

Achieving Sustainability

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Seeking to develop a sustainable world should be viewed as a project to use the human and natural resources available to us to build a balanced, stable, and peaceful world. But since no one controls these resources, politicians tend to focus on the national levels. But human connections and state interdependence make sustainability unachievable except at the global level. In 1972, the Club of Rome issued a report on the state of the world and used the 'sustainable' concept for the first time. '*The Limits to Growth*', authored by a group of scientists, described the desirable "state of global equilibrium". Though the world conditions did not deteriorate as fast as was predicted, other things have made our world less peaceful, less equitable, and thus less sustainable. This paper outlines a plan to achieve all aspects of sustainability in 2 to 3 decades.

Authors of the Club of Rome report said, "We are searching for a model output that represents a world system that is sustainable without sudden and uncontrolled collapse; and capable of satisfying the basic material requirements of its people."¹ This definition views sustainability as an economic issue. But developing a world system where a global equilibrium prevails requires balancing economic production and peoples' actions, and nature's ability to renew depleted resources, when no one knows the feasible rate of resource extraction or the actual rate of resource renewal or control people's actions or know their desires.

'*The Limits to Growth*' sought to highlight the dangers inherent in high economic growth and consumption rates that cause natural resources to be depleted at a rate that exceeds nature's ability to replenish. Though this argument makes sense, some people denied the claim that resources are being depleted faster than nature's ability to replenish them; others argued that market regulations at the time prevented the optimum allocation of resources, which lead to adopting the disastrous free market philosophy in the 1980s. In addition, many people called for stricter environmental regulations and reducing waste. However, Cohen and

Winn tried to answer the question of market failure; they say that there are four types of market failure as possible explanations: First, while the benefits of natural capital depletion can be privatized, the costs are often externalized. Second, natural capital is often undervalued since we are not fully aware of the real cost of its depletion. Third, the link between cause and effect is often obscured, making it difficult to make informed choices. Fourth, most firms, contrary to economic theory, are not perfect optimizers.²

In 1987, the *Brundtland Commission* issued a report on the world's state of environment and development, in which it used the term 'sustainable development' for the first time. The commission defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."³ Michael Needham goes further to say that sustainable development is "the ability to meet the needs of the present while contributing to [meeting] the future generations' needs."⁴ Therefore, sustainable development could be defined as "a pattern of economic growth in which resource use aims to meet human needs in the present, while preserving the environment so it can meet human needs in the foreseeable future."

Since every issue of public concern is inherently controversial, sustainable development continues to be debated. Forces promoting environmental protection, defending the rights of the poor, and promoting free markets have caused three conflicting worldviews to emerge; one emphasizes environmental protection and calls for regulations to protect nature from degradation; the second emphasizes free markets and claims that sustainability is a vague notion to be helpful, and markets are by their nature optimizers. And the third says that constructing a world system in equilibrium with nature requires the developed nations start contracting their economies to allow the developing ones to expand their economies in order to enable the world system to meet the basic needs of all peoples and avoid sudden collapse.

In 2005, the UN held a summit to study issues of development; the declaration of the summit refers to three interdependent and mutually reinforcing pillars of sustainable development: economic development, social development, and environmental protection.⁵

However, these pillars were largely treated as separate spheres of life; an issue that needs to be addressed to improve the chances of achieving sustainable development. The Legrand Group says that “In the field of sustainable development, there are many major challenges to be addressed. They require us to re-think our economy and our growth in favor of a society that is more economical in its use of raw materials and energy. Some of these challenges include climate change, energy consumption, threats to public health, poverty, social exclusion, management of natural resources, loss of biodiversity, and land use.”⁶

Robert Kates and his colleagues argue that “opponents of sustainable development attack from two different perspectives. While some view sustainable development as a top-down attempt by the United Nations to dictate how the people of the world should live their lives—and thus as a threat to individual freedoms and property rights: others view it as capitulation that implies development as usual, driven by the interests of big business that pays only lip service to social justice and the protection of nature.”⁷ In a study; *‘Our Common Journey: A Transition toward Sustainability,’* the Board on Sustainable Development of the U.S. National Academy of Sciences identified three major categories it claims need to be developed to realize sustainability; they are nature, life support systems, and community; in other words, economy, the environment and people.

