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RECONSIDERING CIRCULAR AND REGENERATIVE ECONOMIES

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Abstract: *The relationship between circular economy (CE) and regenerative economy (RE) remains conceptually ambiguous, limiting understanding and their practical application in policy and economic systems. This paper clarifies their relationship by situating both frameworks within the context of regenerative agriculture (RA) and examining the biophysical limits of regeneration. Drawing on literature from industrial ecology, ecological economics, and sustainable agriculture, it argues that CE and RE are not distinct or hierarchical but rather different temporal and conceptual orientations of the same underlying system. Regenerative processes dominate in contexts of ecological degradation, enabling restoration and growth through the repayment of ecological debt and the rebuilding of natural capital. However, biophysical constraints, including thermodynamic limits and nutrient availability, place bounds on regeneration. As ecosystems recover and approach carrying capacity, regenerative growth diminishes, giving way to a circular steady state characterized by continuous renewal, material cycling, and dynamic equilibrium. This transition from regeneration to circularity provides a coherent framework for understanding sustainable development on a finite planet and clarifies the sequencing of economic strategies over time, essentially providing a "roadmap" for sustainable development. The paper contributes a unified conceptual model, illustrated through regenerative agriculture and policy applications, and proposes that sustainable economies must prioritize ecological restoration while ultimately converging toward circularity.*

Keywords: *circular economy, regenerative economy, planetary boundaries, ecological limits, steady-state economy, regenerative agriculture.*

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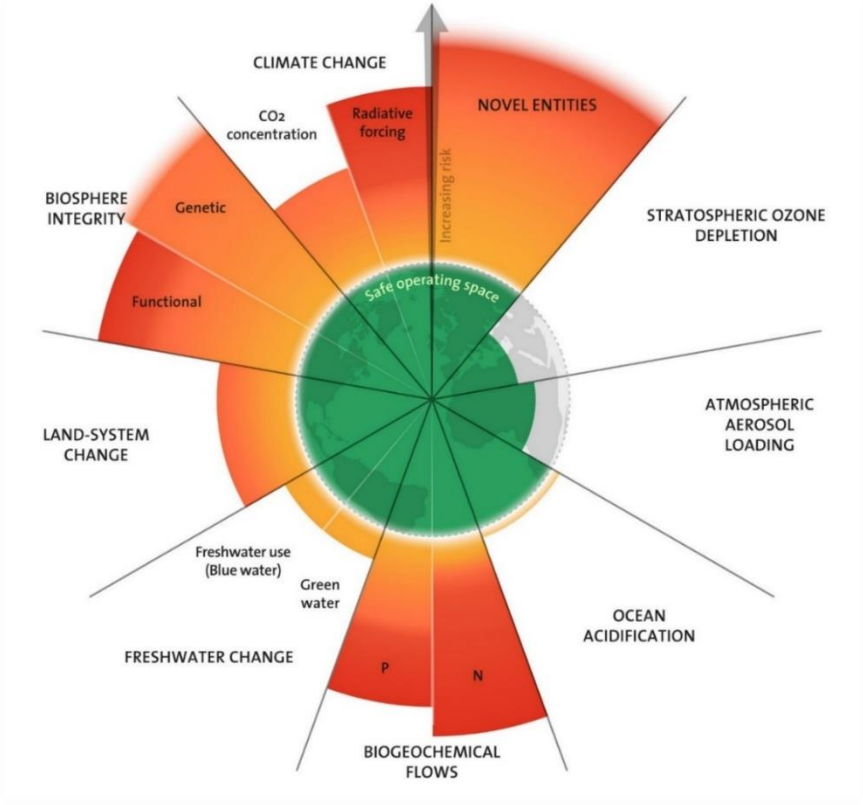
1. Introduction

Efforts to define sustainable economic systems have increasingly centered on two frameworks: the circular economy (CE) and the regenerative economy (RE). Despite their growing prominence in academic, policy, and corporate discourse, the relationship between these frameworks is unclear. This ambiguity limits their effective application in guiding economic transformation.

