Research Paper

Pursuit of hope in the ecological crisis of the Anthropocene era: The promise of degrowth and agroecology approaches to ecological sustainability and some implications for Turkey

Çare Olgun ÇALIŞKAN, Technical University of Berlin, Germany

Abstract

During the Anthropocene era, a consumption economy model predicated on economic growth and human welfare has continuously deepened its roots and rapidly depleted natural resources as if they are infinite. The effects of this course have paved the way for many crises we are currently facing today in rural and urban areas, especially the climate crisis, and that has gradually increased in developing countries such as Turkey. The recent COVID-19 pandemic has called for a deep rethinking of the pro-growth economic system and the relationships between humans and the environment. While overcoming the crisis we face today our main goal should be inevitably ecological sustainability, not economic, which requires new non-growth-oriented economic models and nature-positive agri-food systems. In this regard, this theoretical research focuses on two main axes in search of an alternative way: the transformation of the pro-growth economic model and the agri-food systems shaped by this model based on 'degrowth' and 'agroecology'. The research explores the 'degrowth approach by focusing on the new economic roadmap it involves and the 'agroecology approach by focusing on its sustainable agriculture conception that prioritizes nature and is locally oriented. Due to its limited scope, the research addresses the subject in general lines by utilizing a literature review and specific case studies and draws general inferences that need to be deeply explored for Turkey.

Keywords

Anthropocene era, ecological sustainability, Covid-19, Degrowth, Agroecology, Turkey

1. The unsustainable course of the Anthropocene era and the urgent need to build an ecologically sustainable future on a finite planet

The process of urbanization, population, and economic growth that began with the industrial revolution evolved into a period shaped by the exponential growth of global consumption called the 'great acceleration', especially after the 1950s. With this period so-called Anthropocene (human-dominated) era, a consumption economy model predicated on economic growth and human welfare, which is not sufficiently questioned, has continuously deepened its roots over time and rapidly depleted natural resources (Büscher and Fletcher, 2020). This era, which many refer to as the "capitalocene" or "ecocene", referring to capitalism or the global economic system (Chakrabarty, 2021), has shaped our way of life, which views nature as an unlimited resource, based on an ever-growing economy through cities. Providing water, energy, and food for the urban population results in significant environmental pressure

beyond city boundaries. With urban population growth continuing apace, our need for agri-food despite the decline of the rural labor force, and especially the growing climate-food crisis around the world is imperative at this moment in our history.

Today, agriculture and food supply are major forces driving the environment beyond planetary boundaries (Smaje, 2020). Despite the fact that there is enough food produced worldwide on half of the world's habitable land to feed everyone, 746 million people -%9.3 of the world's population- are still food-insecure, and this number is expected to rise after the COVID-19 pandemic (Reynolds 2021). In addition, more than 3 billion people worldwide still cannot afford a healthy diet while globally agri-food systems consume more than %30 of energy and produce more than %20 of greenhouse gases (IFPRI, 2021). Moreover, %70 of freshwater is used for -mostly industrial- agriculture and released back to nature as largely polluted by agricultural chemicals such as fertilizer and pesticides (Reynolds, 2021). Aside from the devastating effects of surplus production, 6% of global greenhouse gas emissions come from food losses and waste (Ritchie, Roser and Rosado, 2020).

