

# PREFACE

## Eco-Alarmist Perspective on the Islamic World

*A three-part series of papers*

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### **Bio:**

Wardah Alkatiri, Ph.D., is a scholar affiliated with Universitas Nahdlatul Ulama Surabaya (UNUSA) in Indonesia. Her work addresses Muslim communities, environmental crisis, development ideology, postcolonial conditions, and Islamic responses to ecological and social change. She has written on global Islamic environmental governance, decolonizing research methods, climate justice, development, and community empowerment. In her scholarship, Alkatiri often connects Islamic moral resources with critiques of secular development models, authoritarian legacies, nationalism, and the ecological consequences of modern growth-oriented politics.

### **Article:**

The time has come to pay special attention to the Janus-faced colonial mentality in the postcolonial world and its profoundly destructive consequences for environmental concerns. Colonial mentality is the internalized attitude of ethnic or cultural inferiority felt by people as a result of colonization. It corresponds with the belief that the cultural values of the colonizer are inherently superior to one's own<sup>1</sup>. Notably, the colonial mentality exhibits a Janus face. It simultaneously produces the Uncle Toms who are willing to dance to the tune of the imperialists, and at the same time fueling national pride that allows its most authoritarian leadership to be at the helm. The first emerged as a real threat to the environment in the shape of a Eurocentric ideology centered on unfettered obsession with development beginning from the early independence period, while the latter manifests itself in contemporary North-South divide over carbon emission control. India's PM

Narendra Modi<sup>ii</sup>, and Indonesia's President Prabowo Subianto<sup>iii</sup>, in a similar vein argued that decarbonization roadmap is nothing but the colonial mindset of developed nations to impede developing nations from progressing: "*which is attempting to restrict developing nations... from using those resources and paths which they themselves took to become developed.*" From this perspective, the Eurocentric development ideology in the Global South can be seen a revenge against the colonial empire, without regard for the environment and at the expense of ecological integrity. This is why my earlier work on Indonesia identified nationalist education as the main culprit in preventing the inner self-reflection that students need to understand the concept of ecological sustainability. Given all these malign circumstances, the discussion presented in this three-part series of papers began with a discussion of the scientific basis for "limits to growth"<sup>iv</sup>. Limits to Growth' is not a speculative theory. It follows mathematical logic and conforms to the scientific fact that the earth is a closed system. It does not even matter if we are seriously threatened by climate change or not, our bigger problem is that our consumption of natural resources has exceeded the planetary boundaries.

Critics of secularization theory may reject the idea that all societies move along a single deterministic path of socioeconomic development toward a common endpoint called the "modern secular democratic state." They may argue that historical and cross-country patterns are more complex. But hardly anyone can refute from a cultural point of view the claim that we all now live according to a hegemonic global culture, including the environmental degradation that comes with it. We all live through a hegemonic "global culture" now. "Global culture" refers to "culture shared by many worldwide, and is based on western ideals on consumption, and attitudes towards the physical environment" <sup>v</sup>Pop music, fast food chain restaurants, and Hollywood films are examples of global culture, spread to all corners of the world. Communities, societies and states experience a singular trajectory towards a hegemonic world culture with associated predatory economic systems that inevitably and increasingly destroy the environment. Only very few societies continue to uphold more sustainable ways of life, and ironically, most of these are societies that are still on the fringes of this global system and therefore undesirable. Thus, it can be argued that too-muchness is the

hallmark of this late modernity. Too much freedom has been given to individual liberty that we let any kind of individualism, where people become unencumbered selves without reference to their relationships to their communities. Too much freedom has been given to the market forces; to the transnational corporations and banks to buy, sell, invest, produce, use and develop wherever and whatever will maximise their profits. Too much desire we have of progress, and hence, illusion of unlimited available natural resources has been taken for granted in the Development ideology.

Schumacher<sup>vi</sup> perceptively saw a tragedy when people began to believe in human unlimited ingenuity. While they were so amazed by scientific and technological achievement that they began to think that natural resources too have no limits.

Taking seriously the implications of the Triple Planetary Crisis identified by the United Nations in 2022<sup>vii</sup> on social, political and cultural dimensions, this series of papers ultimately seeks to explore the role that religion of Islam can play in helping the followers prepare for the worst. Perhaps for many readers it is not immediately clear how religion in general and Islam in particular connects to the environmental issues. While this three-part series of papers focuses only on the practical rather than theoretical, as it explores the role of religion in coping with precarities that the looming crisis can bring to people, the following key ideas must still be appreciated in the discussion about the place for religion in environmental studies. First, religion as a spiritual worldview, in which Islam has a holistic approach to existence and thus can cultivate an embodied awareness of the totality of things, for which there does not seem to be a barrier between the sacred and the secular, nor between the world of humankind and the world of nature. The cornerstone of *Tawhid* is that Allah created the universe and all that existence reflects unity in plurality. Second, religion as a sacred reference for ethical and moral values for the followers, from which human's responsibility as the guardian of nature is warranted when the appeal to Muslim as an *abd-Allah* (the servant of God) and *khalifat-Allah* (the vicegerent of God) was clearly understood. Third, religion as the source of environmental law applied Sharia law. However, this study begins with the recognition that it is now too late to prevent a catastrophic ecological crisis. Therefore, the research focuses on

exploring how religion can promote fortitude, resilience, and solidarity in the face of adversity.

