

Transforming Finance to Create Nature Positive Futures



Prof. Garry Peterson



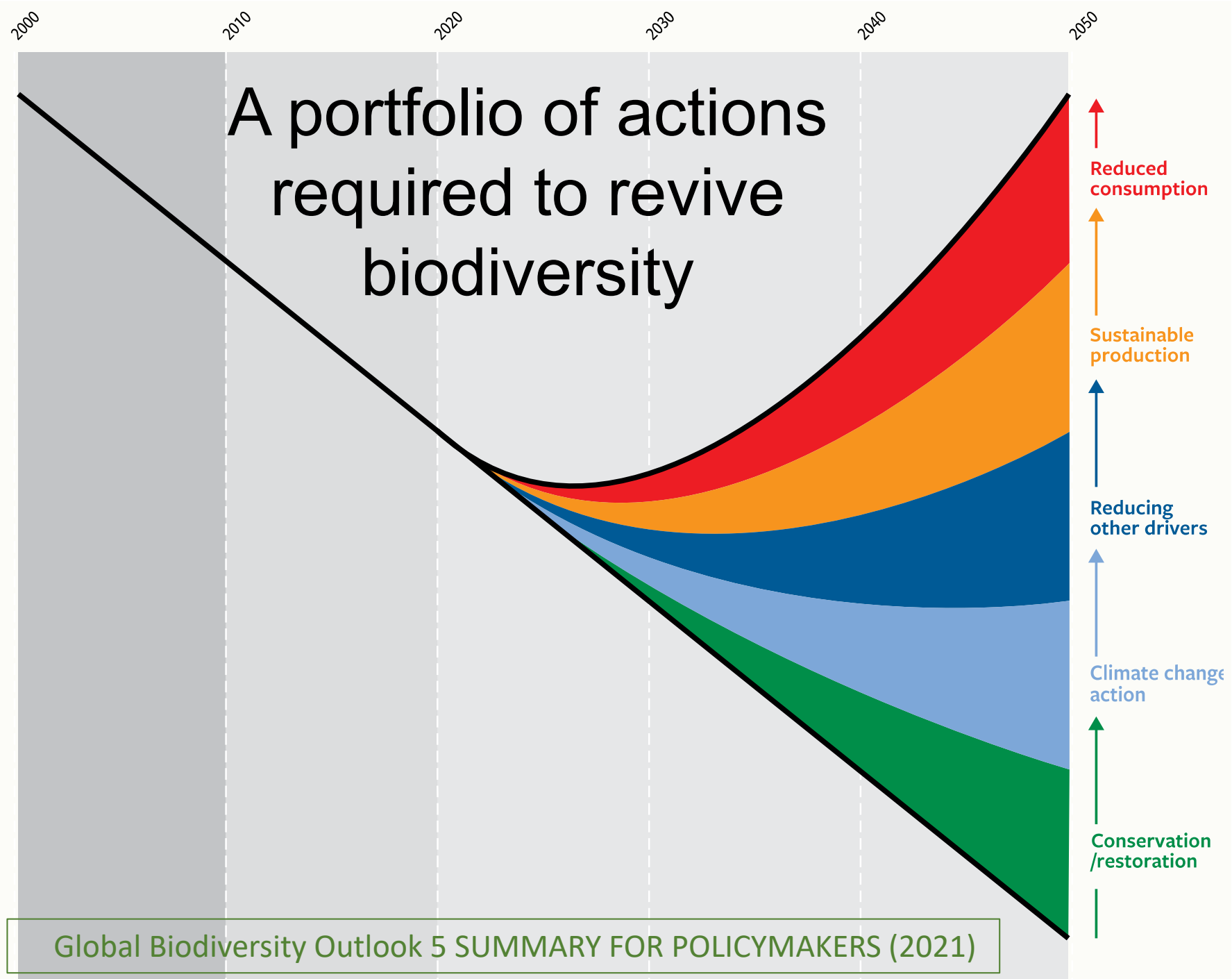
Stockholm Resilience Centre
Sustainability Science for Biosphere Stewardship



Nature rapidly declining

Global Scientific Assessment clearly state that...

