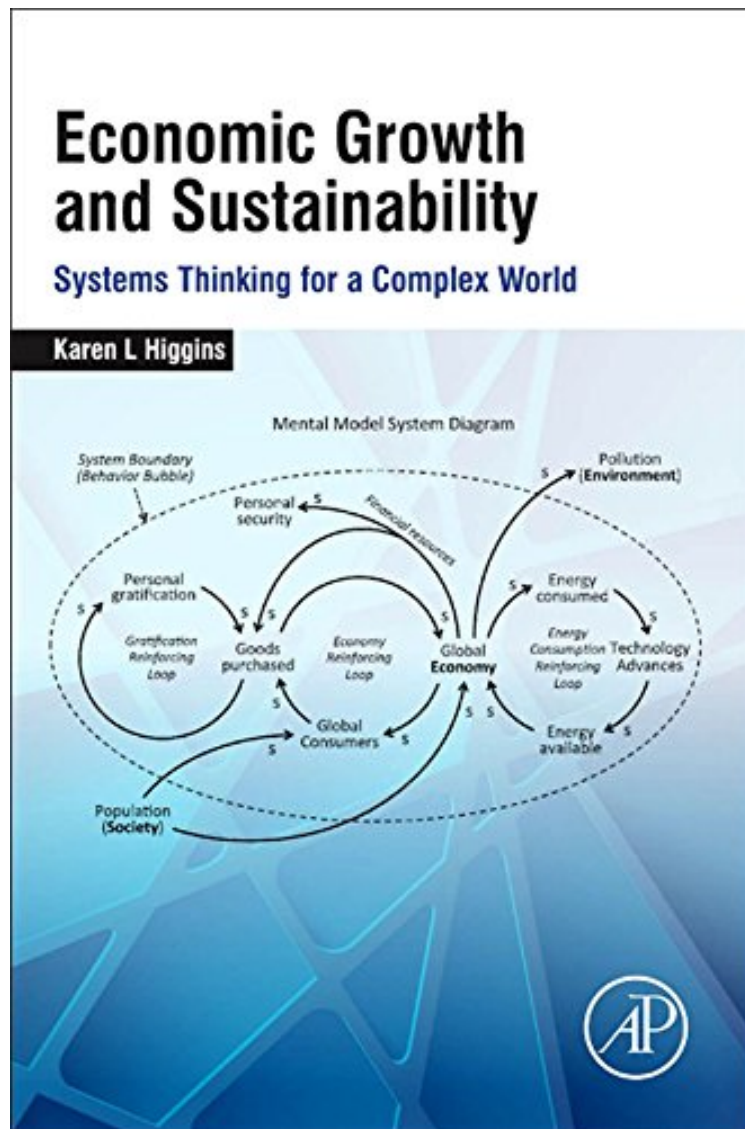


# Economic Growth and Sustainability: Systems Thinking for a Complex World

Karen L. Higgins

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**Karen L. Higgins : Economic Growth and Sustainability: Systems Thinking for a Complex World** before purchasing it in order to gauge whether or not it would be worth my time, and all praised Economic Growth and Sustainability: Systems Thinking for a Complex World:

2 of 2 people found the following review helpful. An eloquent and important discussion of the uncertain future survival of mankind By Willard Webster Wow! What a fantastic and timely book Dr. Karen Higgins has written for us! This book is a must-read for anyone who has pondered the future of mankind. Dr. Higgins has really hit the nail on the

