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DEGROWTH BY DISASTER OR DESIGN: CONVERGENCE OF CRISES AND POSSIBLE PATHWAYS IN LATVIA

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Abstract. The ongoing climate and environmental breakdown, the COVID-19 pandemic, and the Russian war in Ukraine are some of the key events creating a continuous convergence of crises that will likely affect most societal groups and the whole global (dis)order. Based on research within the Latvian Council of Science funded project 'Ready for change? Sustainable management of common natural resources', this paper explores firstly, the evidence-based impossibility of perpetual growth; secondly, the already visible signs of socio-economic hardship throughout 2020 - 2023; and thirdly, the possible pathways for actions in Latvia, based on long-term involvement in degrowth movement and participatory action research. We conclude that the early warnings for 'Limits to growth' 50 years ago have proven correct and dramatic reductions in emissions and material throughput are necessary to ensure a liveable planet for humans and broader biodiversity. The only substantial historical reductions have happened during the crises, and the decoupling of growth from environmental destruction remains a dangerous illusion. Therefore, the degrowth body of knowledge must be considered as a 'vision for a better future' with understanding and respect to planetary boundaries, social equity and other limits. Unfortunately, the lessons from crises indicate that corporate and political elites are afraid to reorganize the growth hegemony-driven economic and political systems. Still, the environmental breakdown has not yet provided such a sense of urgency that COVID-19 did, despite all warnings. The possible pathways in Latvia are not unique in this sense as our research confirms such a lack of sense of urgency and prioritisation of economic aims above environmental/existential, immediate above the more distant. There are aspects of valuable societal and environmental resilience in Latvia that are likely to be useful in adaptation to crises, but growth-based environmental destruction is generally not understood even among many environmentally active people. The strategic vision for alternative development strategies is very limited in Latvia. The high risk of degrowth by disaster remains.

Key words: degrowth, convergence of crises, environmental breakdown, material throughput, resilience.
JEL code: Q5

Introduction

There are two relevant meanings of growth:

1) The natural development of an immature system or organism to maturity.
2) A pathology in which a mature system or organism continues to grow.

[…] any system which grows beyond its mature state without limit will in due course crash. It may not know it, but it is in danger. And the more successful it has been in sustaining its development in this sense, the greater will be the crash. This is the central problem of the market economy' (Fleming, 2016, 182-184).

The context of our interdisciplinary research through the years 2020 - 2023 has been very demanding due to challenges such as the COVID-19 pandemic and the Russian war in Ukraine which led us to move from the original focus on the environmental breakdown to analysis of the complex setup of convergence of crises (Zobena & Felcis, 2022, Felcis & Felcis, 2022). Our research has multiple references to the degrowth paradigm understood as a social movement, research, and critical economic theory. Restating the severity of socio-economic and planetary-ecological circumstances is essential – the side-effects of aspirations for infinite growth on a finite Planet Earth. Material 'sources' and 'sinks' are perceived as externalities in orthodox economic schools, while ecological economists and degrowth scholars emphasise the importance to understand our material throughput to ensure liveable futures for humans and broader biodiversity.

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Even relatively conservative panel of scientists like the Intergovernmental Panel on Climate Change (IPCC) are using very direct language about climate breakdown, risks being higher than previously thought, that any increment of warming makes matters worse and creates compound future risks. 'For any given future warming level, many climate-related risks are higher than assessed in [Assessment Report 5] AR5, and projected long-term impacts are up to multiple times higher than currently observed. Risks and projected adverse impacts and related losses and damages from climate change escalate with every increment of global warming. Climatic and non-climatic risks will increasingly interact, creating compound and cascading risks that are more complex and difficult to manage' (IPCC, 2023, p. 15). Several summary report illustrations indicate increasingly larger areas of Earth turning uninhabitable for animals and dangerous for humans with every warming increment above the currently already achieved state (IPCC, 2023, p. 14-16).

Therefore, in this article firstly, we will explore the inevitability of the end of growth as planetary boundaries and carrying capacity does not allow for ever-increasing growth-driven material throughput and climate breakdown, secondly, we will assess what can be learned from the responses to COVID-19 pandemic and Ukraine war and thirdly, discuss the circumstances in Latvia within this wider context.

