

## Jenna Kay

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**From:** Monica Zazueta <zazuetamonica0813@gmail.com>  
**Sent:** Tuesday, June 4, 2024 1:16 AM  
**To:** Jenna Kay; Amy Koski; Ben Duncan; Sylvia Ciborowski; tlunsford@parametrix.com; Dana Hellman; Harrison Husting; Nicole Metildi  
**Subject:** Overarching Climate Resiliency Policies #1

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This is page/email #1 of the list I sent to you all to listen to and to read with the specific #'s I asked you to look more into. I've put together summaries of the resources I shared. I hope this helps with the overarching climate resiliency policies.

Thank you all for everything that you all do. TEAM WORK!

#3

Alexa Firmenich: "Biodiversity, Beauty, and Being" -  
The Great Simplification  
1 hour 44 minute video  
[https://youtu.be/4POPay2slr8?si=r-U1-fTEg7RvN\\_D2](https://youtu.be/4POPay2slr8?si=r-U1-fTEg7RvN_D2)

Here is a concise qualitative summary of the key discussion points:

Alexa Firmenich shared her passions for reconnecting humans to the natural world through a philosophy of animism and systems thinking. Her work centers biodiversity through scientific initiatives like tracking all species in an area. She also runs an "animist investment fund" that considers nature's interests, like supporting regenerative farming.

Firmenich sees nature and human mental well-being as deeply interconnected. She encourages local practices like identifying a "sit spot" near home to cultivate presence with nature daily. Her podcast "Life Worlds" explores cultivating sensory skills to embody other perspectives.

The discussion emphasized humanity's deep innate connection to nature, but also the psychological and community support needed to navigate complex ecological grief. Both speakers agree addressing this crisis requires shifting power holders' worldviews through aesthetics like guided nature experiences. They also underscored research needs on post-climate change scenarios and collective psychology around environmental issues.

The conversation demonstrated the intersection of fields like systems thinking, indigenous knowledge, psychology and finance in caring for biodiversity holistically. With empathy, ritual and relationship,

speakers hope more people can find purpose and beauty even amid challenges, as together the world seeks ecological-social-spiritual harmony.

#4

Mario Giampietro: "Models with Meaning - Changing Social Practices" - The Great Simplification

1 hour 23 minute video

<https://youtu.be/HFZ3NPPPS0?si=sUY9OrMFw1du4RVv>

Here is a concise qualitative summary of the interview:

Dr. Mario Giampietro discussed the complex challenges facing societies in relation to energy, the environment and human behavior. He emphasized that issues like sustainability cannot be understood through economic or one-scale models. His work with MuSIASEM uses a multi-scale integrated approach to examine relationships between social and ecological factors over time.

Key points included: viewing societies as complex adaptive metabolic systems; the importance of scales, feedbacks and limits to understand issues; problems with concepts like "circular economy"; and the need to consider values, emotions and deliberation alongside data. Giampietro also critiqued trends like unsustainable technical innovation aimed solely at maintaining the status quo.

The discussion touched on semiotics, adaptive cycles, quantitative storytelling and the extinction of farming communities. Giampietro advised focusing resources on local emergent solutions through participatory processes rather than large plans. Overall, the interview conveyed the intricacy of analyzing human and environmental interactions, while emphasizing the value of an integrated, multi-dimensional perspective informed by biophysical realities.

#5

Nate Hagens: "Episode 100 - The Great Simplification

2 hour 8 minute video

<https://youtu.be/GocuMZX3hIs?si=impadsCjN-aGZzk0>

Here is a 266-word summary of the key points:

This episode marks the 100th podcast for Nate Hagens' show "The Great Simplification." Kate interviews Nate about his journey to focusing on topics of energy, ecology, complexity and socioeconomic issues.

Nate describes formative experiences with nature as a child that sparked his interests. He later pursued finance but realized the disconnect between economic growth and environmental impacts. Inspired by thinkers like Herman Daly, Nate pursued a PhD focused on connecting these issues.

Nate discusses concepts central to his analysis, including "energy blindness," the "carbon pulse," the unintentional "economic Superorganism" optimizing growth, and an impending "Great Simplification" as complexity becomes unsustainable. He notes the challenges of hosting a show covering immense, interconnected crises without solutions.

