

A SURVEY OF EASTERN AUSTRALIAN AND SOME OTHER APPROACHES TO
LEGISLATIVE CONTROL OF OFF-ROAD RECREATION VEHICLES: LESSONS AND
PROPOSALS FOR TASMANIA.

by

Gordon

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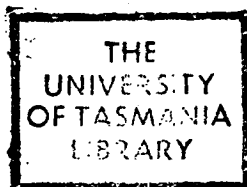
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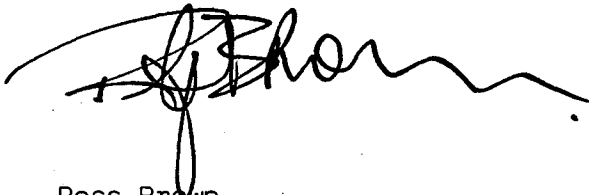
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STATEMENT

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university, and to the best of my knowledge contains no copy or paraphrase of material previously published or written by another person, except when due reference is made in the text.

A handwritten signature in black ink, appearing to read 'Ross Brown', with a long, wavy horizontal line extending to the right.

Ross Brown,
University of Tasmania,
March, 1987.

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The nature of this investigation required consultation with many people - some involved in land management and regulatory functions, others being those favourably disposed toward driving vehicles in remote areas. To those unnamed I, nevertheless, remain grateful for the information, opinions and comments always expressed in good faith.

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ABSTRACT

Rapidly changing social patterns and increasing standards of living have brought about pronounced changes in the way in which leisure and recreation time is utilized. This, combined with rapid technological innovation in vehicle capabilities and manouverability, has brought about a dramatic increase in human use pressure on the natural environment.

Despite the relatively short time in which the incidence of off-road vehicle impacts have been monitored and documented, there already exists a large body of literature (particularly North American) detailing the adverse and long term impacts of unrestricted vehicle use.

That problems involving off-road recreational vehicles in Tasmania occur as regularly as they do suggests that Tasmanian land use management is failing to ensure that recreation vehicles are strictly controlled in confined areas or restricted to properly designed trails.

The frustrations of the land manager are continually experienced by the author himself, through personal experience in bushland management with the Parks and Recreation Department, Hobart City Council. Persons caught driving illegally off-road usually protest ignorance of the relevant vehicular restrictions. All, however, indicate a common problem by asking: "where can I, legally, go?" That dilemma the author, as the owner of an endro motor-bike, has also experienced, when seeking off-road opportunities.

The plethora of Tasmanian legislation dealing with the management of Crown land contains provisions for regulation and control of recreation vehicles. Despite this, officers in the land management field are still confronted with enforcement problems. Indications elsewhere are that specific control measures must be implemented.

It is argued, drawing on lessons from the states of mainland Australia (and elsewhere), that problems posed by off-road recreational vehicles can be best ameliorated by the formulation of strict guidelines for land administering authorities to follow in drawing up regulations for application to recreational use of vehicles on public land. It is also argued that Tasmania should introduce specific legislation, possibly based on similar legislation elsewhere in Australia or overseas (perhaps the USA in particular, where considerable planning and legislation for off-road recreational vehicles has already been effected).

A 'bundle' of strategies is suggested. Initially, a policy and strategy with definite objectives must be formulated. Specific legislation, while necessary, must be backed by determined enforcement and prosecution. Just as important is the role of education in changing community attitudes. Control provisions which foster the latter objective require urgent implementation.

What would the world be, once bereft
Of wet and of wilderness? Let them be left,
O let them be left, wilderness and wet;
Long live the weeds and the wilderness yet.

Gerard Manley Hopkins, "Inversnaid".

