Engagement with research on sustainable development apparently gives the feeling that the term “Sustainability” is too scholastic at times. In the process, the definition of “sustainable development” or “sustainability” has often emerged to be restrictive enough to be confined in the domains of definition of policy makers and academicians. The former considered sustainability from a macro-institutional perspective, while to the latter, sustainability emerged as another issue of academic discourse, whose definition and scope need to be discussed and debated inside the four walls of the seminar hall. In many cases, therefore, both in the policy and academic domains, the definitions of sustainability that emerged often seemed to have lost connections from the daily threads of our lives. Yet, these daily forces cannot be ignored. They begin from social capital of human communities, the behavior and lifestyle of an auto-rickshaw driver, to the issues related to water, the availability of which affects our lives. These aspects of human lives, viz. happiness, feelings, events that guide the society, can be integrated with all the three dimensions of sustainability, namely - social, economic and environmental dimensions with different types of sustainability indicators.

These dimensions, enmeshed in the frugalities of our life, need to be demystified. This can help in sensitizing people about the notions of “Sustainable Development” and “Sustainability”. Such an awareness can bring the subject of sustainable development from the round tables dealing with discussion meetings of eminent heads of states, decision and policy makers to the tables marked by the presence of people in various meeting points, joints spending their leisure time over their cup of tea or coffee. This volume, therefore, is a treatise on those various disaggregated aspects of our life that are connected with sustainability issues, and lend a holistic dimension to the notion by relating it with human existence. However, the book takes a conversational style to connect to the masses as well as giving a theoretical discourse on certain instances to establish a connection to the managers and decision makers. In order to do that it narrates certain context/location specific stories and attempts to establish a linkage between these stories and the larger theoretical paradigm dealing with the domains of sustainability. Therefore this volume augments the paradigm of sustainability discussion and discourse by establishing a bridge that connects the theories with real life observations and stories. In that regard, the chapters enhance the theoretical paradigm of sustainability science by addressing
how these theories need to be modified on the location specific context to bring real changes in the lives of people. This itself is a new attempt in the theoretical paradigm of sustainability science where parallel stories are being told to make the theoretical paradigm of sustainability science more open. While this story telling exercise has been followed in chapters of the book, the authors have created a neighbourhood within which they have dealt with domains of sustainability science. Therefore, certain areas like role of monitoring networks, statistics, information technology, remote sensing, aerial photography, geographic information system which have become important in today’s sustainability science discussion have been avoided. The role of information technology in addressing sustainability science is a specialized area of research and finds wide applications in various issues surrounding climate change, flooding, earthquakes and deforestation which have an impact on society and populations, and the capacity of societies to pursue different actions to foster sustainable development. But the book gives a wide perspective of stories and sustainability issues without getting into the technology centric interdisciplinary science related discussion that is becoming important to tackle many compounding challenges of today’s and future. Therefore, categorically this volume does not delve into a specialized scientific domain of sustainability science to keep the debate, discourse created on a narrative style based theoretical paradigm of sustainability science more open and malleable to keep it exposed to larger criticism and decide the future pathway of sustainability science. The future attempt taking a cue from this book will be therefore to get into these specialized fields of research and then immediately connect it to the compounding local issues and challenges with a larger harmony with various impending challenges like impacts of climate change, deforestation, earthquakes and natural disasters and several more which will impact the sustainability of human society in future by impacting the local issues and stories across various different geographical locations of the world.

