

PREFACE

The arid lands, or Badia, of north-east Jordan have been the subject of many forces of change throughout the course of the twentieth century, particularly since the end of the First World War. National boundaries drawn in the 1920s separated Jordan's Badia from similar areas in Syria, Iraq and Saudi Arabia and meant that the people living within these new boundaries became Jordanian and had to develop a set of relationships with the new Jordanian government in Amman which now provides basic services to the population, including education, health care, electricity and water. Then in the 1930s the Iraq Petroleum Company (IPC) built a pipeline from Kirkuk to Haifa through northern Jordan, creating pumping stations known as H4 and H5 around which grew the settlements of Ruwayshid and Safawi. Today, although some pastoralists retain their traditional lifestyle of full mobility with their sheep and goats, most are only partially mobile for parts of the year or have adopted a fully settled way of life in a cluster of new villages between Safawi and Mafraq, or further afield. Vehicles have replaced camels for most forms of transport (except desert police patrols), but a growing number of sheep and goats overgraze the natural vegetation and are dependent on imported grain-based concentrates for survival during much of the year. Irrigated farming has been introduced, dependent on deep bores, high pressure pumps and sophisticated, piped irrigation systems. Large volumes of good quality water are pumped from the area to Amman for domestic consumption. In addition, a network of paved roads has been built, including the international highway linking Amman with Baghdad. International links are also increased by some members of the population travelling to find work overseas, while others commute to Mafraq and Amman.

These many changes to the population, the resource base and the management of the Badia's natural resources are the subject of the Jordan Badia Research and Development Programme, based at Safawi in a field study area comprising the western half of Jordan's pan-handle. The Programme, initiated by Crown Prince El-Hassan, is under the aegis of the Higher Council for Science and Technology in Amman and the Royal Geographical Society in London. Some of the main research findings from the first phase of the Programme, 1992-6, are brought together in this volume which is an edited selection from about 50 field reports made by Jordanian, British and other researchers during this period.

The two overview chapters (1 and 2) respectively define the changing relationship between the people and their environment and describe the natural resources upon which the people in the Badia depend. Both chapters set the findings in the study area into a wider Jordanian Badia context. Subsequent chapters, which focus more directly on the study area, divide into groups. Chapters 3 to 10 cover aspects of the hydrological cycle from precipitation to water demand while Chapters 11 to 13 look at aspects of the relationship between rainfall and irrigation and geomorphological processes. A checklist of the flora (Ch. 14), including rain dependent grazing plants, then precedes an introduction to the changing pastoral system for the management of sheep and goats (Ch. 15). A final group of papers describes demographic change (Chs. 16 and 17), provides an introduction to aspects of social structure (Chs. 18 and 19) and discusses the provision of health and education services (Chs. 20 to 22). The volume concludes with a selection of abstracts of papers by Jordanian authors in Arabic and English.

Collectively the papers establish a baseline for the natural and human resources of the study area. More baseline studies are in hand in phase two of the Programme, 1997-2000, and together they will facilitate the monitoring and evaluation of change in future years.

The Programme, long-term, is also deeply concerned with questions of economic and social productivity. The aim of the research is to provide decision makers, in both the national government and local households, the information they require for sustainable management of Badia resources by government agencies and local people on behalf of the population and the nation as a whole.

Such a large collaborative research programme has benefited from the close involvement of numerous people, from our keenly interested Patrons who have supported us wholeheartedly to the youngest undergraduates who have set foot in the Badia for the first time. The long lists of committee members and authors give only an indication of the numerous scholars, administrators, researchers and officials who have contributed to the success of the Programme, and to whom thanks must be given. To them must be added, in particular, the people of the Badia without whom this work could not be undertaken. To all who have made contributions to the Programme our grateful thanks are extended.

Roderic W. Dutton
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