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Nota di contenuto	Spatial Management of Risks; Table of Contents; Introduction; Chapter 1. From Prevention to Risk Management: Use of GIS; 1.1. Introduction; 1.2. GIS and public security; 1.3. Examples of applications for public security; 1.3.1. SIGASC application; 1.3.2. Application; 1.3.3. SIG CODIS application; 1.4. Prospects for development; 1.5. Conclusion; 1.6. Bibliography; Chapter 2. Coupled Use of Spatial Analysis and Fuzzy Arithmetic: Assessing the Vulnerability of a Watershed to Phytosanitary Products; 2.1. Introduction; 2.2. Construction of the index; 2.3. Implementation of fuzzy calculations 2.4. Application to the watershed of Vannetin: vulnerability to

atrazine 2.4.1. The research site; 2.4.2. Parameters of the watershed; 2.4.2.1. Pluviometry; 2.4.2.2. Anthropogenic sub-index; 2.4.2.3. Pedology; 2.4.2.4. Summary of data common to the entire watershed; 2.4.3. Cell parameters; 2.4.3.1. Geographic characteristics of the area; 2.4.3.2. Vegetation cover; 2.4.4. Fuzzy parameters; 2.4.5. Representation of the indicator and of its related inaccuracy; 2.5. Conclusion; 2.6. Bibliography; Chapter 3. Agricultural Non-Point Source Pollution; 3.1. Introduction 3.2. Mapping non-point source pollution phenomenon 3.2.1. Mapping principles; 3.2.2. Description of the research phenomenon; 3.2.3. Mapping steps; 3.3. Territorial database building rules; 3.3.1. Choosing software programs; 3.3.2. Design of the implemented GIS; 3.3.3. Organizing and creating geographic information layers; 3.3.3.1. Implementation of a conceptual data model; 3.3.3.2. Digitization of paper-based document; 3.3.3.3. Digital data import; 3.3.3.4. Controlling the geographic data integrity; 3.3.4. Organizing and creating attribute tables; 3.3.4.1. Implementing a conceptual data model 3.3.4.2. Creating a data dictionary 3.3.4.3. Thematic data processing or import; 3.3.4.4. Controlling the attribute data integrity; 3.4. The data sources used; 3.4.1. Identifying the available information; 3.4.2. Soil-related data; 3.4.2.1. Surface texture of the soils; 3.4.2.2. Soil hydromorphy; 3.4.2.3. Soil textural differentiation; 3.4.3. Topography-related data; 3.4.3.1. The slope; 3.4.3.2. Slope orientation; 3.4.4. Land use-related data; 3.4.5. Land planning-related data; 3.4.5.1. Hedges; 3.4.5.2. Ditches; 3.4.5.3. Agricultural land drainage; 3.5. Pollution risk zoning 3.5.1. Treatments to be performed 3.5.1.1. Zoning of the potential for pollution; 3.5.1.2. Vulnerability zoning; 3.5.1.3. Risk zoning; 3.5.2. An example of risk zoning; 3.5.2.1. General presentation of the research area; 3.5.2.2. Knowing the risks; 3.5.2.3. Transfer diagnosis; 3.5.2.4. Risk management; 3.6. Risk zoning applications; 3.6.1. Risk knowledge applications; 3.6.2. Spatial planning applications; 3.6.3. Applications related to monitoring water quality; 3.7. Conclusion; 3.8. Bibliography Chapter 4. Cartographic Index and History of Road Sites that Face Natural Hazards in the Province of Turin

Sommario/riassunto

Spatial analysis is an increasingly important tool for detecting and preventing numerous risk and crisis phenomena such as floods in a geographical area. This book concentrates on examples of prevention but also gives crisis control advice and practical case studies. Some chapters address urban applications in which vulnerabilities are concentrated in area; others address more rural areas with more scattered phenomena.