This volume therefore recognizes that sustainable development is not merely a discussion subject of journals, publications, politicians, bureaucrats and civil society groups. The roots of it are much more engrained in our daily happenings all around us. It is precisely these thoughts that motivated us to start thinking of events, issues roaming all around us and find out their links, associations to the domains of sustainability. Hence through the continuum of the following chapters, this book makes an attempt to find out those associations. Many of them can be found to be superficial or random but the purpose is to instigate and provoke a new thinking in those who are not dealing with this science. Yet, the policy dimensions of sustainability are extremely important, and they have also been addressed in the various chapters. The book chapters thereby make continuous efforts to bring forward the fact that sustainability science is for the people, by the people and of the people. But these are the people—our friends, relatives, companions and other humans who are not in the headlines of any news item in the media news stories. They are the people in the grass roots of different countries who need to feel happy through being engaged in mundane activities and are continuously striving to aspire for attaining the best of the social, economic and environmental domains of sustainability.
The book therefore is for the ones who we see in public transports and in theatres, who complain over cups of tea about corruption issues of government in spectrum allocation. Hence it aims to target a growing urban middle class within developing countries as well as the ones who are aspiring to get an entry into this expanding urban middle class of developing countries.

This segment of people can also include anybody around us who goes to a government hospital in Malviya Nagar and waits for treatment but could not get it during a day and can feel dejected of not getting right access to the health services. Hence, the person after feeling dejected can think that whether trade in health and other services between India and other countries can actually lead to an upliftment of the wellbeing of the people. Further, these are the people who can think whether trade has anything to do with sustainability of a society and a developing country. Further, they might also feel whether there is a need for a sound environmental policy within the country along with the trade in services to address the sustainable development goals of a nation. Some of these thoughts do find a place in one of the chapters of the book.

The book attempts to create a question in the mind of readers about the fact that sustainability comprises of various subsystems in different social, economic and political settings. Such settings include – a) resource/environmental, b) economic, c) social and d) governance systems. Each of these systems will further have functional units with different range and type of several actors. For instance, the resource system comprises of various sectors dealing with natural resources. Economic systems comprise of factors dealing with the value addition by important players of the primary sector of the economy viz. the farmers. Social systems are made up of people from various strata of the society.

Governance systems are made of various organizations, institutions belonging to government, civil society, and so forth, at multilateral, transnational, national, subnational levels. Actors of the system at all these levels interact amongst them in a myriad of ways that determine nature of the outcome dealing with sustainability, efficiency and equity.

The authors aim to address how these various actors of the system interact with each other that finally leads to addressing the broader goals of sustainability. The general framework of sustainability comprises of these actors that interact in various ways catering to the different dimensions of sustainable development.

With a conscious attempt to address some of the general framework guiding sustainability, the book features the essential connections contrasts, and contradictions between “Economic Growth, Sustainable Development and the Role of Markets”. While doing that, one of the chapters of the book also ask a question of how cynics will value and put a price on environmental resources. It addresses these questions by giving a historical journey of the concept of sustainable development. Thus in this respect, the book creates a new value addition to the area of valuation techniques and its connections to the sustainability discourse. The book also initiates certain discussions with an event and then connects it to the concept of sustainability in a direct or indirect way.
These events though being standalone can be directly, indirectly linked to the overall general framework of sustainability analysis that needs to be considered in various subsystems. Essentially, through this connect the book in some ways highlight the complexity of the inter-relationship between the actors of a system and subsystem and how further they address the broader goals of sustainability.

**MOTIVATION FACTORS**

The authors of this book do not aim to give in doses of technicalities of sustainability science in this book. But rather the sections will bring out series of events that in a glance can be just a random event, though over a holistic sense these events are associated with a group of people who comprise several sections of the society. Any effect on these people in some ways over a broader scale gets associated with the domains, broader social goals of sustainability. Thus, it brings to the fore the question of justice for migrant people to the city owing to agrarian crisis and how further it addresses the different aspects of sustainability. In most of developing countries facing a continuous stark contrast of growing urban class, increasing inequality between growing urban class and rural poor, migration is a common phenomenon. This contrast cannot be left under the carpet as it is and going to impinge on the sustainability aspects of many developing countries today and even tomorrow given an increasing rise in the cultural contrast of the growing urban class and marginalized rural poor with a dream and aspiration to reach the ladders of the urban income class. These questions can only be addressed by broader main-streaming and effective implementation of policies that tackle the rural inequalities through betterment of rural employment guarantee schemes, improvement of agricultural sustainability and the book chapters do not ignore that fact. It also explores through the option of how labour observatories can be created and mainstreamed for a better agricultural policy making and its efficient implementation. Several country experiences are illustrated and key take away points from such experiences are taken to elucidate the role of a labour observatory as an effective tool of addressing agricultural sustainability.