head with her eloquent discussion of a subject that has concerned me most of my adult life, i.e., the survival of mankind in a resource-limited world. As mankind continues on its eternal flight through space and time on its spaceship called "Earth," it has become abundantly clear to many of the passengers on board, that spaceship Earth is running low on the resources needed to sustain a quality of life, or even life at all, for its passengers. Unfortunately, unlike our present day astronauts, we cannot order a resupply ship to bring the needed resources to the spaceship. The carrying capacity of the earth has been estimated to be 2 billion people. Our population currently stands at near 7 billion and is estimated to increase to 9 billion by 2030. The basic problem is that there are too many passengers using up the available limited resources at too high a rate. The only recourse is for the passengers is to work together for the benefit of all by reducing their overpopulation and greatly curtailing their ever-increasing plunder of the earth's remaining non-renewable resources. The complexity of this life-saving task is immense because of all the many positively and negatively interacting economic processes involved, including unintended consequences, that drive mankind's progress. Economies that are based and measured only on "growth" will use up resources at an ever-increasing rate. In the end, unbridled capitalism is self-defeating in a resource-limited world. Dr. Higgins brings together all the most recent data and facts to support her discussion the immensity, complexity, and criticality of the economic issues involved. She then provides a readily understandable "system engineering" framework from which to highlight and understand these competing economic issues and their interactions. She also provides several actionable approaches to the solution to the problem. Unfortunately, there are no quick and easy solutions. However, the good news is that it is not too late to correct the dire survival situation that mankind faces. If we begin to take real action now, a solution should be achievable, but it will likely take several generations of mankind to achieve a stable, balanced, and maintainable stewardship of the earth's resources that will allow mankind survive far into the future. It is critical that we all realize and appreciate that there is a real threat to mankind's future existence on earth. As has been said by others, "We have met the enemy, and the enemy is us." Critical to finding a successful solution of the problem is the need for a universal public awareness and appreciation that there is a problem, and the importance to the survival of mankind of solving the problem. Toward that end, I recommend that Dr. Higgins' book be read by everyone; that it be used as a textbook for a course for all high school age students; and that you encourage your friends, associates, and progeny to read this book. I thank Dr. Higgins for creating this very informative and important treatise on the uncertain future survival of mankind.

1 of 1 people found the following review helpful. it would make the perfect textbook for any teacher of this subject

By terrog This is a very, very well written book on a serious and frustratingly difficult problem. The "tragedy of the commons" model was particularly enlightening as applied at various levels of responsibility and action, reminding us the importance of both personal and collective action. Furthermore, the application of a systems thinking model to such a complex issue provided a "picture" of the different problem aspects and their interrelationships to sustainability. The impact of our current economic model (increasing consumerism) on sustainability would be as valuable a topic within our high schools and colleges as any core subject. And given the research, the organization and readability of Dr. Higgins book, it would make the perfect textbook for any teacher of this subject. At the same time, it is a book that behooves us all to understand, such that we might influence our policy makers at all levels, while at the same time taking appropriate personal actions.

1 of 1 people found the following review helpful. Ask your elected government representatives to read this!

By Geoffrey Dean I'm writing to support and agree with the three reviews posted previous to mine - Webster's, Scofield's and terrog's. If their reviews hadn't already been posted, I would have tried to say the same things they have said already - that this book is a great summary and guide to how we should be thinking (and feeling!) about our world, and what we need to be doing to ensure it remains liveable for all of us. Let me just add that the range of sources Dr Higgins draws from is terrific - from Jay Forrester, Donella and Dennis Meadows, John Sterman, and Peter Senge to Fritjof Capra, Jared Diamond, BP, the CIA, the IPCC, Thomas Huxley, the National Petroleum Council, James Lovelock, Lester Brown, and more - and with website links to most references. Put this book together with Donella's Thinking in Systems, and you've got a two-semester course in how to achieve a sustainable world. I wish this book could be required reading for all our political leaders!

How to sustain our world for future generations has perplexed us for centuries. We have reached a crossroads: we may choose the rocky path of responsibility or continue on the paved road of excess that promises hardship for our progeny. Independent efforts to resolve isolated issues are inadequate. Different from these efforts and from other books on the topic, this book uses systems thinking to understand the dominant forces that are shaping our hope for sustainability. It first describes a mental model - the bubble that holds our beliefs - that emerges from preponderant world views and explains current global trends. The model emphasizes economic growth and drives behavior toward short-term and self-motivated outcomes that thwart sustainability. The book then weaves statistical trends into a system diagram and shows how the economic, environmental, and societal contributors of sustainability interact. From this holistic perspective, it finds leverage points where actions can be most effective and combines eight areas of intervention into an integrated plan. By emphasizing both individual and collective actions, it addresses the conundrum of how to blend human nature with sustainability. Finally, it identifies primary three lessons we can learn

by applying systems thinking to sustainability. Its metaphor-rich and accessible style makes the complex topic approachable and allows the reader to appreciate the intricate balance required to sustain life on Earth. Highlights the application of system thinking in economics. Identifies systemic leveraging actions for achieving sustainability. Outlines a comprehensive and integrated plan for achieving sustainable stewardship in the future.

