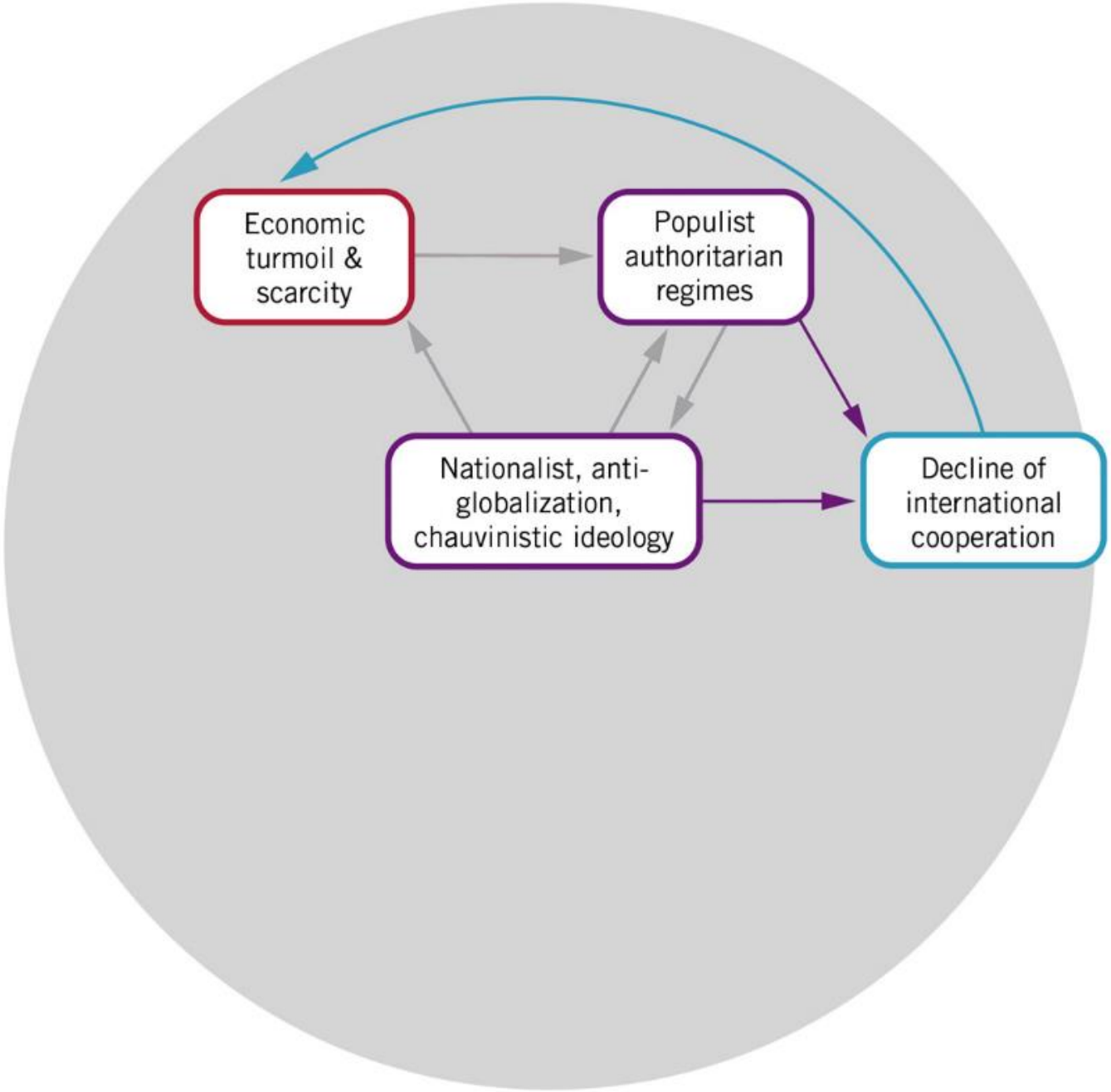


System Affected:

- Governance & social order
- Economy
- International Security
- Environment
- Transportation & communication

