

# Proposal For Degrowth and Productive Restructuring for the Colombian Economy

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## ABSTRACT

This document proposes an economic degrowth model and productive restructuring for the Colombian economy, based on the principles of degrowth theory, supported by the tenets of ecological economics and the theory of human-scale development. It focuses on reducing natural resource consumption and minimizing environmental impact. The current economic model, which prioritizes growth and wealth accumulation without considering ecological limits, is critiqued, and alternatives focused on sustainability and social justice are proposed. Key proposals include reducing hydrocarbon production, military spending, and reliance on petroleum-derived agricultural products. Additionally, it promotes the development of a circular economy, the fostering of bio-industries, and the encouragement of organic agriculture. The text also highlights the need to protect water resources, limit monocultures, and promote durable and repairable goods. The proposal is grounded in the theories of degrowth, “good living”, and human-scale development, aimed at meeting basic needs and improving quality of life without compromising the environment. Finally, a change in the governance model is proposed, strengthening local participation and promoting environmental and social justice, especially to reduce inequalities and ensure the well-being of future generations.

**KEYWORDS:** Economic degrowth, circular economy, good living theory, sustainability, ecological limits.

## 1. Introduction

We live in a chaotic reality, where the only thing that matters is the rampant consumerism of goods and individualism that has left behind the common good, the care and preservation of our nature. We see a society that has inflicted pain on itself, breaking its own social logic, with governments that portray a disassociated reality. These governments replace the true picture of poor economic and political models, and a constantly destroyed nature, with an idyllic one where everything seems fine. They paint a perfect landscape without destruction, thus fostering a mindset of submission in humanity—resulting in a blind, passive human being who accepts any form of destruction.

The ecological footprint indicator for 2022 reveals that humanity's environmental footprint has tripled compared to 1961, while the planet's biocapacity has halved. In 2022, Earth reached an overshoot on July 28 (World Wildlife Fund – WWF, 2023).

What is seen today is a range of political and economic systems adapted to benefit only a few, without considering the damage caused to our natural environment. A clear example of this situation is the unacceptable idea of approving fracking in Colombia and reducing the budget for environmental preservation. This explains the reality of our entire economic, environmental, and social context, marked by an increased concentration of power in the hands of a few who prefer to apply production methods that are not environmentally friendly, prioritizing personal profit over the care and preservation of nature.

One evident inequality can be seen in the per capita income for 2021 (in PPP, in 2017 US dollars), where the most developed country in the Human Development Index is Switzerland, with a gross national income per capita of \$66,933.

### Problem Statement

The current dominant economic system is leading the world to collapse, placing it under extreme stress regarding its resilience capacity. Latouche (2009) highlights the growth rate of emerging economies, such as China, which for many years has had growth rates close to 10%, thereby increasing the world's gross domestic product sevenfold. Another problem is the chaotic concentration of the global population in large cities, which presents challenges in meeting population demands, leading to greater externalities.

Neira (2013) contributes to the discussion on the foundations of degrowth, considering it a viable alternative to ensure present and future security for humans and many other living beings that share the Earth. He proposes abandoning the old paradigms of orthodox economics, which promote egocentric and anthropocentric behavior aimed at dominating the world. Soro (2002) argues that "globalization has generated a more inequitable distribution of resources between public and private goods."

The research problem is: given the issues of environmental pollution, climate change, and generated externalities, is degrowth theory a feasible solution?

## 2. Theoretical Framework and Background

Below are the main exponents of environmental economics. Kneese and Russel (1987) argue that environmental economics has its roots in classical economists, later contributed to by neoclassical economists, such as the theory of externalities by Marshall and Pigou, Wicksell and Bowen's theory of public goods, Walras's theory of equilibrium, and the application of cost-benefit analysis (Kneese and Russel, 1987).

From classical economics, Mill (1848) argued that there is no point in cultivating every piece of land, uprooting every tree, and driving every species to extinction, recognizing that natural resources and the services provided by nature are limited.