Together with anthropologist Thomas Reuter<sup>viii</sup> and dissenting economist E.F. Schumacher in their critical assessment of the non-Western world's submission to the absurdities of the modern West, this three-part series of papers contends to alter the secularization trajectory perceived as a mandatory paradigm in Muslim majority countries. Among other thing, this study encourages empowering committed Muslim communities, including Islamists who have been marginalized as the state continues to secularize Muslims, and equipping them with the necessary skills and knowledge to cope with the greatest challenges we face as a civilization. The central thesis of this research is the notions of *degrowth, transition, resilience, lifeworld, subjective well-being, good-life, solidarity economics, and minimal state*. The first part in this series of papers is entitled: "*Prepare the Horses, the Apocalypse is Near: Ample Scientific Reasons to Believe*", the second part is entitled: "*When Things Have to Fall Apart: Calling for Muslim Communities Empowerment*", and the third part is entitled: "*Capitalising on Religious Lifeworld: Highlights & Challenges in the Faith-based Community Empowerment*". The qualitative data employed in this study, including observations, interviews, and ethnographic accounts, are a part of a longitudinal research that has been ongoing since the start of my PhD in 2009.

# Prepare the Horses, the Apocalypse is Near: Ample Scientific Reasons to Believe

## Eco-Alarmist Perspective on the Islamic World

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### Abstract

This paper is the first of a three-part series of papers that are concerned with the challenges that the Islamic world may face to confront the triple planetary crisis identified by the United Nations as pollution, climate change, and biodiversity loss and to deal with the extremely difficult task of reducing consumption of finite natural resources. The paper uses the term “Islamic world” to refer to the part of the world where Muslims and their faith have been prevalent and socially dominant and where the Islamic lifeworld is still alive and functioning, even though many of them have secular rather than religious governments. As I write this paper, the Saudi Aramco CEO said that the global energy transition strategy was visibly failing on most fronts and advised policymakers to give up the “fantasy” of phasing out fossil fuels. Given the really decisive role of economists, developmentalists, and industrialists in policy-making in developing countries, including the Islamic world, for whom scientific ecological knowledge is apparently beyond their ken, and also considering the Janus-faced colonial mentality in postcolonial countries, this paper sets out to explain the nature of the crisis at hand by laying out the scientific arguments for “limits to growth.” Accordingly, this series of papers is aimed at the power elite readers in the Islamic world. It began with an appeal to understand that the unprecedented crisis in our time posed a herculean task that requires a multidisciplinary approach involving holistic, integrated, and coordinated actions across a very wide range of sectors.

**Keywords** *Footprint, Limits to Growth, Too-muchness, Kuznets curve, Sigmoid curve*

## 1. Introduction

“Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius – and a lot of courage – to move in the opposite direction”

– Albert Einstein

The potentially catastrophic environmental crisis has changed the conversation around modernization, development, and progress; the dominant paradigm is starting to reverse course. “*Climate change is a more serious threat to the world than terrorism,*” says the UK’s scientist David King (Brown and Oliver, 2004). This three-part series of papers argues that Muslim intellectuals need to get themselves up to speed about the changes, and begin to disengage with the outmoded dominant western worldview. We are being forced, whether we like it or not, to enter a *transition* from a modern industrial worldview to an ecological one, from fossil fuel civilization to an uncharted territory fraught with uncertainty.

In spite of that, Section 2 portrays the many challenges that hinder communication on the environmental emergency in the Global South in general, where emerging market economies dominate, and in the Islamic world in particular, where grievances stemming from social-political issues and humanitarian crises are intensifying. By doing so the paper depicts the outlooks on life in two distinguishable “lifeworlds” as understood in phenomenology, namely, (i) the lifeworld of Muslim communities and (ii) the lifeworld of western-modern scientists and environmentalists. “Lifeworld”, German *Lebenswelt*, means a person’s subjective construction of reality, which he or she forms under the conditions of his or her everyday life, as sharply distinguished from the objective worlds of the sciences. Therefore, lifeworld is not a scientific world. This will be the subject matter in the third part of this series of papers.

Section 3 was written to address the lack of scientific ecological knowledge among the power elite of the Islamic world. It is important to note that the fundamental issue facing the world today is our inability to understand how crises are interconnected. This is, in my opinion, a terrible consequence of the over-specialization of academic knowledge today. In this sense, if the triple planetary crisis of our time had occurred in the Golden Age of Islam, when many scholars were also polymaths, it would not be so difficult to communicate the crisis, which requires multidisciplinary knowledge and insights from various fields to understand. This section critically examines the well-established paradigms that have been adopted in modernizing the Islamic world. At the

same time, it exposes the West's hypocrisy over social and environmental justice.

"Limits to growth" analysis has become the linchpin of the argument.

1. The earth has limited natural resource stocks and energy flows. So endless economic growth is simply illogical.
2. It thus follows that there is a contradiction between the pursuit of economic growth and ecological sustainability.
3. A consumer capitalist society is grossly unsustainable. That is why it is not possible for developing countries - including the Islamic world - to follow the levels of consumption, resource use, and ecological impact of the rich countries. The latter has been living in such a way that all cannot share.
4. Finally, the world may have reached the ecological turning point, and consequently, radically different ways of carrying out fundamental processes must be found.

Section 4 delineates the context of the study that our modern civilization with its outstanding achievements in science and technology may have reached a turning point and the way forward is mostly downhill. Together, this paper should develop an understanding of the huge ethical dilemma that arises when the world must reduce greenhouse gas emissions and protect the remaining forests, but some developing and underdeveloped countries become richer and thus need more natural resources and thereby, disposing more industrial pollutions and greenhouse gas emissions.

The terms "ecological" and "environment" are used interchangeably in this paper. Also, the terms "global south", "developing countries" and the "third world".

