Preface

The climate change has become one of the most vital issues affecting all sectors of life across the globe. Following this, there has been a flabbergasting interest in ‘green’ ideas. As we see in our daily life, more and more people have begun to lessen their carbon footprints by bike to work, recycling, and changing over to solar energy power. The key question of most policy makers now is how to reduce the climate change vulnerability of socioeconomic systems in the most cost-effective manner. This book will try to provide an answer to these issues, through a critical engagement with public policies that would promote green development.

Sustainable development has been an overarching goal of the international community since the UN Conference on Environment and Development (UNCED) in 1992. Followed by this, many national and global initiatives have been developed for sustainable development such as Rio Declaration and Agenda 21, which have been further intensified by the recent prolonged global energy, food and financial crises. Following, Al Gore’s movie *An Inconvenient Truth*, many people around the world have taken notice of the dire situation of our planet. The new Sustainable Development Goals (SDGs) expects sustained, inclusive and sustainable economic growth, and every country is expected to work towards achieving these goals.

Green development or environmentally sustainable economic development is a strategy of sustaining economic development in the context of worsening resource constraints and climate crisis. The multidimensional phenomenon of sustainability lies at the core of the challenge of environment and development and the way governments, business and environmental groups respond to it. Sustainable development was stated at the November 11-12 summit of the Group of Twenty (G20) in Seoul as “a strategy of quality development, enabling countries to leapfrog old technologies in many sectors, including through the use of energy efficiency and clean technology” (Ozharovsky, 2010). The sustainability challenge is to overcome a vast array of market, policy and institutional failures and ties together concern for the carrying capacity of natural systems with the social, political, and economic encounters faced by humanity.

Over the years, the idea of green economy has been offered as a means for sustainable development. The International Union for Conservation of Nature (IUCN) regards Green Economy as a ‘resilient economy that provides a better quality of life for all within the ecological limits of one planet’ (Green Economy Coalition, 2011), motivated by social welfare and based on sustainable patterns of natural resource use. The Green economy concept has influenced a variety of influential international organizations, national governments, think tanks, experts, non-government organizations and others. For instance, across the World, the micro, small and medium-sized enterprises started working in a manner that is environmentally friendly and climate smart. The government institutions concerned with economic development are offering the services and strategies required in this regard. Furthermore, the chambers of commerce
and industry as well as business associations are showing ever more interest in supporting policies and solutions which link green economic development and augmenting competitiveness of enterprises. At the community level, the deliberations at COP 21 opened debate about the nature of response towards the environmental challenges, particularly on the climate change, based on clean technologies, renewable energy and a low carbon future. Many of these responses require a multidisciplinary approach to develop effective and resilient strategies for future development.

The chapters in *Handbook of Research on Green Economic Development Initiatives and Strategies* seek to explain the developments in green policy and politics to understand the key global challenges. The chapters discuss the nature and diversity of alternative ideas about sustainability that challenge ‘business as usual’ thinking. The coverage of the handbook is inevitably selective and less than encyclopedic in its coverage of the literature. This handbook bridges the understanding between the theory and practice exists in the areas of environmentalism and development. The chapters have a balance between the discussion of policy and specific environmental issues and are written in an accessible and engaging style. The chapters offer a nuanced interpretation of the scholarly literature on the environmental impact of globalization, trade, finance, and production. While maintaining academic rigour, the chapters are written in such a way that they can be understood by non-academics and non-specialists; they will be appealing to the general public. Topics covered include the environmental implications of globalization; wealth, poverty, and consumption; global trade; transnational corporations; and multilateral and private finance.

Chapter 1 outlines the implications of the growing inequality in developing countries and their development strategies. Jürgen Karl Zattler examines possible international initiatives which might mobilize “green” investments at big scale and foster equality at the same time. The paper suggests a “global green investment pact” which would support environmental sustainability and reducing inequality. In Chapter 2, Berrin Kurşun and Bhavik R. Bakshi points out the need of the interaction between natural and anthropogenic systems in protecting the natural capital. Using the case study of the Rampura Village in India, this study assesses the applicability of Emergy Analysis (EA) as a regional sustainability assessment tool in evaluating the sustainability of human activities and their interaction with nature. Chapter 3 suggests that the oceans offer a vast renewable energy resource and production possibilities with great potential for innovation and growth. Multipurpose offshore platforms are ocean energy and aquaculture synergies developed to achieve efficient use of marine space. Phoebe Koundouri, Amerissa Giannouli and Ioannis Souliotis suggest a multidisciplinary approach in assessing the environmental and socioeconomic impact in the construction and operation of such infrastructures.