Figure 1: Planetary Boundaries 2025 Credit: Azote for Stockholm Resilience Centre



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One prominent system for understanding sustainability is the planetary boundaries developed by scientists at the Stockholm Resilience Centre. Designed to identify the limits on human activities that interfere with Earth's systems, these boundaries represent a "safe operating space" for humanity. Crossing these runs the risk of irreversible damage to the systems that sustain life on earth. The boundaries were proposed in 2009 with nine categories to identify the global processes that regulate Earth's life supporting systems, including climate change; rate of biodiversity loss; land system change; freshwater use; biochemical flows; ocean acidification; atmospheric aerosol loading; stratospheric ozone depletion and

chemical pollution. At that time, seven of the nine boundaries had suggested thresholds, of which three were exceeded (Rockström et al., 2009). In 2023, it was determined that six of the nine boundaries had been crossed, and according to a 2025 update, seven of our nine planetary boundaries have been transgressed (see Figure 1). These transgressions will equate to large scale environmental disruptions (such as droughts, storms, heat events, wildfires, flooding and sea level rise) and will be accompanied by the social chaos and population displacement that frequently follow.

The circular economy has been put forward as one of the most promising pathways for society to return to a "safe operating space" (Elobeid, 2022). Compared to the linear economy, a "take-make-waste" system, CE seeks to redesign industrial systems as closed loops that mimic nature's cycles, eliminating material use and waste through reduction, reuse, repair, and recycling. Additionally, it calls for the replacement of non-renewable resources with bio-based materials, within the limits of regeneration (Ellen MacArthur Foundation [EMF], 2013). The term "circular economy" is relatively new, but draws on earlier concepts of a "spaceship earth" where the limits of natural resources and sinks (environmental reservoirs that absorb pollutants) are recognized, as is the need to find our place in "a cyclical ecological system" (Boulding, 1966, p. 3, 9) and "an economy based on a spiral-loop system" (Stahel, 1981, p. 74). While there is no commonly accepted definition, the one that is used most frequently was introduced by the Ellen MacArthur Foundation (EMF) as "an industrial economy that is restorative or regenerative by intention and design" (EMF, 2013, p. 7), and encompasses three main principles: eliminating waste and pollution; circulating products and materials at their highest value, and regenerating nature (EMF, n.d.).

However, as society further exceeds the planetary boundaries, more attention has been focused on regeneration or a "regenerative economy" (Sessa, 2025). In their paper *Towards Defining a Regenerative Economy*, Unter and colleagues (2024) write that a definition of RE is "notably absent" and suggest the following: "A *regenerative economy* is a holistic, dynamic system that fosters renewal, restoration, preservation, and net positive impacts across ecological, economic, and social systems, necessitating transformational change within and across individuals, organizations, and societies." (Unter et al., 2024, p. 4). However, both the term "regenerative" and "RE" are at risk of potential overuse, and the loose definitions can give rise to "greenwashing", or the rebranding of activities as "regenerative" that are not significantly different from business as usual. Some claims regarding RE are extremely ambitious and go so far as to assert complete reversal of climate change and major carbon sequestration (Rodale Institute, n.d.). It is important to understand the limits of regeneration, and the actual extent to which these claims are justified.

By using regenerative agriculture – one of the most common applications of RE – as an example, the potential and limitations of regeneration will be demonstrated. This paper further argues that perspectives transition over time, from a regenerative perspective that prioritizes transformational growth and ecosystem restoration toward a dynamic equilibrium characterized by continuous nutrient cycling. This is a shift from RE to CE perspective. This study proposes that this is both necessary and desirable, due to the limitations of regeneration and growth.