## 2. The End of the World?

Rasulullah (peace be upon him) said: "The people will soon summon one another to attack you as people, when eating, invite others to share their food."

Someone asked, "Will that be because of our small numbers at that time?"

He replied, "No, you will be numerous at that time: but you will be froth and scum like that carried down by a torrent (of water), and Allah will take the fear of you from the hearts of your enemy and cast *al-wahn* into your hearts."

Someone asked, "O Messenger of Allah, what is *al-wahn*?"

He replied, "Love of the world and dislike of death."

(Abī Dāwūd Ḥadīth [4297])

Although our mainstream institutions do not want to admit, we are in the midst of a civilizational crisis. While I am writing this paper, people around the world are rallying to support Gaza on Israel's genocidal war that has killed tens of thousands of Palestinians. Muslim majority states were caught in a bind unable to help, while Western leaders allowed this horrific war crime to continue. With all support to the gross violations of international humanitarian law committed by the Israeli occupation forces against civilians in Gaza, the West has succeeded in destroying all myth about Western "civilization". At least, three prominent Muslim scholars wrote unprecedented tracts criticizing Western-centric modernity: Asef Bayat (2023), Hamid Dabashi (2024), and liberal Muslim scholar, Mustafa Akyol (2014) who argues that indifference to Palestinian suffering in Gaza has alienated Muslim moderates across the Islamic world and "tarnishing the appeal of liberal democratic values."

We also live in the most turbulent era in modern history. We have just finished the Covid-19 pandemic and realized that bioterrorism has every possibility in the future in the form of other pandemics, including possibly, pandemics aimed at reducing the world population for environmental reasons. We have deepened economic inequality where the richest 10% of the world population own 76% of the wealth. We saw the Ukraine-Russia war erupted, fuelling political disturbances that make the World War-3 becomes possible. We also have climate change that urgently needs to combat the problems of too much dependence on fossil fuel, and yet, the wars have added a new hurdle to the energy transition that is needed.

Multiple ecological crisis is not a future threat. It is already a reality. The impressions of forest fires, floods, storms, draughts, heat waves, and plastic waste floating in the world's oceans are too vivid for humanity to ignore the fact that something fundamentally wrong with our contemporary civilization exists. In 2022, United Nations declared the "triple planetary crisis", the term used to describe the three major interconnected problems that humanity is currently facing: climate change, pollution, and

biodiversity loss. If we are to have a viable future on this planet, each of these issues—each with its own causes and effects—needs to be tackled (UN, 2022).

Oddly, we also live in an era where the balance of economic power is shifting from the Global North to South. China and India are heading to surpass the US and Europe economies. What is more, modern technological advancement has made human life less and less troublesome. Digital communication technologies connect people across the globe easier and faster, and the industrial robots, artificial intelligence, and machine learning are advancing at a rapid pace. Latterly, ‘industry 5.0’ and ‘society 5.0’ have entered into common colloquialism, and the tech billionaires grab the headlines. All this makes a triumphant feeling in the air and undue self-assurance that humanity is on the right track of progress where our wizard technologists will always find ways to solve every problem. To hint at the key idea of this paper, let me start from a statement that such optimism is delusive and dangerous. Growth-economy in conjunction with liberalism, a system in which most of the core structures and processes involve growth and unlimited economic freedom, is the key culprit in destroying the integrity of the environment and the deprivation of the Third World where many Muslim-majority societies reside. There is now mounting evidence that socio-ecological crises could bring us down to the collapse of modern civilization as we know it (Titchener, 2022; Rifkin, 2019; Corn, 2019, Spratt and Dunlop, 2018; Kunstler, 2005). Experts also believe that climate change will have the greatest impact on those living in poverty, and threatens democracy and human rights into the bargain.

In the final analysis, it appears to me that the single common thread connecting all of the above-mentioned world problems is “*al-wahn*”, the passion of worldly life and forgetfulness of death, as prognosticated by Prophet Muhammad (peace be upon him) in the heading of this discussion. In this sense, *al-wahn*'s victims include the Palestinian people, the world's impoverished, dispossessed and oppressed peoples, and also the devastated nature.

### **3. Clever and Dumb at the Same Time: The Paradox of Compartmentalization of Knowledge**

“Anyone who thinks that you can have infinite growth in a finite environment is either a madman or an economist.” (David Attenborough)

Managing a multidisciplinary conversation is definitely not a walk in the park. That is what happened with promoting public engagement with emission-caused climate change crisis across diverse audiences. The debate has become divided between those who believe the general consensus that it is happening and that fossil fuels use is a major contributing factor, and those who continues to deny the fundamental scientific reality of climate change and disputes the central role human activity plays in creating and exacerbating it. Increasingly, the disagreement has taken on religious tone, with believers labelling those who question as "deniers," the equivalent of, "disbelievers". This can be viewed, in my opinion, as the disastrous consequence of knowledge compartmentalization in modern education system<sup>1</sup>. While just a few months earlier at the biggest annual climate summit, COP 28 in Dubai, negotiators from nearly all the world's nations agreed to transition “away from fossil fuels” (known as “decarbonization”)<sup>2</sup>, but as I write this paper, in a conference attended by representatives of the fossil-fuel industry in Houston, the state-controlled Saudi Aramco CEO, Amin Nasser, decried that the energy transition attempts to phase out oil and gas has been “visibly failing” on most fronts. Rather, he states with complete confidence that oil and gas will remain the backbone of the global energy system for decades to come and that Aramco planned to meet the rising demand for oil and gas from

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<sup>1</sup> In addition to the “bounded rationality” that people use when analyzing complex scientific information beyond their grasps, as identified by Hoffman (2012), in which ideological filters reflecting one's identity, worldview, and belief strongly influenced by group values are applied. Regrettably, scientists do not have the last say on whether or not people accept or even comprehend their results, even though they may have established the framework for understanding the technical parts of climate arguments. Because of this, there is scientific agreement on climate change, but there is no social consensus.

