

Vector control

Methods for use by individuals
and communities

Prepared by Jan A. Rozendaal



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Foreword

The development and production of this manual have been an enormous task. Relevant information has been assembled on the control of disease vectors, reservoir species and household pests with the specific objective of providing practical guidance to non-professionals. The target species addressed in this book and the control methods described have been selected for an audience of individuals and communities whose potential contribution to vector control is considerable, but may be restricted by factors such as lack of financial resources and limited education. The decision-making structure of the community and control activities undertaken by local health services are also important in determining which control methods are appropriate.

Most of the research, data collection and field visits needed for this book were carried out by Dr Jan A. Rozendaal between 1988 and 1991. The resulting draft manuscript was then reviewed by various specialists in vector-borne disease control, who made a number of suggestions for changes to the text. In preparing the final manuscript, Dr Rozendaal has incorporated information on new developments in vector control to ensure that the text is as up to date as possible.

This book is particularly timely, since it appears as vector control is coming to depend less on large-scale control programmes organized by governments and more on community participation at the local level. In addition, it is now clear that many of the traditional methods used to prevent and control vector-borne and other infectious diseases are either incorrectly applied or no longer effective. Under the combined pressures of economic development, environmental and demographic changes, and increasing human migration, diseases are reappearing in new environments or are re-emerging in more virulent forms. Many of the agents of these diseases have become resistant to commonly used drugs or their vectors have developed resistance to pesticides. The methods described in this book, especially those directed at permanent modifications of housing and other components of the living environment, will help to prevent and control these diseases, which hinder economic progress and affect the well-being of populations in many parts of the world.

Dr K. Behbehani
Director, Division of Control of Tropical Diseases

Preface

Diseases transmitted by arthropods and freshwater snails are among the major causes of illness and death in many tropical and subtropical countries, and to a lesser extent, in temperate zones also. In addition to the toll they exact in terms of premature death and disability, such diseases—which include malaria, filariasis, leishmaniasis, schistosomiasis, dengue and trypanosomiasis—represent a significant impediment to economic development, as a result of lost working hours, and the high costs of treating the sick and controlling the vectors of disease.

Large-scale campaigns for vector control are often unworkable for both financial and practical reasons, as well as being damaging to the environment. For these reasons, attention has shifted to methods that can be applied by individuals and communities to protect themselves from vector-borne disease. Unfortunately there is little widely available information to guide non-specialists in vector control techniques. This book attempts to fill that gap, by describing methods that are suitable for self-protection by individuals and communities and that require only limited involvement by the health services in planning and community education. In general these techniques are relatively simple and cheap, do not require much training and, if properly applied, are safe for the user and the environment.

The manual includes practical information on all major disease vectors and pests, only some of which will be relevant in any particular community. The manual is therefore intended for adaptation to the local situation or to special target groups, such as travellers. The World Health Organization would welcome feedback from readers, particularly regarding use of this manual in the field. Comments and suggestions for improvement should be sent to Division of Control of Tropical Diseases, World Health Organization, 1211 Geneva 27, Switzerland.

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