So this book pens down series of events, questions to provoke thoughts on sustainability through discussions, events, application of other schools of thought in addressing the larger question of sustainability. The chapter on Water Futures market tries to bring in the Chicago financial school of thinking to explore the question of how a water futures market can reduce the uncertainty of water availability in future and can ensure sustainability of users of water in regions which are marked by water supply constraints. The point this book tries is that although in an immediate sense the events are discrete and does not flow from one to the other in a continuous interconnected way within the domains (economic, social, environmental) of sustainable development, in a social system they affect actors of the society and each domain of sustainability—economic, social and environmental—and therefore impact the larger goal of sustainability.
So the issue of sustainability is scholarly mix of scholarly, activist and practitioners orientation and can be often trivially looked through connecting random events around us to the people who are integrally linked to those events. Thus this book is a take on that mixed perspective and it is for the people in the colloquially used “Theks”, “Coffee House”, “Bazaar”, “Meeting points of villages”, “Meeting places in churches and in all other places around us” where actually opinions on sustainability and sustainable development are formed.

It is precisely with this aim, the book sets the context of instigating people to think through the issue of sustainability through scholarly theories, practicing instances, and sudden events which at a glance might appear to be superficial in spite of its broader linkages to the holistic domain of sustainability.

In order to do that the book has outlined all these perspectives according to three pillars of sustainable development – viz. social, economic, and environment. While dealing in the social domain the book illustrates the importance of the quality of social capital which gets bridged onto the social domain of sustainable development. The stated importance is also further consolidated through the interlinkages between spectrum allocation, social capital and sustainability.

Social capital might be formed with connectivity across human beings. But to make the connection intact, it is important for the human beings and people to stay well in terms of their health need. So there is also a need to see that the people who are connected stay well. They can stay well in terms of better, accessible, affordable provision of health services to them. In order to stay well, people of a country will require an abundance of good environmental and natural resources which can be preserved only by means of a strong environmental policy. An essential feature of a strong environmental policy is the existence of robust mechanisms to value environmental resources within a country which shows how the stock and quality of environmental resources of a country gets effected as it moves on its growth path and on a trade liberalization path. Chapters delving into environmental policy, trade, sustainability and trade in services essentially tries to explore all these questions that any emerging economy is facing today with the onset of globalization and liberalization.

A good sustainable society also means that the people have freedom and their basic rights well laid within the country. In many developing countries, rights of women are still not well established. Thus no book on sustainability and sustainable development can ignore the rights of a woman and its interconnections with ecology and environment. The authors realize the importance of that and hence discuss at length about the interconnections between eco-feminism, individual freedom, women’s rights and sustainability.

Thus within the book, discussions on sustainability trickles down to the point of an individualism and introspection and thereafter connects, associates the findings of those introspection to broader goals of sustainable development. From this individualism, the consciousness of a class in the society emerges. Economic pillar in the book restricts itself only to limited areas of the discussions on ecofeminism, gender empowerment through UIDs, questions on the principles
of neoclassical economics, the daily economics of people who drive autos (autorickshaw) all around us, the behavior of people who are at the grass roots of Indian society such as villagers, and farmers. Questions on each of these areas linked to various behavioural facets can lead to provoking thoughts that can be linked to broader domains and goals of sustainability. This section on economic pillar of sustainable development tries to do that.