<sup>2</sup> “Decarbonisation” refers to the process of reducing carbon dioxide (CO<sub>2</sub>) and greenhouse gases emissions resulting from human activity in the atmosphere. To achieve deep decarbonisation, we need to rethink how we produce and consume energy, and operate a radical switch to renewables and low carbon energy sources.

developing countries. His statement was greeted by the audiences with applause. They don't appear to have realized that we are experiencing a triple planetary crisis and that the greater issue is that we are using more natural resources than the world can support. That only lunatics and economists believe that unlimited growth is possible on a finite planet, as David Attenborough claimed, is therefore, less of a joke.

It is a plain fact that economists have dominated much of the discourse surrounding climate change policy. For reasons that can be understood, economists are resistant to empowering fundamental changes that would contradict their own core beliefs regarding mass production, consumer culture and ideologies of capitalist development. The worst thing is that all governments mainly follow the advice of economists. The Janus-faced colonial mentality that was previously discussed made the nationalists of the Global South, who were fighting for their country's inclusion in the elite, respectable, and prosperous nations as well as its significance to global geopolitics and the world economy, vulnerable to adopting an unsustainable growth economic paradigm. The main scientific arguments against unlimited economic growth paradigm are as follows.

### **3.1 Endless Growth in a Finite Planet is Suicide<sup>3</sup>**

The discussion that follows aims to clarify a number of claims (e.g., Wackernagel & Rees, 1996; Trainer, 2011) that our fierce obsessions with economic growth and affluence is suicidal. The following explanation also shows that economy and ecology are intertwined.

Firstly, the earth is a closed system. Only energy from sunlight enters. No matter enters or leaves, except for the rare meteorite. Secondly, the laws of conservation of mass and energy are valid for ecosystems. Mass and energy cannot be created or destroyed in any closed system, although it can degenerate and decay. Considering that our planet earth is a closed system, these laws outline the bounds of what the earth is capable of -- the endless economic growth pursued in a finite planet is simply

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<sup>3</sup> For further deliberation on the contradiction between the limitless pursuit of economic growth and ecological sustainability, read for example: Trainer (2011, 2021), Rees (1992, 2000), Daly (1996).

unthinkable. Thirdly, the profound concept of entropy (disorder) encompasses in the second Law of Thermodynamics. The concept of entropy places a finite limit on the extent to which resources can be used in any closed system, such as our planet. All things considered, economics by all means is a component of and is dependent upon the natural world where it resides and of which it is a part. Therefore, economics could never be independent of ecology. Given that the earth is a closed system, the endless economic growth pursued in a finite planet is simply unthinkable.

### **A. The Hard Truth about Natural Resources**

Natural resources are classified as either non-renewable or renewable. Each non-renewable natural resource (e.g. fossil fuels, metals, minerals, including Uranium in nuclear energy) has a beginning, middle, and end of production. These non-renewable resources are formed over long geological periods. When they run out, there is no way to reproduce them because of their incredibly slow rate of formation. Oil, natural gas, coal, oil shale, tar sand, coal bed methane, are all fossil fuels. It takes from 3 to 6 millions of years to naturally form fossil fuel from the decomposition of dead organisms. That is why they are generally considered non-renewable. With our modern- industrial-affluent-consumption lifestyle, we consume fossil fuel in a way that is depleting the available resources much faster than the new ones being made. Global oil production is now approaching or has already passed an all-time peak and can potentially end our industrial civilization. In a way comparable to fossil fuels, other non-renewable sources too, have their limits. Everything will have a beginning, middle, and an end of production, and at some point, it will reach a level of maximum output like a bell-shaped curve graph. Another key thing to remember, the *renewable* resources too are seldom perfectly renewable - if their levels are heavily decreased, they may not be able to completely replenish themselves. Obviously, these facts place inescapable constraints on Development - that there cannot be an 'endless Development'.

## **B. The Hard Truth about Human’s Dependency on Nature: Footprint**

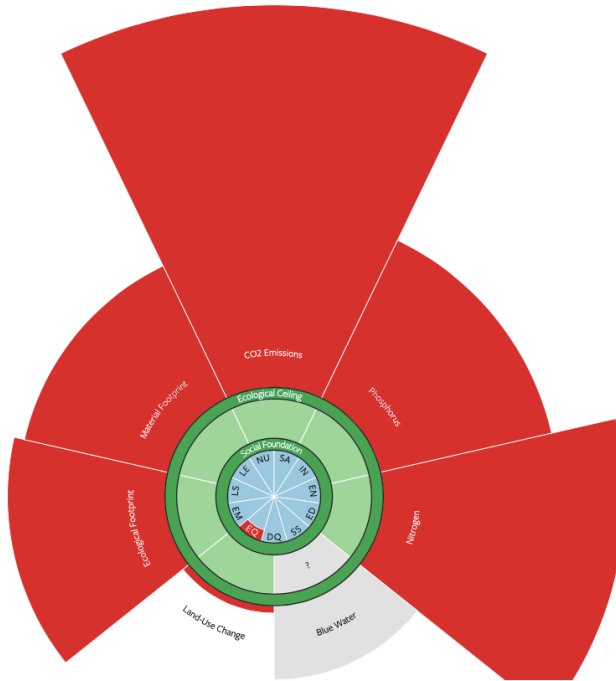
Most people have no idea how far beyond sustainable levels they are; some even do not realize at all that everything they consume, from food to cloth to every single item they use—bags, shoes, telephones, TVs, books, cars, cosmetics, medicine, furniture, toys, anything—is made of something that comes out of the ground that we call a ‘natural resource’. The “footprint” analysis estimates that it takes at least 4-6 ha of productive land to provide water, energy, settlement area, and food for one person living in a rich world city (Wachernagel and Rees, 1996). A more recent study in Australia even shows a figure of 8 ha (WWF Fund, 2009, in Trainer, 2011, p.72). If 7.9 billion people of the world population today were to live the American or European urban lifestyles we began to see in the big cities of the big cities of the Global South, we would need 32–62 billion ha of productive land. That means we need 5–10 planets! because it was about 5–10 times the size of productive land available on the entire earth.

