



The Water-Food-Energy Nexus: Power, Politics and Justice

A Review by Saniya Ramzan

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The Water-Food-Energy Nexus (hereafter referred to as the nexus) is the relationship between the systems of food, energy, water and the environment that are somehow manipulated by power and governance. There is a need for justice for the proper distribution and utilization of these resources in a sustainable way. There is no straight forward solution, and no single body can solve the problems alone. Rather different bodies including those comprising politicians, bureaucrats, policymakers, technicians, scientists and locals have to think together about different nexuses. This book of eight chapters discusses how such nexus thinking is needed across the globe to bring social justice to the food, water and energy sectors by removing barriers including power, politics and injustice.

Chapter one introduces and discusses the nexus approach in the context of the different actors in society. Green economy usually aims to push interventions that conserve resources and bring sustainability in many dimensions regardless of conventional politics. Similarly, policy and decision makers should consider water crises and energy resources during policy making. The physical scarcity of a

resource is not only due to geographic reasons but can be man-made or socially constructed by bureaucrats and market controllers. A single nexus approach is insufficient therefore multiple nexuses that highlight their interconnections should be utilized to resolve resource scarcity problems. Proposed nexus based strategies include either resources shifted to large scale production systems or green policy that leads to sustainable utilization of resources.

Mismanagement of nexuses among water, food, energy and climate are causing drastic effects across the globe. So, current global policy making should consider stability and durability that leads to sustainability among these nexuses. The scarcity of resources is one of the factors that limits the sustainability of the nexus concept and its systems for resource utilization. Some crises are demand led such as high food and oil prices while others are driven by climatic changes, such as food insecurity. These lead to emergency policy making when scarcity of land and water is the result of improper nexus management. Oil crises and fuel shocks can cause environmental damage, geopolitical conflicts and socio-political instability.



The World Economic Forum (WEF), German Federal Government (GFG) and Food and Agriculture Organization (FAO) have played key roles in a new global policy initiative on the nexus and its relation with the Sustainable Development Goals (SDGs). The 17 SDGs referred to in policy domains are however still rather random in the sense that their interconnections are insufficiently elaborated. There is a need for green growth to prevent the further erosion of natural capital. Local nexuses are conceptualized differently by various actors: the nexus thinking of professionals is different to that of rural communities. Static rather than dynamic thinking often leads to failed outcomes. Thus for a wide overview of dynamic security, both ecological and cultural theories must be taken into consideration.

Moreover the book focuses on resource management starting from the 1990s to the present. Today's conceptualisation of nexus is based on the idea of IWRM: coordinated development and management of water, land and related resources without compromising sustainability. Integration attempts from the past including IWRM, Integrated Natural Resource Management (INRM), Tennessee Valley Authority (TVA) and watershed management have been important but such nexus approaches have also faced criticism. IWRM is one of the focal points for international water policy as 80 percent of the world's countries have incorporated it into their water laws. Integration is a political process to allocate water use priorities and trade-offs for various sectors. Who is doing the integration, for whom and how, are the major questions that arise. The new nexus concept presents more novelty and a wider range of resource management coverage than IWRM but both approaches share the ultimate goal of sustainable resource usage. The nexus approach basically helps the shifting of resource management from the state level to the system (global) level.

The proposed nexus is a multidimensional approach that reveals nonlinear and complex linkages among food, energy, water, climate and society. The interdisciplinary methodology focuses on the connections, nature of connections and boundary issues related to the nexus but, according to the authors, data challenges remain. Most of the methods used are based on quantitative methods that are specific or irreproducible, confined to disciplinary silos and lack sufficient conceptualisation of the interaction among resources. Social science contributions are also lacking. Chapter four gives an insight of nexus specific methods that include environmental, technical and social challenges. Knowledge nexus is one transdisciplinary approach that brings up changes among organizations, infrastructure, governance behaviour, markets and cultures by broadening the analysis, connecting theory and methodology to apply it practically to the question of global sustainability. Trans-disciplinarity (final stage of inter-disciplinarity with thorough coordination of knowledge from researcher, practitioners and local persons) is more vast than multi-disciplinarity and inter-disciplinarity but ultimately nexus trans-disciplinary research gets stuck when trying to find tools, procedures and frameworks in regard to policy making owing to barriers in communication and collaboration, decision making, social and cultural dimensions, responses, power and force in academic research. For radical diversity of nexus related methods and capabilities, cultural theoretical concepts like egalitarianism, humility, pluralism and reflexivity can be considered.

According to studies, rather than scarcity, the main problem is the lack of political will to implement long-lasting measures for sustainable resource management. For a sounder nexus based approach, the main problem to be brought to the table of policy makers is consideration of local resource users.



Governmental approaches to redistribution or taxation of resource usage need to be reconsidered, e.g. to transform resource usage from luxurious to justified. Knowledge politics helps to shape nexus governance such as in the cited case of Lake Tana of Ethiopia. For on the ground results, the Kulekhani Hydro-electric Power station and Melamchi basin water supply in Kathmandu are cited as the best examples of single aim approaches. Chapter five focuses on hegemonic official nexus policy and local people's understanding of nexus based approaches with the help of case studies.

Justice and rights have been neglected in the water-food-energy nexus in terms of small holders that have multiple livelihoods. In many countries there has been a mismanagement of multi-scaled and cross-sectoral interlinkage of nexuses. But today there is awareness and recognition of linkages between human rights and natural resources. Chapter six places emphasis on the increased demand of nexus-thinking, fair decision-making and justified outcomes that include local users. Arguments about exploring individual injustice i.e., issues related to just access and control over natural resources are covered in this section. Environmental justice is fair in understanding law, policy and decision making but weak in explaining intersectoral linkages. With the help of case studies from Southeast Asia it is shown that national and local civil society have paid less attention to utilize nexus framing for human rights and justice.

The book further discusses the new nexus approaches that explicitly involve ethics. Ethical thinking conjoined with the nexus approach brings up all the voices of a society to propose innovative solutions to problems. Ethics makes people think what needs to be done and how it can be done. Value judgement and ethics engagement are unavoidable in nexus approaches. Ethical studies of the major religions, i.e. Christianity,

Islam, and Hinduism, make clear that their ethical principles play a vital role in nexus approach formation and implementation to better define the interlinkages of the various sectors. Water, energy, food and environmental ethics for different parts of societies vary, so the nexus approach should be adaptable for them.

The last chapter, chapter eight, summarizes the content of the book. Today's need is to reconceptualize nexus thinking because current policies reflect specific framing of problems. Nexus policies that do not take seriously the inequalities and injustice of current resources distribution are unlikely to result in sustainable and just outcomes. The main argument is that a shift is needed from bureaucratic integrated management to policy that has social styles like hierarchism, individualism and egalitarianism. In nexus approaches, global priorities can be better connected to local needs by developing nexus ethics (normative positioning of nexus). Multiple nexuses intersect with one another, so a precise and critical rethinking of democracy and its practice is needed. There is a global need to make people aware about these nexuses.

This book is recommended because it covers all the possible factors that can affect the nexus based approach for food, water, energy and climate and their possible solutions. The case studies mentioned in the book help the reader to better understand the complexity of nexus based systems and their implementation.

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