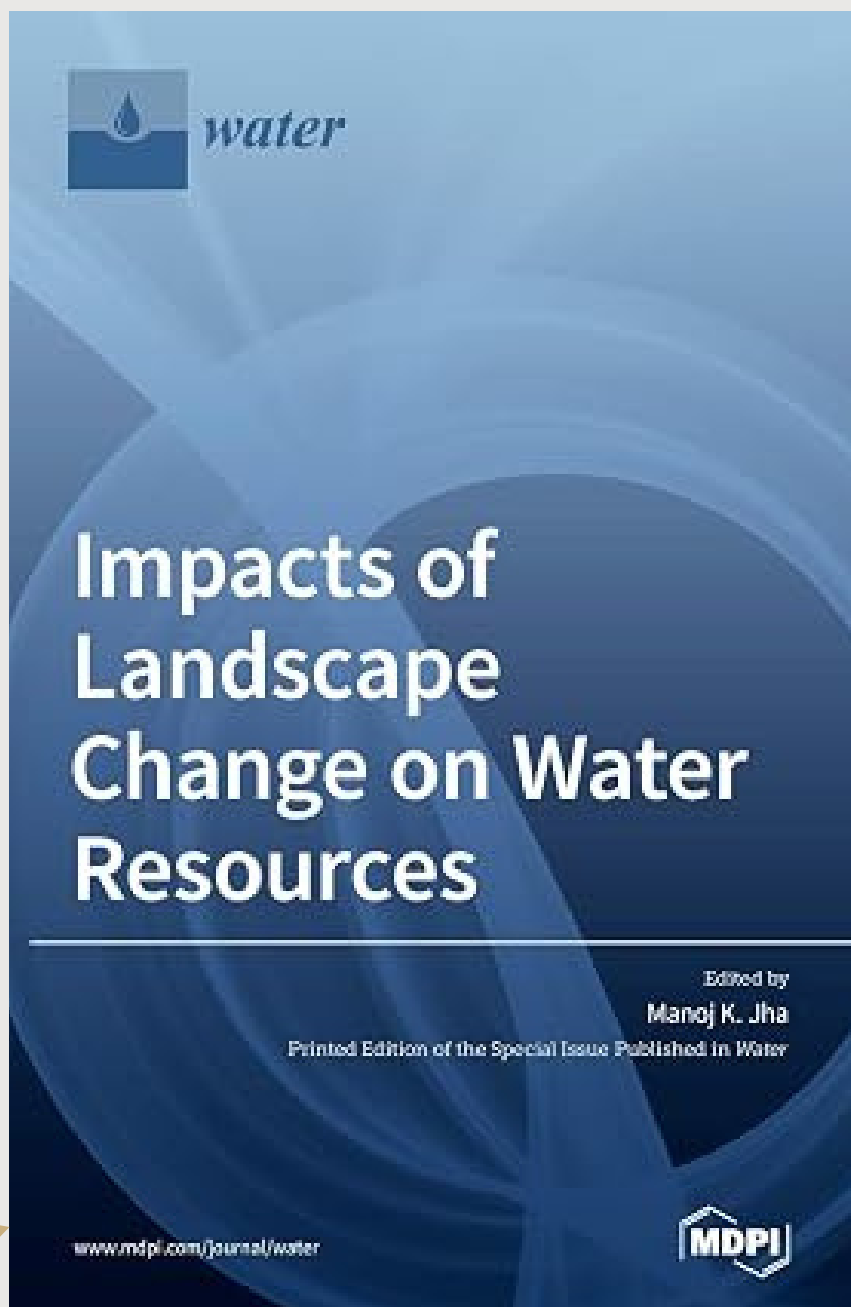




BOOK REVIEW

TITLE: Impacts of Landscape Change on Water Resources

AUTHOR: Manoj K. Jha

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IMPACTS OF LANDSCAPE CHANGE ON WATER RESOURCES EXAMINES HOW CHANGES IN LAND USE AND LAND COVER INFLUENCE THE QUANTITY AND QUALITY OF WATER RESOURCES. WRITTEN BY ENVIRONMENTAL ENGINEER MANOJ K. JHA, THE BOOK EXPLAINS HOW RAPID URBANIZATION, DEFORESTATION, AGRICULTURAL EXPANSION, MINING, AND OTHER HUMAN ACTIVITIES ALTER NATURAL LANDSCAPES, AFFECTING HYDROLOGICAL PROCESSES, WATER AVAILABILITY, AND ECOSYSTEM HEALTH.

THE BOOK INTRODUCES THE SCIENTIFIC PRINCIPLES THAT GOVERN WATERSHED HYDROLOGY AND EXPLORES THE RELATIONSHIP BETWEEN LANDSCAPE CHARACTERISTICS AND THE MOVEMENT OF SURFACE WATER AND GROUNDWATER. IT DISCUSSES HOW LAND-USE CHANGES CAN INCREASE SURFACE RUNOFF, REDUCE GROUNDWATER RECHARGE, ACCELERATE SOIL EROSION, INTENSIFY FLOODING, AND DEGRADE WATER QUALITY THROUGH SEDIMENTATION, NUTRIENT LOADING, AND CHEMICAL CONTAMINATION. THESE ENVIRONMENTAL CHANGES HAVE SIGNIFICANT IMPLICATIONS FOR SUSTAINABLE WATER RESOURCE MANAGEMENT AND ENVIRONMENTAL CONSERVATION.

A MAJOR FOCUS OF THE BOOK IS THE APPLICATION OF MODERN ANALYTICAL TOOLS AND TECHNOLOGIES. THE AUTHOR DEMONSTRATES HOW GEOGRAPHIC INFORMATION SYSTEMS (GIS), REMOTE SENSING, HYDROLOGICAL MODELS, AND WATERSHED SIMULATION TECHNIQUES CAN BE USED TO EVALUATE THE IMPACTS OF LANDSCAPE CHANGE, PREDICT FUTURE ENVIRONMENTAL CONDITIONS, AND SUPPORT EVIDENCE-BASED DECISION-MAKING. NUMEROUS CASE STUDIES ILLUSTRATE THE PRACTICAL APPLICATION OF THESE METHODS IN DIFFERENT ENVIRONMENTAL SETTINGS.

OVERALL, IMPACTS OF LANDSCAPE CHANGE ON WATER RESOURCES PROVIDES A COMPREHENSIVE UNDERSTANDING OF THE INTERACTIONS BETWEEN LANDSCAPE DYNAMICS AND WATER SYSTEMS. IT HIGHLIGHTS THE IMPORTANCE OF INTEGRATED WATERSHED MANAGEMENT, SUSTAINABLE LAND-USE PLANNING, AND CONSERVATION STRATEGIES TO PROTECT WATER RESOURCES IN THE FACE OF INCREASING ENVIRONMENTAL CHANGE. THE BOOK IS A VALUABLE REFERENCE FOR STUDENTS, RESEARCHERS, ENVIRONMENTAL SCIENTISTS, HYDROLOGISTS, ENGINEERS, AND POLICYMAKERS INVOLVED IN WATER RESOURCE MANAGEMENT AND ENVIRONMENTAL PLANNING.

**NATALIE EVELINE GRACE MATEUS
INTERN SABAH
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