A review of academic papers that describe CE and/or RE suggest that definitions of the two essentially encompass the same concepts, even though their framing can differ. Confusion arises from the overlap and uncertainty of these definitions. Generally, meaningful practice depends on a solid understanding of robust economic frameworks, which is currently lacking with respect to RE and CE. Policy discussions are undermined because the participants do not share a common understanding of the terms. Consequently, it may be challenging to design and advance policies, laws, and publicly funded initiatives – including research, technical assistance, and incentives – that effectively promote and support these economic activities. For example, informal economic practices such as "binning", the collection of recyclable or reusable materials from waste streams, may contribute to circular or regenerative outcomes but remain unrecognized. As a result, governments are unlikely to develop policies that legitimize or support these activities. Similarly, when funders cannot clearly identify how a strategy aligns with circular or regenerative economies, they are less able to direct resources toward it, limiting support for initiatives that may otherwise provide significant societal benefits. Additionally, there is also still debate about how to meet the sustainable development goals (SDGs), what "sustainable development" looks like in practice, and whether economic growth is even possible. This paper examines how CE and RE address these questions, clarifies their relationship, and illustrates the boundaries of regeneration. Together, these analyses provide a roadmap within CE and RE frameworks for returning to a safe operating space within planetary boundaries. Although much could be written about the social aspects of RE and CE, that is beyond the scope of this discussion, which will focus on the ecological and economic significance of each.

This analysis is relevant to corporate and government policy and decision-makers, including planners, development professionals, and sustainable development practitioners, with three practical contributions. First, it clarifies the conceptual relationship between CE and RE by showing that they represent different orientations of the same economic system. Second, it demonstrates that regeneration is constrained by biophysical limits, placing bounds on the aspirations of regenerative economies. Third, it proposes a temporal framework in which regenerative processes dominate during ecological restoration, followed by a transition to circular, steady-state dynamics. In the same way *Doughnut Economics* describes the relationship between SDGs and Planetary Boundaries (Raworth, 2017), this paper provides a framework with which to view regenerative and circular economies. The purpose of this study is to make accessible economic theory that is often opaque, and to clarify how these economies interact.

2. The Limits of Regeneration and Growth

To address the exaggerated claims some have made regarding RE, and to understand the limits to growth, an examination of the biophysical mechanisms of ecological system restoration is warranted. An ecological system, or ecosystem, is a community of living organisms interacting with each other and their physical environment, including both biotic (living) and abiotic (non-living) components. These

components are linked through nutrient cycles and energy flows, functioning together as a complex unit. There are limits to regeneration, beyond restoration, in ecosystems. This might not be immediately apparent; however, it is well-known that there is a limit to non-renewable resources such as minerals and metals (the abiotic components of ecosystems) – the earth is a closed system with respect to materials, and elements cannot be practically fabricated (Freedman, 2018). Non-renewable materials cannot be "regenerated".

On the other hand, Earth is an open system with respect to energy, receiving a constant influx from the sun that drives photosynthesis, weather, and biomass production. DeLucia et al. (2014) suggest net primary productivity (NPP, biomass gain from photosynthesis less respiration) could theoretically increase by two orders of magnitude, but this theoretical upper limit does *not* take into consideration nutrient limitation and assumes only plants with low nitrogen requirements.

NPP, a measure of regeneration, is however limited by nutrient availability, such as phosphorous and nitrogen. The amount of nutrients available can be artificially increased, which is one of the ways agricultural production was expanded almost threefold in the so called "green revolution", by extracting inert nitrogen (N_2) from the air and converting it into bioreactive forms including ammonia, nitrates and nitrogen oxide, and mining phosphorous to create artificial fertilizers (Allosso, n.d.). However, it has become apparent that the application of these fertilizers is not sustainable and results in the depletion of the soil of other nutrients (exchangeable calcium (Ca), magnesium (Mg), as well as carbon) and increases soil acidification (Cade-Menun & Bainard, 2024). In addition, the excess nitrogen and phosphorous that cannot be utilized by the plant photosynthesis then enters the environment through water flows and causes eutrophication in receiving water bodies as one of the unintended consequences of this practice (Allosso, n.d.). This damage is represented by the "Biochemical Flows" overshoot and the newly breached "Ocean Acidification" boundary in the 2025 planetary boundaries graphic (see figure 1). NPP is limited by the amount of naturally available nutrients, and artificially increasing these nutrients cannot be sustained due to soil depletion and downstream eutrophication. Consequently, an increased NPP cannot be maintained above the production of a healthy ecosystem without significant environmental consequences.