I believe that the 2005 UN summit on development has clarified the issue of sustainability and made it easy to deal with. By identifying economic development, social development, and environmental protection as interdependent and mutually reinforcing pillars of sustainability, the report gives us a clear path to follow. While the Club of Rome report emphasized the economic dimension, the Brundtland Commission report added an environmental dimension; and the UN summit added social sustainability as a third dimension. I believe that the social dimension is the most important dimension of sustainability, particularly in these days.

Economic sustainability

Though the Brundtland Commission provided a clear definition of sustainable development, it could not answer questions related to how to achieve sustainability. No one in fact seems able to say with confidence how to reach a state of sustainability or what are the needs of future generations that we must consider. No one also knows how many people will be there at any time in the future; how much resources will be available at that time; or what the state of technology will be years from today. We also do not know how much progress we are making at this time, or when a state of sustainability is expected to be reached. Indeed, we do not know if we are moving closer to sustainable development or moving away from it. But despite the complicated nature of these questions, we cannot ignore them. Therefore, I shall try to answer some of these questions, and explain why sustainable development must be considered a global issue.

The Legrand Group report says that “The concept of sustainable development is based on a set of requirements. It must allow the basic needs of present and future generations to be fulfilled, such as access to water, education, health, employment, and the fight against hunger”⁸. The report argues further that development should aim to improve the quality of life, which involves easier access to medical care and social services and “respect for rights and freedoms and the promotion of new forms of renewable energy such as wind, solar, and geothermal power.”⁹ The report goes on to say that sustainable development involves narrowing the gaps between rich and poor countries, because these gaps, if maintained could cause violent conflicts, which by their nature lead to regression rather than development. It is clear that the Legrand Group views sustainability as a social process that covers the economic and social and environmental aspects of life. Nevertheless, this report, just like other reports, fails to provide a plan of action to reach sustainability. This is way we have today many conflicts in the world that threaten the lives of millions of people.

The first attempt to reach common understanding of sustainability issues began as negotiations between the rich and poor nations, with each suspecting the intentions of the other. While the poor nations viewed the rich nations’ repeated calls for the protection of the

environment as an attempt to deny them the right to grow their economies and develop; the rich nations viewed the poor nations' determination to grow their economies as a threat to the environment and its scarce natural resources. But since what is feasible today is unlikely to be feasible a year from now, sustainability should be viewed and treated as a global state in transition that describes a wishful state of nature and a desired way of living coexisting in harmony. National and global developments are evolving processes that transform all aspects of life, and involve all actors whose actions affect life, such as people, technology, culture and weather; they also involve actors affected by nature and human actions, such as water resources and the air we breathe.¹⁰

Despite all this talk about sustainable development and the environment, events that accompanied the development of China and India have changed the nature of most issues and the magnitudes of economic, social and environmental challenges we face. The rapid change that characterized economic and social transformation in China and India caused commitment to economic sustainability to be undermined. In the meantime, states in the West, with the exception of the United States, have accepted the science regarding the issue of air pollution and warming due to climate change and seem satisfied with what they are doing to meet both challenges. Though sustainability remains of interest to people involved in development, no one has a plan to achieve it, particularly environmental sustainability.

Environmental sustainability

The Brundtland Commission Report, emphasizing the interdependence between man and nature, stated that "The environment does not exist as a sphere separate from human actions, ambitions and needs, and therefore attempts to defend it in isolation from human concerns have given the very word "environment" a connotation of naivety in some political circles. The word "development" has also been narrowed by some into a very limited focus, along the lines of "what poor nations should do to become richer." But the "environment" is where we live; and development is what we all do in attempting to improve our lot within that abode. The two are inseparable."¹¹

In 2007, a report written by Joy Hecht for the U.S. Environmental Protection Agency stated, “Throughout the world, sustainability has become the common term for describing the objectives of public policy. At the same time, sustainability indicators have become a preferred tool for tracking the actions of public agencies,”¹² which means tracking how much progress is being made on the way to sustainability. But Hecht says, “When these indicators move in the right direction – if we even know what that is – does that really mean that our economy, our environment or our society is actually sustainable? Do we know how to define sustainability precisely enough to use it as a basis for assessing public policy decisions?”¹³ But instead of relying on common definitions and goals, states and UN agencies have developed indicators to gauge the progress they are supposedly making. But how can anyone measure, for example, the progress that sustainable human development is making when the quality of education varies from one country to another, and when cultural values and attitudes and ways of thinking are not taken into consideration.