The environmental pillar of the book deals with more technical issues of biofuels, association between office timings and emissions with an intent of bringing in a human dimension into the entire course of discussion. While discussing on biofuels, the book aims to question given the way human society and the politics of a human progress is shaping, how a movement and transition between one generation of biofuel to the other will influence the sustainability of the human society and its progress given the sustained growing demand for energy emanating from a material intensive, consumptive lifestyle of the present human society.

This growing demand and consumptive lifestyle will also create a pressure on earth’s finite valuable natural resources like water. Therefore, it will become critical to value this resource and the services it can generate for the ecosystem. Thus in the book there is a discussion on valuation and market based pricing of economic and ecosystem services of water resources. As more countries move ahead and face challenges of scarce water supply, the need for importing virtual water will increase by switching to different less water intensive crop production system and import of water intensive crops from abroad. These facets are looked upon in the book through various chapters and further a comparison of a Virtual Water and Occam’s Razor is done with the background of reflecting on different perspectives dealing with the larger economic thinking on water resource valuation, supply and demand.

Therefore, the book chapters only wish to raise more thoughts, discussions and criticisms, cynicisms that will motivate, help in making the people just outside doorstep to be more aware of something called “Sustainability” which we all are doing, trying to or failing to do in our life everyday in general course of events.

ORGANISATION OF THE VOLUME

With the above motivation, the volume has been divided into 17 chapters. Chapter 1 of the volume tracks the history of development theory, and how over time the developmental discourse emerged with a holistic notion of development as “sustainable development”. Further, the chapter also emphasises the role of markets in promoting sustainability. In that sense, this chapter sets the stage for a broader discussion on the sustainable development discourse.

While chapter 1 talks of the role of markets, and highlights the important roles played by the environmental markets, chapter 2 talks of the inherent problems on why markets on environment and natural resources and the associated ecosystem services may fail, or have failed in some of the recent instances. It talks of the problems of information and knowledge that may lead to improper valuation and pricing of the environmental resource under consideration.
Chapter 3 highlights the concern related to social capital, and its linkages with altruism and social networks. The article states that incentives, expectations and motivations guide altruism, and may further affect the construct of the social capital. In the long run, such behavior can create an impact on the social capital and on the social domain of sustainability.

Chapter 4 raises a normative concern in the context of sustainability. While an agrarian crisis often leads to migration of labor to large cities, and eventual repatriation of incomes back to their native places, the trade-off lies in sacrificing the happiness of staying with family. From a justice point of view, a question can be raised about which situation is better for the migrant worker: staying in a village at the backdrop of an agrarian crisis or moving out to city, getting absorbed in the informal segment, earning money and undergoing deprivation in the city. All these aspects impact the social, economic aspects of sustainability. In this light, this chapter attempts to elucidate the linkage between justice, migration, and agrarian crisis, from the sustainability perspective.

Chapter 5 brings back the discussion of gender issues, and the sheer ignorance of such issues by neoclassical economics. As such, the chapter highlights that while neoclassical production functions are concerned with labor as a factor of production, there might be a need to distinguish labor on the basis of gender to bring in more transparency in the analysis. Resources should also be seen as an important factor of production in the mainstream neoclassical school of thinking. This becomes very important in the context of fast degrading natural resources within the world which is moving blindly towards a resource intensive economic growth path. Here, the concept of viewing nature as a mother brings a larger conservative attitude towards nature which can affect the short term and long term levels of factors of production and hence the economic outputs. These facets are totally neglected by the mainstream neoclassical school of thought.

Chapter 6 highlights the important role of labour observatories in agricultural policy making. Their importances have already been recognised by the developed world, and such initiatives have been put to effect. Now, they are also being initiated in many other parts of the world including Africa. A labour observatory plays a very important role for successful operationalization of agricultural policies within developing countries. Historical information regarding soil, crop varieties, agricultural practices, and skill of agricultural labourers needs to be maintained by a labour observatory. This chapter tracks the various developments and contextualizes the association between these observatories, agricultural policy making and sustainable development.