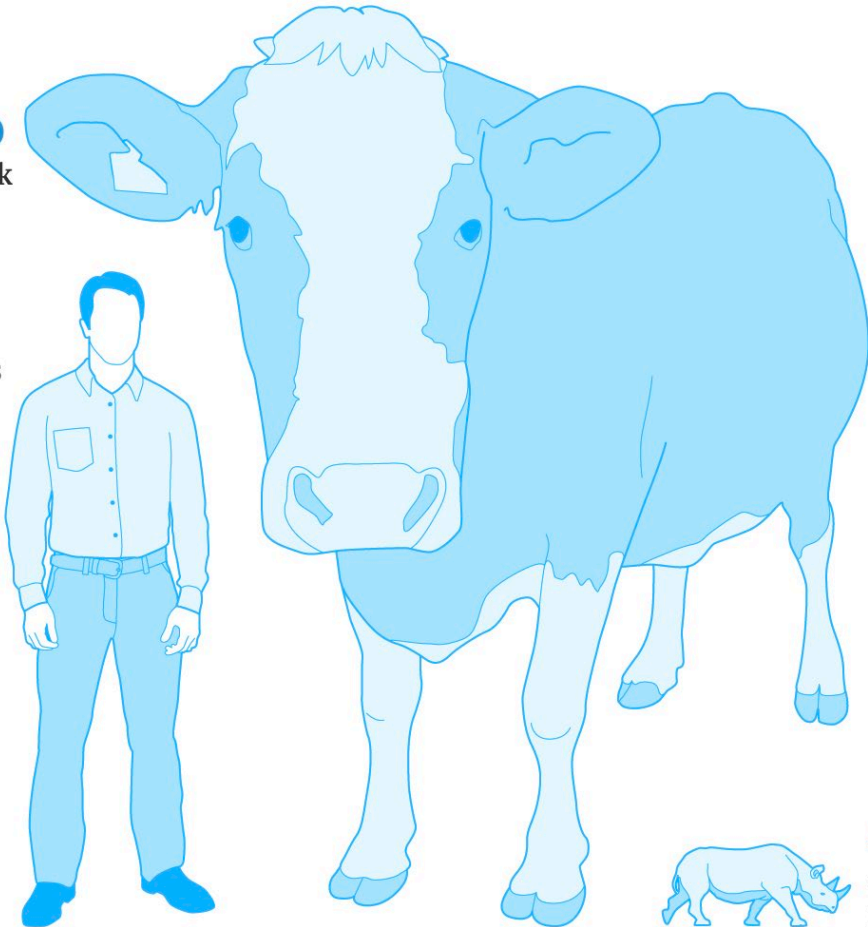
... transformative change required



Anthropocene Polycrisis

60%
are livestock

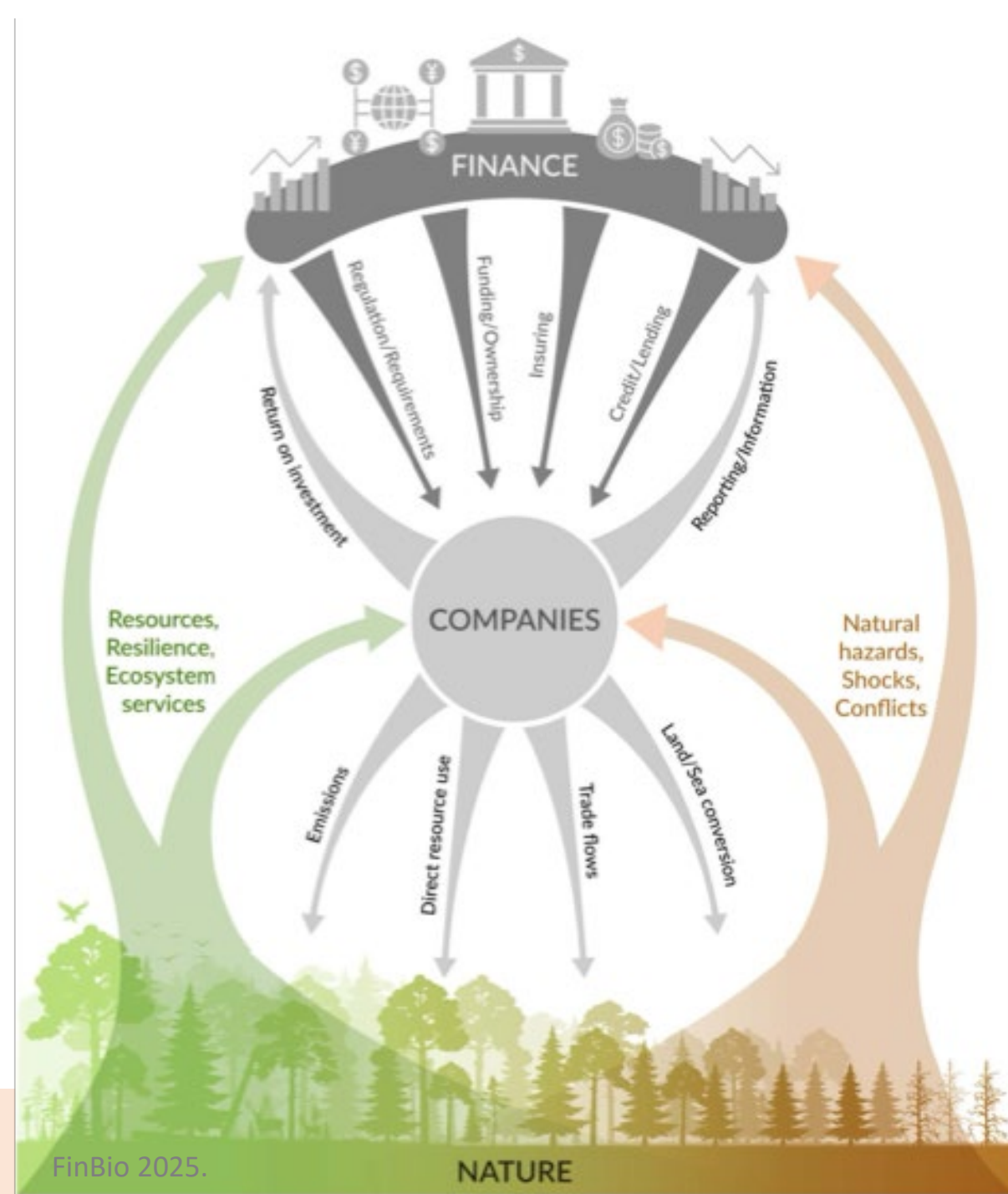
36%
are humans



4%
are wild
mammals



Finance & Business
are contain many
“keystone actors”
that have
disproportionate
impact on Earth &
that can block or
create change

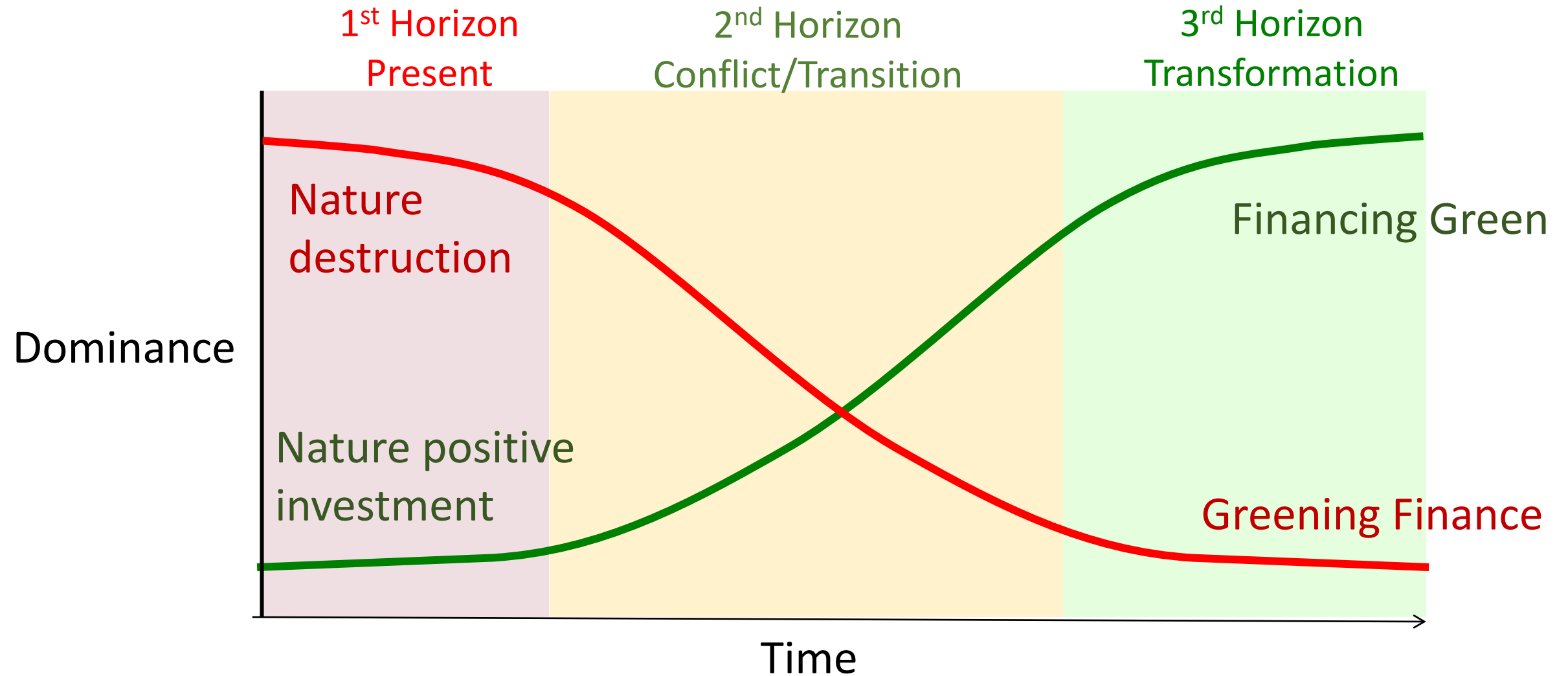


Finance Key to Revival of Biodiversity

Greening Finance
Financing Green



Imaging Transformation



What grows? What has to decline? Where are there conflicts?