On top of that, ecologists are the only ones who can appreciate that the planet provides services in addition to goods, and that the former are frequently more valuable than the latter. The essential role of photosynthesis, nutrient cycles; hydrological cycle; the intricate relationship between plant and animal kingdom; and the sensitive role of climate, are among the services provided.

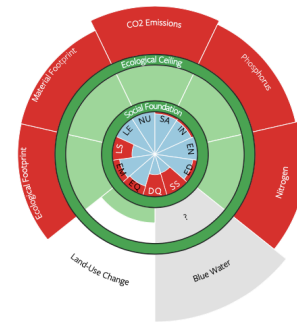
## **C. The Doughnut ‘Safe and Just’ Space**

The hardest question of all is, “will that be possible for everyone to enjoy a decent life without damaging the planet?” Fanning, O’Neill, Hickel and Roux (2022) address these issues using the doughnut ‘safe and just space’ framework, by quantifying the link between 11 indicators (relative to the requirements for a good life) and 7 environmental pressures (relative to environmental limits) for over 150 countries. They show that such a country does not exist. Their work even helps to validate the World-systems theory, whereby rich-core capitalist societies succeed by exploiting poorer, peripheral, ones. In other words, rich nations live as they do now because

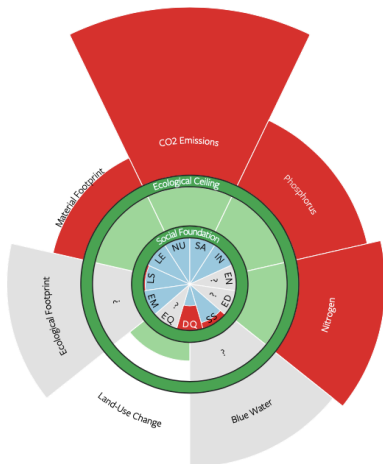
they have been taking and using up most of the natural resources and preventing most of the world's people from having anything like a fair share.



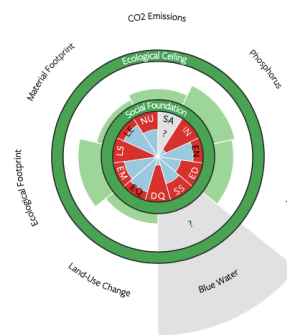
United States of America



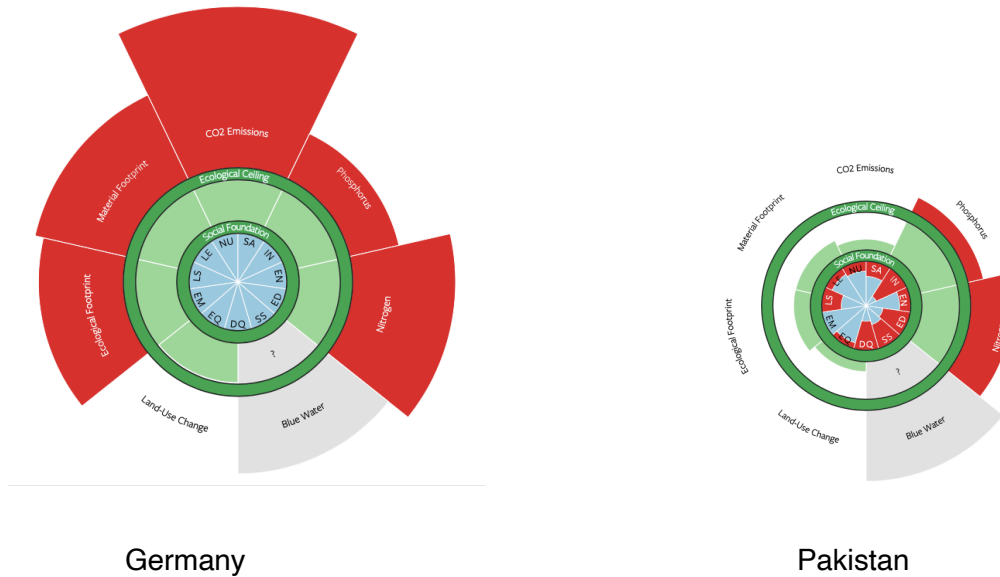
Iran



Saudi Arabia



Yemen



**Fig.1.**

The Doughnut of social and planetary boundaries by countries in 2015 (Goodlife, n.d)

After considering all that has been said, it should be very clear that overproduction and overconsumption—the result of people attempting to live at affluent levels that are just too high to be sustainable or shared by all—are the primary causes of today's biggest issues. We have overshoot by a factor of 5 to 10. Given the magnitude of the overshoot is far too great, there is simply no way that any plausible technological advancement could ever hope to bring this problem down to something manageable. We need a ‘U turn’ to reverse the trends towards a simpler living – but the issue is that development ideologues and economists despise the notion of simple living. They ask: *Won’t growth make us so rich that we will be able to afford to save the environment?*” Here is the appropriate place to present the Kuznets curve.

