

## BOOK REVIEW

**Davis, D.K.: *The Arid Lands: History, Power, Knowledge*. Cambridge–London, MIT Press, 2016. 296 p.**

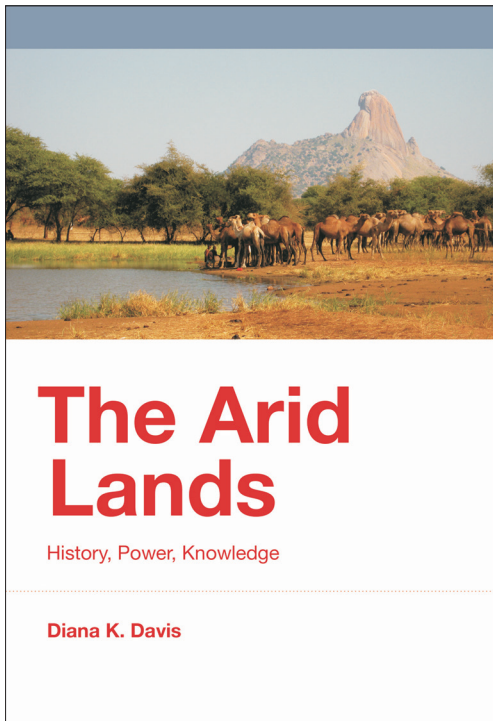
Arid lands, characterised by limited amounts of precipitation, cover substantial part of the Earth. They mainly occur in high pressure areas of the tropical zones or in the innermost parts of the continents. Arid lands and deserts are natural phenomena. Yet, debates about them are deeply embedded in culture and politics, as are related notions, such as the perception of deserts as 'degraded wastelands' that need to be reclaimed. Diana K. Davis's book, uniquely, addresses the historicity of debates about arid lands, and gives an analysis of the discourse of desertification from a political ecology approach, arguing that the global environmental debate about desertification and the United Nations anti-desertification programmes were highly influenced by former colonial discourses.

The short-format and concise volume was published by the MIT Press in the series 'History for a Sustainable Future', and follows the line of influential volumes on environmentalism and political ecology. Diana K. Davis, geographer and veterinarian, is pro-

fessor at the Department of History, University of California at Davis. DAVIS has authored several publications in the field of political ecology and environmental history, including the award winning work 'Resurrecting the Granary of Rome - Environmental History and French Colonial Expansion in North Africa' (DAVIS, D.K. 2008). Her recent book keeps the goal of the previous one while bringing the emphasis from North Africa to a more global understanding of the topic.

The analysis follows a chronological order. The author argues that the perception of arid lands as 'wasteland' was not at all common in antiquity, nor in the medieval period. While this notion has its roots in Judeo-Christian thought, it gained significant ground only with the great early modern geographical (re)discoveries and 19<sup>th</sup>-century colonisation. DAVIS shows how colonial discourses, which blamed local populations for alleged destructive land-uses leading to desertification, permeated later in 20<sup>th</sup> century anti-desertification programmes including the UN anti-desertification project. In line with this chronology, after introducing the topic in Chapter 1, the book discusses Classical, Early Christian and Medieval understandings of arid lands (Chapter 2), then related concepts from the age of discoveries (Chapter 3), the rise of imperialism (Chapter 4), and the 20<sup>th</sup> century (Chapter 5), whereas the final section is devoted to the 21<sup>st</sup> century (Chapter 6).

The first and introductory chapter 'Deserts, Dogma and Dryland Development Policy' starts with a very practical question. There were several well-intentioned development programmes focusing on drylands as well as international projects aimed at combatting desertification, overgrazing and deforestation, and improving agriculture. Such programmes evoked much criticism for their outcomes, however. Irrigation caused salinisation in many places. Afforestation was often not satisfactory due to limited rainfall. Rangeland development projects also changed the situation to the worse in many cases for causing increased degradation. DAVIS argues that the core of these problems should be examined from an historical-political perspective. First of all, the eye-catching term 'desertification' has no universal definition. Recent academic research in quaternary science and ecology reveals that the extent of desertification was heavily overestimated in the 20<sup>th</sup> century in many places, and the high variability of precipitation is a more influential factor in the development of



arid lands than anthropogenic drivers. Blaming local populations for destructive land-use practices like burning, overgrazing and deforestation goes back to the colonial period, and still plays a significant role in more recent debates. Yet, management practices of the local, mainly nomadic, people actually adapted to the high variability of the drylands, and they were in fact being practiced sustainably for a long time. Anti-desertification programmes, however, have often led to the marginalisation of local populations, affecting them even more seriously than the desertification itself. The historical analysis in the next chapters helps better understand how perceptions of drylands have been changing over the *longue durée*.