Foundation for Ecological Security



Mesoamerican Reef Fund's
Reef Rescue Initiative



La NEF

What are (finance for nature) seeds?

A way of thinking, doing, institution, technology

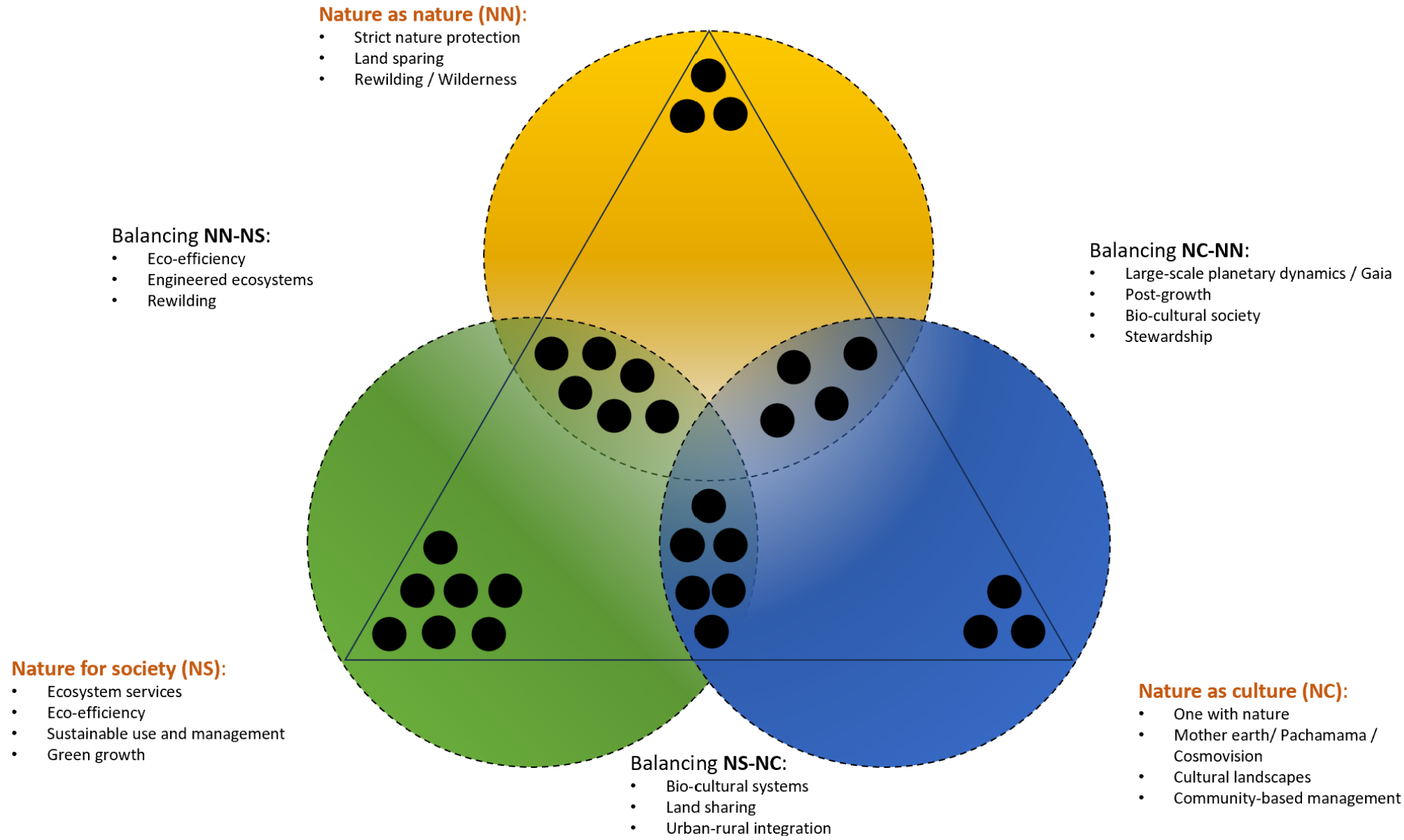
Exists (at least as prototype)

Marginal (not yet dominant/mainstream)

Contribute to creating a sustainable future (according to someone)

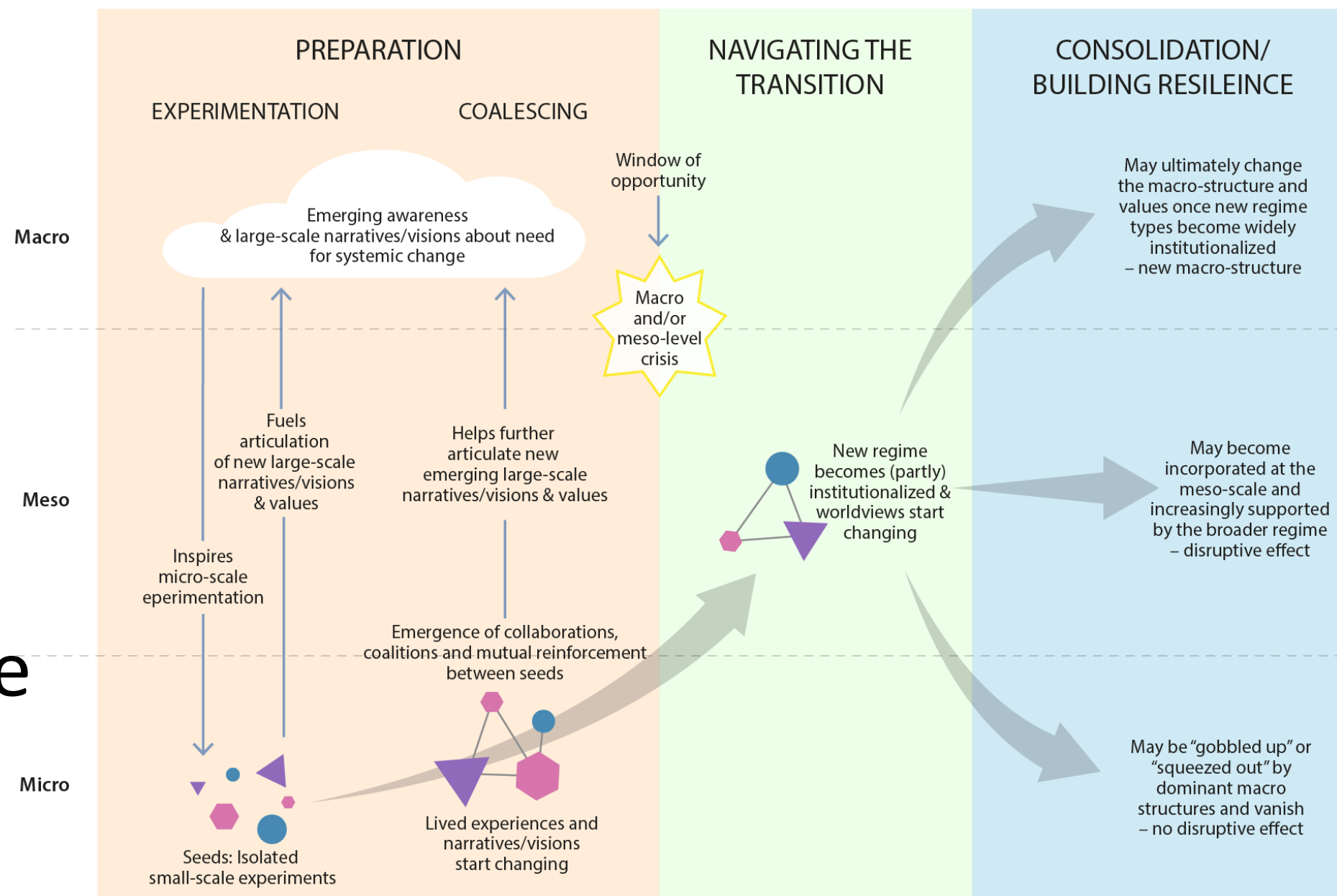
That moves money towards alternative resources towards nature protection, restoration or sustainable use of natural resources

