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Plants, Redistribution by Large Herbivores, Redistribution by Other Animals, Mineral Build-up Due to Livestock Feeding, Management Based on Mineral Distributions, Literature Cited, Distribution of Plants by Animals, Active Transport, Ingestion and Spread of Fruits, Passive Transport, Management Implications, Effectiveness of Plant Dispersal by Animals, Literature Cited, Fire as an Environmental Factor, Prehuman Sources of Fire, The Evolution of Tolerance to Fire, Fire-Type and Fire Species, Adaptations of Plant Species to Burning, Effects of Fire on Soil, Effects of Fire on Animals, Effects of Fire on Plants, Vegetational Responses to Fire, Fire as a Regenerative Stimulant, Literature Cited, Rangeland Synecology, Seven Groups of Vegetational Change, Vegetational Change and Stability, Range Condition and Trend, New Directions in Range Condition Assessment, Livestock as a Tool to Manage Range Condition, Literature Cited, PART TWO GRAZING MANAGEMENT, Numbers of Animals, Concepts and Definitions, Production per Hectare Versus per Animal, Literature Cited, Utilization of Forage, Utilization Defined, Determination of Forage Utilization, Adjustment of Animal Numbers to Forage Supply, Literature Cited, Animal Distribution, Factors Influencing Animal Distribution, Consequences of Faulty Animal Distribution, Practices to Lessen Animal Concentrations, Literature Cited, Mixed Species Grazing, Definition, Attitudes Toward Animals, Mixed Game Animals, Introduction of Exotic Range Animals, Exchange Ratios Among Animal Species, Forage and Animal Combinations, Cycles of Animals and Habitats, Literature Cited, Mixed Species Management, Objectives of Habitat Management, Harvestable Numbers, Animal Capture and Handling, Game Cropping, Game Ranching, Game and Livestock Ranching, Management of Mixed Species, Literature Cited, Seasonal Management, Seasonal Suitability, Range Readiness, Yearly Cycles, Managing Within the Cycles, Needed Information, Manipulation of Grazing Period, Literature Cited, Grazing Plans, Objectives of Seasonal Grazing Plans, History of Grazing Plans, Terminology of Seasonal Grazing Treatments, Types of Grazing Plans, Operation of Grazing Plans Within the Annual Forage Cycles, Literature Cited, Responses to Seasonal Grazing Plans, Vegetational Responses, Livestock Responses, Soil Responses to Grazing Plans, Determination of Responses, Other Benefits from Grazing Plans, Wildlife Responses, Positive Responses to Rotation Schedules, Precautions in Using Rotation Schedules, Literature Cited, PART THREE VEGETATION MANAGEMENT, Modification of Vegetation, The Problem of Undesirable Plants, Kinds of Undesirable Rangeland Plants, Demands for a Clean Environment, Ecological Integrity of Rangeland Management, The Vegetation, Ecological Tactics for Vegetation Management, Toward Flexibility for the Future, Literature Cited, Mechanical Control of Rangeland Plants, Objectives, Specific Sites and Problems, The Method, Time, and Intensity of Application, Methods of Mechanical Plant Control, Debris Arrangements, Soil Disturbances, Plant Kill, Herbage Increase After Brush Removal, Costs of Mechanical Brush Control, Appearance of the Altered Landscape, Literature Cited, Chemical Control of Rangeland Plants, Approval of Herbicides, Major Chemicals Used as Rangeland Herbicides, Application, Hazards, Responses of Rangeland Plant Communities to Herbicides, Literature Cited, Prescribed Fire in Rangeland Management, Fire Characteristics, Fire Behavior, Responses to Burning During Certain Seasons, Temporary or Permanent Effects?, Objectives in the Use of Fire, Prescribed Burning, Reluctance to Use Prescribed Fire, Literature Cited, Biological Control, Practices, Risk, Successes and Problems, Grazing Animals, Developing Plant Resistance, The Future of Biological Control, Literature Cited, Seeding of Rangelands, Deciding to Seed, The Seeding Operation, Regional

Seeding Practices, Literature Cited, Rangeland Fertilization, Widespread Fertilizer Problems, Responses to Fertilization, Is Rangeland Fertilization Profitable?, Management of Fertilized Areas, Literature Cited, Soil and Water Conservation, Rangeland Soil Conditions, The Erosion Process, Recognition of Erosion, Erosion Control with Cover, Mechanical Structures to Control Water Erosion, Sand Control, Windbreaks and Shelterbelts, Water Harvesting Practices, Literature Cited, PART FOUR MANAGING RANGELAND COMPLEXITY, Reclamation of Damaged Rangeland, Overlapping Terms, Goals, Reclamation in the Ecosystem Context, The Reclamation Process on Mine Spoil, Rangeland Roads, Literature Cited, Riparian Areas and Pollution: Best Management Practices, Definition of Riparian, Riparian Conditions, Grazing Management of Riparian Zones, Mechanical Structures to Improve Riparian Habitats, Successful Riparian Management, Pollution, Best Management Practices (BMP), Literature Cited, Multiple-Use, Changes in Land Uses, Multiple-Use Principles and Characteristics, Multiple-Use Practices and Management, Selling a Multiple-Use Management Program, Experimental Stewardship Program, Coordinated Resource Management Planning (CRMP), Summary, Literature Cited, Planning for Rangeland Management, Planning, The Operating Ecosystem, Selecting the Parts of a Range Improvement Program, Intensity of the Practice, Selecting Rangeland Products, Summary, Literature Cited, Decision Support Systems, Multiprocess Models, Combining Rangeland Resource Models, Precautions in Applying Models and Simulation, Accumulation of Data-Sets, Issues and Values of Modeling, Literature Cited, Appendix One: Scientific and Common Names of Plants, Appendix Two: Scientific and Common Names of Animals, Index, About the Book and Authors.

Sommario/riassunto

Over the last two decades the science of range management, like many other resource disciplines, has embraced and integrated environmental concerns in the field, the laboratory, and policy. Rangeland Ecology and Management now brings this integrated approach to the classroom in a thoroughly researched, comprehensive, and readable text. The authors discuss the basics of rangeland management?including grazing and practical management of animals and vegetation?and place those basics within the context of decision making for damaged land, riparian and water conservation, multiple use.