**D. The Kuznets Curve: Understanding ‘Waste Colonialism’**

In any talk with economists or industrialists about the connections between economic activity and environmental degradation, Kuznets curve theory is always used as a convenient way to shut down the conversation. This section will show how the Kuznets curve conceals the reality, and therefore, dash any hopes of stopping deforestation, land conversion, plastic pollution, and decarbonization in

developing countries. The delusion of the Kuznets curve theory is that there is really no need to be concerned about the environment, it will solve itself if we just carry on with pursuing economic growth.

This inverted U graphic illustrates Simon Kuznets' hypothesis that pollution and environmental damage will increase dramatically in the early phases of industrialization, but the GDP will eventually reach a peak point and start to decline as governments start enacting laws to reduce pollution as the economy shifts from manufacturing to services. If the hypothesis were to hold true, it would undoubtedly be convenient – but in the real world, the evidence is not the same. If anything, the curve only held true for air quality. Research indicates that water quality also increases, though not for all environmental indicators. No evidence of a peak or drop was discovered for other environmental indicators.

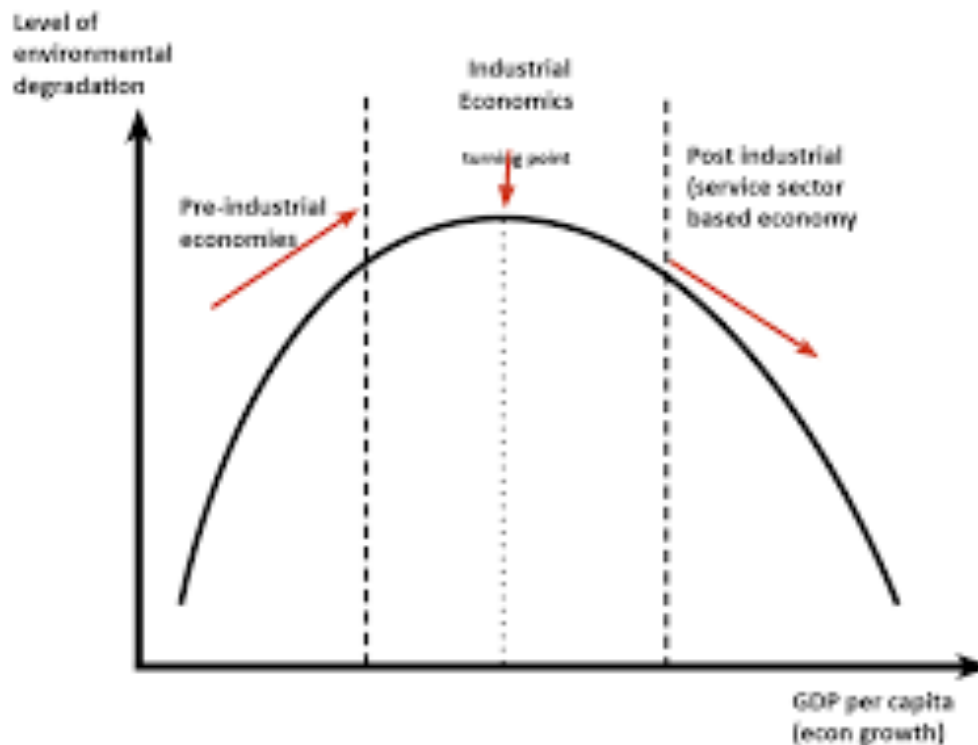
In the real world, the evidence is not the same. The curve was only accurate in the case of air quality, and to some extent water quality as well, while on other environmental indicators studies found no evidence of a peak and decline: deforestation continued, biodiversity loss was not reversed, municipal waste carries on increasing with income, and most importantly of all, carbon emissions didn't peak and decline either. When it comes to their ecological footprint, the richest nations undoubtedly use more resources and services than the poorest nations. The following are some of the main shortcomings of the Kuznets curve theory in the context of the Global South:

First, the truth of the Kuznets curve is only valid within a country or even a locality. When a country moved away from heavy industry, but the population continued using the goods of heavy industry coming from elsewhere, their environmental impacts were only displaced, not eliminated. This is what happened to the Global South, where the most polluting and heavy industries moved as the Global North grew. The Global South continued to be devastated and polluted. The next country, if it becomes sufficiently developed, will in turn displace its environmental

impacts. Basically, the improved environment of these countries does not mean global environmental improvement, but the transfer of pollution and destruction from one part of the world to another. China can be an example of this. The most polluting industries have moved to China in recent years, and as China develops, they will move again – eventually to Africa. It is evident that Indonesia has become the world's dumping ground for plastic waste in recent years following China's ban on the import of waste. In 2019, environmental activists in Indonesia called on the trade ministry to immediately revise its 2016 regulation on waste imports because the regulation contains several loopholes that have turned Indonesia into a dump site for developed countries. So the bad news is for whoever is last in the chain. Poorer countries cannot possibly apply similar levels of environmental regulations, for they cannot possibly outsource the heavy & polluting industries products, or ship the trash, to other countries. “In our finite world, the poor countries of today would be unable to find further countries from which to import resource intensive products as they themselves become wealthy” says David Stern (2003).