Financial Seeds Address Different Nature Values









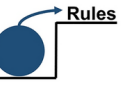

Seeds of Bottom up Financial Innovation

How to grow nature positive finance

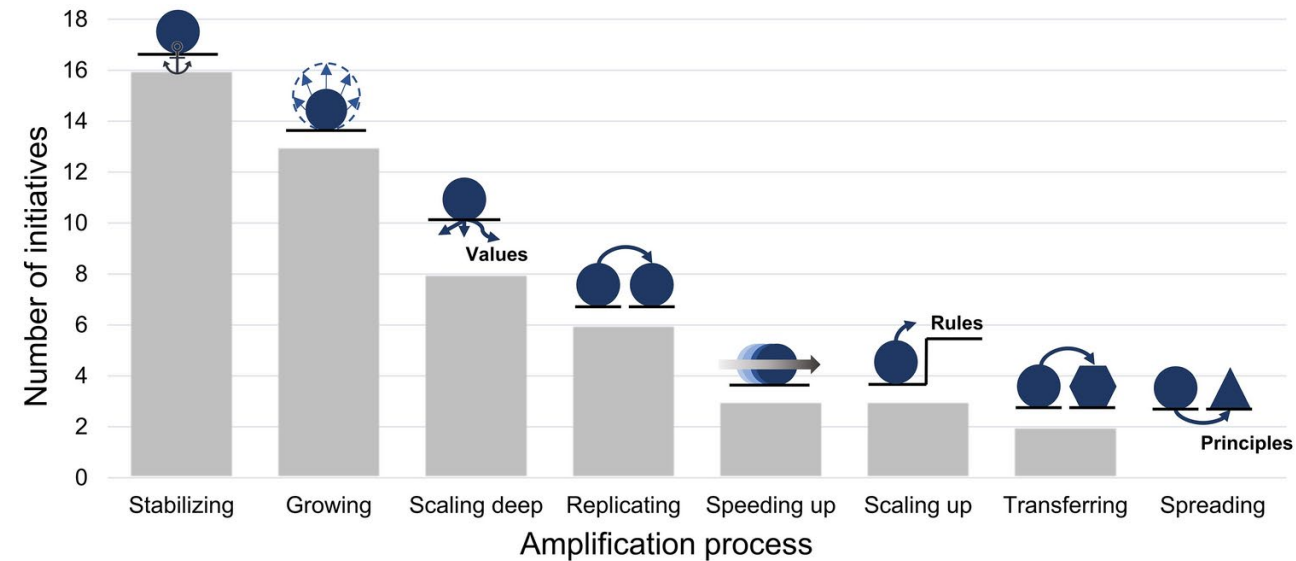


Pereira, L., Bennett, E., Biggs, R., Peterson, G., McPhearson, T., Norström, A., Olsson, P., Preiser, R., Raudsepp-Hearne, C. and Vervoort, J., 2018. Seeds of the future in the present: Exploring pathways for navigating towards “good” Anthropocenes. Pages pp. 327-350 in *Urban Planet*. Cambridge University Press.

AMPLIFICATION PROCESSES & ACTIONS

Categories	Processes	Analytical questions	Actions defined (* actions inductively generated during the data analysis; ** actions not found in the data)
Amplifying within an initiative	Stabilizing 	Does the initiative try to have longer impact?	<ul style="list-style-type: none"> Building an organizational structure Getting new partners Getting new members Optimizing resources Looking for financial resources Making members to stay longer Adapting to the system dynamics*
	Speeding up 	Does the initiative try to have faster impact?	<ul style="list-style-type: none"> Securing access to financial resources <i>Increasing number of people involved**</i> <i>Optimizing processes and efficiency**</i> <i>Developing a work routine**</i> <i>Setting clear goals and deadlines**</i> Developing ready solutions or products* Providing mentoring/consulting*
Amplifying out an initiative	Growing 	Does the initiative increase its impact range (in a similar context)?	<ul style="list-style-type: none"> Reaching more people Covering larger areas Diversifying portfolio Covering larger share of market
	Replicating 	Does the initiative replicate the existing initiative (in a dissimilar context)?	<ul style="list-style-type: none"> Opening other local groups, entities, franchise in other locations
	Transferring 	Has the initiative been transferred to create a similar initiative (in a similar context)?	<ul style="list-style-type: none"> Another independent initiative emerges with similar profile
	Spreading 	Has the initiative spread principles or approaches to create a new initiative (in a dissimilar context)?	<ul style="list-style-type: none"> Spreading principles/approaches to create a new initiative
Amplifying beyond an initiative	Scaling up 	Does the initiative impact higher institutional levels?	<ul style="list-style-type: none"> <i>Influencing rules and laws**</i> <i>Influencing policy**</i> Influencing dominant norms, customs, traditions, practices Advocating/lobbying Connecting across scales and engaging with key individuals
	Scaling deep 	Does the initiative impact values or mind-sets?	<ul style="list-style-type: none"> Increasing awareness <i>Fostering critical thinking**</i> Creating a community of like-minded people (networking) Reconnecting people to nature Empowering people in risk of social exclusion Integrating different kinds of knowledge