Thus, ecological restoration plateaus once systems reach a healthy state: regeneration is impossible to sustain beyond ecological carrying capacity. For land used for other purposes, such as industry or human habitation, "multi-functionality" limits restoration. The land cannot be fully returned to pre-development biodiversity while still supporting production or providing shelter. It follows that there is an upper limit to ecological regeneration and to the aspirations of RE. Once this limit is reached, ecosystems and the economy approach an equilibrium where nutrients, water and materials cycle continuously. In a similar dynamic, generating toxins would eventually overburden waste sinks and disrupt cycles, so processes that produce substances that cannot be neutralized are also antithetical to circular and regenerative economies.

3. The Particular Case of Regenerative Agriculture

Regenerative agriculture (RA) is considered one of the cornerstones of RE (Filipović et al., 2024). RA, although heterogeneous and context-dependent, generally refers to specific practices and/or desired outcomes in food production. These practices include soil conservation, crop diversification, elimination of synthetic inputs, and the integration of perennials to enhance biodiversity and carbon sequestration (Newton et al., 2020). One of the principles of RA is to work with nature rather than attempting to dominate it. In this way, RA rejects the industrialized methods of the green revolution and relies on ecosystem health to increase crop production.

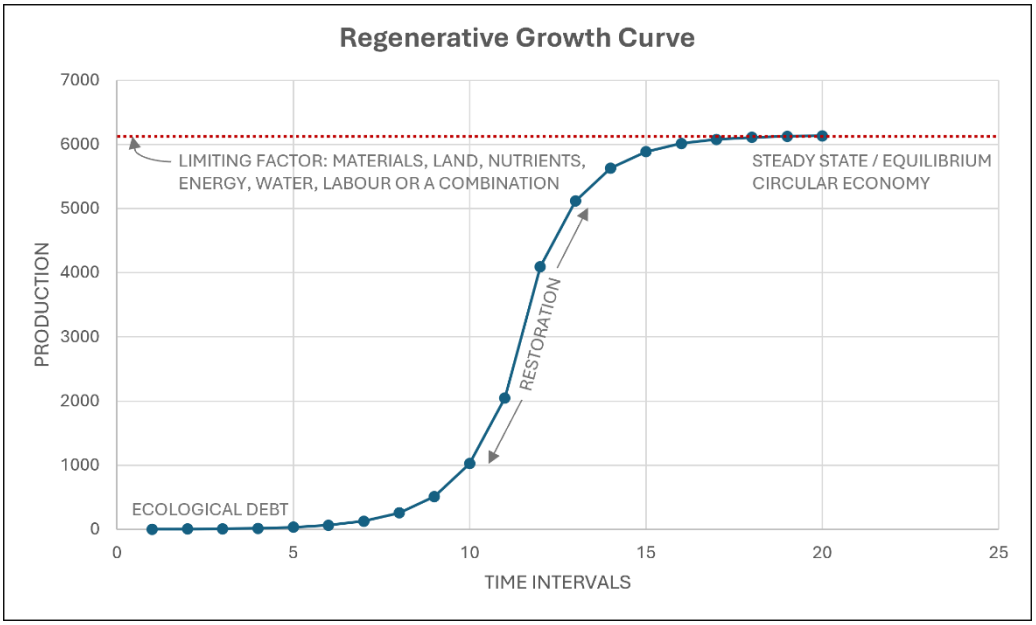
Agricultural production has been industrialized over the past century, using farming practices that are contrary to RA principles. This transformation has been labelled "the green revolution". According to Lowder and colleagues (2021), industrial farming generally refers to large-scale, confined animal systems or mechanized planting and harvesting of monocultures that rely on synthetic fertilizers, pesticides, and often incorporates genetically modified, proprietary seeds. "The largest 1% of farms in the world (those larger than 50 ha) operate more than 70% of the world's farmland" (Lowder et al., 2021, p.4). Smaller scale farms also use industrial methods, so while there is not an exact figure of how much agriculture is industrialized, it is in excess of the 70% quoted for large farms. Of the remaining non-industrialized food production, not all would qualify as RA. Organic farming, for instance, may eliminate synthetic inputs but still rely on mechanical planting which can disrupt the soil biome. Industrial agricultural practices have artificially increased food production at the expense of nature, leaving a deficit in the soil and oceans. It is an ecological debt – the depletion of natural capital and exploitation of natural sinks at the expense of the world's poorest nations for the enrichment of the world's wealthiest nations– which must be repaid to have healthy ecosystems and communities (Goeminne & Paredis, 2009).