Especially by not mitigating global warming for years, we are heading towards the extinction of our habitat. Have been experiencing recent years, climate extremes, droughts, deforestation, floods, food and water shortages, ecosystem destruction, biodiversity loss, etc. are to many researchers' a pre-stage for the claims that we will soon have to face an apocalyptic future. Notwithstanding, at the beginning of the pandemic, our ecological worldwide footprint decreased by approximately %10 compared to the previous year (WWF, 2020) while the water consumption of the industrial sector decreased by %20 to %30 (Reported by Radhika Mehta, 2020). Additionally, issues such as local production and markets, community-based sharing networks, low carbon, and sustainable commodity supply, which were not given enough importance in the past, started to come to the forefront in the field of the economy (Leach, MacGregor, Scoones and Wilkinson, 2021). The pandemic has also shown how vital the interrelation between urban and rural life, urbanization and agri-food habitats in terms of ecological sustainability is. The inevitable path for our future seems to overcome the crises we are facing today by not the persistence of pro-growth global economies through riveting 'green' concepts, but by trying to ensure 'ecologic sustainability' as much as possible. On that note, the resulting COVID-19 pandemic, caused by human-made habitat destruction and biodiversity loss and intensified human-wildlife interactions, calls for a deep rethinking of the pro-growth economic system and the relationship between humans and the environment (IFPRI, 2021; Prep, 2021). This point we have reached in terms of the agri-food system shows that the way we feed ourselves is neither ecologically nor economically sustainable. Therefore, the fossil fuel-based growth economy requires also the transformation of the agri-food system that is shaped by that system.

The transformation of today's pro-growth/fossil-fuel economic model and the resource-intensive agri-food systems can increase our hope for a healthier planet. However, for this change, we must first strongly integrate different economic approaches that do not see nature as an infinite resource. From this point of view, degrowth-based approaches propose an economy and a society that sustains the natural basis of life, prioritizes ecological limits, reduces unnecessary production and consumption, and improves social life revealing the need for fundamental economic change. In a way that supports this paradigm shift, the transformation of today's resource-intensive and industrial food systems is the core objective of future-proof agri-food systems. This transformation includes key actions such as ensuring food security for a growing world population, maintaining healthy ecosystems to support livelihoods, mitigating climate risks, and reducing greenhouse gas emissions. Agroecology, which advocates small-scale agricultural production that respects ecological limits, agricultural production free from chemical inputs, peasant wisdom, and crop diversity based on seasonal cycles, is a very important guide for the

mobilization of potentials related to rurality and local food systems (Shiva, 2016; Altieri and Rosset 2017). At that rate, can a new approach based on these two axes, complementing each other with promises to restore ecosystem services and reduce the damage caused by the current pro-growth economic models and the industrial agri-food systems, increase our chances of achieving a healthier planet worldwide? The following sections of the research will elaborate on this chief question of the research by focusing on these two axes that can reinforce each other in terms of ecological sustainability.

2. Degrowth-based approach and relevance to ecological sustainability

Georgescu-Rogen, who drew attention to the impossibility of infinite growth in a finite world, even in the case of zero growth, triggered the degrowth movement that started in the 1970s and began to grow in the 2000s (D'Alisa, Demaria and Kallis, 2014; Martínez-Alier, Juan; et al. 2010; Latouche, 2009; 2018). Gorz, the first author to adopt the idea of degrowth in literature and a precursor of political ecology, argued that the advocacy of achieving prosperity through degrowth is now reality itself, while the physical survival of economic growth by increasing human welfare is a fantasy (Gorz 1980; cited in D'Alisa, Demaria and Kallis, 2014). In the 1970s, degrowth debates focused on the limits of resources; in the 2000s, when neo-liberalization became more rampant, the driving force was the criticism of the hegemonic idea of 'sustainable development, and the goal of 'sustainable degrowth' was brought to the fore under the leadership of Latouche, who emphasized the oxymoron structure of 'sustainable development' (ibid). In this period, the ability of the degrowth movement to provide economic stability and prosperity for the long run against ecologically unsustainable growth economies has been widely discussed and Herrman Daly's views on the steady-state economy since the early 1970s strengthened the economic basis of the degrowth idea (Farley and Malghan, 2016). In this context, degrowth, which is advocated as a solution, is regarded as a transition process, and the ultimate goal of this process is a steady-state economy (Dietz and O'Neill, 2013; Farley and Malghan, 2016). In a planned degrowth-based steady state economy, the process works toward 4 main principles to ensure ecological sustainability: (1)to use resources at a rate that does not exceed their rate of renewal; (2)to emit waste at a rate that does not exceed the rate of absorption of waste; (3)to use non-renewable energy resources at a rate that does not exceed the rate of development of renewable energy resources to replace them; (4)to relatively curb population growth (Farley and Malghan, 2016; Dietz and O'Neill, 2013). At this point, the goal of achieving economic stability while remaining within ecological limits begins to look more achievable after Victor's (2011) promising modeling-based work. In his pioneering case, from 2005 to 2035 in Canada based on different scenarios, Victor was able to reach the following results with a projection of a degrowth-based economy plan without compromising economic and social stability (ibid):

- unemployment and poverty are both halved in this scenario as a result of active social and working time policies (by a reduction in working hours).

