

INTRODUCTION TO SUSTAINABLE DEVELOPMENT

Sachs, J.D. (2015). *The Age of Sustainable Development*. New York: Columbia University Press. Pp.1-7, 42-44.

Sustainable Development as an Analytical and Normative Concept

Sustainable development is a central concept for our age. It is both a way of understanding the world and a method for solving global problems. Sustainable Development Goals (SDGs) will guide the world's economic diplomacy in the coming generation. This book offers you an introduction to this fascinating and vital field of thought and action.

Our starting point is our crowded planet. There are now 7.2 billion people [as of 2015] on the planet, roughly 9 times the 800 million people estimated to have lived in 1750, at the start of the Industrial Revolution. The world population continues to rise rapidly, by around 75 million people per year. Soon enough there will be 8 billion by the 2020s, and perhaps 9 billion by the early 2040s (Sustainable Development Solutions Network [SDSN] 2013a, 2, 5).

[...]

What we know is that the world economy is vast, growing rapidly (by 3-4 percent per year in scale), and highly unequal in the distribution of income within countries and between countries. Ours is a world of fabulous wealth and extreme poverty: billions of people enjoy longevity and good health unimaginable in previous generations, yet at least 1 billion people live in such abject poverty that they struggle for mere survival every day. The poorest of the poor face the daily life-and-death challenges of insufficient nutrition, lack of health care, unsafe shelter, and the lack of safe drinking water and sanitation.

The world economy is not only

remarkably unequal but also remarkably threatening to Earth itself. Like all living species, humanity depends on nature for food and water, materials for survival, and safety from dire environmental threats, such as epidemics and natural catastrophes. Yet for a species that depends on the beneficence of nature, or on what the scientists call "environmental services," we are doing a poor job of protecting the physical basis of our very survival! The gigantic world economy is creating a gigantic environmental crisis, one that threatens the lives and wellbeing of billions of people and the survival of millions of other species on the planet, if not our own.

The environmental threats, we shall learn, are arising on several fronts. Humanity is changing Earth's climate, the availability of fresh water, the oceans' chemistry, and the habitats of other species. These impacts are now so large that Earth itself is undergoing unmistakable changes in the functioning of key processes - such as the cycles of water, nitrogen, and carbon - upon which life depends. We don't know the precise scaling, timing, and implications of these changes, but we do know enough to understand that they are extremely dangerous and unprecedented in the span of humanity's 10,000 years of civilization.

Thus we arrive at **sustainable development**. As an intellectual pursuit, sustainable development tries to make sense of the interactions of three complex systems: the world **economy**, the global **society**, and the Earth's **physical environment**. How does an economy of 7.2 billion people and \$90 trillion gross

world output change over time? What causes economic growth? Why does poverty persist? What happens when billions of people are suddenly interconnected through markets, technology, finance, and social networks? How does a global society of such inequality of income, wealth, and power function? Can the poor escape their fate? Can human trust and sympathy surmount the divisions of class and power? And what happens when the world economy is on a collision course with the physical environment? Is there a way to change course, a way to combine economic development with environmental sustainability?

Sustainable development is also a normative outlook on the world, meaning that it recommends a set of *goals* to which the world should aspire. The world's nations will adopt SDGs precisely to help guide the future course of economic and social development on the planet. In this normative (or ethical) sense, sustainable development calls for a world in which economic progress is widespread, extreme poverty is eliminated, social trust is encouraged through policies that strengthen the community, and the environment is protected from human-induced degradation. Notice that sustainable development recommends a holistic framework, in which society aims for economic, social, and environmental goals. Sometimes the following shorthand is used: SDGs call for *socially inclusive and environmentally sustainable economic growth*.

To achieve the economic, social, and environmental objectives of the SDGs, a fourth objective must also be achieved:

good governance. Governments must carry out many core functions to enable societies to prosper. Among these core functions of government are the provision of social services such as health care and education; the provision of infrastructure such as roads, ports, and power; the protection of individuals from crime and violence, the promotion of basic science and new technologies, and the implementation of regulations to protect the environment. Of course, this list is just a brief subset of what people around the world hope for from their governments. In fact, all too often they get the reverse: corruption, war, and an absence of public services. In our world today, good governance cannot refer only to governments. The world's multinational companies are often the most powerful actors. Our wellbeing depends on these powerful companies obeying the law, respecting the natural environment, and helping the communities in which they operate, especially to help eradicate extreme poverty. Yet as with governments, reality is often the reverse. Multinational companies are often the agents of public corruption, bribing officials to bend regulations or tax policies in their favor and engaging in tax evasion, money laundering, and reckless environmental damage.

