

Image Atlas in Forest Health Protection

2001

Image Atlas in Forest Health Protection (Report of the APEC Project)

Completed by

Institute of Forest Resource Information Techniques, Chinese Academy of Forestry Institute of Remote Sensing Applications, Chinese Academy of Sciences

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Preface

Since 20's in last century, airborne remote sensing has been used in forest resource inventory and monitoring. Ever since 1972, civilian Earth observation satellites of different origin and construction have been circling our planet and reporting regularly on its land and ocean surfaces. Remote sensing techniques are now used for innumerable practical and scientific tasks, and make significant contributions to our understanding of the manifold processes that take place on our home planet.

Forest insects and diseases have long been a serious kind of disaster and cause great damage every year. Remote sensing has the capacity of large scale data acquisition, and can be used in the monitoring of forest disease and insects. Our project is to probe into the techniques for remote sensing applications in forest disease and insect monitoring. The study has been carried out in northeastern China, central eastern China and southern China, and has gained great success. It has demonstrated that Landsat TM data can be used in monitoring and assessing damages caused by pine caterpillars in stand level. Videography and high resolution data such as IKONOS data can even be used to detect individual trees hampered by diseases and insects. Images and maps of various type used in our project are compiled into this atlas, and they can be a good demonstration of remote sensing potentials in forest protection.

It is to be hoped that this work will have a widespread readership, broaden interest in the possible uses of remote sensing, and enhance awareness of what China is capable of doing. To mitigate damages by forest insects and diseases through remote sensing is our final goal.

Wu Honggan