- the debt to GDP ratio has been slashed by 75 percent.

- it falls some way short of achieving a 450 ppm stabilization target, Canada has achieved its 'Toronto target' of a 20 percent cut in greenhouse gas emissions.

Wherever we live, sustaining economic growth is no longer economically sound, as its costs now exceed its benefits in every respect (Kallis, Paulson, D'Alisa and Demaria, 2021). Although one of The Club of Rome's most influential books "The Limits to Growth" was published in 1972, the final message of it still holds today: The Earth, given population growth, food production, industrialization, and environmental pollution, is bound to collapse despite advanced technology unless behaviors/tendencies change (Meadows et al., 1972). On the one hand, the book emphasized the unsustainability of the consumption

of the planet's resources at an irrational speed and will and the need for a complete overhaul, and on the other hand, it partly anticipated the predictions of the degrowth movement (Latouche, 2018). Victor's modelling work is an important response to the pro-growth lobbies that have dominated for half a century and those prejudiced against degrowth-based economic transformation in terms of ecologic sustainability. Unfortunately, it is not enough.

The necessity of rebuilding a world free from the destructive idea of progress that dominates capitalist modernity is now an indisputable reality and has become a race against time that no one can deny, and we no longer have a choice not to change the course (Avila and Horvat, 2021). At this point, one of the biggest challenges of the degrowth movement which is the view that the pro-growth capitalist system will transform itself and will not be rejected by society has now changed. Based on opinion surveys conducted in recent years in different parts of the world, Hickel (2020) summarises the overall opinion of a large segment (particularly among the young generation) of society into two important conclusions:

1. A large part of society is now questioning capitalism more and more and believes that it is a system that does more damage than benefit.

2. Given the choice between environmental protection and growth-oriented economic activities, environmental protection is the clear priority.

This leads us to an inevitable question which is what kind of post-capitalist process does degrowth promise today when conditions are more favorable and urgent than ever for transformation? From the perspective of ecological sustainability and its relation to the transformation of agri-food systems, the fundamental principles and lines of thought behind degrowth may provide a convenient basis for such a transformation, even if it has not been recognized politically and implemented in practice yet.

Analysts have recently argued that a strategy of managed economic degrowth is required to achieve a more sustainable planetary trajectory, citing the fact that the only period in which global environmental impacts appeared to be declining was during the global economic crisis of 2007–2008 and the ensuing decline in global growth levels (Büscher and Fletcher, 2020). Furthermore, the quarantine period experienced by a significant portion of the world at the beginning of the Covid-19 pandemic was more than enough to demonstrate the potential benefits there could be if today's pro-growth economic system changes. With the pandemic, a series of transformations such as the transition from a consumption economy to an economy of necessity, a decrease in spontaneous and unnecessary expenditures, and a shift towards healthier-organic foods (Francesco Bandarin, Enrico Ciciotti, Marco Cremaschi, Giovanna Madera, Paolo Perulli and Diana Shendrikova, 2020) brought various awareness based on degrowth to the fore. Whilst degrowth studies do not address the agri-food system, the lines of thought on environmental justice, political ecology, and the search for another economy in D'Alisa, Demaria, and Kallis' (2014) conceptually comprehensive book on degrowth are very much in consonance with the agroecology movement's agenda. Agroecology suggests concrete actions to build a degrowth society through agriculture (López, 2018), and policies embodied in it such as changing food systems to reduce waste, moving away from a meat-heavy diet, and promoting community-supported agriculture are vital to the degrowth movement (Kallis, Paulson, D'Alisa and Demaria, 2021). Therefore, the conceptual assessment of agroecology and its possible coherence with the degrowth movement needs to be further explored.