This article is based primarily on the review and synthesis of interdisciplinary literature on limits to growth, alternatives of degrowth and convergence of crises in order to further the limited discussion in Latvia and wider Eastern Europe about growth-degrowth dilemmas in order to have more courage for strategic national aims and plans instead of predominantly reactionary political action. Few scientists dare to think beyond the prevailing economic and development orthodoxies. Furthermore, quantitative and qualitative research material within 'Ready for change' project (Zobena & Felcis, 2022, pp. 39-78) enables further interpretation of Latvian circumstances, possibilities and limitations within a global context.

Research results and discussion

The inevitability of degrowth

One of the degrowth definitions is 'the democratic transition to a society that – in order to enable global ecological justice – is based on a much smaller throughput of energy and resources, that deepens democracy and guarantees a good life and social justice for all, and that does not depend on continuous expansion' (Schmelzer et al., 2022, p. 4). The authors are importantly summarising that growth is not just the increase in Gross Domestic Product (GDP), it is an ideological construction, a social process, and a material process. Firstly, it is an aspect of neoliberalism ideology and became the dominant perspective since 1950. Secondly, it is a stabilizing social process when both individuals and nation-states focus on growth as a hopeful perspective of the ability to catch up with peers or other states. Thirdly, any economy has its material throughput or metabolism, and growth is 'the flows of energy and matter that are passing through societies – extracted in some useful form, put to work or consumed, and eventually emitted as waste' (Schmelzer et al., 2022, p. 62). The key problem is that this planetary metabolism is by far exceeding the carrying capacity of planetary ecosystems and resources (Rockstrom, 2009, Steffen et al. 2015a, 2015b), and therefore growth as the dominant ideological construction is unable to solve the problems that it itself creates with constant expansion.

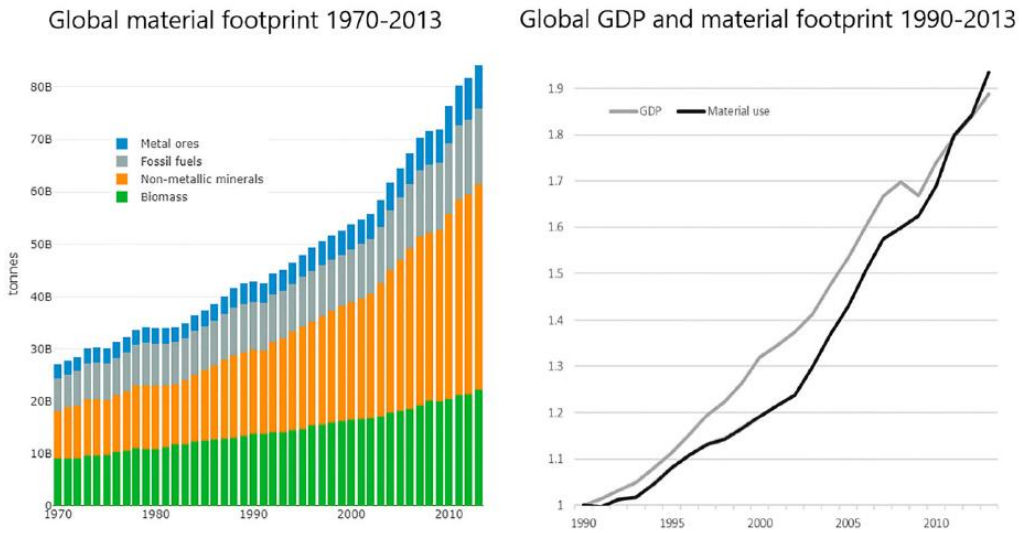
One of the earliest works to question to benefits of growth as an overall ideology was the 'Limits to Growth' report (Meadows et al., 1972). As shown in the figures about the 'Great Acceleration' since 1950s (Steffen et al., 2015b), growth is capable of increasing prosperity and well-being of many people, but simultaneously becoming pathological in the perspective of planetary biophysical reality – growing material throughput.