Culture and Sustainability

Since the major goals of sustainable development is to put people first, the way to achieve this goal presents an obstacle to reaching an international consensus on sustainability. Different nations tend to view human rights differently; and needs and expectations of people vary greatly from nation to nation according to their cultures and levels of development. In fact, one nation’s needs could be another nation’s luxuries. Helen Clark, administrator of the United Nations Development Program, said in 2012, “If the way in which both rich and poor nations develop is destructive of the very ecosystems on which life on this planet depends, then the burden will fall disproportionately on the poorest and most vulnerable people who depend the most on healthy ecosystems for their survival and have the least means to adapt to the challenges brought by environmental degradation.”¹⁴

As national development agencies strive to achieve sustainable development and sustainable environment, they tend to treat sustainability as a domestic rather than a global endeavor. But the three categories of sustainability – economic, environment and social

sustainability - cannot be attained except at the global level, because many nations have access to non-renewable resources like water and natural gas to waste, and rivers and seas to pollute without giving much consideration to the needs and interests of other nations that depend on the same resources. In addition, the flood of immigrants from conflict-ridden poor states to the West cannot be stopped without stopping outside interference and convincing the United States to abandon its vicious policy of creating failed states everywhere. Poverty, political and economic corruption, and US intervention in the national affairs of many states have triggered one of the largest waves of immigration in recent history.

This migration reflects the social dimension of sustainability that has become a hotly debated issue in Europe and America, causing the social fabric of societies to be undermined, not only the ones that suffer poverty, war and conflict, but also Western societies in general. Therefore, fairness and reality dictate that sustainability must be treated as a global endeavor; and sacrifices needed to accomplish it and benefits generated by it should be shared by all nations. "In order to be sustainable, development must also be harmonious. At least a certain amount of social cohesion must exist on a planetary scale in order to create the conditions for the peace we need."¹⁵

As mentioned earlier, debate over issues of sustainable development led to defining the sustainability problem as how to manage three types of capital: economic, social and natural. However, the indigenous peoples of the world have argued successfully that sustainable development has four pillars, the fourth being cultural. *The Universal Declaration on Cultural Diversity*, issued by UNESCO in 2001, states, "Cultural diversity is as necessary for humankind as biodiversity is for nature. In this sense, it is the common heritage of humanity and should be recognized and affirmed for the benefit of present and future generations... [it is] one of the roots of development understood not simply in terms of economic growth, but also as a means to achieve a more satisfactory intellectual, emotional, moral and spiritual existence."¹⁶ But as production and consumption activities deplete our shared natural capital, cultural globalization undermines cultural capital as it deforms indigenous cultures. As a consequence,

globalization has reduced the capacity of all indigenous peoples and traditional cultures to contribute to our intellectual, emotional, moral and spiritual existence. Actually, indigenous peoples and traditional cultures hardly exist today to make a difference.

Intellectuals defending the rights of the poor and the underdeveloped nations to develop say that the developed nations need to reduce their rates of economic growth. According to one of these voices, on a planet where 20% of its population consumes 80% of its natural resources, the right term for this 20% ought to be sustainable de-growth, defined as “a smooth, voluntary and equitable downscaling of production and consumption that insure human well-being and ecological sustainability locally as well as globally on the short and long term.”¹⁷ Though this suggestion sounds rather fair, it eliminates the possibility of constructive dialogue between the rich and poor; it also ignores the rich’s responsibility to help improve the quality of life for the poor and lead the way toward sustainability. I believe that we do not need to even think about this controversial issue, because sustainability is possible without reducing the rates of economic growth or the incomes of the world’s rich. This issue will be discussed further in the next section.