Accelerated growth is feasible only in the initial stages, and as resources deplete, the cost of exploitation rises. Growth can be moderated by technical improvements, and natural resources also hold value for their beauty and the natural landscape.

Marx's contributions in 1867, as interpreted by Perelman (1974), relate to the discovery of labor's binary nature, with the value of use (the ability to produce) and the value of exchange (wage). Capital owners extract profit from the difference between these two values. Applied to natural resources, the cost of recovery exceeds the cost of exploitation, even when accounting for rents or income, leading to fictitious surpluses from resource exploitation (Perelman, 1974).

According to Labandeira et al. (2007), neoclassical economists oppose Marx's contributions to environmental issues, valuing demand factors in determining the value of goods. Jevons and Stanley (1871) are notable for their theory of diminishing marginal utility as a key factor in price determination. Marshall (1890) reintegrates Marxist value theory in price determination, alongside demand factors, which, when applied to natural resources, shows that the interaction between supply and demand factors determines the amount of natural resources used in the production process.

Pigou and Coase (1962, 1960) laid the modern foundations for environmental economics. Pigou focused on the negative nature of externalities and possible solutions from orthodox economics, while Coase discussed social costs and how market negotiations between agents could solve environmental problems, highlighting the lack of clear property rights as a root cause.

Hotelling (1931) contributed to the theory of resource depletion, stating that the price of non-renewable resources should increase over time until it matches production costs plus the interest rate. Pereira and Flores (2007), citing Bradley (1985), showed that Hotelling's theory applied individually to firms but could not be generalized to the entire industry.

Solow (1974) made important contributions to analyzing the relationship between economic growth and the environment. He argued that economic growth can be compatible with environmental protection if adequate measures are taken to internalize environmental costs in investment and production decisions. He also suggested that reinvesting profits from non-renewable natural resources could lead to sustainable development patterns and, therefore, economic growth.

The premises of environmental economics are insufficient to correct negative externalities, ensure the provision of public goods, and address general environmental issues. However, there are important contributions, such as carrying capacity, ecological footprint, and resilience applied to human activity. I consider that the appropriate theoretical framework for understanding the research problem and the proposed degrowth for the Colombian economy should mainly rely on the contributions of degrowth theory and Human-Scale Development. Below is an explanation of these theories.

### Degrowth Theory

Latouche (2006) argues that the main problem with orthodox or neoclassical economics is its failure to consider natural laws, especially thermodynamics and

entropy. Unlimited growth is incompatible with a world of finite resources, as growth implies increased consumption, which means not all energy invested in production, distribution, and consumption can be fully recovered. Due to the law of entropy, some energy is lost, leading to the depletion of ecosystem services and natural resources. Efforts by companies to self-regulate fall short, even when incentives, fees, and fines are used, as these measures do not adequately prevent and address corporate externalities and excessive consumption.

Latouche (2006) bases degrowth theory on reducing the impact of economic activity, known as externalities, to achieve balance with the planet's ecological limits and improve quality of life. He develops his postulates around eight principles ("8 Rs"): revalue, reconceptualize, restructure, redistribute, relocalize, reduce, reuse, and recycle. Revalue and reconceptualize involve unlearning classical economic concepts and teaching new principles that emphasize a holistic understanding and foster harmonious and cooperative human relationships.

Georgescu-Roegen (1975) criticized the neoclassical approach for assuming resources are infinite and that technology and efficiency can resolve environmental issues. He argued that neoclassical economics ignores entropy and ecological limits and proposed economic degrowth as a more sustainable alternative. He advocated reducing resource consumption and waste production to preserve the biosphere and maintain long-term economic viability. Georgescu-Roegen argued that degrowth should be a planned strategy, not merely a result of unwanted economic crises. He presented a minimal bioeconomic program consisting of eight actions: stopping war and weapons production, gradually reducing the world population to be sustainably fed by organic agriculture, using solar energy, controlling excessive energy consumption, avoiding extravagant goods, producing durable and repairable goods, and encouraging leisure time used intelligently.