In the following decade, the so-called 'Bruntland report' (WCED, 1987) was famous for phrasing arguably the most common definition of sustainable development. However, it is rarely emphasised that the report was very optimistic about the prospects to maintain infinite economic growth while not causing environmental degradation. 'Far from requiring the cessation of economic growth it (i.e. sustainable development) recognises that the problems of poverty and underdevelopment cannot be solved unless we have a new era of growth in which developing countries play a large role and reap large benefits' (WCED, 1987, p. 40). Furthermore, report authors expressed a belief that 3-4% growth rates in the developed countries are the minimum necessary for global development and could be environmentally sustainable. Without analysing in more detail, such a vision implies doubling the size of 'developed' economies (and their related environmental and material throughput impacts) every 20-25 years and doubling of 'developing' economies even less than every 10 years, using simple mathematical rules of exponential growth. Economic growth further contributes to increased social metabolism in natural resource, energy use and related emission growth which leads to human-caused climate breakdown.

Another widespread term to justify further growth is 'Green economy'. It was introduced in 1980s and has become increasingly more used as another response to environmental problems becoming more evident. The transition to a green economy was at the centre of the Earth Summit 2012 (UNEP, 2011). It is a common argument that green economy principles through 'speaking in understandable language' (i.e. expression of ecosystem services and other natural capital in monetary terms) allows one to appreciate the importance of a viable environment and hence mobilise action to maintain it. Simply speaking, the green economy is envisaged as a win-win-win strategy for everyone involved with a disproportionate emphasis on economic instruments.

This approach has received a critique that it leads to the commodification of the environment because of its simplistic combination of social, ecological, and economic understanding while denying biophysical realities (Spash, 2012; Steffen et al., 2015a). 'Green economy' initiatives typically achieve only relative improvements while absolute/total conditions degenerate.

The widely circulated reports like the United Nations (UN) resolution 'Transforming our world: the 2030 Agenda for Sustainable Development' (UN, 2015), the Sustainable Development Goals (SDG), and 'Better Growth, Better Climate' follow the same line of logic 'that countries at all levels of income now have the opportunity to build lasting economic growth at the same time as reducing the immense risks of climate change' (The New Climate Economy, 2014, p. 8). This is based on a continuous growth paradigm and aims to achieve sustainable development through decoupling of economic growth from environmental degradation, at the same time. However, numerous times over the last decade it has been demonstrated as impossible to be achieved (Jackson, 2016: 67-86, Fletcher & Rammelt, 2016; Ward et al., 2016; Parrique et al., 2019; Hickel, 2021).



Source: Hickel & Kallis, 2019, p. 5. (a) Global material footprint, 1970-2013; (b) Change in global material footprint compared to change in global GDP, 1990-2013

Fig. 1. **Global material footprint and comparison to GDP**

Hickel and Kallis (2019) visualise very clearly the material throughput continuously increases since 1970 and is tightly correlated with global GDP. Further on they conclude that 'the empirical data suggest that absolute decoupling of GDP from resource use (a) may be possible in the short term in some rich nations with strong abatement policy, but only assuming theoretical efficiency gains that may be impossible to achieve in reality; (b) is not feasible on a global scale, even under best-case scenario policy conditions; and (c) is physically impossible to maintain in the longer term' (Hickel & Kallis, 2019, p. 7).

Multiple degrowth thinkers (for example, D'Alisa et al., 2014; Schmelzer et al., 2022) are developing a systems-level explanation why most of the widely shared beliefs and strategies for development are very likely to fail in long-term perspective. And yet there is strong resistance to this economic analysis supported by clear mathematical and physical arguments. From a sociological point of view, there can be two explanations. Firstly, most often on the individual level, this is a complicated mental exercise to accept that many aspects of our societies are impossible to continue sustainably if to continue at all in the future. Secondly, it is difficult to motivate people to action or mobilisation when the risks are so distant and invisible from an individual perception.

These two phenomena have been already analysed in the past. Sociologist Anthony Giddens emphasised the danger in this invisibility and according to 'Giddens Paradox': '[…] since the dangers posed by global warming aren't tangible, immediate or visible in the course of day-to-day life, however awesome they appear, many will sit on their hands and do nothing of a concrete nature about them. Yet waiting until they become visible and acute before being stirred to serious action will, by definition, be too late' (Giddens, 2009, p. 2).