Since the publishing of *The Limits to Growth* in 1972, people calling for the protection of the environment and others advocating free markets have called for reducing population growth rates to sustainable levels; they claim that such a reduction is necessary to preventing the human race from destroying the planetary support systems. But what is the population growth rate that is sustainable? No one seems to have a satisfactory answer. Today, in 2023, the world’s population growth rate has declined to 1.09%, with more than 25 countries are losing people. Since these countries include almost all European states, Russia, Japan, and China, with the United States not far behind, we can say that about 30% of the world’s population is shrinking, not growing.¹⁸ In the meantime, improving labor productivity and substituting knowledge for other factors of production have enabled us to support more people than ever before, therefore the need for reducing population growth rates has ended.

In fact, as technology advances and new tools and management systems are invented,

our ability to produce larger amounts of goods and services using the same amounts of inputs increases; it also enables us to produce the same amount of goods and services by using smaller amounts of inputs. Technology is also helping us to make all goods and services we produce better, and more durable, while reducing the cost of production in terms of time, money, and manpower. These facts make the question, not how to reduce population growth rates but how to reduce waste of food and minerals and narrow the income and wealth gaps between the rich and poor, nationally and globally.

As the world's corporate and political elite convened in Davos, Switzerland in January 2023, a report published by Oxfam International found that the global rich have captured nearly two-thirds of all the wealth generated since 2020. Oxfam shows that the top 1% of the world's people grabbed \$26 trillion or 63% of the \$42 trillion created in the previous 2 years, while the other 99% of the global population captured \$14 trillion or 37% only. Billionaires added around \$1.7 million to their net worth for every \$1 gained by a person in the bottom 90% of the world. According to Oxfam, billionaires' fortunes have grown by an average of \$2.7 billion per day since 2020. Meanwhile, nearly 2 billion workers across the globe saw inflation rise at a faster pace than their wages, resulting in a real pay cut that increased poverty, hunger, and other hardships worldwide.¹⁹

Nevertheless, the world's poor need more food to eat, the world's rich need to eat less and stop wasting food and other things, and corporations need to stop wasting human and natural resources by producing harmful products like cigarettes. This means that the culture of conspicuous consumption and corporate's behavior need to become less wasteful and more conserving. The Brundtland Report says, "Sustainable development involves more than growth. It requires a change in the content of growth, to make it less material- and energy-intensive and more equitable in its impact. These changes are required in all countries as part of a package of measures to maintain the stock of ecological capital, improve the distribution of income, and reduce the degree of vulnerability to economic crises."²⁰

In September 2000, 189 member states of the United Nations got together at the

Millennium Summit and adopted the Millennium Declaration, which emphasized the role of values in human life. The declaration stated, “We consider certain fundamental values to be essential to international relations in the 21st century.” These fundamental values include:

1. Freedom. Men and women have the right to live their lives and raise their children in dignity, free from hunger and the fear of violence, oppression or injustice. Democratic and participatory governance based on the will of the people best assures these rights.
2. Equality. No individual and no nation must be denied the opportunity to benefit from development. The equal rights and opportunities of women and men must be assured.
3. Solidarity. Global challenges must be managed in a way that distributes the costs and burdens fairly in accordance with basic principles of equity and social justice. Those who suffer or who benefit least deserve help from those who benefit most.
4. Tolerance. Human beings must respect one other. Differences within and between societies should be neither feared nor repressed but cherished as a precious asset of humanity. A culture of peace and dialogue among all civilizations should be promoted.
5. Respect for nature. Prudence must be shown in managing all living species and natural resources, in accordance with the precepts of sustainable development. Only in this way can the immeasurable riches provided to us by nature be preserved and passed to our descendants. The current unsustainable patterns of production and consumption must be changed in the interest of our future welfare and that of our descendants.”²¹