Hickel (2020) argued that economic growth always involves resource use and waste generation, and technological improvements are insufficient to reverse environmental damage. Therefore, the only way to reduce ecological impact to sustainable levels is through degrowth, without harming human well-being, which should be achieved with minimal ecological impact.

Hickel (2020) also suggested that rich nations should drastically reduce resource consumption to allow developing countries to improve their living conditions without increasing environmental pressure. This approach links degrowth with global justice, emphasizing that degrowth is an ethical issue concerning equity and sustainability. Hickel also proposed several policies, such as reducing working hours, implementing a universal basic income, progressive wealth taxes, and providing free public services (water, health, education), thus decoupling workers' well-being from economic growth.

Jackson (2017) criticized the neoclassical paradigm, which ties well-being to increased consumption and perpetual production growth, advocating for redefining well-being in terms of prosperity rather than consumption. Prosperity should be based on quality of life, social justice, and environmental health, with social justice focusing on both individual and collective well-being. Given our finite resource world, perpetual growth is unsustainable and does not foster resilience. Jackson also

argued that growth has contributed to greater injustice and economic and social inequalities. He proposed creating policies to promote sustainable employment, reduce working hours, and boost local economies.

Demaria et al. (2013) presented degrowth as a multidimensional theory that facilitates dialogue among economics, ecology, and social movements. They argued that degrowth is a necessary response to unsustainable growth and a means of resisting consumerism and policies that prioritize economic growth over well-being. Degrowth promotes a more equitable society focused on human well-being and sustainability.

Demaria's degrowth proposal advocates for an economic model based on sufficiency and reduced production and consumption to achieve a sustainable economy. This ethical premise draws on the Andean concept of "good living", which involves the voluntary reduction of consumption in developed economies and global resource redistribution so that everyone can access the resources necessary for a dignified life without exceeding the planet's ecological limits.

Kallis (2011) explored the limits of economic growth and examined how societies can live within ecological boundaries without sacrificing well-being. He argued for redefining social welfare, emphasizing solidarity, justice, and sustainability, with a more localized economy based on cooperative and less consumerist values, challenging the ideas of green or environmental economics. From an environmental justice perspective, Kallis argued that degrowth is necessary to redistribute resources equitably, ensuring that everyone has access to basic needs, particularly in the context of climate change and resource depletion.

Kallis (2018) proposed a series of policies to achieve greater ecological and social balance, including reducing working hours, wealth redistribution, and implementing universal welfare policies. He also suggested a more decentralized economy, with increased local production and self-sufficiency, and emphasized ensuring that developing countries are not adversely affected by degrowth in advanced economies.

Alier (2002) contributed to degrowth theory by promoting an ecological economy based on reducing natural resource extraction. He also advocated for transitioning to moderate consumption and sustainable production, with policies that limit energy and material use. Alier argued that a country's economic growth often has an "ecological cost" that falls on less powerful regions or groups. Alier et al. (2010) suggested that degrowth should include policies that repair ecological damage and promote justice between countries and social classes. Therefore, degrowth must be, above all, a means of reducing inequalities and protecting marginalized populations.

Gudynas (2011, 2012) is one of the main critics of the extractivist model, which has caused significant environmental damage and deepened inequalities. He argued that a development model should recognize and respect ecosystems' regenerative capacity, proposing policies and practices that reduce resource consumption, control pollution, and preserve ecosystems. Gudynas advocated for the "good living" model, in collaboration with Acosta (2013), which should be adapted to cultural diversity and local contexts in Latin America. He promoted environmental justice to protect marginalized communities, adding that one purpose of "good living" is food

sovereignty and territorial autonomy, with active civil society participation.

