

Renewable Energy in the Arab World: Transfer of Knowledge and Prospects for the Arab Cooperation

Odeh Al-Jayyousi, **Renewable Energy in the Arab World: Transfer of Knowledge and Prospects for Arab Cooperation**, Friedrich Ebert Stintung, 2015, 190 pp.

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Prof. Odeh Al-Jayyousi is currently serving in "Technology and Innovation Management" at the Arabian Gulf University, Bahrain. He remained an independent international consultant in the sectors of energy, water and environment. Along with that, he served at the key position of the Vice President for Science and Research at the Royal Scientific Society, Jordan. Moreover, he executed the responsibilities of the regional director (Middle East regional office at IUCN, 2004-2011), dean of research, and professor of civil engineering at the Applied Science University; being a consultant with many international agencies; GTZ, USAID, WB, UN and UNU etc. His prime areas of interest are water planning, environment, policy analysis, organizational development, youth leadership and capacity building. He published a book, "Islam and sustainable development- New worldviews", (2012). He assumed the charge of the board member and of the chairperson of several research centers, respectively.

A shift in the processes of energy generation based upon the utilization of fossil fuels to the renewable sources of energy production is not a novel concept. It holds a pivotal significance in the global perspective owing to its far-reaching implications in terms of protecting the natural environment. The major triggering factors which led to such a global approach constitute global warming, greenhouse effect, acid rain, increased carbon dioxide levels in the air, a boost in oil prices, the phenomenon of, "oil curse" etc. (pp. 27-38). Similarly, Middle East and North African (MENA) countries have also started focusing upon the aforementioned concept since 1980s for the sake of developing the, "clean sources" of energy generation for fulfilling their potential

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demands (p. 5). This book highlights the potential, needs and future prospects for the renewable energy resources in the Arab countries (pp. 5-6).

The author has vividly elucidated the utilization of renewable energy resources for the purpose of channelizing the concept of environment friendly processes of energy production in the aforementioned countries. By regarding such a concept as a tool for adopting the, "green energy sources" and by elaborating the drawbacks in implementing the western developmental model, he has defended the former idea. After describing the demerits associated with the mounting phenomenon of the "oil curse" in the Arab countries, he urges for the incorporation of non-pollutant sources of energy, e.g., solar energy, wind energy, biofuel etc. (while pinpointing the potential of these resources in the Arab World) as the efficient means of energy generation (pp. 58-64).

He levies considerable emphasis upon the documentation of some fruitful Arab experiences in the renewable energy sector; this development transfers the knowledge in the said sector and upon probing into the role of such projects at the national level (pp. 84-88). The appraisal and management of the knowledge transfer has been executed at three different levels, e.g., international (landscape) level, local (regime) level and at the third (niche) level (p. 51). The sphere of influence encompasses national and international organizations, environment of technology, industrialization, system of education and research etc. After a detailed analysis of the potential of solar energy, wind energy, biofuel etc. in the Arab World, he has compared the stipulation to the other countries (successfully generating a considerable share of energy owing to the renewable resources of energy), for instance, the European Union, China, Japan etc. (pp. 21-31).

By deciphering the merits and limitations of the methods of energy production dependent upon the renewable energy resources, he put forward the case studies on the basis of three practicable models being portrayed by the Arab World. The first such model manifests the pioneering role of Jordan in the context of focusing upon solar energy and other clean methods of energy production. The innovative research trend and its applications in the corresponding industry, initiated by

NERC (National Energy Research Center) have been acknowledged as valuable services of that center (pp. 85-102). Second and third such models depict the examples of Morocco (dependent upon, "imported energy" owing to the paucity of native petroleum resources) and Tunisia (experimenting in the similar means of energy production). The imperative from these case studies is that the Arab countries can excel in this field by a transformation from the prevalent situation to the knowledge based economy (pp. 103-110).

The author is of the opinion that this transformation relies upon chalking out of a new strategy procured from the local data. Moreover, piling up the strengths and the comparative advantages of each country within the Arab project, annexed to the supply chain is of considerable significance. Other characteristics of the fundamental importance in this regard are; availability of the raw material, research and development, manufacturing and marketing (pp.113-137). Finally, the core idea of the author to shun the present practice of generating energy at the risk of the "energy ability" of the future generations is definitely heart-rendering and it has immense applications in terms of the global management of the natural resources too (pp. 139-142). However, the Arab world will keep insightful modifications on the renewable energy facade due to the technological development to optimize, store and transport energy, alongside the utility of traditional energy sources such as gas and oil-shale, which will in turn affect the nature of energy monopoly.