More than a decade after Giddens assessment it is already too late to avert many climate change related dangers, because the previously invisible risks that environmental movement activists and scientists have been talking about for decades are becoming ever more visible. For example, Jem Bendell (2020) calls for deep adaptation to acknowledgement that in many regards it is 'too late'. 'Some future changes are unavoidable and/or irreversible but can be limited by deep, rapid and sustained global greenhouse gas emissions reduction. The likelihood of abrupt and/or irreversible changes increases with higher global warming levels' (IPCC, 2023, p. 19). For example, there has been no slowing of CO_2 concentration, material throughput, frequency of extreme weather conditions and average global temperatures, where

'the 10-warmest years on record have all occurred since 2010, with the last nine years (2014-2022) among the all-time 10-warmest years' (NOAA, 2023).

In all this convergence of crises, degrowth is largely about building alliances across the world and showing the multiplicity of paths that can be taken to achieve better future societies that are conscious of the limits of global biophysical reality. Degrowth 'strength is its holistic view. [It] relies not on a single strand of growth critique but has, from its very inception, braided the seven emancipatory strands […] together into a cohesive, well-developed, and broad critique of growth' (Schmelzer et al., 2022, p. 177). These seven strands of critique can be briefly summarised.

- **Ecological critique** implies that economic growth leads to destruction of the ecological foundations of human life and there are inevitable limits to growth.
- **Socio-economic critique** states that economic growth is not measuring genuine well-being and equality, and after a certain income level further growth has more costs than benefits and thus becomes 'uneconomic'.
- **Cultural critique** in essence demonstrates that people are becoming less happy and fulfilled in modern industrial societies and critiques the reductionist perspective of humans as homo economicus; David Graeber succinctly describes many current day workplaces as 'bullshit jobs' (Greaber, 2018).
- **Capitalism critique** points out that economic growth depends on continuous capitalist exploitation and accumulation that inevitably leads to more environmental degradation and social inequalities – both widely recognised problems in various political circles.
- **Feminist critique** adds the gender perspective in lasting inequalities and the essential role of reproductive and care activities that are carried out predominantly by women.
- **Critique of industrialism** emphasizes the unequal distribution of benefits from industrial progress that furthers other already mentioned problems.
- Finally, the **South-North critique** points to lasting post-colonial heritage in global (dis)order, where economic growth inevitably depends on relations of domination, extraction, and exploitation of the 'developing' world that is locked in this impossible catch-up game with the 'developed' countries.

From all these critiques we can conclude that there are structural problems with further growth aspirations - they are not likely to bring further environmental, social, and even economic benefits for current and future generations. Unfortunately, there is still a lot of 'designing' for growth, not degrowth. 'The Limits to Growth' (Meadows et al., 1972) was ridiculed 50 years ago, 20 years ago the authors confirmed the worrying trends (Meadows et al., 2004), in 2021 we could see that the trends of the last 50 years have matched the closest with the 'business-as-usual' scenario that 'indicate a halt in growth over the next decade or so' (Herrington, 2021, p. 614), and the acceptance of limits is ever more a reckoning with the biophysical planetary reality.

Therefore, the degrowth body of knowledge is very valuable in the ongoing convergence of crises that are probably starting to bring about the 'degrowth by disaster'. In this article, we use the degrowth movement phrase 'degrowth by disaster or design' to discuss the possibility of 'designing' preventive, thoughtful degrowth transitions at the time of relative stability or the likelihood of 'disaster' – crises and collapses with dramatic reductions in material throughput and only consequential realignment with reality. Indeed, there is a risk that the latter option will not lead to many desirable degrowth transition outcomes.

Socio-economic hardship in 2020-2023

As indicated in the introduction, since 2020 there have been multiple large-scale global events or even disasters. The COVID-19 pandemic is interesting in the context of this article because responses to it can

be perceived as a partial form of degrowth – reductions and limitations for the common good: 'the politics to fight the pandemic can be interpreted as a deliberate and planned shutdown of large parts of economy, with the goal of furthering the common good. […] To achieve this shutdown and cushion its effects, governments introduced policies that had long been deemed impossible […] all by using the government's sovereign power of money creation. […] they led to (temporary) significant reductions in emissions and material throughput' (Schmelzer et al., 2022, p. 285-286).

The first key aspect here is about government actions that are deemed possible or not. Many politicians and economists would argue that it is impossible to stop, change or fundamentally alter the current status quo, while the pandemics demonstrated that under emergency situations radical changes are implemented. The second aspect is about the reductions - this is noted also by multiple other authors (e.g. Hickel & Kallis, 2019) and visible in country emissions reports that the only emissions and material throughput reductions that have happened during the last decades are during crises.