Acosta (2010, 2013) contributed to degrowth theory and other movements seeking a fairer, more sustainable economy in harmony with nature. He defined "good living" as an approach to life that prioritizes harmony between humans and nature, emphasizing collective well-being over individual profit. Acosta's ideology of "good living" was incorporated into Ecuador's Constitution, guaranteeing basic rights such as access to water, food, health, education, and a healthy environment while promoting a sustainable and equitable economy that respects ecological limits, including recognizing the rights of nature (Acosta, 2009).

### Human-Scale Development Theory

Manfred Max-Neef's (1994) Human-Scale Development theory is a development proposal focused on human needs and quality of life. This theory asserts that development should not only be measured by economic growth but also by meeting basic human needs. Max-Neef identified nine fundamental human needs: subsistence, protection, affection, understanding, participation, leisure, creation, identity, and freedom. Human-scale development theory proposes that development should be sustainable and people-centered, focusing on quality of life and the fulfillment of basic human needs instead of economic growth.

## 3. Methodology

This research proposal is qualitative, focusing on action research to explore the understanding of social phenomena and combine observations and the research of authors on the topic with practical action to transform and improve reality (Ballestín et al., 2019). It involves an exhaustive review of secondary sources concerning alternative theories to economic growth, aiming to avoid the economic, social, and environmental externalities generated by the current development model.

The categories of analysis and variables identified as relevant include carrying capacity, ecological footprint or biocapacity, resilience, bio-industries, economic sectors, pollution, negative externalities, environmental change, population growth control, and biodiversity conservation. These variables are considered in the elaboration of the minimum points that should form the degrowth policy for Colombia, as well as in adopting biotechnology and creating new companies based on such technology.

The ecological footprint (WWF 2022) is defined as the measure of the impact of human activities on nature, represented by the surface area required to produce the resources and absorb the impacts of human activity. This includes measurements of the forest footprint, grazing lands, fishing zones, cropland, urbanized soil, and carbon footprint.

Resilience is defined as the capacity of an ecosystem to resist or recover. According to Common and Perrings (1992), recovery capacity depends on the biological diversity of the system.

Based on the review of information and analysis of alternative theories to the

dominant economic growth paradigm, a minimum restructuring plan for the Colombian economy is presented below to achieve environmental and socio-economic balance.

### Proposal for the Productive Restructuring of the Colombian Economy, Based on Degrowth, Good Living, and Human-Scale Development Theories

1. **Reduction of Hydrocarbon Production:** Reduce hydrocarbon production by 30% within the first five years after the policy's approval, followed by a 5% annual reduction (approximately an additional 18 years to reach zero production). This should contribute to improving the environment and achieving greenhouse gas reduction targets.

2. **Reduction of Military Spending:** Cut military spending by 50%, especially on arms purchases, and assign soldiers to border protection activities. The fiscal resources thus freed should be invested in other public goods, social programs, and the development of human capital and infrastructure needed for the Colombian economy to transition towards a decarbonized economy focused on citizens' welfare and environmental sustainability.

3. **Reduction of Private Vehicles:** Decrease the number of private cars in circulation in all cities by 50% over 25 years, implying a 2.5% annual reduction in the vehicle fleet. At the same time, incentivize the purchase of non-polluting vehicles, fostering the production and commercialization of such vehicles. This would be conditioned on the creation of mass transit systems in cities and a system of fast interregional trains for both goods and people, according to travel flows, using renewable fuels like hydrogen or electricity from renewable sources, replicating the successful experience of Nordic countries.

4. **Reduction of Agricultural Inputs Derived from Petroleum:** Promote the large-scale production of organic fertilizers for small productive units, initiating a revolution in organic agriculture, accompanied by technological developments in water use and seed improvement to adapt to changing environments.

5. **Reduction of Monocultures:** Limit the production of highly impactful monocultures that create goods not associated with well-being, such as African palm, unless used as biodiesel for transportation or electricity production. This should enable better utilization of natural resources.

6. **Protection of Water Sources and Strategic Ecosystems:** Protect all of the country's water sources and strategic ecosystems, restoring them to appropriate functioning levels that ensure ecological viability and essential environmental services for sustaining the population, production, and environmental balance.