Industrial farming is deeply embedded in our global food system. Given that these farming practices damage and deplete soil and cause eutrophication (Cade-Menun & Bainard, 2024), then *most* agricultural land would require restoration to bring it back to health. As part of a larger social and economic system, the transformational and aspirational characteristics of the regenerative economy are called for to bring about this systemic change. Due to the extensive area of agricultural land requiring restoration, regenerative practices will dominate over circular approaches for the foreseeable future. In other words, agricultural land will need active healing and rebuilding for a considerable length of time before transitioning to a primarily cyclic flow of nutrients.

This relationship between regeneration, growth, and eventual equilibrium can be made explicit through a practical example that shows how regenerative economic activity initially enables growth before transitioning toward circular operation. In a regenerative economy growth is to the benefit of the planet, rather than at its expense. Profits are directly linked to regeneration. Consider an urban farm employing permaculture principles – a self-sustaining system that mimics natural ecosystems through biodiversity, closed nutrient cycles, and minimal external inputs –

established with the support of local government on underutilized land. This venture is regenerative in multiple ways: it replaces a monoculture of grass with a variety of crop plants, thereby increasing biodiversity and benefiting pollinators; it reduces carbon emissions due to "food miles" (the distance food travels from farm to table), while building healthy soils that are better able to sequester atmospheric carbon; it mitigates urban heat island effect through shade from fruit trees, and evapotranspiration from trees, bushes and plants; and it provides affordable food to local communities. It addresses not only the overshoots of the planetary boundaries, but also the shortfalls in the social foundation (Raworth, 2017). Critically, the farm's revenue is inextricably tied to these environmental and social benefits. As the farm matures, the yield, and the regenerative benefits will increase until it reaches its full productive capacity. As operations achieve profitability, including living wages for the manager and all workers, the surplus can fund a second farm, effectively doubling the regenerative impact of the first site. After several years, the profits from *both* farms can support starting two additional sites (now four farms in total). This pattern constitutes exponential growth with regenerative impacts doubling at regular intervals until one of the limiting factors is reached (land, water, labour and nutrient availability). Like all exponential growth patterns, the initial increases appear small – doubling small numbers still yields small numbers – consequently it is important to avoid adding new ecological debt, in order to give the system time for the regenerative impacts to have meaningful effect before irreversible climate change occurs.

***Figure 2*:** *The general pattern of regenerative growth, which can increase exponentially until a limiting factor is reached. Growth occurs because of ecological debt, otherwise the economy operates in a steady state as shown in the graph's later stages.*



Source: Author

Unlike conventional growth in a linear economy, this expansion generates compounding benefits in carbon avoidance and sequestration, biodiversity enhancement, positive land use transformation, meaningful employment, local food security and, over time, could displace land currently dedicated to industrial agriculture, allowing the potential for rewilding. This example illustrates how RE contributes to multiple SDGs.