Looking at the values emphasized by the Millennium Declaration, especially in light of what is happening today in the world, we discover that neither value has been realized or honored. Freedom is suffering due to the revival of discrimination, racism, and religious sectarianism in almost all European states and America, as well as Asian, African, and Middle Eastern states. Consequently, no equality exists anywhere, even in America where women are paid less than men for performing the same tasks. As for solidarity, the rich and powerful often stand with each other to subjugate and exploit the weak and poor, while the weak and poor receive

neither the compassion they need nor the respect they deserve. Lack of tolerance is seen in dealing with most minorities like the queer community in most parts of the world. Tolerance, in my view, is a basic requirement for democracy to function properly. So in the absence of tolerance, democracy was transformed from a just system of governance to a den of thieves and corruption. The only value emphasized by the Millennium Declaration that seems to be gaining legitimacy is respect for nature.

Income Distribution and Poverty

According to the World Bank, for three decades, the number of people living in extreme poverty— defined as those who live on less than \$2.15 per person per day—was declining. But the trend was interrupted in 2020, when poverty rose due to the COVID-19 crisis. The number of people in extreme poverty rose by 70 million to more than 700 million people. The global extreme poverty rate reached 9.3%, up from 8.4% in 2019. In fact, the world’s poorest people bore the steepest costs of the pandemic; they also faced large setbacks in health and education which, if left unaddressed by policy action, will have lasting consequences for their lifetime income prospects. Rising food and energy prices—fueled in part by the war in Ukraine and climate shocks and conflict—have hindered a swift recovery.²²

The UN estimates that 71 million persons were pushed into extreme poverty in 2020. But before COVID-19 arrived, food insecurity was rising. In 2014, 23.2% of the population were affected by moderate or severe food insecurity. In 2018, that number rose to 26.4%. Moreover, the pandemic hit small-scale food producers in developing countries very hard, putting millions of people at risk of going hungry, which means that food insecurity continues to rise. Moreover, COVID-19 disrupted the education of 1 billion students.²³

According to Statista, during the last few decades, worldwide poverty declined due primarily to the reduction of poverty in East Asia, where the economic growth of China has lifted millions out of poverty. Despite these positive developments, in some countries, mainly in Sub-Saharan Africa, millions do not have enough income to feed their families. Moreover,

rising inflation rates around the world have pushed more people into poverty. This means that the world faces significant challenges to reduce poverty in the years to come.²⁴

Sustainable development, therefore, involves the simultaneous pursuit of environmental quality, economic prosperity, human development, social equity, freedom, human values, and cultural diversity. If pursued as such, sustainable development would be able to protect the environment, enable all people to meet their basic needs, achieve social justice and peace, and liberate women and men from political and cultural chains that undermine their potentials. It should also undermine the capacity of corporations to use the sustainability issue to protect their interests while preventing poor nations from developing their national economies. Therefore, the way to achieve sustainability is to integrate economic, cultural, environmental, and social policies, including the development of human resources.

There is no doubt that sustainability efforts have improved the conditions of many lakes, rivers and forests around the world, which means that 'environmental sustainability seems to be working. However, other forms of sustainability appear to have failed to make meaningful progress. After some 50 years of publishing "The Limits to Growth' and 35 years of issuing the Brundtland Commission Report, indicators suggest that the world is not on the right track to overall sustainable development. According to reports issued by the United Nations agencies, the World Bank and several nongovernmental organizations, world poverty is still very high and increasing in many parts of the world, human rights in general, and women's rights in particular are being violated in many parts of the world, and illiteracy rates are high and cultural illiteracy and cultural ghettos are spreading in the rich and poor countries.

Since all these issues are global, the only development that could be sustainable is global development that makes national changes an integral part of a global grand design. And because every major change touches the life of every human being, sustainable development cannot succeed unless we understand it and manage it as a participatory process. Therefore, every member of the world community must feel that he and she has a stake in change, and a vital role to play in making change, and that the benefits of sustainability are shared by all.

The Chinese experience proves that public projects that fail to get people involved in designing them are more likely to anger people and fail. The demonstrations which Shanghai witnessed in 2012 suggest that economic growth that damages the environment degrades rather than upgrades the quality of life and makes money worthless.