Nate explains living rurally but lacking time for self-sufficiency due to podcast demands. Kate challenges the assumption that everyone can flee cities, and Nate agrees communities, not land, are most important for "pro-social prepping."

Regarding inevitable impacts, Nate believes growth will end but is uncertain how/when. The system's momentum appears uncontrolled, approving new fossil projects despite climate risks. Kate questions if actions slowed emissions, but Nate cites continued coal expansion.

The conversation surveys Nate's journey awakening to our predicament and efforts raising awareness, while acknowledging complex, system-level challenges beyond individual influence. They discuss navigating impending crises and changing initial conditions.

#6

'Doughnut Economics' explained in a 29 minute video  
How radical ideas can turn into transformative practice Stockholm impact week 2023

<https://youtu.be/qwyzsAWRMcw?si=Hut8czYBLqAjOBpb>

Here is a concise summary of the key points:

Kate Raworth discussed the need for a new economic model framed by sustainable development goals. She presented the "doughnut" diagram depicting a safe and just space for humanity based on social foundations and environmental ceilings.

Currently most countries are failing on social issues like healthcare, education and income inequality, while exceeding planetary boundaries on issues like climate change and biodiversity loss. Costa Rica comes closest to achieving the doughnut model.

To transition economies will require "regenerative" and "distributive" redesign. Companies should focus not just on product design but organizational design, with purpose, networks, governance, ownership and finance aligned with sustainability and equality.

Examples of forward-thinking companies include Faith in Nature putting an environmental lawyer on its board, and Patagonia changing ownership to protect its sustainability mission. National policies are also needed to shape business norms and support regenerative growth.

Overall, Kate argues the current economic growth doctrine and theories of self-interest no longer apply. A post-growth system is needed to meet human needs within planetary means, requiring systemic change in business models, finance, governance and what we value. The doughnut offers a path for a thriving future.

- Here are some potential overarching policy approaches that could support managing growth towards sustainability goals:

- Carbon pricing and emission reduction targets to internalize environmental costs and incentivize low-carbon transition. Explore policies like carbon taxes, cap-and-trade, emission reporting mandates.

- Sustainable consumption and production policies like polluter pays principle, extended producer responsibility, green procurement, biomimicry incentives. Encourage circular economic models.

- Financial sector reform including mandatory sustainability reporting, tax reform to shift investments, 'doughnutizing' financial risk analysis, phasing out subsidies for high-impact industries.

- Just transition programs to assist workers and communities affected by shifts to sustainable industries. Ensure new opportunities and social safety nets.

- Strengthened environmental regulation and enforcement on issues like renewable energy targets, nature protection, pollution standards, sustainable resource management.

- Redistributive policies like living wages, strengthened collective bargaining, universal basic services, increased progressive taxation.

- Local economic development focused on sustainability, equity and well-being indicators rather than purely growth and GDP. Support social enterprises.

- International cooperation on issues that transcend borders like climate change, tax havens, sustainable supply chains and standards harmonization.

The overall aim would be policy coherence across sectors and levels to iteratively shift the drivers of the economy towards human and planetary well-being.

- The Doughnut Economics model helped in developing these suggested overarching policies. Specifically:

- The policies aim to manage growth and transition economies so that societies can meet the social foundations (inner ring of the doughnut) for all people, relating to food, health, education etc.

- They also aim to ensure resource use and environmental impact are reduced and maintained within planetary boundaries (outer ring), for issues like climate change, biodiversity loss, pollution etc.

- The just transition programs directly support moving societies into the "doughnut space" where social foundations are met without overshooting boundaries.

- Financial sector and tax reforms incentivize investments that drive regenerative and distributive solutions rather than solely seeking growth and returns.

- Local economic development using well-being indicators measures progress comprehensively rather than one-dimensionally like GDP.

- International cooperation recognizes the global scale of environmental challenges and our interconnectedness requiring coordinated multi-country solutions.

