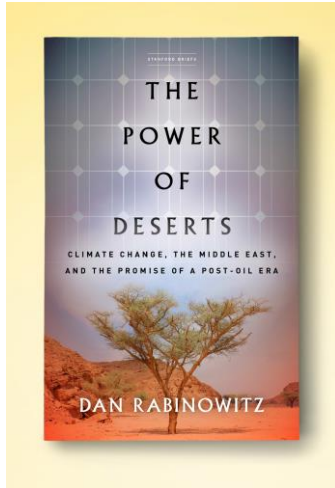


Forthcoming from Stanford University Press (August 2020):

## ***The Power of Deserts***

*Climate Change, the Middle East, and the Promise of a Post-Oil Era*

By Dan Rabinowitz



**Keywords:** Climate Change, Energy, The Middle East, Renewable Energy, Post-oil, Climate Inequality, Climate Refugees, Regional Climate models, Solar energy, Gulf Cooperation Council

**Summary:** Hotter and dryer than most parts of the world, the Middle East could soon see climate change exacerbate food and water shortages, aggravate social inequalities, and drive displacement and political destabilization. And as renewable energy eclipses fossil fuels, oil rich countries in the Middle East will see their wealth diminish. Amidst these imminent risks is a call to action for regional leaders. Could countries like Saudi Arabia, Kuwait, and the United Arab Emirates harness the region's immense potential for solar energy and emerge as vanguards of global climate action?

*The Power of Deserts* surveys regional climate models and identifies the potential impact on socio-economic disparities, population movement, and political instability. Offering more than warning and fear, however, the book highlights a potential brighter future—a recent shift across the Middle East toward renewable energy. With his deep knowledge of the region and knack for presenting scientific data with clarity, Dan Rabinowitz makes a sober yet surprisingly optimistic investigation of opportunity arising from a looming crisis.

[Dan Rabinowitz](#), Professor of Sociology and Anthropology at Tel-Aviv University, is Chairman of the Association for Environmental Justice in Israel. He was Head of TAU's Porter School of Environmental Studies and Chairman of Greenpeace Mediterranean. He received the Pratt Prize for Environmental Journalism (2012) and the Green Globe award for environmental leadership (2016).

## Table of Content

Acknowledgements

Introduction:           The Heat is On

Chapter 1.               Parched Future

Chapter 2.               Burning Inequality

Chapter 3.               Climate of Insecurity

Chapter 4.               Solar Prospects

Chapter 5:               200 Men Will Save the Planet?

Notes

See next page for chapter summaries and key words

## Chapter summaries and key words:

### Introduction

**Chapter title:** The Heat is On

**Chapter abstract:** Folk tales, myths and physical remains in various Middle Eastern cultures indicate the region saw dramatic climate fluctuations in the past. Climate models suggest that current global warming could have far-reaching consequences for the region. Multiplying socio-economic inequalities, demographic instability, ethnic tensions and insecurity, climate change is impacting scientific fields, from Earth Sciences and the Natural Sciences to history, sociology and political science. New vocabularies and methodologies are being developed to help theorize and analyze the profound changes that will characterize the imminent Post Normal Climate Era. A determined, sophisticated global environmental movement has long been trying to convince world leaders to save the planet by instigating major cuts in CO<sub>2</sub> emissions for decades, to no avail. Could salvation come from oil-rich countries in the Middle East?

**Chapter keywords:** Paleoclimatology; Post Normal Climate Era; Greta Thunberg; Species History; Emancipatory Catastrophism, Bruno Latour, Ulrich Beck.

**Chapter number:** 1

**Chapter title:** Parched Future

**Chapter abstract:** Advances in climate modeling since 2010 enable scaling down global predictions to regional- and country-specific forecasts. Using these new methods, researchers predict that temperature hikes in the Middle East will be sharper than projections for other regions and the world at large. Rainfall quantities in key areas in the northern and western section of the region will go down below 200 millimeters per annum, the level necessary for rain fed agriculture. This will have serious consequences for agriculture in Turkey, Syria, Northern Iraq and the Maghreb, and dire implications for water cycles and animal husbandry across the region. Dwindling water volumes in the Nile, the Tigris and Euphrates will seriously endanger regional food production. Egypt and the Gulf countries are particularly vulnerable to sea level rise.