Chapter 7 talks of biofuel, considering the views of proponents and critics. One school of thought suggests that biofuel production does not have an impact on people, land, air, or water. Whereas, there is another school which shows through consistent work that there is an impact on different elements of nature within the planet from biofuel production. Policy makers from different countries of the world are also in a transient phase about their biofuel policies. This debate that has been documented here.
Chapter 8 essentially continues where chapter 7 ends. It states that the transition pathway from the first generation to the second generation biofuel has to be guided by an innovation system. Essential elements of this innovation system have to deal with the system of new knowledge development and its diffusion, enabled by the right institutional processes.

Chapter 9 presents a comprehensive review of valuation of water. Water pricing, whether by government mandate or in practice, has to take into consideration a host of concerns, and hence cannot be confined to bounds of individual disciplines. This chapter presents a survey that attempts to summarize accumulated knowledge on the valuation of water resources and deals separately with the valuation of water in the economic and the ecosystem sectors. This is indeed an important component in sustainable development policy making in the context of sustainable resource use.

Chapter 10 is on virtual water, a powerful notion that has huge implications for water management policy in water-scarce nations. Virtual Water has been criticized as merely being a jargon camouflaging crop-water requirements. This chapter brings to surface the new economics of water management that is deeply rooted in the notion of virtual water imports.

Chapter 11 introduces the reader to the concept of futures trading in water resources, and how a water futures exchange in South Asia can help in resolving water conflicts. The important notion of scarcity value of water, as introduced in the previous chapter, has been explained in detail and used here.

Chapter 12 talks about the bio-fuel scenario in India. It also talks of the trade pattern of first generation biofuel which affects the economic segment of sustainability for the exporting and importing countries, and relates to the various issues posing various other questions to be explored in future.

Chapter 13 poses the hypothesis that better spectrum access through efficient spectrum allocation can improve connectivity of people, thereby strengthening social capital and positively impacting the social dimension of sustainability.

Chapter 14 narrates the story as heard from discussions in auto rickshaws of New Delhi, and presents the sustainability perspective of the discussion. Through a series of discussions and interviews with the drivers of auto rickshaws in New Delhi, this chapter reveals the way the social, economic and environmental domains of sustainability are interrelated with the operation of auto rickshaws by these drivers for a time period between 2004 - 2010.

Chapter 15 presents the obvious linkages between energy consumption and emission from the perspective of three wheeler auto rickshaws of the city of Kolkata, taking into consideration the policy triad of environmental, social, and sustainability goals.

Chapter 16 is about trade and the environment. This linkage quite naturally brings about the sustainability concern in international trade. In a growing globalized world, trade regimes and routes also impact the social, economic and environmental segments of sustainability of trade partners. This chapter outlines these notions to bring a larger clarity on the subject of sustainability.
Chapter 17 raises another normative/semi-normative concern: Can a poor be a vegetarian? Nutritious vegetarianism might come at a higher cost, often much outside the access of the poor. The chapter raises the question of whether a poor can be a vegetarian to address the social dimension of sustainability.

TO BEGIN WITH...

In this book, the authors have tried to find out the factual tenets of sustainability taking cues from theoretical discourse of sustainable development. The astonishing fact that we all around us everyday have been finding out the in the abstract, realistic domains of various pillars of sustainability makes us wonder about the limitless stretch of visionary boundaries of the concept of sustainable development. Some of us through our means of lifestyle, work, and interpersonal relationships with actors of the society live in the centre of that boundary. Some live on the edges and few of us remain spread out in this vicious circle of sustainability encircling all of us every day. But it is only sometimes, when certain events around us act as a sparking factor, that we get enlightened and that enlightenment helps us to understand our position with relative to this encompassing circle of sustainability. And when that realization happens and any common man finds out the position in this encompassing circle we can tell somebody around us that “The Geek within us has met sustainability”. We aim and hope that the chapters of this book will bring about that realization in the soul of the readers of this book.

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