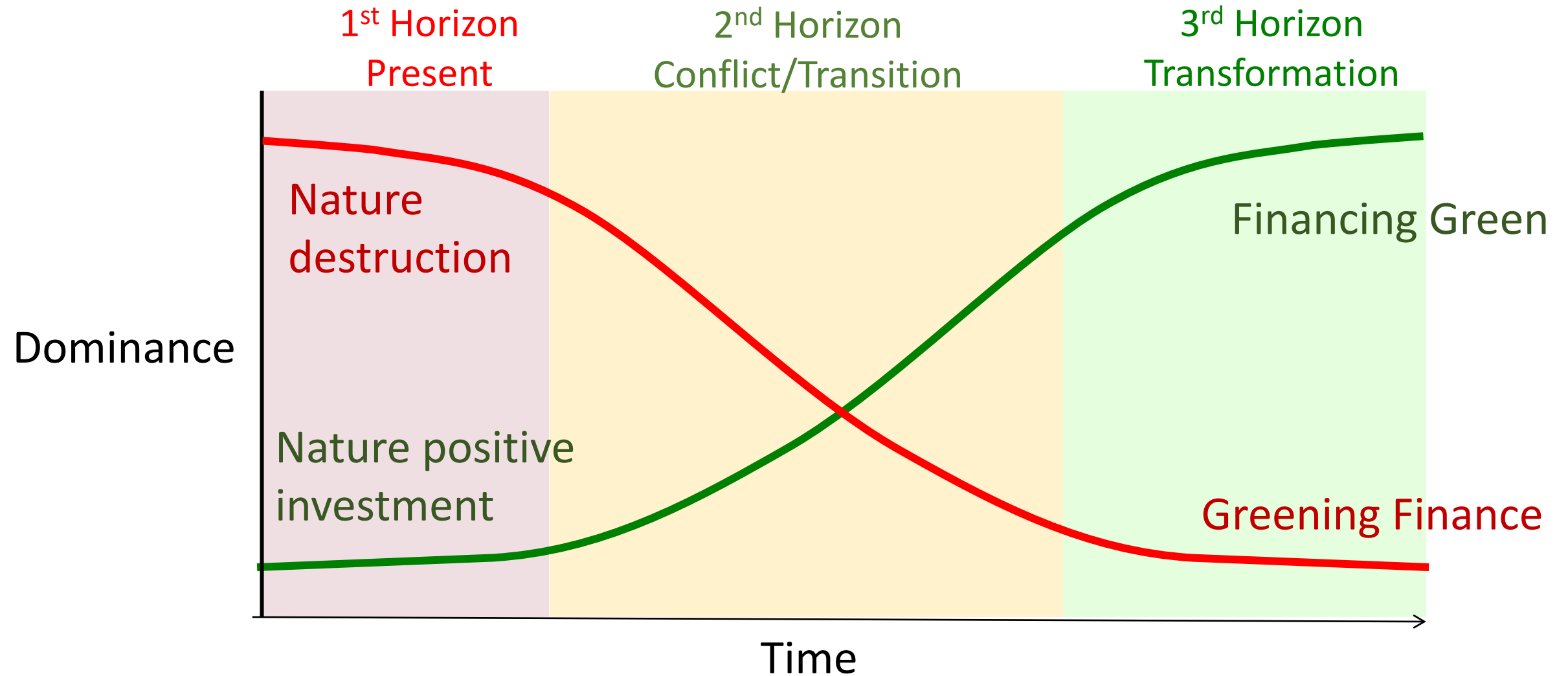
Eight “Seed” amplification processes



Strategies exhibited by ‘food system’ seeds in Stockholm region

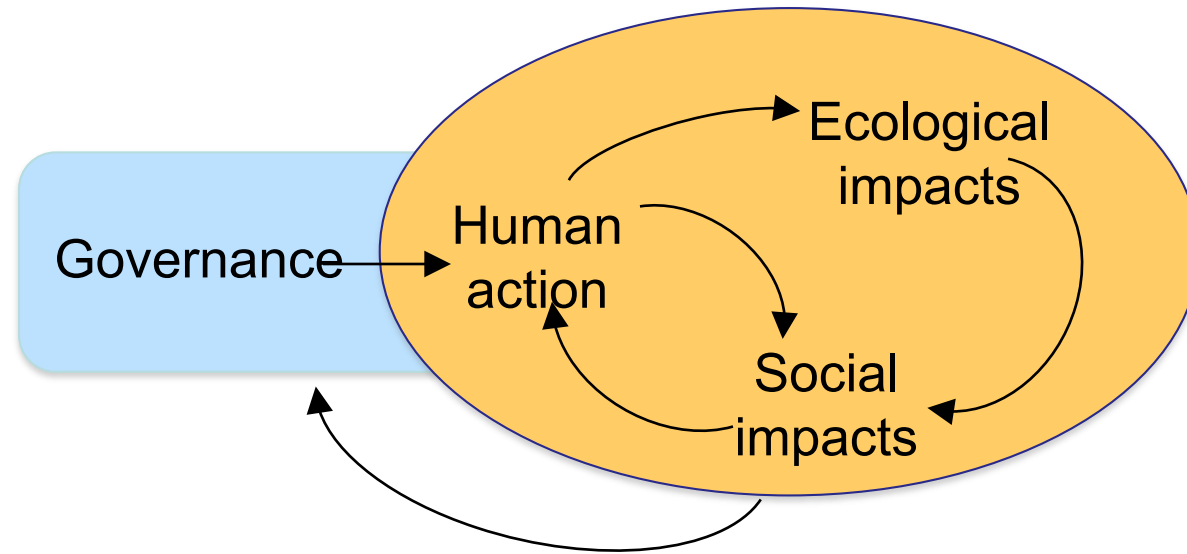
Lam, D.P.M *et al.* Amplifying actions for food system transformation: insights from the Stockholm region. *Sustain Sci* **17**, 2379–2395 (2022). <https://doi.org/10.1007/s11625-022-01154-7>

Unravelling Pathologies



What grows? What has to decline? Where are there conflicts?

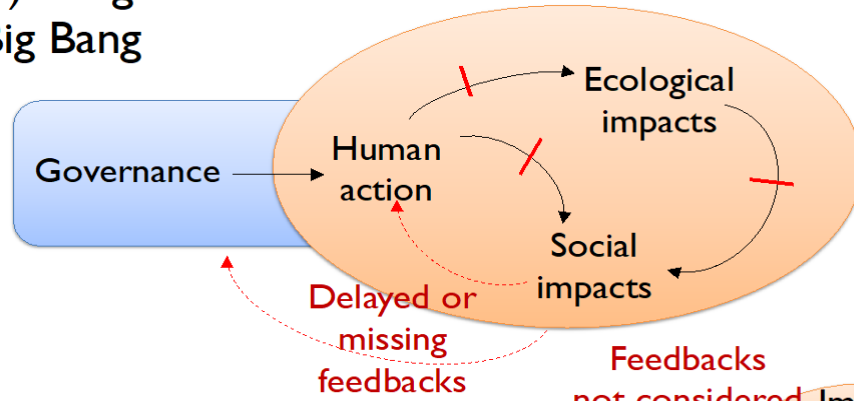
What are the “pathological” system dynamics that underlie global environmental problems?



