



Unsustainable economic institutions in climate mitigation scenarios

Victor Ecrement, PhD candidate

Institut de la Transition Environnementale, GRIPIC - Sorbonne Université

CC BY-SA 4.0 : <https://creativecommons.org/licenses/by-sa/4.0/>

Unsustainable economic institutions

Institution	Main evidence on unsustainability	Alternatives
Economic growth objectives	Parrique et al. 2019, Vaden et al. 2020, Vogel and Hickel 2023, Li 2020, Cuny and Parrique 2024, Hickel and Kallis 2020, Brockway et al. 2021	Multiple social and ecological indicators
Private property and capital accumulation	Malm 2018, Sullivan and Hickel 2023, Wilkinson and Pickett 2024, Bell 2015	Commons, economic democracy, cooperatives, wealth taxes, public property
Generalization of markets	Cahen-Fourot 2022, Singer 2010, Bonneuil et Fressoz 2013, Fressoz 2024, Fremstad et Paul 2022, Evite et Zara 2023	Democratic planning, decommodification, public services, regulation
Generalization of wage labour	Cahen-Fourot 2022	Working time reductions, universal basic income, job guarantees
International trade	Quet 2022, Hickel et al. 2022, Althouse et al. 2023, Jarrige 2010, Malm 2018	Relocation of essential production, high environmental standards on imports, reduction of trade volume
Entrepreneurship freedom	Calvin et al. 2023, Bonnet et al. 2021	Technical democracy, moratorium on all infrastructure projects, bans on activities
Consumption freedom	Wilkinson and Pickett 2024, Bell 2015	Consumption thresholds, progressive prices

Worldwide scenarios

- All worldwide scenarios assume the continuation of the current organization of the world economy (Cointe and Pottier 2023, Keyßer and Lenzen 2021, Kuhnhenh 2018, Palmer 2018, The Shift Project 2019, Anderson et Jewell 2019)
- Keyßer and Lenzen (2021) test multiple degrowth scenarios
- IEA Net Zero scenario includes minor sufficiency proposals (Négawatt 2022a)

EU scenarios

- Almost all EU scenarios assume the continuation of the current organization of the economy
- EU 2040 climate target scenarios include a small sufficiency alternative (European Commission 2024)
- 3 non governmental scenarios include more structural sufficiency :
 - *Net Zero 2050*, Climact
 - *PAC scenario*, CAN-E and EEB
 - *CLEVER*

National scenarios

- Almost all national scenarios assume the continuation of the current organization of the economy
- NECP and LTS have very little structural sufficiency measures (Zell-Ziegler et al. 2021a, Zell-Ziegler et al. 2021b, Lage et al. 2023, Velten et al. 2022)
- Some sufficiency scenarios by NGOs and state agencies (Stephenson et Allwood 2023, Veyrenc et Houvenagel 2021, ADEME 2021, Négawatt 2022b)

Conclusion

- All IPCC and official scenarios are deeply unsustainable
- They would lead to overshoot of many planetary boundaries, rising inequalities, millions of deaths
- A few actors are starting to question unsustainable economic institutions through sufficiency
- Sufficiency is not enough : wellbeing has to be decoupled from economic growth

References

ADEME. (2021). *Transitions 2050—Synthèse*. ADEME. <https://librairie.ademe.fr/cadic/6529/transitions2050-synthese.pdf>

Althouse, J., Cahen-Fourot, L., Carballa-Smichowski, B., Durand, C., & Knauss, S. (2023). Ecologically unequal exchange and uneven development patterns along global value chains. *World Development*, 170, 106308. <https://doi.org/10.1016/j.worlddev.2023.106308>

Anderson, K., & Jewell, J. (2019). Debating the bedrock of climate-change mitigation scenarios. *Nature*, 573(7774), 348–349. <https://doi.org/10.1038/d41586-019-02744-9>

Bell, K. (2015). Can the capitalist economic system deliver environmental justice? *Environmental Research Letters*, 10(12), 125017. <https://doi.org/10.1088/1748-9326/10/12/125017>

Bonnet, E., Landivar, D., & Monnin, A. (2021). *Héritage et fermeture: Une écologie du démantèlement*. Divergences.