Chapter 4 examines the sustainable consumption trends in the context of debates on green economy and sustainability. Seda Yıldırım, Durmuş Çağrı Yıldırım and Ayfer Gedikli analyse the new tendencies in consumer behaviour and its impact on the personal sustainable development. In Chapter 5, Catherine Sutton-Brady and Arpit Raswant investigates the growth of organic cooperatives and outlines the reasons behind this growth. This chapter further analyse the concept of organic cooperatives through social networks and the role of close relationships in the supply chain in building consumer confidence. Chapter 6 deals with the instruments and policies to achieve energy efficiency, particularly on efficient combination of policy instruments in the EU. Savaş Çevik, M. Mustafa Erdoğan and Fatma Turna analyse data related to energy efficiency policy measures in 28 EU countries and Norway. The conclusions indicate the impact level of different policy packages on energy efficiency.

Chapter 7 examines the issue of financing energy and low carbon investment in Europe. Etienne Espagne and Michel Aglietta examine the investment objectives in the Climate and Energy Package, set by the European Union in key sectors. The chapter sheds light on the details of how these objectives can be
met. Chapter 8 examines the complex and long term managerial approach required in European sustainable city management initiatives. Nemanja Backović, Vesna Miličević and Adam Sofronijević analyse several strategic directions important for the management of sustainable cities in Europe. Chapter 9 analyse the renewable energy sources and policy in Norway, China and Turkey. Bülent Doğu and Hikmet Gülçin Beken critically examine the tendency of current societies to transform traditional production techniques and development models to new renewable energy sources and to sustainable development path.

Chapter 10 identifies the main policy strategies of green growth model in Latin America, particularly on Brazil, Chile and Mexico. Inmaculada Martínez-Zarzoso and Nicole Grunewald examine the social and inclusive nature of the green growth model through a series of green growth indicators. In Chapter 11, Mahmure Övül Arıoğlu Akan, Ayşe Ayşim Selam and Seniye Ümit Fırat provides a global level review of the use and policies of renewable energy sources. This chapter attempted a detailed review and evaluation of the current literature, particularly on binding regulations, incentives, pricing mechanisms and global energy statistics. Chapter 12 examines the economics of renewable energy promotion policies in Brazil through a case study of wind power in Brazil. Using a perfect foresight computable general equilibrium model, Govinda R. Timilsina and Florian Landis computes the economy-wide costs of achieving a 10 percent share of wind power in Brazil’s electricity supply mix by 2030.

Chapter 13 examines the environmental and economic impacts of wave energy. Sevda Akar and Dilek Akbaş Akdoğan analyse the advantages of wave energy in terms of cost and reliability, and evaluate the feasibility of wave energy production opportunities in Turkey. Katarzyna Osięcka-Brzeska examines the development of renewable energy in Poland in Chapter 14. The study finds the need for the combination of a stable legal environment and the availability of external forms of co-investments in the Polish renewable energy sector. Chapter 15 identifies the role of the residential sector as being one of the areas with a large potential for energy savings. M. Mustafa Erdoğan, Coşkun Karaca, and Ali Kurultay find that the energy-efficient residential building retrofitting benefit the heat transfers by conductivity, where the rate can be determined by surface size, thermal resistance of the building materials and their thickness.

Energy-saving measures in buildings constitute not only a major aspect of energy policies in many countries but also can be an important tool in fighting unemployment by creating many new jobs. Tülin Altun and Hilal Göktem in Chapter 16 focus on employment aspect of energy performance practices in buildings and develop fiscal policy recommendations for Turkey by comparing practices applied in Sweden and Greece. Chapter 17 complements the previous chapter by proposing new financing methods for energy performance practices in buildings. Tülin Altun, Akın Bildik, and Gökhan Gökçeoğlu emphasize that to increase the attraction for the energy efficiency practices public involvement is vital. Considering the limited financial resources, however, the authors suggest that priority should be given to the projects with the lowest transformation costs and the highest energy savings.