7. **Suspension of Large-Scale Mining Projects:** Suspend all large-scale mining projects that do not comply with Marx's evaluation premise: a project should not be granted a license unless it is economically and socially profitable, where:

Positive Economic-Social Profitability = Exploration Revenue > (Exploitation Cost + Ecosystem Recovery Cost).

Any project that does not yield positive economic and social profitability should not

be allowed, and the State should regulate artisanal mining, especially to promote good practices.

8. **Increase Renewable Energy Production:** Increase the production of electricity from renewable resources, requiring substantial investment in project co-financing, as well as subsidized or low-interest loans for investors and families who wish to generate their own electricity through solar panels, wind turbines, and other viable technologies.

9. **Reduction of Manufacturing Industries Not Integrated into Circular Economy Networks:** Reduce all manufacturing industries that do not integrate into circular economy networks, which should rely primarily on local supplies of factors, particularly raw materials, and human resources. This should be accompanied by institutions that promote the creation of biotechnological companies based on ecological and circular economy principles, aiming to produce for the local and national markets and generate productive surpluses for the global market.

10. **Reduction of Production of Petroleum-Based Plastics:** Move towards eliminating petroleum-based plastics and fostering the bioindustry of biodegradable bags, packaging, and components.

11. **Reduction of Luxurious Imports and Promotion of Anti-Obsolescence Production:** Reduce the import and consumption of luxury goods, and promote a principle of production that opposes planned obsolescence, whereby all appliances and furniture must be made to last and constructed modularly for easy repair.

12. **Agrarian Reform:** Implement agrarian reform with land titles or state exploitation contracts, effective land restitution, and land distribution according to the Family Agricultural Unit (UAF) in each region, along with use according to land vocation. Promote biotechnological production, and comprehensive rural investment, especially in peasant economies.

13. **Territorial Reorganization:** Increase density in urban centers, expand green areas and prioritize the provision of services and public goods to improve the quality of life of economically disadvantaged families.

14. **Generalize Ecological Economics Principles in Education:** Incorporate the principles of ecological economics across all levels of education in the country, either transversally or specifically, and bring universities to rural areas. Also, improve sexual education and eliminate policies and social programs that incentivize higher birth rates, aiming for a reduction in the total population within a generation or quarter-century, proposing a very gradual population reduction rather than the drastic measures suggested by Georgescu.

15. **Change in Political Decision-Making Model:** Shift from a centralized decision-making model to one based on local governance, where communities and non-governmental organizations have real influence over the organization and policymaking processes that affect individual and collective well-being. This change aims to improve prosperity indicators broadly, incorporating Jackson's (2017) propositions.

### 3. Conclusions

It is feasible and necessary to promote a productive restructuring proposal for the Colombian economy based on degrowth theory, aimed at reducing natural resource consumption and minimizing activities that negatively impact the environment. This includes reducing hydrocarbon production, promoting clean energy generation, decreasing military spending, and transitioning to sustainable organic agriculture, among other actions.

The current growth model is argued to be unsustainable due to the excessive use of finite resources and increased social and environmental inequalities. Degrowth is presented as an alternative that prioritizes sustainability and ecosystem preservation, promoting policies to reduce non-recyclable goods production, foster the circular economy, and diminish economic sectors that generate negative externalities for society and the environment, thereby safeguarding future generations.

The proposal includes transforming productive sectors to integrate sustainable practices. This encompasses promoting bio-industries and reducing polluting industries, focusing on local production with minimal environmental impact, and encouraging the production of durable, repairable goods. It also focuses on the well-being of people, particularly collective well-being and community autonomy, local employment, resource reuse, a new form of political organization based on local governance, and effective guarantees of the rights of communities and ecosystems.

Degrowth theory is linked to human-scale development, which prioritizes the fulfillment of basic needs and social well-being over economic growth. The proposal also embraces "good living" as a model that promotes equity, fair access to resources, and improved quality of life without compromising the environment.

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