Attaining Sustainability

Concerned people of the world argue correctly that meeting the needs of future generations depends on the decisions we make today to balance our social, economic, cultural and environmental objectives. But the question of how to balance such variables is hard to answer. For example, what is the rate of economic growth that is compatible with land use and can meet peoples' present needs while protecting the ecosystem? Since no state or organization can determine the sought after rate, we have to assume certain economic growth rates based on our historical experience as objectives, and devise plans to achieve and maintain such rates. Again, this has to be done at the global level because interdependence and shared natural resources make national policies inadequate, if not counterproductive.

Robert Kates and his colleagues say that much of what is described as sustainable development is negotiations in which workable compromises are found that address the environmental, economic, and human development objectives of competing interest groups. But negotiations that enabled the wealthy and the poor to reach common grounds through the United Nations Conference on Environment and Development should not be considered as having achieved what is needed to attain sustainable development; they are attempts to reconcile the different aspirations of the poor with the rich to preserve the basic life support systems of the planet.²⁵

To build a theory of sustainable development, we need first to agree on a formula that divides nations into groups according to certain indicators, and second assign a range of economic growth rates for each group. These ranges, while prescribing an upper limit for members of each group, they limit the overall growth rate of the world economy to about 3%

annually. Economic rates would be based on each group's levels of development and needs. Rich nations that enjoy high levels of per capita incomes and low population growth rates can live comfortably with low economic growth rates. For example, Germany seems to do fine with about 1% annual growth rate. In contrast, poor nations that have low per capita incomes and relatively high population growth rates need higher rates of growth. Nevertheless, these nations need to reduce their population growth rates as they develop; otherwise, their standards of living would not rise fast enough to improve the quality of their lives. Nations that are neither rich nor poor need moderate economic growth rates and probably lower population growth rates.

All nations, however, need to transform their cultures to move away from conspicuous consumption because it wastes resources and is governed by the law of 'diminishing returns.' Advocates of less conspicuous consumption argue correctly "that beyond certain thresholds, ever-increasing consumption does not increase subjective levels of happiness, satisfaction, or health. Rather, it often has precisely the opposite effect."²⁶ People living in societies that view conspicuous consumption as a sign of affluence tend to have health problems such as high diabetes and obesity rates. As a result, they spend more money fighting self-inflicted diseases than maintaining healthy lifestyles.

Being a global issue, sustainable development must be viewed and pursued as a collective human goal. Nations need to agree on the basic services that all people should have and join together to ensure that such services are provided wherever needed. Since equity requires that income and wealth gaps between the rich and poor be narrowed, states need to specify levels of income disparity as targets to be reached within a specified period of time. And to achieve such goals, people need to be aware that all nations need to transform their cultures. States need also to agree on an upper limit of economic growth rate for each group of nations based on their levels of development and quality of life. Accordingly, it is suggested that nations be divided into four groups: the most developed states that have begun to experience living in the knowledge age; the industrialized states in the West and East; the developing

nations that are about to enter the industrial age; and the less developed nations. Five basic indicators are suggested as markers to determine the group to which each state belongs, and thus the range of economic growth rates it should try to attain and sustain.

1. The overall state of the economy.
2. Per capita income.
3. Rate of poverty.
4. Illiteracy rate; and
5. Population growth rate.

It is further suggested that the upper limits of economic growth rates for these groups be set at 2, 3, 4 and 6%, respectively. However, targets should be viewed as averages over specified periods of time, say 5 or 6 years, and should be reevaluated periodically. Based on these assumptions, the average growth rate of the global economy would be around 3% and 3.5% annually, not a difficult rate to sustain. In fact, continued improvement in the overall state of technology, the unstoppable stream of scientific discoveries, and replacing knowledge for the basic factors of production are capable by themselves of achieving the desired growth rates without utilizing more natural or human resources. However, there is a need to enable poor nations to have access, at affordable cost, to the new technologies and scientific discoveries related to raising the productivity of land, labor and machines. There is also a need to ensure that technology is employed to promote peace and improve the quality of life, not to encourage war and destroy human and animal life and harm the environment.