Bonneuil, C., & Fressoz, J.-B. (2013). *L'événement Anthropocène: La Terre, l'histoire et nous*. Seuil.

Brockway, P. E., Sorrell, S., Semieniuk, G., Heun, M. K., & Court, V. (2021). Energy efficiency and economy-wide rebound effects: A review of the evidence and its implications. *Renewable and Sustainable Energy Reviews*, 141, 110781. <https://doi.org/10.1016/j.rser.2021.110781>

Cahen-Fourot, L. (2022). *Looking for growth imperatives under capitalism: Money, wage labour, and market exchange* [Working Paper Series]. Post-Growth Economics Network. <https://www.econstor.eu/handle/10419/264902>

Calvin, K., Dasgupta, D., Krinner, G., Mukherji, A., Thorne, P. W., Trisos, C., Romero, J., Aldunce, P., Barrett, K., Blanco, G., Cheung, W. W. L., Connors, S., Denton, F., Diongue-Niang, A., Dodman, D., Garschagen, M., Geden, O., Hayward, B., Jones, C., ... Péan, C. (2023). *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Intergovernmental Panel on Climate Change. <https://www.ipcc.ch/report/ar6/syr/>

Cointe, B., & Pottier, A. (2023). Understanding why degrowth is absent from mitigation scenarios. *Revue de La Régulation. Capitalisme, Institutions, Pouvoirs*, 35, Article 35. <https://doi.org/10.4000/regulation.23034>

Cuny, J., & Parrique, T. (2024). *Can Europe green its growth ?* IDH 21.

European Commission. (2024). *Securing our future. Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society*. European Commission. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2024%3A63%3AFIN>

Evite, P. M., & Zara, A. R. (2023). *Neocolonialism in Carbon Offset Markets* (SSRN Scholarly Paper 4651498). <https://doi.org/10.2139/ssrn.4651498>

Fremstad, A., & Paul, M. (2022). Neoliberalism and climate change: How the free-market myth has prevented climate action. *Ecological Economics*, 197, 107353. <https://doi.org/10.1016/j.ecolecon.2022.107353>

Hickel, J., Dorninger, C., Wieland, H., & Suwandi, I. (2022). Imperialist appropriation in the world economy: Drain from the global South through unequal exchange, 1990–2015. *Global Environmental Change*, 73, 102467. <https://doi.org/10.1016/j.gloenvcha.2022.102467>

Hickel, J., & Kallis, G. (2020). Is Green Growth Possible? *New Political Economy*, 25(4), 469–486. <https://doi.org/10.1080/13563467.2019.1598964>

Jarrige, F. (2010). Refuser de se laisser ferrer. Les résistances au chemin de fer en France au XIXème siècle. In *Les Luddites en France. Résistance à l'industrialisation et à l'informatisation*. L'échappée.

Keyßer, L. T., & Lenzen, M. (2021). 1.5 °C degrowth scenarios suggest the need for new mitigation pathways. *Nature Communications*, 12(1), Article 1. <https://doi.org/10.1038/s41467-021-22884-9>

Kuhnhenh, K. (2018). Economic growth in mitigation scenarios: A blind spot in climate science. *Heinrich Böll Stiftung*, 25. https://www.boell.de/sites/default/files/endf2_kuhnhenh_growth_in_mitigation_scenarios.pdf

Lage, J., Thema, J., Zell-Ziegler, C., Best, B., Cordroch, L., & Wiese, F. (2023). Citizens call for sufficiency and regulation—A comparison of European citizen assemblies and National Energy and Climate Plans. *Energy Research & Social Science*, 104, 103254. <https://doi.org/10.1016/j.erss.2023.103254>

Li, M. (2020). Anthropocene, Emissions Budget, and the Structural Crisis of the Capitalist World-System. *Journal of World-Systems Research*, 26(2), Article 2. <https://doi.org/10.5195/jwsr.2020.977>

Malm, A. (2018). *L'anthropocène contre l'histoire: Le réchauffement climatique à l'ère du capital*. La fabrique éditions.