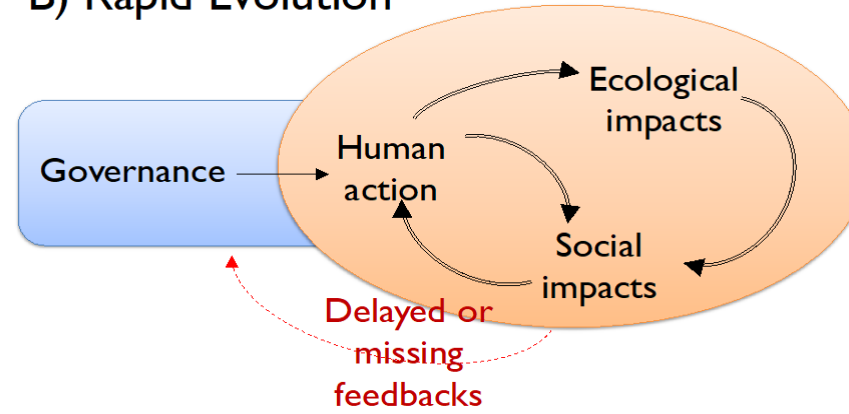
Review of global change & global environmental governance across ecological, political, and economic, literatures

Pathological Dynamics

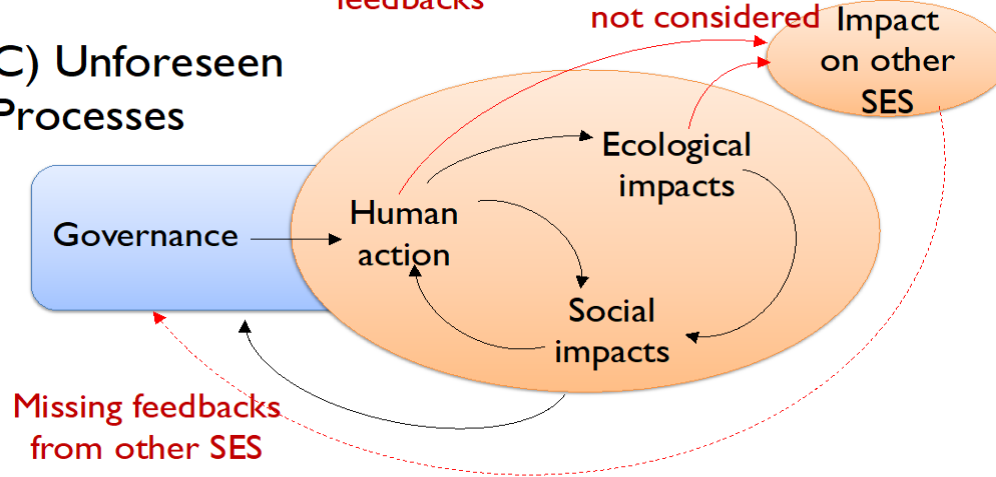
A) Long Fuse
Big Bang



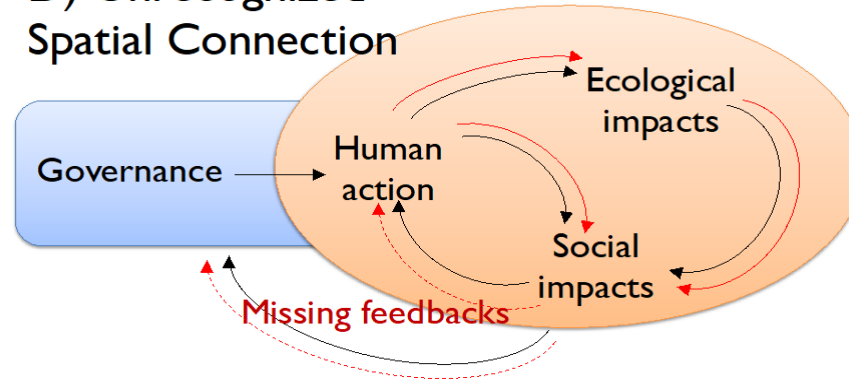
B) Rapid Evolution



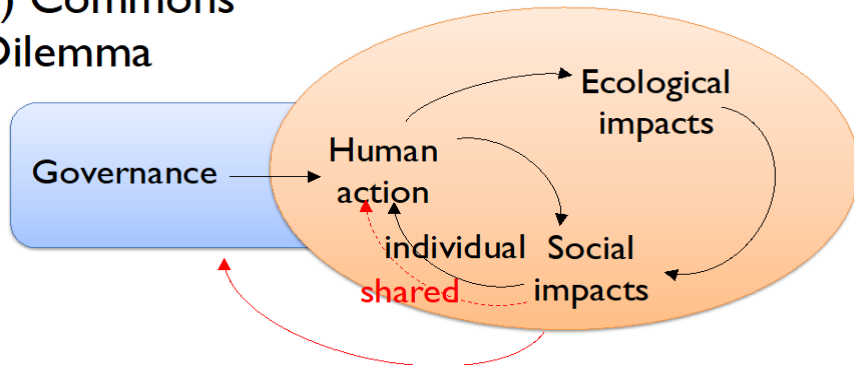
C) Unforeseen
Processes



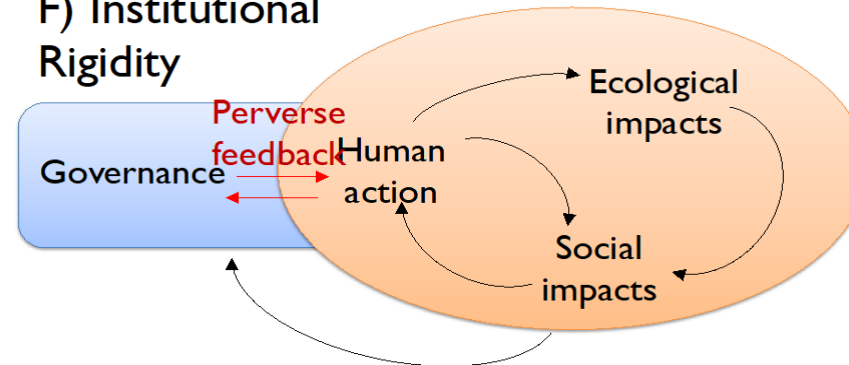
D) Unrecognized
Spatial Connection



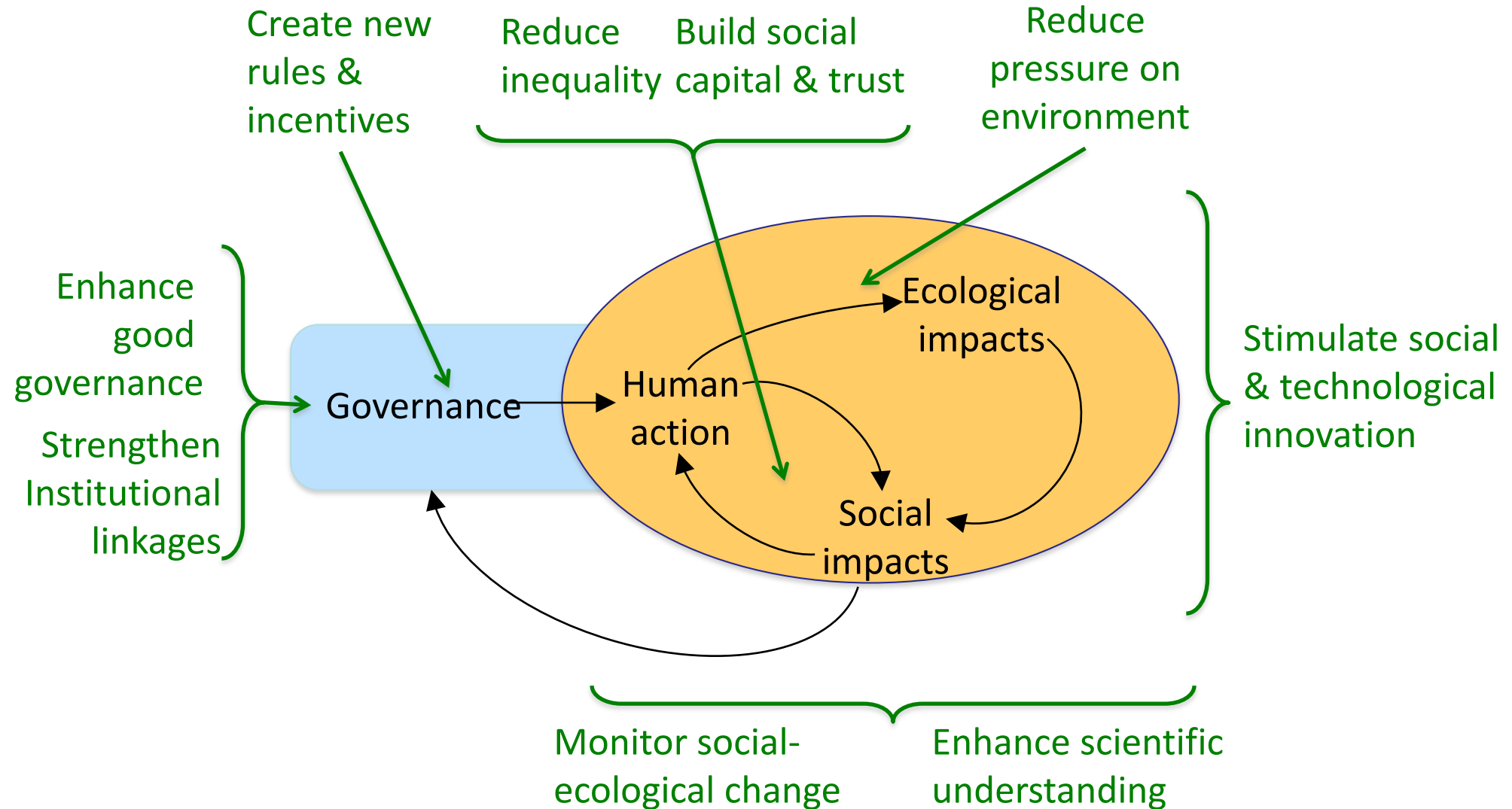
E) Commons
Dilemma



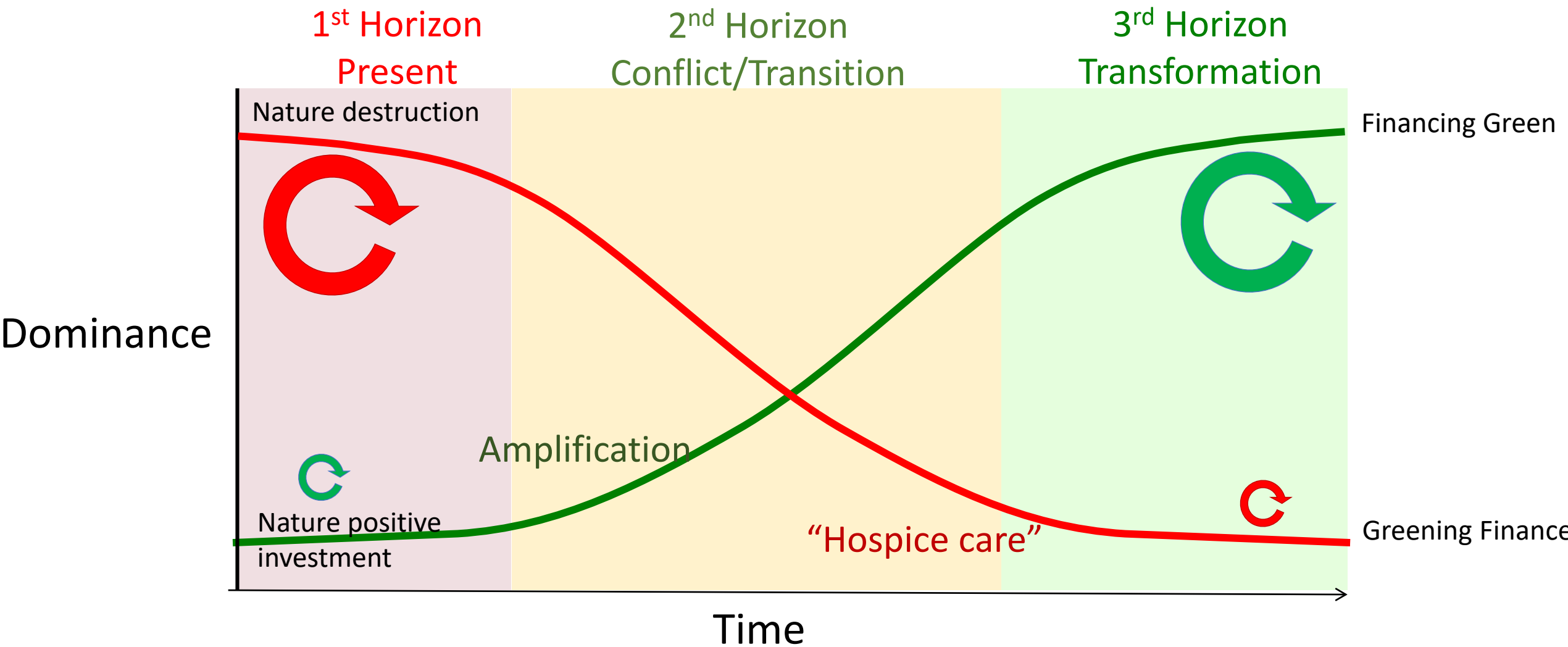
F) Institutional
Rigidity



Response Strategies to address Pathological Dynamics



Processes that dominate today will not dominate in a transformed world

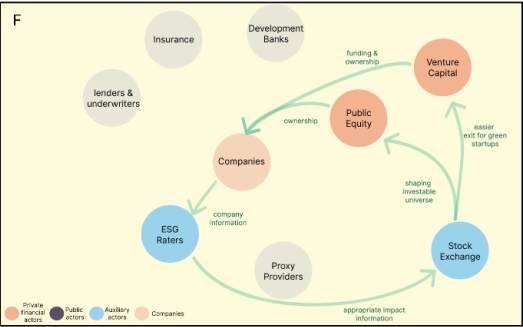
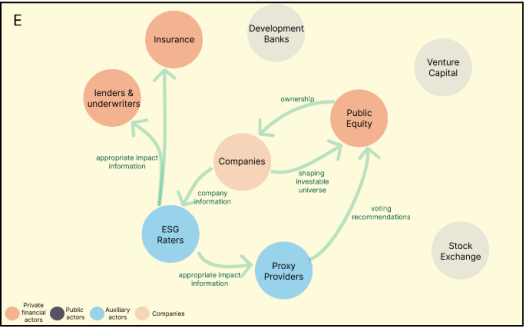
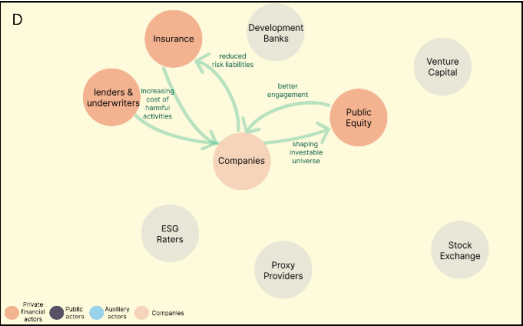
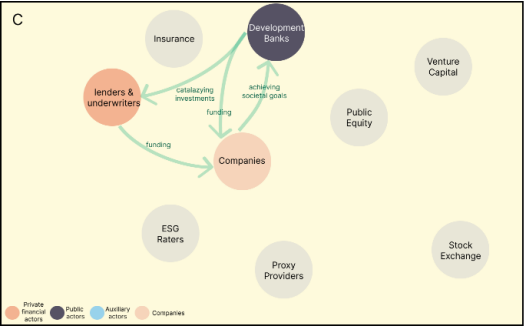
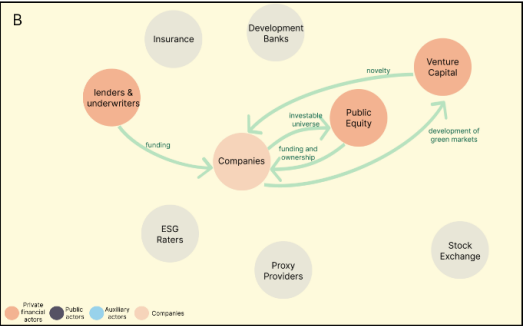
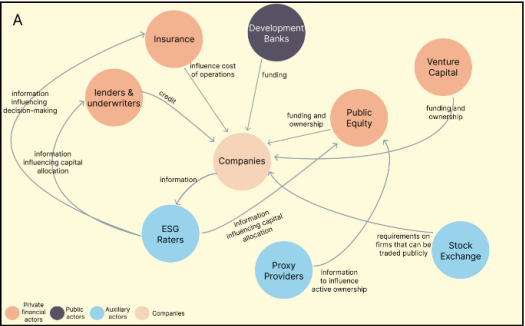


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Leverage Points in Financial Systems