However, perpetual economic growth in production, in *material* terms, is not sustainable in *any* economy on a finite planet. The linear economy grows at the expense of the planet, borrowing against natural capital by excessive extraction and harvesting, and overburdening sinks – our oceans, atmosphere and land – with waste. A regenerative economy can grow exponentially, as per the example above, *only until our ecological debt is eliminated*, after which a "steady state" or dynamic equilibrium is reached. Growth through restoration continues only until any one of the physical limits is met. This is the limitation of RE; it cannot continue to provide growth, and increase in yield, either ecologically or economically.

Circular and regenerative economies improve efficiency and resilience but still face thermodynamic limits. In CE, labour displaces new material costs and adds value to the economy. Resale and repair add to GDP (gross domestic product) without adding virgin materials. This enables initial economic growth through value addition. However, entropy ensures all products will degrade over time and lose utility, at which point the added value diminishes to zero. All economies operate within planetary boundaries, such as resource availability and waste absorption capacity. Even optimized models can't defy physics: energy and materials can't be created from nothing, and entropy ensures some loss in every cycle.

Economic growth in RE and CE will *initially* be provided by gains in efficiency – greater production with less material inputs. This occurs as CE recaptures the value of materials multiple times with reuse and recycling. RE's initial growth is actually the "regrowth" of degraded ecosystems. This allows RE and CE to decouple growth from materials, at least until an equilibrium is reached. This initial capacity for growth is important to facilitate transitioning from a linear, growth-reliant economy to one that is not. Terms like "post-growth" and "degrowth" reference the reduction in consumption by affluent nations (Basu et al., 2024; Savini, 2023), but an abrupt cessation or deep reduction in growth risks systemic collapse of the existing economy. This includes spikes in unemployment, debt crisis, market crashes and the accompanying social and political chaos (Siderius & Zink., 2022). The gradual reduction of growth provided by RE and CE will allow time for societies and governments to adapt, provided they take advantage of it.

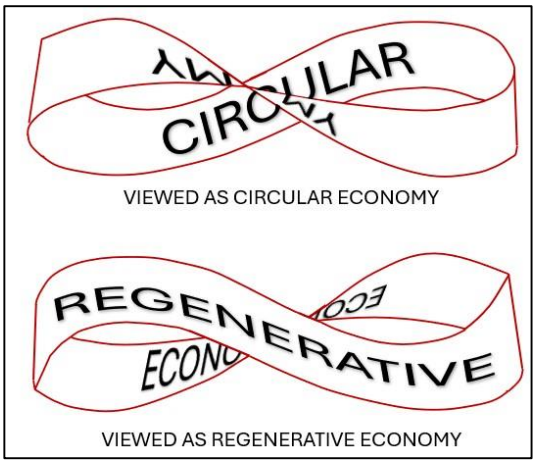
4. The Relationship between RE and CE

There are competing interpretations of the CE–RE relationship. Although there are widespread references to regeneration within the definitions of CE, there are also those who argue RE is more than this: "The concept of regenerative economy, which is broader than that of the circular economy, is far more proactive. It is based on a holistic approach, aiming not only to achieve sustainability principles but also to

promote healing, restoration of ecosystems, and the economy as a whole. Fundamentally, the term 'regeneration' refers to the process of renewal, or returning to the original state of what has been damaged or depleted." (Filipović et al., 2024, Introduction). Baues et al. (2026) agree, noting that circular economy strategies "do not automatically contribute to the restoration or regeneration of ecological systems," yet also acknowledging they are "indispensable tools for implementing a regenerative economy" (p. 5). They further observe that the European Commission describes CE as a regenerative growth model, but without a clear definition (Baues et al., 2026). Clearly, there is a substantial conceptual overlap between CE and RE. This lack of differentiation has been a cause of confusion for individuals and organizations who work in these economies, and for governments who regulate and incentivize activities that contribute to these economies.