Thus the normative side of sustainable development envisions four basic objectives of a good society: economic prosperity; social inclusion and cohesion; environmental sustainability, and good governance by major social actors, including governments and business. It's a lot to ask for, and there is no shortage of challenges to achieving sustainable development in practice. Yet the stakes are high. Achieving sustainable development on

our crowded, unequal, and degraded planet is the most important challenge facing our generation. The SDGs must be the compass, the lodestar, for the future development of the planet during the period 2015 to mid-century.

Brief history of the concept

The term "sustainable" as applied to ecosystems goes back a long way. Fisheries managers, for example, have long used the concept of the "maximum sustainable yield" to denote the maximum fish catch per year consistent with a stable fish population. In 1972, at the UN Conference on the Human Environment in Stockholm, the challenge of maintaining sustainability in the context of economic growth and development was first brought to the global forefront. That same year, the blockbuster book *Limits to Growth*, published by the Club of Rome, argued forcefully that continued economic growth on the prevailing economic patterns would collide with the Earth's finite resources, leading to a future overshoot and collapse.

While 1972 put the challenge of sustainable development onto the global stage, the phrase itself was introduced eight years later, in an influential publication entitled *World Conservation Strategy: Living Resource Conservation for Sustainable Development* (1980). This pathbreaking publication noted in its foreword that

human beings, in their quest for economic development and enjoyment of the riches of nature, must come to terms with the reality of resource limitation and the carrying capacity of ecosystems, and must take account of the needs of future generations.

The purpose of the document was to "help advance the achievement of

sustainable development through the conservation of living resources" (iv).

The phrase was then adopted and popularized in the report of the United Nations Commission on Environment and Development, known widely by the name of its chairwoman, Gro Harlem Brundtland. The Brundtland Commission gave a classic definition of the concept of sustainable development, one that was used for the next twenty-five years:

Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Brundtland 1987, 41).

This "intergenerational" concept of sustainable development was widely adopted, including at the Rio Earth Summit in 1992. One of the key principles of the Rio Declaration was that "development today must not threaten the needs of present and future generations."

Over time, however, the definition of sustainable development evolved into a more practical approach, focusing less on intergenerational needs and more on the holistic approach linking economic development, social inclusion, and environmental sustainability. In 2002, at the UN World Summit on Sustainable Development (WSSD) in Johannesburg, the WSSD Plan of Implementation spoke of "the integration of the three components of sustainable development - economic development, social development and environmental protection - as interdependent and mutually reinforcing pillars" (World Summit on Sustainable Development 2002, 2). The concept of intergenerational justice remains but is now secondary to the emphasis on holistic development that embraces economic,

social, and environmental objectives.

This three-part vision of sustainable development was again emphasized on the twentieth anniversary of the Rio Summit. In the final outcome document for the RiO+20 Summit ("The Future We Want"), the aim of sustainable development was put this way:

We also reaffirm the need to achieve sustainable development by: promoting sustained, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living; fostering equitable social development and inclusion; and promoting integrated and sustainable management of natural resources and ecosystems that supports inter alia economic, social and human development while facilitating ecosystem conservation, regeneration and restoration and resilience in the face of new and emerging challenges. (UN General Assembly 2012, para. 4)

The SDGs called for in the same outcome document, are to be based on the three - part framework. Here is how the SDGs were announced in "The Future We Want":

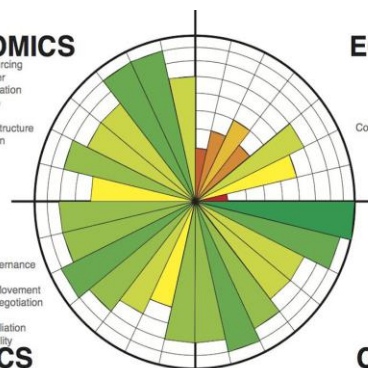
[The SDGs] should address and incorporate in a balanced way all three dimensions of sustainable development and their inter-linkages ... We also underscore that SDGs should be action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries while taking into account different national realities, capacities and levels of development and respecting national policies and priorities ... Governments should drive implementation [of the SDGs] with the active involvement of all relevant stakeholders, as appropriate. (UN General Assembly 2012, paras. 246-7)

[...]