	Influence Mechanisms			Sustainability Enhancement				Barriers to Sustainability		
	Fund	Influence	Filter	Catalyze investment	Novelty	Promote practices	Assessment	Poor assessment	Low accountability	Status-quo bias
Financial System Actors										
Public and private equity investors										
Lenders of private capital or underwriters of bonds										
Venture Capital Investors										
Stock Exchanges										
ESG raters										
Proxy Providers										

Actors in the private finance system can move the financial system towards sustainability and influence other actors or block action that creates change



Six potential virtuous cycles of change in finance

Environmental Research Needs to Enable Nature Positive Finance

- Tools and strategies that incorporate complexity & multiple dimensions of biodiversity into economic decision making
- How to identify & design fundable 'nature-positive' projects
- Accessible & useful biodiversity data for financial actors & decisions
- Environmental research that addresses questions important for financial actors

Signs of Opening for Nature Positive Transformation for Finance & Biodiversity

Monitoring Nature – fusion of eDNA to Earth Observation; combined with databases and tools

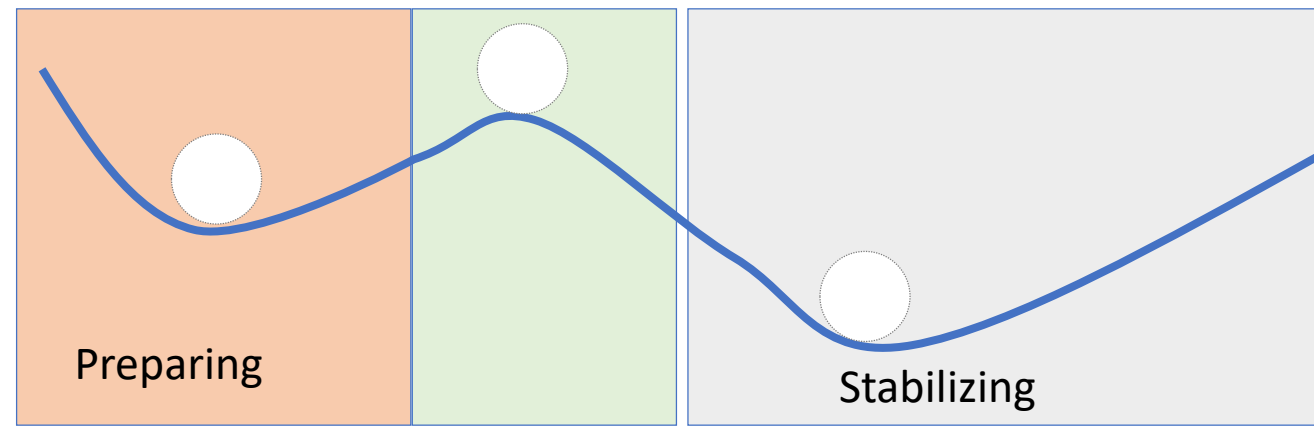
Nature models – rapid expansion and integration -> species distribution models, ecosystem services, land use change, earth system process

Policy – Global Biodiversity Framework; EU Green Deal; China's Ecological Civilization; Corporate Sustainability Reporting Standards

Business – Nature thrust into board room

However, there is also a backlash, especially from current US government

Transformation



Understanding seeds, barriers, and system dynamics can help develop strategies:

How to destabilize nature negative present

Navigate transition

Stabilize nature positive future

Thanks!

Finance to Revive Biodiversity
Finbio.org

Related projects:
Seeds of Good
Anthropocene
goodAnthropocenes.net

BiosphereFutures.net