Mountain bike activity in natural areas: impacts, assessment and implications for management: a case study from John Forrest National Park, Western Australia


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Abstract

An exploratory literature review was conducted into the biophysical and social impacts of mountain biking in Australia and around the world. This review provided the basis for an impact assessment method that could be applied to mountain biking in natural areas. Mountain biking is increasing in popularity in Australia and this is adding to the demand for more space in natural areas for recreational activities (Goeft & Alder, 2001, Faulks, Richtie & Fluker 2007, Standing Committee on Recreation and Sport 2006, CALM 2007). Mountain biking can have negative impacts on the natural environment but the extent and significance of impacts is not fully understood (Goeft & Alder 2001, Chiu & Kriwoken 2003, Hasenhauer 2003, Sprung 2004, White, Waskey, Brodehl & Foti 2006). This situation constitutes a problem for managers as they need impact information to ensure mountain biking in natural areas is sustainable.

This report addresses mountain biking as a recreational activity by examining styles of riding and the corresponding demands of riders. It also identifies the major impacts of mountain biking and explores potential management techniques for developing sustainable mountain biking activities in natural areas. A method of assessing mountain biking impacts has been field-tested. The study was conducted in John Forrest National Park (JFNP), a popular recreation area in the Perth metropolitan area, Western Australia. Park rangers have previously identified areas in the Park where mountain bikers have created informal trail networks and technical trail features. Such findings are recognised to be having a negative impact on the Park. A GPS and GIS assessment method was field tested in JFNP to quantify this impact and proved to be useful in quantifying areas impacted by mountain bike activities.

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Natural Area Tourism provides an authoritative and comprehensive account of tourism in natural, wild and protected areas. The second edition contains an overview of key literature and new developments that have emerged since the publication of the first edition more than a decade ago. Accordingly, this book will remain an invaluable resource and review of the subject for many years to come.

3.16 Trail surface showing compaction and linear rutting caused by mountain bikes, John Forrest National Park, Western Australia.

3.17 Elevated cycle-way constructed off-trail for the purpose of mountain biking activity, John Forrest National Park, Western Australia.

3.18 Impact of off-road vehicles on soils.

3.19 Environmental impacts of off-road vehicles in semi-arid and arid ecosystems.


51 Box 46: Dispersion strategies.

The definition-assessment and implementation of Tourism Carrying Capacity (TCC) needs to be considered as a process within a planning process for tourism development. The study aims at the elaboration of a comprehensive methodological framework which will contribute to an understanding of the concept of Tourism Carrying Capacity (TCC), its practical analysis and measurement and its efficient application in European tourist destinations. European destinations areas, rich in natural and cultural resources, have a major advantage in the world tourism market. The study was conducted in John Forrest National Park (JFNP), a popular recreation area in the Perth metropolitan area, Western Australia. Park rangers have previously identified areas in the Park where mountain bikers have created informal trail networks and technical trail features. Such findings are recognised to be having a negative impact on the Park. Recreational mountain biking in natural areas can cause physical degradation to the environment through informal trail development, informal modification of existing trail systems, and disturbance to native vegetation. It also provides management with informative and interpretive maps of the impacted area.