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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Title Page; Copyright Page; Contents; Notes on contributors; Foreword; Preface; Acknowledgements; About the companion website; Chapter 1 The Ecological Effects of Linear Infrastructure and Traffic: Challenges and Opportunities of Rapid Global Growth; INTRODUCTION; LESSONS; 1.1 Global road length, number of vehicles and rate of per capita travel are high and predicted to increase significantly over the next few decades; 1.2 The 'road-effect zone' is a useful conceptual framework to quantify the negative ecological and environmental impacts of roads and traffic 1.3 The effects of roads and traffic on wildlife are numerous, varied and typically deleterious 1.4 The density and configuration of road networks are important considerations in road planning; 1.5 The costs to society of wildlife-vehicle collisions can be high; 1.6 The strategies of avoidance, minimization, mitigation and offsetting are increasingly being adopted around the world - but it must be recognized that some

impacts are unavoidable and unmitigable; 1.7 Road ecology is an applied science which underpins the quantification and mitigation of road impacts; CONCLUSIONS; FURTHER READING
REFERENCES Chapter 2 Bad Roads, Good Roads; INTRODUCTION; LESSONS; 2.1 Land-use pressures will rise sharply this century and will be strongly influenced by roads; 2.2 Agricultural yield increases alone will not spare nature - land 2010;use zoning is crucial too; 2.3 Roads in pristine areas are environmentally dangerous - the first cut is critical; 2.4 Paved highways have especially large-scale impacts; 2.5 Roads can be environmentally beneficial in certain contexts; 2.6 Roads are amenable to policy modification
2.7 A recently proposed global road-mapping scheme could serve as a potential model for these efforts CONCLUSIONS; FURTHER READING; REFERENCES; Chapter 3 Why keep areas road-free? The importance of roadless areas; INTRODUCTION; LESSONS; 3.1 Roadless areas contribute significantly to the preservation of biodiversity and ecosystem services; 3.2 Planning of new transport routes should identify existing roadless areas and avoid them; 3.3 Subsequent ('contagious') development effects of road construction should be avoided in roadless and low-traffic areas
3.4 Unnecessary and ecologically damaging roads should be reclaimed to enlarge roadless areas and restore landscape-level processes 3.5 It is crucial to systematically evaluate the need for and location of proposed roads and implement the principle of 'no-net-loss' of unfragmented lands when there is no alternative; CONCLUSIONS; ACKNOWLEDGEMENTS; FURTHER READING; REFERENCES; Chapter 4 Incorporating biodiversity issues into road design:The road agency perspective; INTRODUCTION; LESSONS
4.1 Road planning, design, construction and operation are complex challenges that attempt to balance environmental, economic and social demands

Sommario/riassunto

This authoritative volume brings together some of the world's leading researchers, academics, practitioners and transportation agency personnel to present the current status of the ecological sustainability of the linear infrastructure - primarily road, rail and utility easements - that dissect and fragment landscapes globally. It outlines the potential impacts, demonstrates how this infrastructure is being improved, and how broad ecological principles are applied to mitigate the impact of road networks on wildlife. Research and monitoring is an important aspect of road ecology, encompassing