

Book review

Surviving Climate Chaos by Strengthening Communities and Ecosystems

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Surviving Climate Chaos by Strengthening Communities and Ecosystems, places local community resilience in the spotlight of climate mitigation and ecosystem adaptation and highlights the urgency of local and small-scale interventions built upon the qualities and needs of local communities and ecosystems.

The book begins by setting the context of climate emergency and need for adaptation, shedding light on the emergence of global discussions about climate change. The United Nations Framework Convention on Climate Change (UNFCCC) was formulated as a response to the increasing need for establishing a global framework against the occurring climate crises around the world. To achieve this, alternative and experimentalist climate governance structures were created. The development of the UN Sustainable Development Goals (SDGs) provides an important tool for identifying the current climate change induced global challenges, whilst also keeping track and assessing the progress made towards more sustainable futures.

The role of the 2015 Paris Agreement was to support the pursuit of these goals, as well as the implementation of the interventions proposed by the UNFCCC. The Paris Agreement provides a legal and regulatory framework, which has helped establish global mitigation and adaptation goals and has allowed the measurement, reporting, and action against climate change. The author, however, highlights that it is necessary to rethink the climate conventions and make sure that no one is left behind the climate mitigation and adaptation discussions.

The following chapter (Chapter 2) explores the current climate emergency in more depth. The transition from Holocene to Anthropocene (a new geological epoch) has brought several changes, leading to major ecological damages. Adaptation is, therefore, a necessity. However, as the author highlights whether and how we can adjust our way of living, in order to survive climate chaos and ensure sustainable and thriving futures, remains a key issue. Humanity is currently at 'war' with nature, constantly violating the ecological boundaries, overexploiting the natural ecosystems, whilst also contributing to the extinction of wildlife species, with detrimental effects on society.

Adaptation is not only about responding to climate change, but is also about ‘finding peace’ with nature. Grand-strategic ideas are being developed in order to regulate climate chaos and the global climate risks and ecological dangers that jeopardise human survival. Climate adaptation is about responding to these risks and making sure that any future damage is minimised. The idea of ‘tipping points’ acts as precaution tools that allows one to measure and predict the point from where an ecological risk becomes a threat and begins to cause major harm to the earth’s ecosystems. Ecological risks manifest at local scales, before these escalate to global disasters, posing significant challenges and threats to local communities worldwide. Such risks are not always easy to predict; and this is the reason why climate change is interlinked with the term climate ‘chaos’.

Governmental and public interventions that respond to climate change play a fundamental role. However, these initiatives are often affected by politics and economic arrangements, making it difficult to shift business operations in a ‘sustainable-for-all’ manner. A ‘Zeitgeist’ shift is therefore necessary, as this will involve more effective leadership, collective action, and willingness to pay, in order to successfully regulate climate change and adapt. Governmental and citizen-led climate initiatives, movements, and alliances are formulated, aimed at influencing public and corporate behaviours, mobilising people, shifting existing climate emergency systems, enhancing legal and regulatory frameworks, and developing a more targeted and efficient climate action. Emergency measures can be efficient if properly planned, as evidenced by the Covid-19 pandemic; a fact that has created hope for climate adaptation.

The book continues with a discussion of ecological systems, their complexity, and the urgent need for developing stronger systems to foster climate adaptation. Ecological systems are complex and ‘chaotic’ by their nature. Life on Earth provides an important example of a self-organising system, which maintains all living sub-systems and constantly transforms. Climate, as an integral part of the earth systems, is interlinked not only with the scientific/biological realms of the living systems, but also with other aspects of socio-economic life. The author argues that climate change strongly influences human life, as well as the economic activity and the local lifestyle. Climate change provides opportunities for re-arranging the global systems, for re-balancing power dynamics, and for re-distributing the benefits of adaptation.