- Stress
- Trigger
- Crisis

Inter-Systemic Feedbacks Diagram

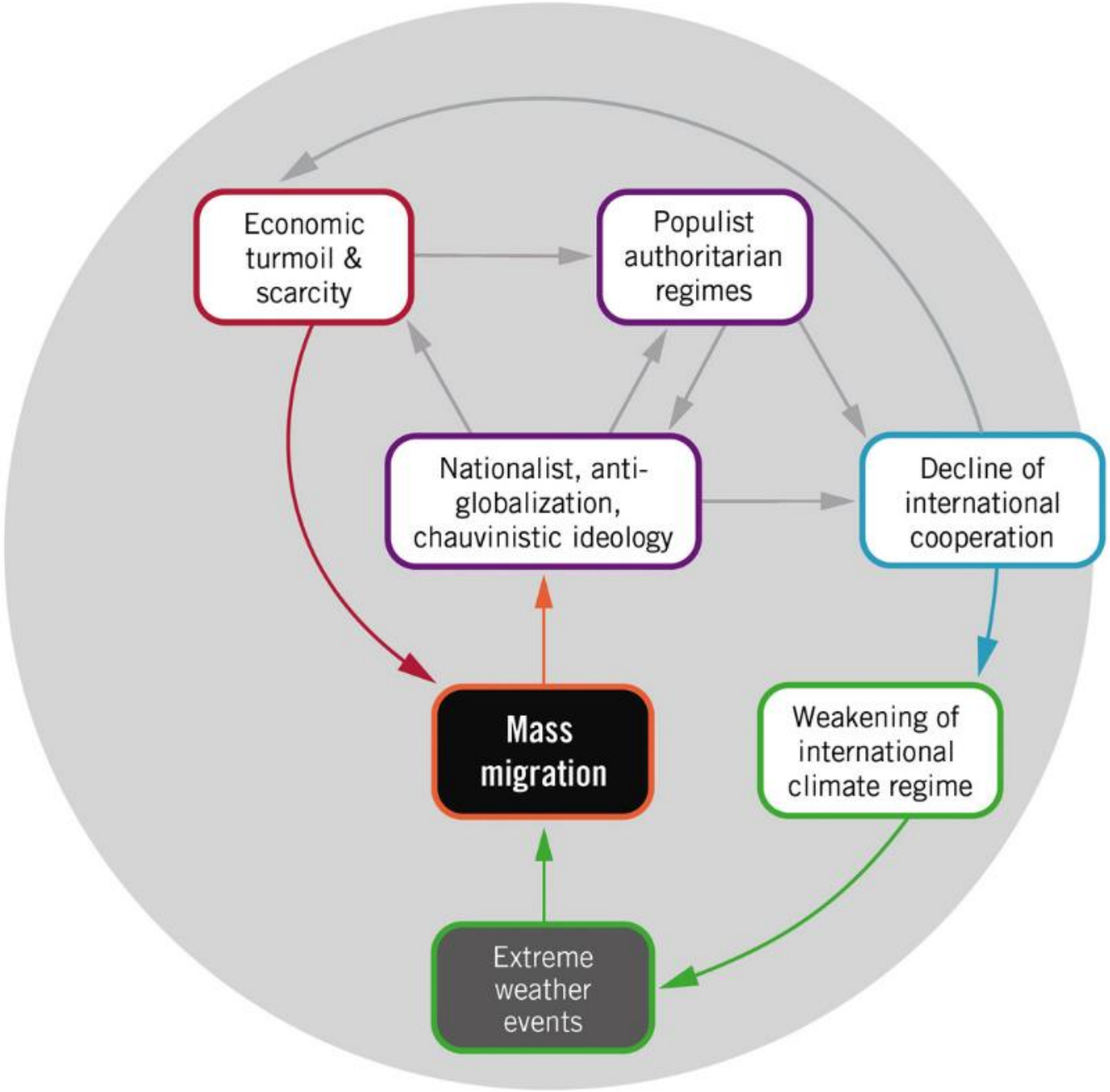


System Affected:

- Governance & social order
- Economy
- International Security
- Environment
- Transportation & communication