The analysis starts with the ideas of the Greek historian HERODOTUS, who is said to be the author of one of the first descriptions of the Sahara. Written knowledge about deserted lands increased with the expansion of the ancient Greek civilisation, as for example ALEXANDER THE GREAT brought many writers to his campaigns to North Africa and Asia. These descriptions influenced many later scholars, including the geographer STRABO. The knowledge of arid lands in the Roman period came from both earlier Greek sources and first-hand experience with arid Roman provinces. In Greek and Roman texts deserts were depicted as naturally dry regions that hinder travel and are usually inhabited by nomadic peoples, but, in turn, offer many valuable products. The idea of environmental determinism, which claimed a decisive impact of climate on the life and characteristics of the inhabitants of a given land, was first expressed by HIPPOCRATES, then by ARISTOTLE. These early sources about the connection of climate and human traits had a strong influence on the way the inhabitants of arid lands were perceived by Europeans in the later centuries.

Christianity brought many changes in the evaluation of arid lands. In the Old Testament deserts are depicted as wilderness, places of chaos and temptation. Another negative picture of arid land is the Fall of Adam and Eve from the Garden of Eden to the unproductive deserted land, which could only be made productive with hard work. But there are some more positive Christian approaches as well, which presented the desert as site of protection and refuge, or as the locus of ascetic perfection for early monks called the Desert Fathers. After the early Muslim conquests Europeans had much less direct knowledge about deserts. Pilgrimages to the Holy Land experienced the landscape of the desert more from a spiritual aspect, and provided limited information about the environment.

The next chapter, entitled 'Exploration, Desiccation, and Improvement', is dedicated to significant shifts in the notion of the desert after the geographical discoveries. Knowledge of the habitable world was increasing. Yet, this did not lead to the rejection of

environmental determinism inherited from ancient Greek texts. Quite the contrary happened. For example, MONTESQUIEU claimed in his political writings that the arid and harsh climate of Asia has an influence on the despotic political culture of the region. The theory of desiccation, which states that deforestation causes aridification, was supported by the studies of prominent scholars of the Enlightenment on different aspects of the hydrological cycle and the link between forest cover and humidity (e.g. Edward HALLEY, John WOODWARD and Stephen HALES). This idea was then improved and spread mainly by French naturalists, physiocrats and politicians (such as Pierre POIVRE, François-Antoine RAUCH, George-Louis LECLERC, de Comte BUFFON and François-René DE CHATEAUBRIAND), who argued for solutions against aridification. The moral claim of land improvement was also fuelled by liberal economic thought, which blamed pre-capitalistic managements for inefficiency and causing degradation. The tools of land development programmes in France and England, such as the privatisation of common lands, the control of transhumant pastoralism, or the afforestation of the sand dunes in Gascony in Southwestern France, were later introduced to arid lands in newly colonised areas as well.

In the chapter 'Imperialism and Desert Blame Game' the author discusses how desiccation theory became even more popular with the rise of colonial expansion. The idea of desiccation by anthropogenic factors appeared in many writings, ranging from French authors to HUMBOLDT and the American George Perkins MARSCH. MARSCH for instance, similarly to his contemporaries, claimed that deserts are desiccated forests, which were destroyed by 'nomadic invaders' and by their animals like camels and goats. Perceiving deserts as degraded wastelands justified the 'redemption' of arid lands through 'civilising' projects under colonial control, just as the 'primitive' cultures of the colonised were often thought to be 'redeemed' by their Christian colonisers. French Algeria, which became a colony by the 1830s, was one of the first sites where colonial arid land development policies were implemented. Restrictive measures were introduced, which later became dominant in the management of arid lands in other regions as well. These included "sedentarizing nomads, controlling or eliminating grazing, suppressing fire, improving livestock, creating forest reserves and reforestation, and increasing agriculture, both irrigated and rain-fed" (p. 116). Similar policies were applied in the British colonies in South Africa and India. Local nomadic people were criminalised by new laws controlling forest use. Afforestation took place, and in the Thar Desert an irrigation canal system was constructed. These developments were often realised at the expense of food safety. A plausible example is the introduction of a fast-growing tree species, *Prosopis*

*julifolia*, in India, which still has detrimental effects on herding as it suppresses grass growth. Moreover, its fruit is not even edible for animals as opposed to those of native trees which it replaces invasively (ROBBINS, P. 2001).

'The Twentieth Century: Desertification Comes of Age' scrutinises how colonial dryland policies became globalised in the twentieth century. Although the underlying idea of 'desertification' was apparent even before, the term itself was coined by a French forester, Louis LAVANDEN, as late as 1927. Dryland management policies, restrictions and laws were spread and transposed to the new French colonies, French West Africa (in the Sahel region) and to British colonies as well. The dominant notion of the day, which interpreted vegetation dynamics as progressing towards a state of equilibrium, justified the theory of desertification. It implied that the scarce vegetation of the Sahel should be interpreted as remnant of a previous, arboreal condition of 'climax'. In the 1930s droughts were experienced worldwide. The Dust Bowl in the United States led to the introduction of new soil conservation techniques, which were applied then in a number of regions as elements of a 'universal' dryland management package. After World War II several political changes took place, and new post-colonial states were emerging. The United Nations Arid Development Program, however, had no one to employ but former colonial dryland experts, who inevitably utilised the dryland development methods from the colonial period. The battle against deserts continued, and the idea of anthropogenic desertification was disseminated even more broadly.