"There are many books on systems thinking and many on sustainability BUT none to my knowledge that brings them together. This book brings these two topics together in a unique and refreshing manner." --David Sundaram, The University of Auckland "Karen Higgins makes use of system thinking to explain the many linkages and interactions within a globally needed sustainable development. Reflecting her explanation about environmental damage, economy and society (mainly caused by growth) with causal loop diagrams and illustrative examples without losing the scientific background makes the book a must to read. I'll look forward to using the book in class." -- Reneacute; Scheumann, Technische Universitauml;t Berlin "The author analyses the challenges posed by the sustainability concept from a new perspective. A lot of literature has been written on sustainability, but this book shows an innovative path to reach a sustainable development by 'blending the two faces of happiness: instant gratification vs. sustainable well-being.'" -- Marzia Traverso, Technische Universitauml;t Berlin

**From the Back Cover** How to sustain our world for future generations has perplexed us for centuries. We have reached a crossroads: we may choose the rocky path of responsibility or continue on the paved road of excess that promises hardship for our progeny. Independent efforts to resolve isolated issues are inadequate. Different from these efforts and from other books on the topic, this book uses systems thinking to understand the dominant forces that are shaping our hope for sustainability. It first describes a mental model - the bubble that holds our beliefs - that emerges from preponderant world views and explains current global trends. The model emphasizes economic growth and drives behavior toward short-term and self-motivated outcomes that thwart sustainability. The book then weaves statistical trends into a system diagram and shows how the economic, environmental, and societal contributors of sustainability interact. From this holistic perspective, it finds leverage points where actions can be most effective and combines eight areas of intervention into an integrated plan. By emphasizing both individual and collective actions, it addresses the conundrum of how to blend human nature with sustainability. Finally, it identifies primary three lessons we can learn by applying systems thinking to sustainability. Its metaphor-rich and accessible style makes the complex topic approachable and allows the reader to appreciate the intricate balance required to sustain life on Earth.

**About the Author** Dr. Karen Higgins has a B.S. in Mathematics, M.S. in Electrical Engineering, and an MBA and PhD in Executive Management. She has extensive experience in executive leadership and in leading research and engineering teams. Throughout her 32-year career with the Naval Air Warfare Center, Weapons Division at China Lake and Pt. Mugu, California she held technical, functional, project and executive management positions for efforts that integrate state-of-the-art and commonly-used weapons systems onto some of the newest jet fighter aircraft. As a member of the Senior Executive Service, she was one of the most senior civilians within the U.S. Department of Defense. In her Executive Director and Director for Research and Engineering roles, she had responsibility for a \$1B budget and over 5,000 employees. She has received the highest civilian awards for her services to the Navy and the Department of Defense. As President of Eacute;LAN Leadership Concepts, Dr. Higgins serves as a leadership consultant for government and industry. She is an adjunct professor at Claremont Graduate University, where she teaches Project Management, Systems Thinking, and Morality Leadership. She enjoys her grandchildren, practices yoga, does research, and writes. Her recent book, *Financial Whirlpools* (2013), analyzes the financial crisis of 2008-2009 using a systems perspective. Her second book, *Economic Growth and Sustainability* (in print, 2014), investigates the relationship among Economy, Environment and Society also using a systems perspective. On a personal note, she enjoys ballroom dancing and "loves, loves, loves" the LA Clippers! Affiliations: Claremont Graduate University, Claremont, CA, USA (Adjunct Professor) Eacute;LAN Leadership Concepts, Ridgecrest, CA, USA (President) Effective Edge, Austin TX, USA (Performance Catalyst) Personal website: <http://www.systems-sense.com> Expertise Executive leadership, project management, systems thinking, sustainability, ethics, interpersonal communication, culture shaping