3. Agroecology-based approach and relevance to ecological sustainability

Conceptualized in the 1920s, agroecology regained prominence in the early 1980s and began to expand and draw the attention of academia, particularly in Latin America towards the end of the 20th century (Altieri and Nicholls, 2017). Since the 1980s, neoliberal agri-food policies have strengthened their dominance by reducing agricultural subsidies, privatizing state-owned enterprises and promoting transnational agribusinesses that oppose small-scale farmers, healthy food, ecological sustainability and food sovereignty (McMichael, 2021) and this domination triggered the emergence of counter-arguments. In the late 1990s, the framework of agroecology was broadened, going beyond the farm to include food production, distribution, consumption, and waste management (Anderson et al., 2020). This led to a new and more comprehensive recognition of agroecology as an important regenerative form of agriculture and food systems. In the 2000s, agroecology evolved into an ecological food system approach that includes economic, social, and political aspects (Özkaya, Yıldız, Özden and Kocagöz, 2021; Anderson et al., 2020). Recently, 'agroecology has increasingly come to be seen as viable, necessary, and politically feasible, as the limitations and devastation of 'business as usual' in agriculture are exposed and practiced by hundreds of millions of farmers around the world (Anderson et al., 2020). While no unified global definition of agroecology exists today, the different approaches have a common denominator: It is a holistic process based on ecosystem restorative methods that can lead us to food sovereignty, emphasizing the importance of local knowledge and participatory processes, standing against industrial corporate agriculture and advocating for small producers and direct relations with consumers. The findings of Mier y Terán Giménez Cacho and colleagues in their study, which analyzes the driving forces necessary and contributing to the advancement of agroecology through the examples of Latin American countries and India, are instructive for the debates on the framework and process of agroecology. According to the study, 8 interrelated drivers can act alone or together to promote and sustain territorial scaling of agroecology : (1)crises that drive the search for alternatives; (2)social organization; (3)constructivist teaching-learning processes; (4)effective agroecological practices; (5)mobilizing discourse; (6)external allies; (7)favorable markets; and (8)political opportunities and favorable policies (Mier y Terán Giménez Cacho et al., 2018). The study also refers to the factors that limit the expansion of agroecology identified by Altieri and Rosset (2017) and suggests that they should not be ignored: Paternalistic, clientalist, demobilizing relationships; public policies that facilitate land concentration and land grabbing; actions of governments, international organizations and market institutions that promote the expansion of agribusiness and industrial monocultures (ibid).

Agroecology, which uses methods such as intercropping multiple crop types, using compost and organic fertilizers, crop rotation, local seeds, peasant wisdom, etc., has recently emerged as the most holistic alternative way to transform the dominant agri-food system (Shiva, 2016; Özkaya, Yıldız, Özden and Kocagöz, 2021; Hickel, 2020; Klein, 2014; Ajl, 2021). Agroecological practices, which have been tested for years in many different parts of the world, have shown that soil biodiversity, crop productivity as well as CO2 sequestration have increased, agroecosystem repair has occurred, and the economic structure of small-scale farmers has been strengthened (Shiva, 2016; Özkaya, Yıldız, Özden and Kocagöz, 2021; Hickel, 2020, Andersen 2020, Prep, 2021). Agroecology, which has been left out of the common debate focusing on comparisons between industrial agriculture and organic farming, represents an important emerging alternative path, not only for its aforementioned benefits but also for creating self-sufficient, shock-resilient local economies/communities and reducing rural poverty (Prep, 2021; Özkaya, Yıldız, Özden and Kocagöz, 2021; Klein, 2014, Andersen et al., 2020). This is why agroecology is one of the most fundamental guidelines of pioneering small farmer networks such as La Via Campesina (Agroecology and Peasants'Seeds : Via Campesina, 2022) and Navdanya (Agroecology, 2018) who strongly assert that agroecology is the best way to solve the climate crisis and feed the world. At the international level, the

landmark reports of global institutions like FAO (Food and Agriculture Organization of the United Nations) and the World Bank have all recognized the special ability of agroecology to reconcile the economic, environmental, and social aspects of sustainability (IPES Food, 2020). On that note, is it possible to feed the growing world population with agroecology despite the ecological crisis?