In the larger scheme of trying to achieve sustainable global development, the United States represents an obstacle; the American culture of conspicuous consumption, and tax loopholes contribute to spreading poverty and fostering an ever widening income and wealth gaps in society. In addition, spending some \$1 trillion annually on security matters hinders our ability to reach sustainable development. The United States, therefore, needs to eliminate tax loopholes; raise taxes on the rich and super-rich; rebuild the middle class as suggested in the next section; reduce spending on the military and security matters until total spending on

security is equal to 3% of GDP or less. America also needs to incorporate teaching the merits of saving and investing and reducing consumption in the curricula of all school. The current American economic growth model based on conspicuous consumption and military spending is unrealistic and harmful; it wastes natural and human resources; promotes war; encourages greed and envy; and pollutes poor people's cultures and minds. In addition, the United States needs to allocate an annual budget for peacemaking and peacekeeping; guns kill people and end life; they do not save people or prolong life. Therefore, assuming that America seeks global peace and tranquility is the wrong assumption at this time.

Looking back at our shared human experience in older times, I found that we were able to achieve sustainability by maintaining balance between three factors; population, natural resources, and technology; though culture is important to achieving and maintaining such a balance, it remained remarkably stable throughout the tribal and agricultural ages which lasted thousands of years. During these years, neither the environment nor the ecosystem were exposed to substantial damage. But as society entered the transitional period to the industrial age in 15th century, the old balance, and the means to sustain it, were disrupted. Populations grew faster, technology improved gradually, industrialization spread, cultures changed greatly, consumption increased substantially, and the utilization rate of natural resources accelerated. Consequently, the industrial society was able to produce more, consume more, and colonizes many countries. But in the process of achieving these objectives, industrialization created many problems such as environmental degradation, air pollution, a population explosion, widespread poverty and war, particularly in poor countries.

By exploiting the natural resources of the colonized peoples, the West undermined the capacity of the colonized nations to develop their economies, transform their societies, and improve the quality of their lives, while consumerism caused their cultures to be deformed beyond recognition. Meanwhile, a new capitalist culture that sanctioned exploitation, racial segregation, greed and conspicuous consumerism emerged, causing the income, wealth, and educational gaps within and between societies to widen gradually and become structural. As

a result, the balance between resources, population, culture and technology ended, causing sustainable development to end as well. Thus, to reach sustainability at the national and global levels, the old balance need to be reconstructed, taking into consideration the need to incorporate environmental protection and adapt all components to suit our changing times.

While no one is able to determine what rate of economic growth is sustainable, we know that some natural resources are increasing and many more are being depleted. We also know that the state of technology is improving all the time; and knowledge is fast becoming a good substitute for the basic factors of production. Based on these facts, we can say that by harnessing the potentialities of science and technology, and developing our human and cultural capital, we should be able to reach the desired economic growth targets and achieve sustainable development. However, to reach these targets before competition over rare natural resource causes an overwhelming global war, the world needs to set five targets and try to reach them within the coming two decades.

1. A fair distribution of income among social classes and nations.
2. Reducing the world's annual population growth rate to near 1%.
3. Transforming world cultures to be more peaceful and amenable to change.
4. Reducing the annual military spending by all nations, especially the great and regional powers, to 2% of their GDPs; and
5. Liberating all nations from the public debt burden.

The first objective has to be sought by working at the national and international levels at the same time. All states need to close tax loopholes while raising tax rates on the rich; increase minimum wages and use the new tax revenues to improve the quality of life of poor citizens. States should also provide healthcare for all citizens and guarantee equal educational and work opportunities. In addition, states need to arrest the deteriorating position of the middle class and enact new regulations to enable it to grow in size through education, equality of opportunity, and financially rewarding jobs. Production relations need also to be changed to give workers and employees a voice in managing the companies they work for and help the

middle class survive the free markets' tribulations that include worshiping money and greed, ignoring fairness, and avoiding social responsibility.