In sum, the Kuznets curve only applies to local environmental issues. It does not operate at the level of the global scale, which, in the final analysis, is the most serious as we are threatened by climate change as well as by the ocean pollution that contaminates our food systems already. Doing harm to another is doing harm to oneself. It is, therefore, not an exaggeration to say that Kuznets curve was misleading, and had only succeeded in deluding economists and distracted them away from serious considerations of the objective limits imposed by natural systems. By doing so, the economists continue to maintain the subordination of nature and society to economic logic. A broader implication of this is the impossibility of conventional development to raise many of the Third World countries to satisfactory living standards. The effluence enjoyed in developed countries is built on a global economic system that is, at its core, plainly unjust.

**Fig.1**  
Environmental Kuznets Curve



The above exposition of Kuznets curve provides a valid argument to challenge the widely held assumptions that we are able to decouple economic growth from environmental impacts, and to refute the neoliberal idea that we need more economic growth in order to fund environmental protection initiatives, thus saving the planet - an idea that has been consistently put forward in international political discourse on environmental issues.

### 3.2 Anthropogenic Ecological Crisis

The pursuit of endless economic growth is chewing through our living planet, producing poverty and threatening our existence. Since the first World Conference on the Human Environment in Stockholm in 1972, climate scientists and human ecologists have warned about the impending crisis, in the hope that people might do something about it

before it is too late. Climate scientists assert that we would not know exactly how the crisis will unfold until it becomes too late to stop.

While climate change is nothing new in the history of the Earth, the one in our time is anthropogenic, and has become the most pressing issue facing humanity today. In the past, the change was caused by variations in solar energy, volcanic eruptions, in the tilt or orbit of the earth around the sun, changing oceanic circulation and melting permafrost releasing large quantities of methane gas. As modern civilization evolved and the demand for energy increased, the energy remained renewable for thousands of years with windmills, waterwheels, gravity fed hydro power, use of animal and human power, until coal was discovered, and eventually, petroleum and natural gas. From that point on, these fossil fuels were used on a massive scale to fuel the Industrial Revolution. It is important to bear in mind that only as recently as 250 years ago these fossil fuels began to make possible a huge increase in the amount of cheap and productive energy available to humans. Since then, the earth's ecosystems have suffered twice as much damage from our energy-hungry, consumption society. First, by forcing and pumping fossil fuels—coal, oil, and gas—out of the Earth's interior, where geological processes have sealed them away over millions of years. Secondly, by burning these fuels, which primarily releases carbon dioxide (CO<sub>2</sub>), methane, and other greenhouse gases into the atmosphere. It was only lately that we realized that too much CO<sub>2</sub> in the atmosphere trapped heat and led to global climate change.

Climate scientists admonish that the global emissions must be cut by half by 2030 if we stand a chance of averting the worst impacts of warming. We must avoid 1.5°C in global heating beyond pre-industrial times, a critical target of the Paris climate agreement. But why 1.5 degrees of warming matter? Here is the explanation. A one-degree global change is significant because it takes a vast amount of heat to warm all of the oceans, the atmosphere, and the land masses by that much. Just a heads-up, the earth could enter the Little Ice Age in the fourteenth century with just two degrees dip in temperature. Climate scientists estimate that 20,000 years ago, a five-degree dip was sufficient to bury a sizable portion of North America behind a towering sheet of ice.

The urgency to curtail emissions by half by 2030 implies radical changes in all spheres of life. The costs of inaction would be far greater than the costs of taking immediate action. Yet, governments around the world are failing to make necessary changes and engage their citizens in the role they can play to avert the most disastrous consequences of climate change. Hardly any country in the Global North - the cradle of modern civilization - have laid the concrete groundwork for the economic, cultural and political shifts that will be necessary to deal with the crisis seriously. Only peripheral progress has been made at reducing carbon emissions but overall, the world is moving too slow to avoid 1.5°C. As can be expected, the Global South, including Muslim-majority countries with a long list of more pressing everyday life problems, are way behind the needed tasks. Collectively, most people turn their face away from environmental emergencies - no one likes to think seriously or confront the possibility that they and their loved ones may one day see a world collapsing.

#### 4. Discussion: We have reached the ‘Turning Point’

Dionysus is the god of *letting go* in Greek mythology (Euripides, 78). Dionysus possesses the power of allowing humans to *let go* of their troubles through *wine*. His power of *letting go* through *wine* can be excessive and bring harm than good, causing humans to let go of even their sanity, self-control, and judgment. Most people get drunk to drown their sorrows. Excessive drinking eventually gets out of control, causing the destruction of the person.

As has been shown thus far, the root of the current problem is our attitudes of too muchness toward freedom and progress. We hugely exceeded the golden balance of *sirotol mustaqim*<sup>4</sup> in the way we manage our lives. Our behavior has drastically interfered with the Earth’s climate equilibrium, the *mizan* in the language of the Qur’an<sup>5</sup>.

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<sup>4</sup> Quran (Q: 1:6-7)

<sup>5</sup> “He (God) set up the balance (mīzān). So that you may not exceed the balance (mīzān). Weigh with justice and do not fall short in the balance (mīzān). He (God) laid out the Earth for all living creatures” (Q: 55:7-10)