The COVID-19 pandemic, which has upended, even more, the already disruptive state of our food system, has raised our awareness of improving the resilience, health, safety, and sustainability of our food systems. Weis (2010), argues that agriculture needs to be radically restructured to make the human relationship with the earth more ecologically sustainable. This depends on making agri-food systems more labor-intensive, biodiverse, and much less oriented towards meat production to reduce the untenable environmental and atmospheric burden of industrial methods (ibid), which is precisely what agroecology proposes: to transform the agri-food system and follow the path of agroecology to minimize environmental degradation and human-wildlife interaction to prevent new pandemics (Tittonell et al., 2021; Prep, 2021; IFPRI, 2021; Anderson et al., 2020). Today, feeding the world population with healthy, organic food produced without devastating nature is a major challenge for especially developing countries, with a growing population, especially in cities. Towards a near future in which ecological crises will persist, the world will continue to urbanize over the next three decades from % 56 to %68 (UN-HABITAT, 2022). Ajl (2021) argues that the 'green new deal' put forward after the 2008 world economic crisis is far from transforming the current agri-food system and that what is needed is local economies based on agroecology, food sovereignty, and renewable energies. Likewise, Shiva (2016) puts food at the center of the alternative agri-food system for the future, which we should accept not as a commodity but as a source of nourishment, claims that agroecology can feed the world.

4. A brief overview of the relationality of agroecology and Degrowth approaches

On one side, the idea of degrowth advocates for an economy and society that sustains the natural basis of life, and overlaps the concept of agroecology for the transformation of the dominant agri-food system that we criticize today (Gerber, 2020). However, on the other side, our world has never been closer to a transformation into an agroecological food system. The full success of such a transformation will only be possible if the pro-growth economic model that created the capitalist food system it would replace, can also be transformed. Therefore, a holistic transformation towards ecological sustainability could only be possible through synergy between agroecology and degrowth approaches. A recent overview of 'agroecology' and 'degrowth' clearly shows that they look as if they are two separate fields that do not benefit from each other, even though they have similar principles and the same goal of achieving the socio-economic and ecological paradigm shift. As Gerber (2020) emphasized in his degrowth and critical agrarian studies research, they still can't convey their lines of thought enough to bridge the gap between discourse and policy adoption. The conditions for the realization of degrowth's promise of a transition that is based on finite natural resources and healthier ecosystems, ecologically utilizing less material/energy use could be strengthened by the bridges it could build with agroecology. This is why degrowth debates and research should have more to say about agri-food systems.

The few researchers who have expressed this surprising lack of communication and examined the interactions between the two fields based on theoretical and/or case studies (from Cuba to Spain) emphasized the need for extensive research on the interrelationship of the two fields (Boillat, Gerber and Funes-Monzote, 2012; Gerber, 2020; Infante Amate and González de Molina, 2013 and López, 2018). Among them, Infante Amate and González de Molina's research has shown that a move towards agriculture based on an agroecological perspective and associated new consumption patterns (e.g. local,