Négawatt. (2022a). *La transition énergétique au cœur d'une transition sociétale*. Négawatt. <https://negawatt.org/IMG/pdf/synthese-scenario-negawatt-2022.pdf>

Négawatt. (2022b). *Sufficiency's integration into climate and energy strategies*. <https://2050pathways.org/resource-hub/sufficiencys-integration-into-climate-and-energy-strategies/>

Palmer, G. (2018). A Biophysical Perspective of IPCC Integrated Energy Modelling. *Energies*, 11(4), Article 4. <https://doi.org/10.3390/en11040839>

Parrique, T., Barth, J., Briens, F., Kerschner, C., Kraus-Polk, A., Kuokkanen, A., & Spangenberg, J. H. (2019). *Decoupling debunked – Evidence and arguments against green growth as a sole strategy for sustainability*. European Environmental Bureau. <https://eeb.org/library/decoupling-debunked/>

Quet, M. (2022). *Flux. Comment la pensée logistique gouverne le monde*. Zones.

Singer, M. (2010). Eco-nomics: Are the Planet-Unfriendly Features of Capitalism Barriers to Sustainability? *Sustainability*, 2(1), Article 1. <https://doi.org/10.3390/su2010127>

Stephenson, S. D., & Allwood, J. M. (2023). Technology to the rescue? Techno-scientific practices in the United Kingdom Net Zero Strategy and their role in locking in high energy decarbonisation pathways. *Energy Research & Social Science*, 106, 103314. <https://doi.org/10.1016/j.erss.2023.103314>

Sullivan, D., & Hickel, J. (2023). Capitalism and extreme poverty: A global analysis of real wages, human height, and mortality since the long 16th century. *World Development*, 161, 106026. <https://doi.org/10.1016/j.worlddev.2022.106026>

The Shift Project. (2019). *Scénarios énergie-climat. Évaluation et mode d'emploi*. The Shift Project. <https://theshiftproject.org/article/scenarios-energie-climat-evaluation-mode-emploi-rapport-shift/>

Vadén, T., Lähde, V., Majava, A., Järvensivu, P., Toivanen, T., Hakala, E., & Eronen, J. T. (2020). Decoupling for ecological sustainability: A categorisation and review of research literature. *Environmental Science & Policy*, 112, 236–244. <https://doi.org/10.1016/j.envsci.2020.06.016>

Velten, E. K., Evans, N., Duwe, M., Spasova, D., Vega, R. de la, & Duin, L. (2022). *Charting a path to net zero: An assessment of national long-term strategies in the EU*. Ecologic Institute. <https://policycommons.net/artifacts/3866760/charting-a-path-to-net-zero/4672715/principaux-resultats.pdf>

Veyrenc, T., & Houvenaguel, O. (2021). *Futurs énergétiques 2050—Principaux résultats*. RTE. <https://assets.rte-france.com/prod/public/2021-12/Futurs-Energetiques-2050-principaux-resultats.pdf>

Vogel, J., & Hickel, J. (2023). Is green growth happening? An empirical analysis of achieved versus Paris-compliant CO2–GDP decoupling in high-income countries. *The Lancet Planetary Health*, 7(9). [https://doi.org/10.1016/S2542-5196\(23\)00174-2](https://doi.org/10.1016/S2542-5196(23)00174-2)

Wilkinson, R. G., & Pickett, K. E. (2024). Why the world cannot afford the rich. *Nature*, 627(8003), 268–270. <https://doi.org/10.1038/d41586-024-00723-3>

Zell-Ziegler, C., Thema, J., Best, B., & Wiese, F. (2021). Sufficiency in transport policy: An analysis of EU countries' national energy and climate plans and long-term strategies. *ECEEE Summer Study Proceedings*.

Zell-Ziegler, C., Thema, J., Best, B., Wiese, F., Lage, J., Schmidt, A., Toulouse, E., & Stagl, S. (2021). Enough? The role of sufficiency in European energy and climate plans. *Energy Policy*, 157, 112483. <https://doi.org/10.1016/j.enpol.2021.112483>