We ruin the balance of the Earth's interconnected and unified planetary systems<sup>6</sup>. Many scientists believe we have passed the tipping point already (Corn, 2019). In titling his book "Peak Everything," Richard Heinberg (2010) suggested that humanity has achieved an unsustainable pinnacle of population size and consumption rates and that the road ahead will be mostly downhill—at least for the next few decades until humanity has learned to live within Earth's resource limits. He argued that the industrial expansion of the past century or two was made possible only by our use of the concentrated energies of cheap fossil fuels. As a consequence, when oil, coal, and natural gas cease to be cheap and abundant or when their use has to be regulated to curtail carbon emissions, economic growth will phase into contraction. Heinberg further noted that the shift from growth to contraction will impact every aspect of human existence—at both the macro and micro levels—threatening even our psychological coping mechanisms. In 2017, Heinberg penned "The End of Growth, Seven Years Later," highlighting the latest turn of events that confirm the Limits to Growth warnings, that there are clearer signs economic growth is becoming more difficult to achieve worldwide, and that the global economy is approaching inevitable growth limits as the larger ecological systems of which it is a part become depleted, degraded, and destabilized. Heinberg is certainly not alone in making such a grim prediction. In a similar vein, political scientist William Ophuls (1992) asserts, "liberal democracy as we know it... is doomed by ecological scarcity," and "such central tenets as individualism may no longer be viable" (p. 3). While offering support for their claims, my paper offers a cyclical view of time, in contrast to an outlook of human history as a straight line of movement that underlies the utopianism of modernization (Alkatiri, 2021). The cyclical view of human history might be best illustrated by the sigmoid curve. This curve helps to point out the significance of the transition from the present fossil-fuelled civilization to the next, which is one of the central discussions in this series of papers.

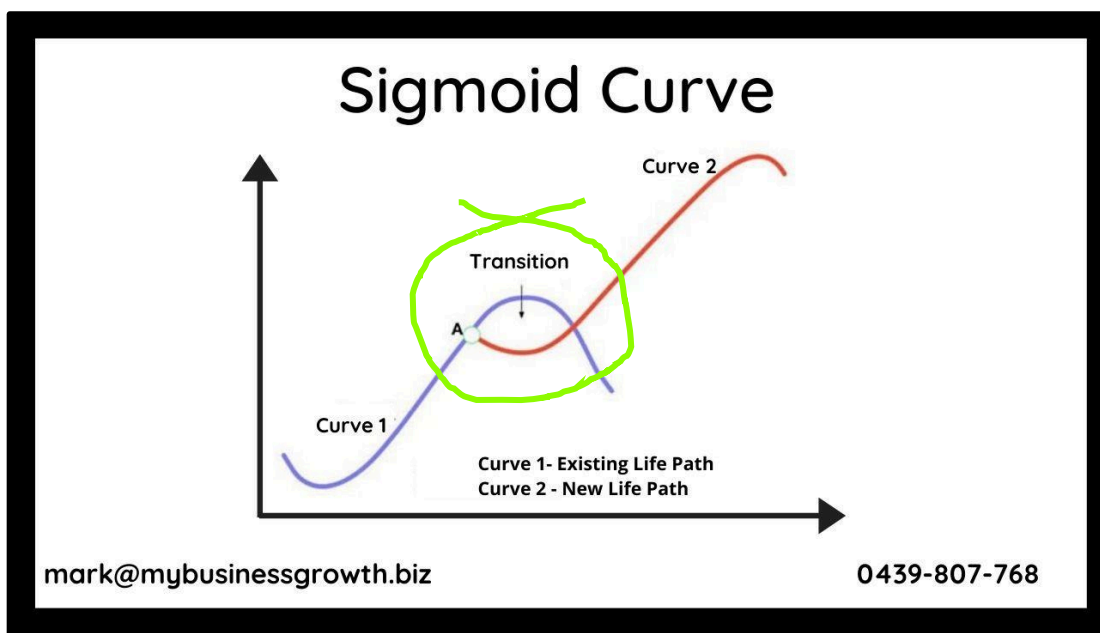
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<sup>6</sup> Science tells us that nature relies on balance: the balance between soil erosion and new soil formation, the balance between carbon emissions and carbon fixation, the balance between trees dying and trees regrowing, and so forth.

## Sigmoid Curve

The sigmoid curve has fascinated people since the beginning of time (Handy, 1994). The curve summarizes the history of rise and fall, and in fact, the story of life itself: we begin slowly, experimentally and shakily; we wax and wane. This is indeed the history of all empires; it is also the story of the product life cycle. The curve is a depressing image, unless one holds a cyclical view of time. In the cyclical view of time, there is life behind this curve. The secret to continuation and success is to start a new curve before the first one crashes, and the correct place to start the second curve is at point A, where there is time, resources and energy to go through the initial exploration and sinking of the new curve before the first curve begins to descend. Point A is where the *transition* efforts discussed in the second part of the paper (Paper 2) began to gain traction. However, it is worth noting that at Point-A everything seems fine, it even seems silly to change anything when the current recipes work so well. People understand the problems only when looking the disaster in the face.

**Fig.2**  
Sigmoid Curve



On a side note, it is important to remember that history repeats itself. Archaeological discoveries have shown that environmental problems also existed in ancient societies. Because each species has its physiology and, thus, its requirements for natural resources, every human society exploits the physical and natural environment around it. Anthropological accounts show that even the smallest group of hunters and gatherers can deplete local resources and profoundly alter local ecology (Somma, 2009), but most anthropologists argue that historical changes in culture are what increased our population and consumption and thus, had an impact on nature (Reuter, 2010). The difference between climate change and ecological crises in our time and the ecological collapse of the distant past, such as Easter Island (Diamond, 2005) and ancient Mesopotamia (Oppenheim, 1955; Jacobsen, 1982), is their scale and magnitude. The crises of past societies occurred in clearly defined areas, while the climate change and plastic pollution of our time are global problems, the effects of which are global and unprecedented. We have now reached the turning point, and the road ahead will be mostly downhill, so preparations must begin. The following article, titled “*When things have to fall apart: Calling for Muslim Communities Empowerment*” (Part 2), aims to explore the potential of community-led initiatives to move Muslim societies from current un-sustainable ways of living to a low-carbon future.

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