Further to the descriptions above, academics and economists have used the following terms to describe regeneration, regardless of whether referring to CE or RE: Filipović and colleagues (2024) highlight healing, restoration of ecosystems, and renewal, while Unter and coauthors (2024) emphasize renewal, restoration, net positive impacts, transformational change, and preservation. EMF (2013; 2022) includes preservation and enhancement of nature (2013), rebuilding natural capital, rewilding, and returning biological materials to the earth (2022). Across these overlapping definitions and descriptions, there are three common concepts in both CE and RE; preservation, renewal and restoration. These concepts are reflected in the broader body of literature discussing CE and RE, where preservation is the conservation of existing natural spaces and "wilderness"; renewal is the recurrent generation of new biological growth based on cycling nutrients from decomposition and decay; and restoration is "returning to original state of what has been damaged or depleted" (Filipović et al, 2024, p.98). What makes RE *appear* unique is the idea, which Unter and colleagues (2024) allude to, that it is "transformational" and "net positive". In other words, while restoration implies returning a system to health, regeneration, for some scholars, implies moving beyond that baseline toward an improved state (Morseletto, 2020). Accordingly, the literature frequently characterizes regenerative economies as "broader," "better," or "transformational," and therefore more aspirational than circular economies. However, similar language is also applied to circular economy frameworks, which include objectives to not only restore, but to *enhance* natural capital (EMF, 2015).

***Figure 3*:** *When viewed from different perspectives, a Möbius strip can be interpreted in varying ways.*



Source: Author

But the emphasis for CE is on the cyclical flow of materials with terms like "closed loops", "cradle to cradle" and "zero waste" often being used synonymously. Consequently, CE is viewed primarily as a continuous and enduring economy. When looked at from the limited perspective of non-renewable resources, which it often is, circular economy "doesn't go far enough" (Baues et al., 2026).

Conceptually, regenerative and circular economies can be understood as describing the same underlying system. Looking at the urban farm example, the exact same activities (crop cover, rotation and diversification; elimination of synthetic fertilizers, pesticides and herbicides; and the integration of perennials) lead to either a "regenerative outcome" during restoration of the ecosystem, or "cyclical renewal" when a steady-state is reached. In other words, it falls under either RE or CE depending on when the system is under observation. The distinction lies not in the system itself, but the perspective from which it is viewed. This relationship can be visualized as a Möbius strip – a single unified structure with one continuous surface, which *appears* to have two sides – with RE on one side and CE on the other. Regenerative discourse emphasizes transformation and ecological repair, while circular discourse emphasizes continuity and the cyclical flow of materials. The distinction, therefore, is one of orientation rather than substance.

As unsatisfactory as this explanation of the relationship might be, it accurately describes the literature and popular perception that currently exists, and accounts for much of the confusion on these topics. Conventionally, RE and CE are distinguished based on these differences of emphasis: the former as aspirational and transformative with a focus on the regeneration of nature and the latter as continuous and enduring with a focus on the cyclical flow of materials and nutrients. Recognizing regeneration as a transitional phase and circularity as a steady-state condition *of the same system* provides clearer guidance for sequencing economic strategies over time. It allows policymakers and practitioners to prioritize restoration where ecological debt is high, while planning for a transition to circular systems as ecological capacity is restored.

5. Implications for Policy and Practice

Corporations and governments that wish to utilize CE and RE to bring society back to a safe operating space would support projects and policies that align with the following principles.

The first is paying down ecological debt, by prioritizing regeneration and restoration in damaged and degraded ecosystems, especially those that provide services such as flood protection, stormwater management, heat management, food and other ecoservices. Green infrastructure appreciates in value and improves in performance as it matures, whereas "grey infrastructure", such as chemical water treatment facilities, structural flood protection (like sea walls), and concrete slope stabilization, starts to depreciate and degrade the moment it becomes operational.

The second principle is to avoid creating new debt. A linear economy increases ecological debt. Eliminate or greatly reduce virgin material consumption, while delivering equivalent or better services. An example of this is car cooperatives and lending libraries (not just books but tools, clothing, sporting equipment, etc.). The ratio of users to goods is significantly increased with, for instance, one vehicle for 20 households (U.S. carshare member ratios average 40:1 (Shaheen & Cohen, 2006)) rather than two vehicles for one household, thereby expanding access to services, like transportation, that may otherwise be unaffordable. Another example is dematerialization by providing a service without the physical assets. Video conferencing and working remotely provide the function of meeting and work environment without the dedicated buildings, offices, meeting rooms and furnishings. Additionally, reuse, refurbishment, remanufacturing and recycling add value to existing resources through labour rather than material extraction, creating employment and entrepreneurial opportunities. Transition non-renewable consumption of both energy and materials to renewable, provided that usage is within the rate of renewal and does not deplete our natural capital.