For example, the collapse of the Soviet Union led to dramatic emissions reductions in the newly independent countries, including Latvia. Surely, that was not because of environmentalists in the government, but because of the collapse of large industrial enterprises and the economic hardships of many people. The next moments of reductions are during the impacts of the late 1990ties Asian and Russian crises and the post-2008 global economic crisis. We will return to the last one later to explain the fragility of the recovery from that crisis and the structural problems that are lasting since then. In summary, if only crisis situations with slower economic growth rates are linked to reductions in emissions and material throughput, then once again the key worry must be about ensuring well-being without further economic growth.

The ecological economist Clive Spash early in the COVID-19 pandemic had precisely compared that the sense of emergency in the pandemic should have been similar regarding the climate and environmental breakdown. For example, after reaching the Paris Agreement in 2015 it should have led to 'oil markets collapsing, fossil-fuel investments being decimated, airlines cutting flying and going bankrupt and people stopping daily commuting [...]. Instead, they occurred as a reaction to the Coronavirus pandemic and as things to be reversed as soon as possible' (Spash, 2020b, p. 14). Spash continues his analysis to warn that the pandemic had demonstrated that politicians in the current hegemonic economic thought paradigm 'will only act to counter corporate and financial interests, and the consumer throwaway society, under domestically actualised extreme circumstances' (Spash, 2020b, p. 14). This indeed can be perceived as a system test that asks the question of not whether, but when the resource, climate, and ecosystem circumstances will become extreme enough to act on them like in an emergency. The current elites seem to be afraid of demands to reorganize the economic and political system (Spash, 2020a, p. 20) and also authors of IPCC (2022, 2023) and IPBES (2019) reports note that vested interests are slowing down the necessary actions.

Just when the pandemic was becoming less deadly in early 2022, Russia started the full-scale invasion of Ukraine. That refocused the attention of many, especially in the Baltic States with their complex history of Russian/Soviet occupations. Immediate crises always are perceived as more urgent, as discussed above. Later in 2022, the war intensity had slowed down, but its ongoing impacts, primarily the need to reorganize energy and resource supplies from elsewhere than Russia, had brought up sustained high inflation rates in most of Europe and elsewhere in the world.

While this is a straightforward correlation between energy sources and prices, there is a limited analysis of the other interconnected drivers of inflation. For example, climate crisis and environmental degradation are negatively affecting agricultural productivity, while its production is heavily reliant on diesel tractors

whose fuel and maintenance costs in turn have gone much more expensive. More extreme weather conditions are also creating more damage to infrastructure and higher costs to rebuild it.

In addition to that, since the post-2008 crisis, many countries have created into existence enormous volumes of new money through 'quantitative easing' (USA), European Central bank promises to buy any national bonds and other programs. In other words, it has been a lot of borrowing from future generations to maintain further expansion of economic growth. That continued during the pandemics and war in Ukraine, all done with many years of record-low interest rates of all the biggest national banks in the world.

The usual fiscal recipe to limit the high inflation rates is to raise interest rates, which is ongoing in the EU, USA, and the UK in 2023, but is unable to bring down the inflation because of its above-mentioned multiple causes and is likely to bring more bank bankruptcy risks as have already happened in March 2023 with the Silicon Valley Bank collapse, problems in the Credit Suisse, its acquisition by UBS and other risks of banks that are 'too big to fail', as we have learned in post-2008 crisis.

The fragile recovery since 2008 with a lot of debt creation that bring ever smaller increases in GDP and lower oil prices because of lower demand through the demand drop in especially 2009 and 2020-2021, is unlikely to deliver further economic stability and can burst into the next global financial crisis in any time between 2023 and 2030. The various forms of debt might become impossible to be repaid and oil prices might keep fluctuating in a higher range regardless of economic downturns because of the inevitable oil supply limits where conventional sources have peaked in 2015 and shale oil and gas added production is likely to peak in this same decade until 2030. The absurdity of our dependence on fossil fuel corporations is highlighted by British Petroleum, Exxon Mobile and Shell reported historical all-time record profits in 2022. IPCC alarmingly emphasize that 'there is a rapidly closing window of opportunity to secure a liveable and sustainable future for all. […] The choices and actions implemented in this decade will have impacts now and for thousands of years' (IPCC, 2023, p. 25).' What is relatively clear from the current trends is that it will not be possible to:

- Grow the economy and simultaneously efficiently mitigate climate breakdown;
- Grow the economy by replacing fossil fuels (currently they make up 80-85% of world's energy sources) with renewables;
- Expect people to leave fossil fuels in the ground, while IPCC reports that the operation of the current energy infrastructure guarantees exceeding the internationally agreed desirable 1.5-degree limit (2023);
- Expect governments to explain limits to growth before limits to growth are well past.

Since major economic downturns are likely within this decade, the key question remains about the viability to achieve democratically planned reductions in material throughput while reducing inequalities and improving well-being, all at times of crises. Unfortunately, the observed trends are not hopeful – profiteering from crisis and politicians' unwillingness to counter vested interests in sustaining the unsustainable.

Possible pathways in Latvia

In the bleak picture of the global context, further we want to reflect on what characterises recent developments in Latvia; not because of its uniqueness, but because of, a) the historical understanding of its past and present, b) social and political activism for change, c) understanding of its dependency on external international processes and d) possible capacity for resilience in such complicated circumstances.

Valuable insights about local, rural settings in Latvia can be learned from the outcomes of the EU funded research project 'My own corner, my little bit of land' (www.savskaktins.lu.lv). For example, social

anthropologist Dace Dzenovska has carried out extensive fieldwork resulting in her monograph about emigration and emptiness in rural Latvia. She discusses the global pressures and stages of post-Soviet transitions, critiques development paradigm hegemony, and then relate these pressures to responses of personal coping strategies (Dzenovska, 2012). Cimdiņa and Raubisko (2012) monograph within this project is challenging the dominant production intensification paradigm through an in-depth depiction of work and place attachment in rural Latvia.

Authors emphasise that most of the work remains invisible for market monetisation and therefore statistically appears as inefficient, but at the same time small and medium farms in Latvia are characterised by 'culturally and socially embedded management logic […] that is more encompassing and meaningful than market economy logic' (Cimdiņa & Raubisko, p. 162). Statistics on increasing organic farming conversion in Latvia are supporting the argument about Latvian rural resilience and aspirations for environmentally friendly and regenerative farming/management (Felcis & Felcis, 2021).

However, there are also instances where people resist the return to some aspects of the past legacy, as they feel the need to 'break' with a past of hardships as in the Soviet Latvia until 1990 (Dzenovska, 2012). Since the fall of the Soviet Union and its influence sphere, there is a dominance of convergence paradigm of growth-based 'catching up' throughout the Central and Eastern European (CEE) countries. It includes sentiments as Hungarians looking at Austria as an example of how they should have developed if not for the Soviet occupation; in the same way Latvians have their widespread narratives of being equal to Scandinavian countries before World War II. Furthermore, in the CEE and Latvia is a strong sense of failure of communism, fragile democracies and people who are often disillusioned, and it makes it very difficult to involve people in social movements, especially if they can be linked to communism as is the risk in case degrowth.

Therefore, it is a very complex challenge in Latvia for anyone willing to adapt or adjust some of the ideas, language, and practices of global movements towards sustainability; for example, permaculture, agroecology (Felcis & Felcis, 2021), transition towns and degrowth, which are all encompassing the types of 'real utopias' (Wright, 2010) that could be worked towards in the settings of Latvia. Such actions can be easily labelled as reversing the development trend towards the genuinely difficult times of recent history and therefore discrediting any such attempts. That reduces the likelihood of actions towards 'degrowth by design' in Latvia.

One of the first academic publications in Latvian to explicitly discuss degrowth as a development alternative is the 2016 book on climate change and sustainable development (Kļavins & Zaļoksnis 2016, pp. 327-329). However, while authors are highly critical of a 'business-as-usual' development approach, their recommendations and future vision is inconsistent and abruptly end with the wishful proposition that 'green economy' + 'national happiness' = 'sustainable world' (ibid., p. 345), which is not a useful or actionable development or economic transformation aim.