seasonal food, less meat consumption) can significantly reduce resource use in the agri-food process and contribute to sustainable degrowth in Spain, the largest producer of organic food in Europe. In this context, Cuba's experience and scale of agroecology is a promising and unique example of the application of the degrowth approach, despite the lack of more democratic governance policies (Boillat, Gerber, and Funes-Monzote, 2012). The European Coordination Via Campesina (ECVC), which has incorporated many successful agroecology experiences in Europe, has put forward principles for an alternative economic paradigm that overlaps with the 'degrowth' approach (EVCV, 2022). Gerber (2020) on his part justifiably suggests that a rigorous conceptualization of the compatibility of agroecology and degrowth policies is required and draws attention to several points for a post-capitalist degrowth strategy to succeed in the long run: Primarily, new ownership institutions/regulations need to be designed to achieve an ideal degrowth society. Besides, while all degrowth scenarios aim to enhance social life by reducing working hours, agroecology requires labor-intensive processes to develop small-scale and ecological agriculture. Thus, the question of how to ensure coordination between these approaches requires a convincing response. Another overlooked aspect of the issue is that the transition to degrowth as a relatively anti-systemic approach in the capitalist world order is not easy given the current dominant government-growth relationship. Drawing attention to this point, Akbulut (2020) underlines that while governments are the most dominant political actors and driving forces of the current growth-based system, it is tacitly assumed in degrowth debates that governments can be mobilized towards degrowth. Since pro-growth policies favor large-scale corporate agriculture in terms of agroeconomics, today, not only degrowth debates but also agroecology debates need to develop policies taking into account the tendency of governments to favor pro-growth economies. The government's openness to a possible drastic shift from the current growth-oriented economic model is critical for the transition and expansion of agroecology and degrowth approaches together.

5. Some implications for Turkey in the light of degrowth and agroecology approaches

In Turkey, agroecology and degrowth studies, which have been discussed in a very limited scope in the field of political ecology and social sciences in the last decade, have started to gain importance, especially in the last few years. In these studies, which are predominantly academic publications (except for translated few books), the concept of degrowth has been discussed within the critique of growth from an ecological perspective (Kocakuşak, 2020; Koşanay, 2021; Işıkara, 2021; Işık, 2020; Murteza, 2021; Turgut, 2014), and the concept of agroecology has been discussed in terms of the transformation of the agri-food system, alternative food networks (AFNs)/initiatives and sustainable agricultural policies (Al, 2020; Karakaya, 2016; Özkaya, Yıldız, Özden and Kocagöz, 2021; Şişman, 2022; Türkeş, 2014). Despite the ecological crisis and the search for a sustainable ecological future representing common points of departure in these studies; there is not yet a study/research in which both approaches are evaluated together. Besides, agroecology and degrowth-based approaches have not yet found a promising venue for discussion in the state institutions. In the last National Development Plan, which is reflecting country-wide policies, the vision of a stable, competitive, and strong economy is prominent, while ecological sustainability is in the background and alternative approaches such as degrowth have not been addressed (The Presidency of Strategy and Budget, 2019). In the state's rural development and agriculture agenda, the treatment of the agro-food systems follows a similar attitude, and agroecological approaches have not been mentioned in the National Rural Development Strategy Plan (Republic Of Türkiye Ministry Of Agriculture And Forestry, 2020).

The development of agroecology and degrowth debates towards ecological sustainability, which are still in their infancy, is very essential for countries like Turkey with profound agricultural history. While Turkey was once one of the world's most important agricultural production regions, today it is in a position where rural life and agricultural production are weakened and dependent on foreign countries (Özkaya, Yıldız, Özden and Kocagöz, 2021). Turkey's transformation from a producing country to a consuming country in the 2000s can be explained by the transformative effect of the pro-growth policies summarized aforementioned by McMichael (2021). During the 2000s, when the effects of global warming began to increase, urban sprawl accelerated, agriculture and livestock industry came to the fore and large-scale energy/mining/transportation investments encircled the rural hinterland and nature, led to an increase and diversification of ecology-based movements in Turkey. Even so, the main political discourse based on economic growth, sometimes accompanied by the concepts of 'sustainability' or 'green', has continued to be one of the most important arguments of almost all political parties (even socialist movements) and has been kept out of the field of criticism (Yurdanur, 2022). Today, the importance of the promise of agroecology and degrowth approaches for Turkey's future is further emphasized by the findings of Aslan and Demir's joint study. Aslan and Demir (2018), reached two main findings in their study exploring the feasibility of feeding the whole (mostly urban) population of Turkey solely with healthy foods produced through organic agriculture, accessible to all, and with short-distance supply chains: (1)It is possible to feed Turkey using %63 of arable land; (2)this scenario cannot be sustainable unless we transform the prevailing trajectory, which is growth-oriented, urban sprawl encompassing the rural areas, and neglecting the response to the ecological crisis.

