

## FOREWORD

by M.S. Swaminathan

Wetlands have played a critical role in the development of human society. For thousands of years rural communities have relied upon their fertile soils to grow crops, grazed livestock on their rich pastures, fished their productive waters, and harvested a diversity of products ranging from timber to wild game. In this way the major river systems of the world, the Niger, Nile, Tigris-Euphrates, Ganges, and Mekong among them, have supported the development of rich and sophisticated civilizations that exploited the productive wetland ecosystems of their valleys.

Nowhere has this association between human communities and wetlands been as close, and become as highly developed, as in Asia. Across our continent many diverse societies have developed highly effective systems for deriving benefit from the rich natural productivity of these ecosystems. The complex schemes for rice production in Burma, Thailand, Java, and the Mekong basin, are but a few examples of this.

Today, despite the region's rapidly rising population, and the increasing demands being made upon the natural environment, Asia still possesses some of our planet's richest natural ecosystems. Among these are many of the most important tropical wetlands which provide their ecological and hydrological services to human society, especially in the extensive coastal wetlands of South-East Asia and along the broad river valleys which stretch through the continent. The rich diversity of the flora and fauna which these ecosystems support, including numerous resident and migratory waterbirds, is of particular international significance, and the new forms of floating rice which have evolved in the wetlands of the Ganges, Brahmaputra, Irrawaddy, and Chao Phraya rivers are of great importance to human society. These deep water rice varieties contain genes which enable them to rise above flood waters and thereby provide food even when severe floods occur. Today they play a significant role in food production in many parts of the world, and genetic engineering now enables us to transfer such genes to other species.

If managed sensitively, wetland ecosystems can continue to provide their services for people's benefit. In some cases this will, as in the past, require conversion of parts of the wetland for agriculture or aquaculture, but in many, and perhaps most, it will mean leaving natural wetlands untouched. Only rarely will use of these resources entail the large scale conversion which in recent years has led to widespread loss and degradation of wetlands over much of the world, and the loss of the ecological and hydrological services which they provide.

Many of the Asian wetlands which have been converted in this way have been

considered to be of minor importance. It is only once the damage has been done that their importance has become fully realized. Mitigation is then impossible, or vastly expensive. Yet if information on the importance of the area had been available earlier, the project could have been designed differently, or moved to an area which was less sensitive ecologically.

Until now one of the obstacles to effective consideration of these conservation concerns has been the limited availability of high quality information on the distribution and importance of the region's principal wetland systems. Now, with the publication of *A Directory of Asian Wetlands*, future decisions on development planning will no longer suffer from the handicap of ignorance. Of course the information contained in the Directory will be but one of many tools which governments and the development assistance community will need in order that future development investment builds upon, rather than destroys, the benefits which these natural ecosystems provide. However, it will provide the essential baseline from which to build. Combined with complementary investment in sensitive management of natural ecosystems so that they are managed to yield improved benefits to human society, and to strengthen the institutional capacity for designing and implementing such measures, the Directory is a major step towards the sustainable management of Asia's wetland resources. It now needs to be used by conservationists and development planners alike so that these wetlands can continue to provide their benefits to present and future generations.