The last chapter 'Conclusion: Embracing Variability' highlights the continuity of dryland development policies against desertification and offers some new aspects for the future. In the 1970s the Sahel region experienced serious droughts, which were followed by new anti-desertification projects of the UNESCO and FAO. In the last decades there has been an increasing amount of research revealing that the concept of desertification was exaggerated, and that climate variability is more influential a factor in such situations than anthropogenic drivers and arid lands should simply be understood as non-equilibrium environments. "It was not until 1994 UN Convention to Combat Desertification (UNCCD) that climate was added as a cause of desertification along with human activities." (p. 160). The crisis narrative of desertification proved to be so powerful that it is applied in non-arid regions as well. The author finds worrisome, that in the 2014 UNCCD report 'Desertification: the Invisible Front Line' desertification was mentioned as a driver of resource wars and the rise of political extremism in arid lands, which she interprets as a new wave of environmental determinism. She argues that the 'combat against de-

sertification' narrative was used to accumulate power in postcolonial states and to delay democratisation projects. These developments often marginalised local populations, what, according to DAVIS, might have a lot more to do with conflicts in arid regions than the contested process of 'desertification'. DAVIS looks for solutions by providing examples from Chad, Niger and the Syrian steppe. She offers the implementation of integrated dryland development, which is based on decentralisation, participation, recognition of indigenous knowledge, and the use of flexible management systems adapted to the variability of arid lands.

There is not much to criticise in this excellent book. A minor concern might be that the chapters sometimes overlap, and the steady flow of biographies and names of influential people can be a bit confusing. The book is very efficient in the sense of connecting the history of desertification discourses to concrete places around the globe from North and South Africa to France, India and the USA. It also sheds light on the networks of knowledge and experts within anti-desertification programmes of the United Nations. Nonetheless, there may be some space left beyond the Anglo- and Francophone world for further investigation to reconstruct how the discourse became global and how it channelled local perceptions of 'spreading drylands'. Arid territories and anti-desertification campaigns in China and Russia (or the Soviet Union) are mentioned several times in the text. Yet, the possible role of these countries in formulating the global desertification narrative is not examined directly. For example, while other authors like LINTON, J. (2004) successfully explore the influence of Soviet scientists in the 'global water crisis' discourse of the seventies, similar connections were not investigated in this volume.

From an Eastern Central European perspective it is interesting to ask how these discourses were translated and mobilised, and how they affected *our* understandings of arid lands and similar local environments. Unforgettably exotic pictures of the overgrazed Sahel, for instance, were present in all elementary school geography textbooks in Hungary when I went to school in the 1990s. Countries of Eastern and Central Europe were not involved directly in the colonisation of arid lands, and they do not have real deserts for their own climate is too humid. There are some places, however, especially sandy regions like the 'Błędów Desert' in Poland, the 'Moravian Sahara' in Czechia or the Kiskunság region in Hungary, which are often regarded as local equivalents of a desert. In the case of Hungary, which is the most prone to drought from these countries, 'desertification' was indeed a vivid topic in many periods. As a quick search in *Arcanum Digiteca*, an online collection of Hungarian printed sources, shows, the Hungarian version of the term desertification ('elsivatagosodás') was used as early as the 19<sup>th</sup> century, but I found the

first use of the term with regard to an area in Hungary in the 1930s, when Hungary, just like many other parts of the globe, experienced severe droughts. River regulation and deforestation were claimed to be the cause of 'desertification' on the Great Hungarian Plain. Extensive afforestation and irrigation programmes were meant to address these problems, especially in the Sovietised period, when they were influenced by similar projects in the Soviet Union (JANKÓ, F. 2013; BORVENDÉG, Z. and PALASIK, M. 2016).

As DAVIS puts it, "The power of stories of environmental change has been widely underestimated for too long." (p. 175). In her book she analyses the powerful story of desertification in a powerful and inspiring way. This concise, well-written book offers a fascinating new understanding of drylands. It gives a great historical overview of perceptions of arid lands from the antiquity to recent years, and excavates the origins of the discourse of desertification. The use of clear language and well-chosen informative illustrations helps a lot in comprehending the narrative, whereas detailed notes and references are valuable tools for further investigation. The inherent power of the book lies in that it has a very clear message for the future of environmental management. It challenges the way of seeing the desert as an inherently degraded landscape and offers the approach of seeing them as diverse environments with a highly variable climate. Therefore, for DAVIS, they should not be 'redeemed' or 'restored', since they can be managed sustainably by understanding their variability and by taking into consideration local knowledge and management practices as well. This volume will certainly have a great impact on arid lands research and management. In addition, it employs methods and provides approaches that are highly applicable to various fields in political ecology, history of science and environmental management, well beyond the history of drylands.

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