A similar lack of transformational potential can be observed in key policy planning documents in Latvia – they include inconsistencies in development visions – sustainability is frequently mentioned as an end goal, but the paths to sustainability are often conventional and inconsistent with genuine sustainability or degrowth. For example, the Latvian Sustainable development strategy (Latvija 2030) has an overall focus on human-centred development and maintains the belief in sustainability model as an answer to global challenges. However, National Development Plan for 2014-2020 (NDP 2014-2020) had moved away from human-centred development and has an explicit focus on 'economic breakthrough' and growth, even using technical and fossil fuel focused language in setting the objective of 'Prioritising national economic growth acts as fuel in the engine of Latvia's 'economic breakthrough'' (NDP 2014-2020, p. 17).

Furthermore, the whole Latvian Operational Programme for 2014-2020 planning period Cohesion Policy funding was titled 'Growth and Employment' (Ministry of Finance, 2014). This obvious link has been criticized as the lack of strategic thinking based in the most recent economic thought and response to global risks and challenges and NDP serving only as the framework to spend the funds available from the EU. The latest NDP 2021-2027 somewhat refocuses the attention to human centred perspective, has sustainability mentioned in different contexts more than 60 times, and mentions the European Green New Deal, but unsurprisingly still includes no mentions of degrowth as development alternative to achieve climate neutrality or other sustainability aims.

These planning documents are highlighting the overall policy-making scene in Latvia that is following the same dominant neo-liberal economic paradigm and belief in infinite economic growth (Felcis & Felcis, 2017). That makes conscious degrowth-oriented actions in Latvia complicated and underlines the necessity to contribute to the development of alternative political-economic relations. On one hand much can be learned from social experiments with universal basic income, widespread participatory budgeting, time banks, transition towns and other initiatives across Europe, but on the other hand, Latvian society is characterised with still widespread set of skills and abilities that are important for societal resilience, for example in the back-to-landers and permaculture movement (Felcis & Felcis, 2021).

Conclusions, proposals, recommendations

Human progress is causing side effects that cannot be solved while remaining in the same economic paradigm. The challenges reflected in this article reassure that spaces must be created to imagine 'real utopias' (Wright, 2010) – utopian from the perspective of current economic hegemony, but real because they could be well functioning in human societies in long-term perspective. As the section on degrowth inevitability demonstrates, it is less utopian to work towards regenerative alternatives without further material throughput expansion than to believe that the current dominant principles of economic organisation can continue indefinitely.

Decoupling is a dangerous illusion, 'Limits to growth' modelling proves frighteningly correct 50 years later and the relatively conservative IPCC uses increasingly alarmist language in its synthesis reports. The degrowth perspective has the potential to encourage thinking and acting in different paradigms from the dominant ones. It 'is not only a critique of the present but also a proposal and a vision for a better future (Schmelzer et al., p. 180).' Regarding degrowth, 'designing' would mean a preventive, thoughtful degrowth transitions at the time of relative stability, while 'disaster' – crises and collapses with dramatic reductions in material throughput and only consequential realignment with reality, that is not guaranteed.

From this article, we can conclude that because of biophysical limits and societal inabilities to achieve fast and deep transformations, the economic growth will rather come to an end by 'disaster'. The already visible crisis-time responses in 2020-2023 reaffirm the concerns – corporate and political elites are afraid to reorganize the growth hegemony-driven economic and political systems. Still, the environmental breakdown has not yet provided such a sense of urgency that COVID-19 or war in Ukraine did, despite all IPCC and other scientists' warnings. The possible pathways in Latvia are not unique in this sense as our research confirms such a lack of sense of urgency and prioritisation of economic aims above environmental/existential - on individual, corporate and political levels. There are aspects of societal and environmental resilience in Latvia that are likely to be useful in adaptation to crises, but growth-based environmental destruction is generally not understood even among many environmentally active people.

It is relatively clear from the observed trends that it will not be possible to a) grow the economy and simultaneously efficiently mitigate climate breakdown; b) grow the economy by replacing fossil fuels with

renewables; c) expect people to leave fossil fuels in the ground not to exceed the desirable 1.5-degree limit; d) expect governments to explain limits to growth before limits to growth are well past. In either way, it is clear that the system that will need to be developed without growth and respecting the resources externalities will not be a reformist revision, but a fundamentally different way or human socio-economic organisation.

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