ECONOMICS

Production & Resourcing
Exchange & Transfer
Accounting & Regulation
Consumption & Use
Labour & Welfare
Technology & Infrastructure
Wealth & Distribution



ECOLOGY

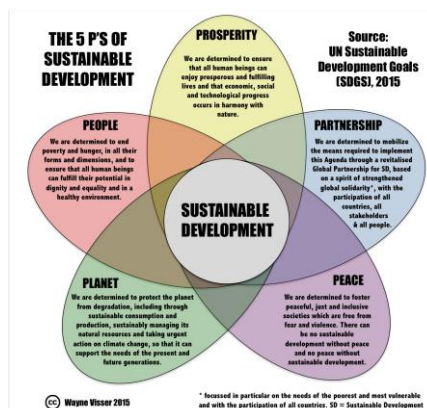
Materials & Energy
Water & Air
Flora & Fauna
Habitat & Food
Place & Space
Constructions & Settlements
Emission & Waste

POLITICS

Organization & Governance
Law & Justice
Communication & Movement
Representation & Negotiation
Security & Accord
Dialogue & Reconciliation
Ethics & Accountability

CULTURE

Engagement & Identity
Recreation & Creativity
Memory & Projection
Belief & Meaning
Gender & Generations
Enquiry & Learning
Health & Wellbeing



Pathways to Sustainable Development

The first part of sustainable development - the analytical part - is to understand the interlinkages of the economy, society, environment, and politics. The second part of sustainable development - the normative part - is to do something about the dangers we face, to set SDGs, and to achieve them! Our overarching goal should be to find a global path, made up of local and national paths, in which the world promotes inclusive and sustainable economic development, thereby combining the economic, social, and environmental objectives. This can only be accomplished if a fourth objective - good governance of both governments and businesses - is also achieved. Good governance, I shall repeatedly emphasize, means many things. It applies not only to government but also to business. It means that both the public sector (government) and the private sector (business) operate according to the rule of law, with accountability, transparency, responsiveness to the needs of stakeholders, and with the active engagement of the public on critical issues such as land use, pollution, and the fairness and honesty of political and business practices.

In the coming chapters, I will constantly refer to a comparison. On the one hand, we will consider the implications of humanity continuing on the current course. For example, suppose that the world economy continues as today to be run mainly on fossil fuels, so that the CO₂ concentration in the atmosphere continues to rise rapidly. Or suppose that farmers continue to overuse groundwater so much that the aquifers are depleted. These scenarios will be called *business as usual*, or BAU for short. Such

scenarios will be compared with a dramatic change of course for humanity, one in which the world quickly adopts new technologies (e.g., solar power to replace coal-fired electricity generation or more efficient water use to avoid depleting the aquifers). The alternative path, one that aims not only for economic growth but also for social inclusion and environmental sustainability, will be called the *sustainable development* path, or SD for short.

We will examine and contrast the BAU and SD trajectories. If we continue with BAU, what would happen? Certainly there would continue to be many kinds of progress. Science and technology won't stand still. The poor might benefit from advances in ICTs, such as access to higher education through free, online learning. Poverty might continue to fall in many places. The rich might continue to become richer for another decade or two. Yet eventually, the negative consequences of rising inequality and rising environmental destruction will come to dominate the positive tendencies. Progress will peak. Calamities, both social and environmental, will start to dominate. More than 200 years of progress could be choked off, and even sacrificed to war.

What about SDGs? Can we find alternatives to fossil fuels, groundwater, pasturelands, and the like, to meet human needs without destroying the physical environment? Some of the key solutions are likely to be more expensive in the short term, such as buildings specially designed to use less energy for heating through better design, insulation, materials, and overall systems strategy, or electric vehicles with battery power that are still expensive

compared with normal gas-guzzling internal combustion engines. [...]

The essence of sustainable development in practice is *scientifically and morally based problem solving*. We indeed have a lot of problems. We have continued life-threatening poverty in the midst of plenty. We have built up inequalities of wealth and poverty, and we have deployed technology systems that are now crossing planetary boundaries. We are going to need a coordinated global effort in a focused and relatively short period of time, a matter of decades rather than centuries, to move from the BAU to the SD trajectory. In order to accomplish the SDGs, every part of the world will have to be involved in problem solving, in brainstorming, and in determining new and creative ways to ensure inclusive and sustainable growth. This book aims to contribute to that problem solving. We will describe the challenges, identify the best candidates for SDGs, and determine how those SDGs can in fact be achieved.

*Did you know of the **17 Sustainable Development Millennium Goals (MDGs)** set by the UN and agreed on by close to 200 countries in 2015?*

<https://www.un.org/sustainabledevelopment/blog/2015/12/sustainable-development-goals-kick-off-with-start-of-new-year/>

*Do you know about the 2015 film **"Tomorrow"** ("Demain")? It will serve as a guideline for this course.*

<https://www.demain-lefilm.com/en/film>

Welcome to
Global Challenge...

... and, solutions!