To strengthen the middle class and ensure its revival and permanence, it is suggested that public corporations pay 25% of their employees' salaries in company stock, using the stock market to determine the price of shares at the end of each pay period. Since old employees are accustomed to getting paid in cash, the stock payment should be introduced gradually over two years. It is further suggested that employees be required to hold the shares they receive as partial payment for at least two years before they could sell them. After 3 to 4 years, almost every employee of a public corporation will have at least 25% of his annual salary invested in his company, causing an active and rather permanent block of shareholders to gradually evolve. Creating such a block of shareholders whose members care about the financial health of their companies and the way they are managed is badly needed to control the spiraling compensation packages of managers, and limit their annual bonuses, while holding them accountable for their deeds. The adoption of this proposal would create fairly large groups of people tied to productive economic processes, helps the middle class to strengthen its social role, restore corporate social responsibility, and institute stockholders' oversight.²⁷

The international community of states, meanwhile, needs to develop a new economic world order to contain the current trend of enriching the rich and impoverishing the poor, and ensure that national policies and international treaties of common markets do not give some states substantial advantages over others. As for the transformation of cultures in poor states, it has to come through the launching of national campaigns to educate all children and empower women, in conjunction with an economic transformation process whose aim is to revive national economies and achieve sustainable development.

While citizens of the Third World need to change their attitudes toward time, work, life, material gain, and the environment, all people in the world need to transform their cultures to consume less, stop smoking, stay healthy, protect the environment, and end discrimination

against others. A sustained international campaign, similar to the anti-smoking, social awareness campaign, must be launched by the WHO (World Health Organization) to explain the damage conspicuous consumption causes to people's health and the environment, and how it depletes natural resources, leaving little for future generations to meet their needs. To ensure success, WHO should make every effort to guarantee the cooperation of the national and international media, the major Internet companies, and social media. In addition, all nations should reduce spending on arms and the armed forces and promote a culture of peace instead of a culture of war and intimidation. The great powers in particular need to concentrate on solving national and regional conflicts rather than perpetuating conflicts and using them as tools to manage relations with each other at the expense of the world's poor.

As for liberating all rich and poor nations from the public debt burden, a visionary plan was articulated and published in my book, *The Global Debt Crisis and its Socioeconomic Implications* to deal with this problem (Palgrave Macmillan, 2018). The plan is designed to help everyone and hurt no one; it does not ask the rich to sacrifice any portion of their wealth, while guaranteeing lenders the money owed to them. And by saving the interest that states are required to pay on their debts, it gives all states additional income to help college students and the poor, improve schools, provide healthcare for everyone, and enhance the quality of life for all citizens of the world.

As mentioned earlier, a balance between population, natural resources, technology and culture was able in the past to attain and maintain sustainability for countless generations. Though the same old balance is needed today to achieve sustainability, all components have to be considered global issues due to the globalization of economies, cultures and security matters. And while we do not need to worry about the state of technology anymore, because it continues to improve, the other components, particularly culture, need special attention. Populations and corporations and cultures affect the state of natural resources, the levels of consumption, and the degree of damage caused to environments. Since population growth rates are declining, the rich and economically advanced states should reduce their economic

growth rates to preserve natural resources. And as the state of living of the poor in rich nations improves, the rich nations should increase aid to poorer nations to help them speed up the process of sociocultural and socioeconomic transformation. If the plan outlined above were to be fully implemented as of 2023, global sustainable development would most likely be reached by 2050, and a new healthier, more peaceful world would become a reality for all to love and enjoy living in.

Technology needs to be directed toward serving peace and justice, developing new sources of renewable energy, facilitating better education, and creating small industries to enable rural communities to join the developed worlds of industry and knowledge. Cultures need to be transformed to enable people to view time and work and material gain as sources of pleasure and social recognition and see a cleaner environment as a prerequisite for good life and longevity. And while deemphasizing consumption, we need to emphasize and reward saving and investing. All of this can be accomplished by transforming educational systems and eliminating both traditional and cultural illiteracy. This simply means that sustainable human development is a key to achieving all facets of sustainability and improving the chances of creating a peaceful and more harmonious world for all.

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