Finally, social and environmental returns need to be maximized. Target those initiatives that add value both inside and outside the economic system. A destination park, for example, can increase tourism revenue while managing stormwater, sequestering carbon, reducing urban heat island effect and providing a free community amenity. These types of projects will reverse the historic trend of externalizing social and environmental costs.

Support for these may include economic and regulatory mechanisms such as incentives, CE/RE-aligned procurement policies, codes and standards, pilot projects, and disincentives such as taxes, alongside the broader range of financial and policy tools available to public and private entities to influence economic activity.

Aspirations don't override physics, so ultimately, there cannot be zero resource extraction – unavoidable losses in the system will result in needing virgin resources to replace those losses. But, the rate of extraction should be measured in millennia, not decades, and fully functioning ecosystems will go a long way to providing renewable replacements for non-renewable resources. An economy that internalizes social and environmental costs turns ecological debt into economic value. In this way, the question of what sustainable development looks like is resolved: it is the

transition from regeneration to circularity, where growth gives way to equilibrium within Earth's biophysical limits.

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PREISPITIVANJE KONCEPATA CIRKULARNE I REGENERATIVNE EKONOMIJE

Apstrakt: *Odnos između cirkularne ekonomije (CE) i regenerativne ekonomije (RE) i dalje je konceptualno nedovoljno razjašnjen, što otežava razumevanje ovih koncepata i njihovu praktičnu primenu u okviru javnih politika i ekonomskih sistema. Cilj rada je da se razjasni njihov međusobni odnos sagledavanjem oba koncepta u kontekstu regenerativne poljoprivrede (RA) i analizom biofizičkih ograničenja regeneracije. Polazeći od relevantne literature iz oblasti industrijske ekologije, ekološke ekonomije i održive poljoprivrede, u radu se zastupa stav da cirkularna i regenerativna ekonomija ne predstavljaju međusobno odvojene niti hijerarhijski uređene koncepte, već različite vremenske i konceptualne perspektive istog osnovnog sistema. Regenerativni procesi imaju dominantnu ulogu u uslovima ekološke degradacije, omogućavajući obnovu i rast kroz smanjenje ekološkog duga i obnavljanje prirodnog kapitala. Međutim, biofizička ograničenja, uključujući termodinamičke granice i raspoloživost hranljivih materija, ograničavaju mogućnosti regeneracije. Kako se ekosistemi oporavljaju i približavaju svom nosivom kapacitetu, regenerativni rast postepeno slabi, ustupajući mesto cirkularnom stacionarnom stanju koje karakterišu kontinuirano obnavljanje, kruženje materijala i dinamička ravnoteža. Ovaj prelaz od regeneracije ka cirkularnosti pruža koherentan okvir za razumevanje održivog razvoja na planeti sa ograničenim resursima i doprinosi jasnijem sagledavanju redosleda primene ekonomskih strategija tokom vremena, praktično predstavljajući svojevrsnu „mapu puta" ka održivom razvoju. Naučni doprinos rada ogleda se u razvoju jedinstvenog konceptualnog modela, ilustrovanog primerima iz regenerativne poljoprivrede i primene javnih politika. U radu se zaključuje da održive ekonomije moraju dati prioritet ekološkoj obnovi, uz dugoročnu težnju ka uspostavljanju cirkularnih sistema.*

Ključne reči: *cirkularna ekonomija, regenerativna ekonomija, planetarne granice, ekološka ograničenja, ekonomija stacionarnog stanja, regenerativna poljoprivreda.*