Given its ecological and political history, Turkey's adoption of a very radical strategy like degrowth looks more difficult than the adoption of an approach like agroecology, which can exist locally through partial activities even within the existing system. Shortly after the pandemic, Sassen's (2021) criticism of the evolution of the industrial food system for the needs of the modernizing and urbanized consumer society, pointed to a transformation in which peasant wisdom and local actors take part. What gave Sassen hope was the existence of local actors still active in Europe on food matters and the forcing effect of the pandemic on transformation. In considering such a transformation holistically, it is facilitative to consider the 8 driving factors identified by Mier y Terán Giménez Cacho and colleagues. First, there is a deepening multifaceted crisis to trigger a change. This increases the crop and income losses and precariousness of small-scale producers, who are already in a difficult situation due to declining government support. In terms of social organization, agroecology is far from becoming a collective movement. This can be explained by the fact that agroecological practices and discussions have not yet gained widespread popularity at the grassroots level and have not yet been able to expand their field of action through horizontal relations. However, the expansion of the ecology movement is promising in this respect.

There is a dynamic and high potential ground in Turkey in terms of constructivist learning and teaching processes that aim to preserve peasant wisdom and increase the number of pioneering peasants by combining traditional and contemporary knowledge locally (Çalışkan, 2019; Gür and Bayramoğlu, 2018). It should also be taken into consideration that agroecology education, which has been carried to the university level in Latin America, can expand this approach by gaining an institutional structure in Turkey (Özkaya, Yıldız, Özden and Kocagöz, 2021). Although it does not have an effective/widespread agroecology practice, the development of ecological initiatives, AFNs, cooperatives, eco-farms, permaculture practices, agro-tourism, and local-ecological markets based on direct producer-consumer interaction, have gained importance in Turkey in recent years, strengthen the infrastructure and political defense of this approach. If we add to this the growing academic interest in recent years and the initiatives of city dwellers based on healthy food, it is clear that a significant external constituency of allies is developing. Online food trade, which has increased even more with the pandemic, has also

enabled the expansion of alternative lanes outside the free market economy, as it also includes small producers and peasants who produce with sustainable agricultural practices.

One of the biggest challenges to the development and proliferation of the agroecological and degrowth approaches in Turkey is that they are not yet recognized or are disregarded by central politics. This recognition can only be achieved through the collective power of local organizations and other driving forces, as in the case of Cuba and Latin America, and can only be achieved through grassroots organizing. The degrowth movement in Turkey requires a much more difficult transition process than agroecology, both politically and in terms of implementation stages. Turkey represents the action-oriented side of degrowth, albeit weakly, with its eco-communities, back-to-the-landers, cooperatives, community-supported agriculture, and growing ecology movements. The greatest promise of the degrowth approach for ecological sustainability is that it requires an alternative economy that is shaped according to the limits of nature, as in the case of the steady state economy. In this respect, Turkey must first get beyond the hegemony of growth.

6. Conclusion

The human-dominated life of the Anthropocene is leading us to a catastrophe and it is now certain that there is no other way but radical/fundamental change. But this change needs to be achieved as soon and as widely as possible. The most critical questions of transformation are how to shift to a non-growth-oriented economic approach and how to feed an ever-increasing and urbanizing world population while minimizing environmental damage. This research presents that a new strategy based on the degrowth and agroecology ideas, despite its various challenges, increases our chances of achieving a healthier planet on a global scale by complementing each other with promising to restore ecosystem services, lessen damage from current pro-growth economic models, and industrial agri-food systems. This result, which is characterized by theoretical debates and very limited implementation outputs, requires multifaceted and in-depth research, notably for developing countries such as Turkey. At the starting point of the research, the assumption that a degrowth-based economic transformation would pave the way for an agroecological transformation also suggests that a reverse process may be possible in the evaluation of Turkey. Therefore, both approaches, with their intersecting and mutually reinforcing aspects, should be further questioned and discussed in the case of favourable conditions and political recognition.

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