**Chapter keywords:** Special Report on Emissions Scenarios (SRES); Representative Concentrations Pathways (RCP); Wet Bulb Temperature (WBT); Nile Delta; Egypt's Climate forecast; Turkey's Climate forecast; Saudi Arabia's climate forecast; Israel's climate forecast.

**Chapter number:** 2

**Chapter title:** Burning Inequality

**Chapter abstract:** Climate change involves three types of inequality. First, wealthier communities consume more, are responsible for higher greenhouse gas emissions and thus carry a heavier responsibility for the advent of climate change. Second, affluent communities are more resilient to climate perils than poor ones. Third, those unwilling to join the struggle against climate change put others in harm's way. These inequalities, while omnipresent, are particularly prevalent in the Middle East, where socio-economic gaps between and within countries are the widest in the world. The chapter illustrates that oil-rich Middle Eastern countries are amongst the highest per capita CO<sub>2</sub> emitters in the world, while poorer countries hardly contribute to climate change. The chapter reviews regional gaps in resilience and exposure and demonstrates how oil-exporting countries in the region played an active role in efforts since the 1990s to subvert global climate agreements.

**Chapter keywords:** Climate Inequality, Climate Injustice, Per-capita CO<sub>2</sub> Emissions; Climate Resilience gaps; Subverting Climate Action.

**Chapter number:** 3**Chapter title:** Climate of Insecurity

**Chapter abstract:** Exerting pressure on water, agriculture and food supply, climate change is having devastating consequences for arid regions. This chapter distinguishes between security (small s), a condition with concrete personal and familial resonance; and Security (capital S), a more nebulous, less rational term focused on more abstract collectives such as the state or "the realm." The recent climate-related crises in Syria and South Sudan are reviewed. Given that similar drought spells could become the Middle East's new normal, the chapter seeks to isolate the role of climate in such calamities. Analyzing climate-related migration already underway in the region, it traces the emergence of "climate refugees" as a discursive term, and critically examines the perils of climate change becoming securitized. Finally, it highlights the need for proactive, forward-looking planning on behalf of vulnerable rural communities that might be forced to relocate as a result of climate change.

**Chapter keywords:** Syrian Refugees; Darfur; Securitization; Climate Refugees; Climate Migration; Planned Relocation.

**Chapter number:** 4**Chapter title:** Solar Prospects

**Chapter abstract:** Ideas for renewable energy hubs in the Middle East have been floated since the 1920s. With costs of solar energy slashed by 90 percent in a single decade, global investment in renewables is rising quickly. Solar plants are now being constructed across the Middle East, even in oil-exporting countries. With abundant solar irradiation, huge tracts of unproductive land, high liquidity and a good track record of incorporating new technologies into civil infrastructure, the six oil-rich kingdoms by the Persian Gulf have an immense potential for solar energy. Consistently pledging to transition their own domestic energy sectors to renewables, they are now beginning to actually do so. Should they indeed follow through with this, could they decide to extract less oil and natural gas? More importantly, are they likely to decide that leading a global energy transition to renewables is in their own best interest?

**Chapter keywords:** Atlantropa; Renewable Energy; Investment in Renewables; Golf Cooperation Council (GCC); Photo-voltaic; Concentrated Solar Power (CSP); Solar Irradiation; International Renewable Energy Agency (IRENA); United Arab Emirates; Saudi Arabia

**Chapter number:** 5**Chapter title:** 200 Men Will Save the Planet?

**Chapter abstract:** Disconcerting climate predictions, the imminent demise of oil and their huge potential for solar energy could convince the oil rich countries of the Gulf to accelerate the global transition to renewables. To avoid economic ruin they could (a) immediately convert their own energy sectors to renewables (b) invest heavily in renewable technologies and capacity worldwide, then (c) drastically reduce oil and natural gas production. An already struggling oil industry will be forced to surrender, crowning renewables the primary source of global energy. Like carriage-makers who became automobile tycoons, the GCC six will have converted their pole position in the oil market ante to control of the energy universe of tomorrow. The economic lockdown triggered by the 2020 coronavirus pandemic, which brought the oil industry to its knees, may leave the GCC with no other option if they wish to withstand the passage to a post-oil era.

**Chapter keywords:** Peak-oil; Post-Oil; OPEC; OPEC Plus; Demise of Salt; William Durant; Saudi-Russian Oil Price War; Collapse of the oil industry.