- Stress
- Trigger
- Crisis

Inter-Systemic Feedbacks Diagram

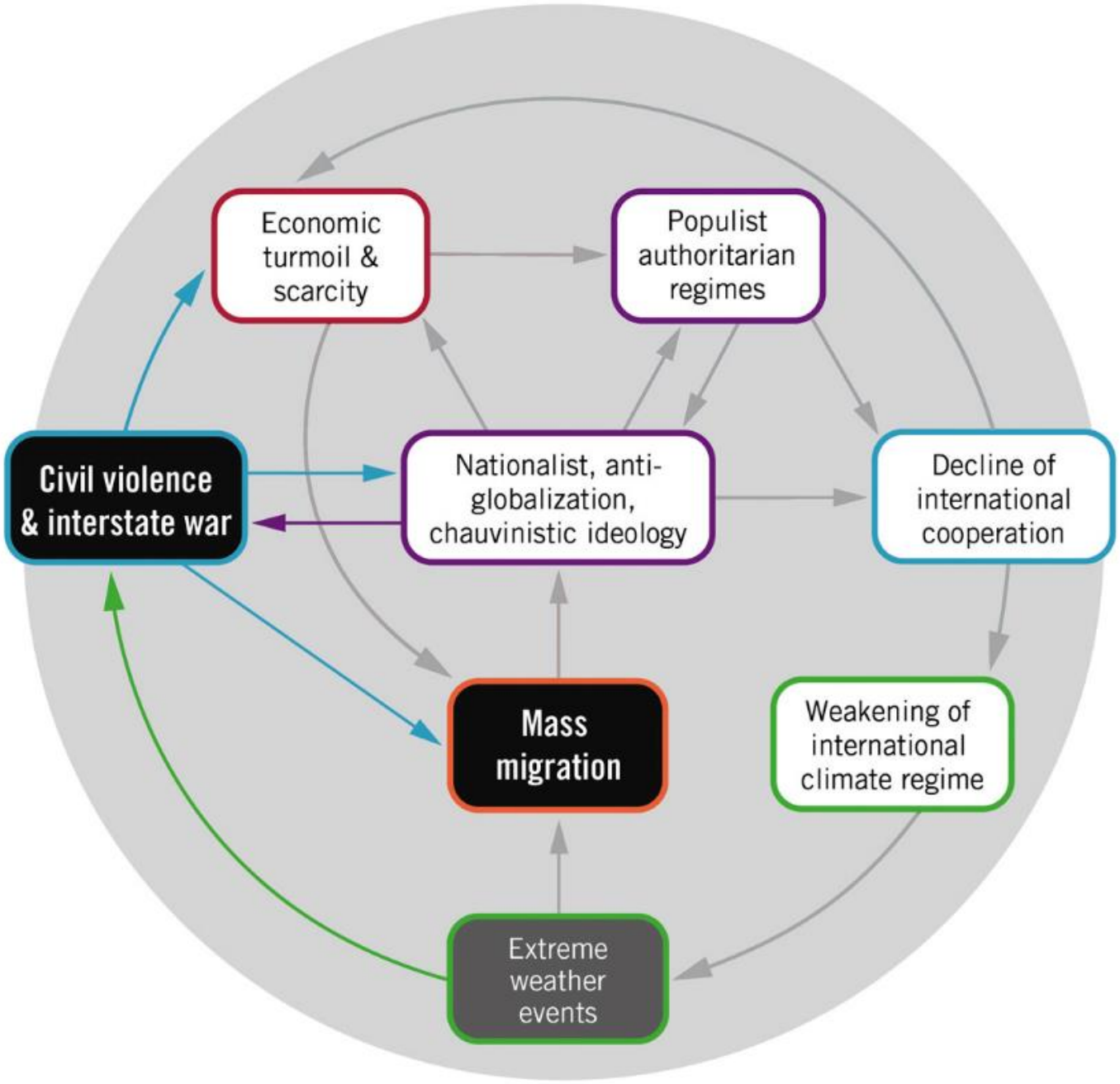


System Affected:

- Governance & social order
- Economy
- International Security
- Environment
- Transportation & communication