The subject of climate change has raised several questions; more specifically, in this book, the author is asking: (1) ‘How do we make it (i.e. climate change) less severe by changing what we are doing to cause it?’ and; (2) ‘How do we adapt if climate change cannot be stopped?’ By answering these questions, the author argues that in order to adapt to climate change we need to move beyond understanding the scientific basis of the natural phenomena, as climate change interferes with the socio-cultural, political, cognitive and behavioural realms of human society (i.e. social systems).

Subsequently, it is argued that in order to understand climate change one needs to consider not only positive sciences and ecology, but also other disciplines, for example politics, legal studies, economics, anthropology, and sociology. Understanding this inter-relationship between ecological and social systems, provides the key to climate response and adaptation, as it allows for the understanding of the principles and criteria that need to be met. The key adaptation principles identified and discussed in this book include the understanding of how systems work, the understanding of the changes that are underway, the sharing of knowledge and ideas about the system changes and coping strategies, the envisioning of a sustainable future, the choosing of good leaders, and making sure that no one is left behind in the process.

Climate adaptation is also closely linked to the strengthening of systems. Building resilience and ability to ‘bounce back’ after a shock, plays a vital role as external stressors disturb, and in many cases weaken ecological and social systems. Strengthening social and environmental systems, allows for maintaining homeostasis and finding a new equilibrium in the climate chaos. Effective planning in this case involves local and small-scale interventions, which empower local communities.

The book continues with providing critical insights from different community interventions across different geographies, on system strengthening and adaptation. Three case studies are explored, providing experiences from community forest groups in Nepal, community land titling in Bolivia, coastal zone and community planning in Zanzibar, as well as adaption in urban areas using the case of Kathmandu Valley. There, international development aid was of high importance. Development agencies, such as the Danish International Development Agency (DANIDA), provided important ecosystem-based adaptation interventions, which not only fostered environmental restoration and conservation, but also empowered local and Indigenous communities, in a time of socio-political unrest. Even though international aid bodies left prematurely, it is concluded that local communities were in a much stronger position to adapt to climate change.

From the aforementioned case studies, one learns that in order to ensure socio-ecological system strengthening and effectiveness of adaptation strategies, it is necessary that: (1) local communities are united and ‘adaptation-ready’; (2) continuous monitoring and follow-through (from international and regional aid bodies) are established; (3) the local/Indigenous socio-cultural and ecological qualities are taken into consideration, and; (4) climate adaptation is recognised as a key priority initially, as is also highlighted by the author. Evidently, drawing upon evidence from different geographies post-Paris Agreement, it appears that there is growing research and more organised planning and action on climate adaptation; including the effort for a more targeted adaptation communication globally.

In the final part of the book, the author provides useful insights for designing and evaluating climate adaptation, as well as for the importance of adaptive thinking during this process. In-depth scientific knowledge and understanding of the social and ecological systems interactions plays an integral part in the climate adaptation and community strengthening. Therefore, finding a ‘fine-tuning’ between ecosystem-based and community-based adaptation is necessary, while future research on how to achieve this is paramount.

As the author states in the beginning of the book: “*Surviving climate chaos is therefore something that every community on Earth must do in its own way, each in their own circumstances and dependent upon their own local ecosystems*”; this phrase highlights that successful climate adaptation relies on the empowerment of local communities and Indigenous populations, on the preservation of their unique identity and traditional knowledge, and on acknowledging that these are vital parts of the Earth system. The final and key take-home message of the book is that there is no need for a global ‘one-size-fits-all’ solution, as each small local community that acts for climate change gives a glimpse of hope for surviving climate chaos and for finding peace with nature.

Surviving Climate Chaos makes an important contribution to knowledge, through an in-depth investigation of real-life adaptation case study examples from across the globe, providing rich academic insights and critical reflections on community-led climate adaptation interventions. The book appeals to a wide range of audiences, providing an invaluable educational resource for researchers, academics and students, working in the field of climate change/adaptation, whilst also providing a useful guide for policymakers,

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government officials, and international aid professionals; but also for everyone who is now living under the threat of climate chaos.

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