So in summary, the policy approaches are suggested with the overarching goal of the Doughnut model in mind - to meet human development needs without exceeding ecological limits, and to shape systems of governance, business and economy accordingly. The needs of people and planet are both prioritized.

#8

Fossil Free Food Systems: Jason Bradford, Andrew Millison, Vandana Shiva, Daniel Zetah  
Reality Roundtable #06  
1 hour 31 minutes

<https://youtu.be/lb2tJXopTJA?si=vAnRvnMOHzzbah3a>

Here is a concise summary of the key points from the discussion:

The panel explored how humanity could transition away from an industrial food system reliant on fossil fuels to growing nutritious, ecologically-regenerative food with minimal fossil inputs. Central to this transition is re-localizing agriculture through repopulating rural communities near farmland. Panelists stressed the importance of apprenticeship programs to pass on skills, and reviving peasant agriculture globally as a model. Government policies like ending agricultural subsidies for fossil inputs and recognizing farmers' rights could support this shift.

Productive landscapes like India's maintain diversity naturally through symbiosis rather than monocrops. Metrics should prioritize soil and human health over yield alone. Restoring degraded lands through ecosystem techniques can potentially support more people. Rural communities with mixed smallholders, grazing lands and watershed-scaled political structures were presented as viable models. Overall, reframing farming as a high-status vocation that regenerates both land and community well-being was viewed as key to attracting newcomers to the land.

#10

David Holmgren: "Small and Slow Solutions - Permaculture Design" | The Great Simplification  
1 hour 40 minute video

<https://youtu.be/A9hW4Jh9hF0?si=RVED1O0zp1SsBP6q>

Here is a concise summary of the key points from the interview:

David Holmgren, co-originator of permaculture, discusses the design system's principles and application. Permaculture focuses on resilient and regenerative land use, including agriculture, forestry and living spaces. While some see it as gardening, its essence is designing multifunctional systems with redundancy to withstand shocks.

The interview covers soil fertility impacts from industrial agriculture, including a lingering "phosphorus bank" boosting productivity. Non-monetary local economies, retrofitting suburbs, and novel plant

hybrids' higher yields offer sustainability opportunities. While centralized systems persist, localized complementary models like urban gardening could meet community needs.

Holmgren believes taking time and working slowly benefits creative problem-solving. Shortening global supply chains may mean more localized but nationally-controlled resource access. Permaculture and self-reliance can help people navigate uncertainties, through reconnecting with nature and each other in community. While large-scale plans pose challenges, permaculture's flexible, small-scale approach deserves wider trial before crises compel radical changes.

In closing, Holmgren expresses how living through the fossil fuel era affords privileges to influence the future, for better or worse, through even small divergences from the present path. Maintaining acceptance and creativity amid uncertainties is key.

#11

Andrew Millison: "Geomorphology, Permaculture, and The Good Work"

1 hour 23 minutes

<https://youtu.be/52L4Ncs0jLk?si=rEmUN7CnDBB5r88W>

Here is a 291-word summary of the key points:

Andrew Millison is a permaculture expert and educator who teaches at Oregon State University. He advocates designing human settlements based on watersheds rather than arbitrary property lines. Millison sees India as ahead of the US in this regard - many rural villages there are centuries-old and their boundaries follow the natural land contours.

Millison believes India may lead an global "ecological watershed revolution" due to communities' cooperative spirit and permaculture knowledge. On a recent trip, he witnessed farmers doubling organic yields through practices like biodynamic fertilizers, agroforestry, and watershed restoration. This cooperative success contrasts with America's individualism and lack of "cultural memory" of communal problem-solving.

As energy declines, Millison thinks permaculture can support higher populations than expected by substituting labor for fossil fuels. Examples from India reassuringly show decreased workloads when organizations implement regenerative techniques. Millison shares these successes globally via educational videos attracting millions of views.

The interview discusses scaling permaculture education, the generational shift toward new philosophies, and potential for wealthy land donations to spark local movements. Millison remains optimistic citizens can drive grassroots transformation and sees his role as amplifying others' effective work - like projects in India restoring ancient hydrological systems through community cooperation.