- Stress
- Trigger
- Crisis

Inter-Systemic Feedbacks Diagram

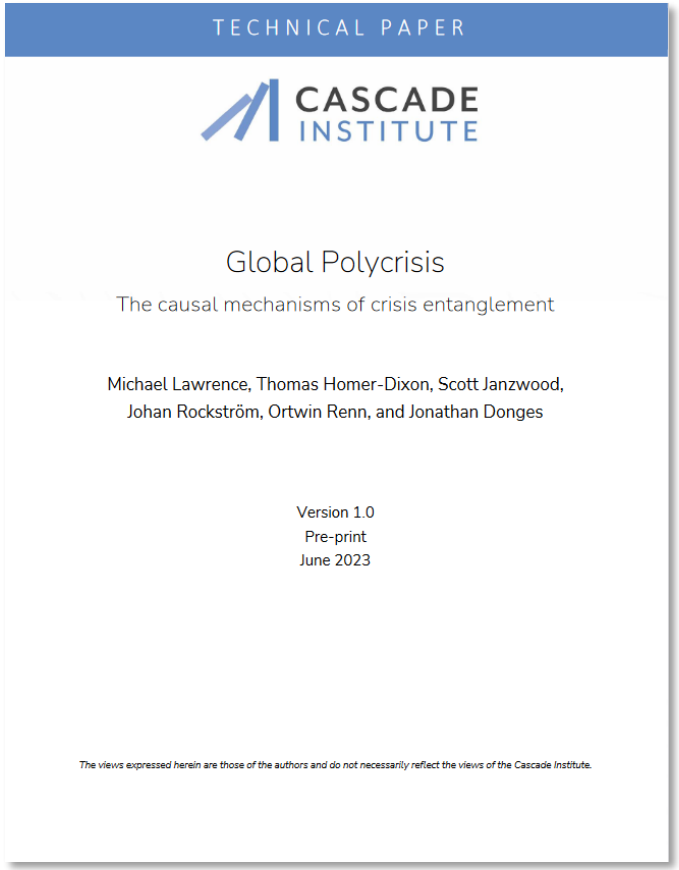


System Affected:

- Governance & social order
- Economy
- International Security
- Environment
- Transportation & communication

- Stress
- Trigger
- Crisis

Summary:


TECHNICAL PAPER

CASCADE INSTITUTE

Global Polycrisis

The causal mechanisms of crisis entanglement

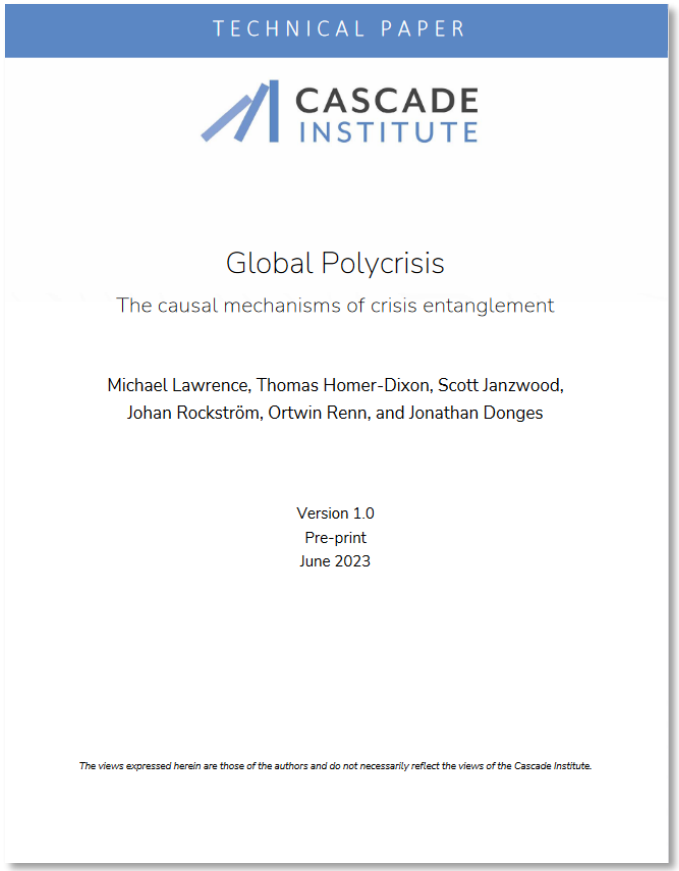
Michael Lawrence, Thomas Homer-Dixon, Scott Janzwood, Johan Rockström, Ortwin Renn, and Jonathan Donges

Version 1.0
Pre-print
June 2023

The views expressed herein are those of the authors and do not necessarily reflect the views of the Cascade Institute.

- Stability landscape diagrams
- Stress, trigger, crisis model
- Grammar of crisis interactions across systems
- Causal maps: domino diagrams and inter-systemic feedback diagrams

Polycrisis Research and Practice:
Advancing the Agenda


TECHNICAL PAPER

CASCADE INSTITUTE

Global Polycrisis

The causal mechanisms of crisis entanglement

Michael Lawrence, Thomas Homer-Dixon, Scott Janzwood, Johan Rockström, Ortwin Renn, and Jonathan Donges

Version 1.0
Pre-print
June 2023

The views expressed herein are those of the authors and do not necessarily reflect the views of the Cascade Institute.

- Does our systems-based framework resonate with your own polycrisis work and thought?
- What are we missing in our approach?
- How can we make polycrisis thinking more accessible to the public?
- How can we better connect systems analysis to practice?

For more polycrisis resources, please visit: cascadeinstitute.org and polycrisis.org