Chapter 18 engages with sustainability management and Yasemin Sen provides basic knowledge about sustainability and four corporate sustainability management tools (Environmental Management System - EMS, Sustainable Value Stream Mapping - Sus-VSM, Total Quality Management – TQEM, and Sustainable Balanced Score Card - SBSC). Chapter 19 highlights conditions under which firms are likely to pursue green innovations. From the institutional perspective Wiboon Kittilaksanawong discusses to what extent the regulatory pressures and normative pressures influence firms to engage in green innovations. Chapter 20 focuses on the role of innovations for achieving sustainable development of Bulgarian enterprises. Julia Dobrova explores a model for transforming businesses towards sustainability and the development impacts which will be achieved through the introduction of innovations in production processes.
In the wake of increasingly aware and environmentally conscious consumers, organizations are gearing up with green offerings to satisfy them. The purpose of Chapter 21 is to facilitate a holistic learning of green marketing that aids decisions in making environmentally responsible choices. Shahazadi Begum Shaik suggests that green marketing must be adopted by organizations as a well-crafted green marketing mix strategy and not as a set of discrete sustainable practices. Merve Er Kara and Seniye Ümit Oktay Firat in Chapter 22 explain sustainability and risk management concepts in supply chains and discuss the relationship between these two issues in a multidirectional way. The aim of the chapter is to provide a background to better understand the link between supply chain risk management, sustainability and business intelligence.

The Global Value Chains (GVCs) literature has highlighted the role of lead firms in the greening of GVCs but left the role of supplier firms under-theorized. Chapter 23 aims to fill this gap in the literature by providing empirical evidence to support the role supplier firms play in environmental upgrading in the context of the apparel industry in Sri Lanka. Amira Khattak and Christina Stringer reveal that understanding of the process of environmental upgrading remains incomplete if the capabilities and strategic intent of suppliers are not taken into consideration. Although there are some good practices of fair trade supply chain management (FTSCM) in the western companies, that is still a new concept in developing countries. Chapter 24 investigates FTSCM in China with a focus on its opportunities and challenges. Kaifeng Zhang and Zheng Liu enrich the study of green management from supply chain management perspective and suggests that supply chain management should be consistent with brand management and green/ethical management, depending on companies’ strategic goals.

The ability of companies to turn an environmental constraint into a source of strategic opportunity is a controversial topic. Diane-Laure Arjaliès, Cécile Goubet, and Jean-Pierre Ponsnard takes this issue in Chapter 25 and carry out a comparative study of the CO₂ emission reduction strategies implemented by the cement and chemical industries. Their main finding is that structural economic factors explain the differences in which companies respond to the increasing environmental constraint regarding their CO₂ emissions. The purpose of Chapter 26 is to analyze factors predicting which groups are supportive and non-supportive on setting stricter carbon dioxide emission limits on coal-fired electricity generating power plants in the US. Mary Schmeida and Ramona Sue McNeal explore this topic using multivariate regression analysis and individual level data. Findings suggest that comprehension of the policy area and individual financial situation are the most important factors in predicting support for stricter emission limits. Chapter 27 aims to shed light on credibility initiatives developed by governmental and non-governmental bodies to improve the quality of environmental reporting and to see the extent to which these credibility initiatives are different or similar. Akrum Helfaya and Amr Kotb make the point that “[a]dopting reporting guidelines and applying independent external assurance services have the potential to deliver real value to reporters, both in terms of the credibility and effectiveness of their corporate responsibility reporting practices and the integrity of their systems of internal control.”
Preface

We thank all the contributors of this publication for their excellent work. This handbook of research is ideal for academics, research students, government agencies, policy makers, Non-Governmental Organizations (NGOs), businesses, and professionals working on climate change and green economic development. We believe this diverse array of titles will provoke the reader into further research and study of green development.

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REFERENCES


ENDNOTE

1 Sustainability can be defined as the practice of reserving resources for future generation without any harm to the nature and other components of it.