#12

Tom Chi: "Net Positive for the Planet – from Beavers to Bionics" | The Great Simplification

2 hours and 19 minutes

<https://youtu.be/AjGOGfzAvyc?si=KuTaTyie2q1yyd2F>

Here is a concise summary of the key points from the interview:

Tom Chi discusses ambitious yet practical solutions to ecological crises through the lens of his venture capital firm, At One Ventures. He outlines 3 "epochs" for transitioning to a sustainable economy - from extracting resources to optimizing material productivity to enriching ecosystem functions.

Epoch 1 seeks maximum economic value from scarce resources like through efficient air conditioners. Epoch 2 focuses on ecosystem "verbs" over "nouns," supporting keystone species through regenerative agriculture practices restored by mapping technologies.

Epoch 3 proposes maximizing the number of organisms benefited by each photon and water molecule through designing an economy centered on diverse nutrient flows inherent to life on Earth. Targeting photosynthesis and the hydrologic cycle could support prosperity for centuries.

Though large-scale issues like climate change will take generations to fully address, focusing on "tiny rates" like technology innovations can accelerate progress. Companies in Chi's portfolio implement practical yet visionary solutions already financially viable without subsidies, like autonomous electric tractors reducing agricultural emissions and costs.

Overall, Chi advocates reframing societal goals from prohibitions that induce anxiety to affirmative visions of thriving interdependent communities, human and more-than-human. Approaching problems as surmountable through perseverance and cooperation better equips persistent problem-solvers to make gradual improvements shaping our long-term collective future.

#14

Pella Thiel: "Ecocide and The Rights of Nature" | The Great Simplification  
1 hour 18 minute video

<https://youtu.be/JgRlgKHvKCE?si=jnRYXVQlvB32NABL>

Here is a concise summary of the key points from the podcast:

Pella Thiel is working to establish "ecocide" as an international crime through the Stop Ecocide movement. Ecocide would criminalize widespread environmental destruction comparable to genocide. Pella sees this as crucial to protect nature's rights and shift our culture's anthropocentric view.

Some highlights from Pella's work:

- Inspired by destruction of Ecuador's Yasuni rainforest, the most biodiverse place on Earth
- Rights of Nature is gaining recognition globally, including in 30+ country laws
- Recent examples show rights are "teething," like a Panamanian mine closure

Pella also cares for Sweden's struggling Baltic Sea. To represent its interests, she aims to create an "embassy" for the sea. More broadly, Pella wants to shift norms and values through legal frameworks influencing decisions, practices and worldviews.

The discussion covered related topics like ecopsychology's role in fostering reverence for nature. Pella urged focusing less on harm reduction, and more on regeneration by reframing nature as sacred rather than a resource. Overall, the summarization aims to convey Pella's passion and pragmatic approach to addressing ecocide through legal and cultural change.

#15

Steve Keen: "On the Origins of Energy Blindness" | The Great Simplification

1 hour 32 minute video

<https://youtu.be/lrMWSkzrMYg?si=P8AxGlsl3zw7gCe8>

Here is a concise summary of the key points:

Economics has long been "energy blind" by neglecting the fundamental role of energy in powering productivity and wealth creation. The interview traces how this oversight originated and compounded over centuries, from the Physiocrats who recognized land as the source of value, to Adam Smith who substituted labor.

Later economists built production function models excluding energy despite the laws of thermodynamics proving output depends on transformed energy inputs. The Cobb-Douglas function endured despite thin empirical backing, masking capital's true high contribution. Solow's "technological change" ignored capital embodying energy-using tools.

Redefining energy as an input solves these issues. Data shows GDP strongly correlates with energy consumption. The Leontief function, derided for assuming output equals capital divided by its efficiency, actually illuminates efficiency levels of energy transformation into work.

This core blind spot means economists fail to account for waste emissions damaging Earth's support systems, and downplay climate risks jeopardizing production. Transformation is urgently needed to reframe economics based on energetic reality and harness innovation to replace fossil fuels before civilization-threatening climate impacts make that transition impossible.

In re-examining economics' foundations, the interview illuminates how understanding energy's primacy in powering society could reshape scientific, political and economic perspectives toward more sustainable paths. It emphasizes the engineers now needed to guide such changes.