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GLOSSARY

4WD(s)	Four Wheel Drive Vehicle(s)
HEC	Hydro-Electric Commission - Tasmania
MAIB	Motor Accidents Insurance Board - Tasmania
NPWS	National Parks and Wildlife Service - Tasmania
ORV(s)	Off-Road Vehicle(s)
RV(s)	Recreation Vehicle(s) - NSW

OR

	Restricted Vehicle(s) - Tasmania
RVA(s)	Recreation Vehicle Area(s) - NSW
SLARV(s)	State Land Area(s) for Recreation Vehicle(s) - Tasmania
SPCC	State Pollution Control Commission - NSW
TRLUS	Tasmanian Recreation Land Use Study

CHAPTER 1: INTRODUCTION: THE NEED FOR THE STUDY

1.1 Background to the Problem

Warning about some of the major factors inhibiting realisation of the "conservation ethic" in the United States, Justice William O. Douglas, eminent champion for a US Wilderness Bill of Rights, stated:

Pressures of commercial interests, of motorised recreationists, of our mounting population, threaten to overrun the meager wilderness areas left, fill them with the debris of civilisation, and leave only alpine areas in primitive condition (emphasis added, Douglas 1965 : 3).

Such a proposition, that the twentieth century 'beast of burden', the motorised vehicle, in its recreational use, should be considered in the same league as 'rampant capitalism' and population pressure as a threat to conservation and therefore to the environment, might be considered excessive by some, but an increasing number of people now seem prepared to acknowledge that there is much substance to Justice Douglas's observation. His warning provides the basis for the ensuing investigation of provisions for recreation vehicle control on Tasmanian Crown land.

The threat posed by off-road recreational vehicles (ORVs) has only recently revealed itself, via realisation of possible consequences of the extremely rapid increase in their number and use. Human ingenuity and innovative genius can be expected to ensure such rapid technological developments that new and possibly more environmentally dubious off-road vehicles (ORVs) will be produced and sold in the future. Recent research points to an increase in social affluence generally and in the proportion of disposable income spent on leisure and recreational pursuits in the western world (Mercer 1981). Leisure time is also expected to increase (Kraus 1984), which, in conjunction

with an apparently increasing motivation to get away from the pressures of contemporary urban existence, is likely to increase human use pressures on that scarce and dwindling resource, the natural environment. The prima facie assumption must be that these pressures will result in increasingly adverse effects upon the natural environment (cf. House of Representatives Standing Committee on Environment and Conservation 1977; New South Wales, State Pollution Control Commission 1979).

1.2 The Problem

A plethora of evidence exists, both scientific and otherwise, indicating that social, economic, biophysical and environmental problems stem from the various recreational uses of ORVs. That evidence is reviewed in detail in Chapter 3. Like many twentieth-century devices and developments, ORVs can provide positive benefits. Misused, however, they can be ecologically and socially disastrous, often also incurring economic costs (for example, costs associated with access and management trail maintenance). If a 'blind eye' is turned to the problem, the authorities will permit an entire generation to grow up believing it is a natural right to drive carelessly through public lands, and remain unchecked by the authorities. Expressions of concern and alarm have become increasingly common and measures to control the use of ORVs have been implemented in some Australian states, as well as overseas. Some of these measures have proven effective whereas others have been, to varying degrees, less successful.

This study examines the situation which pertains specifically in the smallest Australian state, Tasmania. In Tasmania, management of Crown land is primarily the responsibility of the Lands Department, National Parks and Wildlife Service (NPWS), and Forestry Commission. The Hydro-Electric Commission (HEC) is also involved in the management of Crown land but incidentally, and not to the extent of the other authorities. Due to the comparatively small land area within its jurisdiction, and considering that its main function is power

generation, the Commission is not considered herein. Also, the Commission has no field personnel involved in land management per se (that is, in exercising the functions of Crown land wardens or park rangers¹). Nonetheless, the HEC's programmes of roadbuilding in remote areas (for example, at Lake Pedder, and in the Upper Mersey and Pieman river valleys) have made much more Crown land accessible to ORVs. Other commercial activities play a significant role in opening up previously inaccessible areas to recreation vehicles - a role discussed in greater detail in Section 3.4.

Lands, NPWS and Forestry, on the other hand, are charged with the responsibility of maintaining the integrity of public land. There are difficulties, however. Firstly, they are severely restricted because of the fragmented and piecemeal nature of the relevant legislation: the issue is not confronted via legislation targeted specifically at the problem. Secondly, the government and land managing authorities have no co-ordinated strategy with which to tackle the problem: planning for increasingly popular ORV activities is simply inadequate. Perhaps even more crucial to the issue is the scant attention given to questions of enforcement.

1.3 Aims and Objectives of this Investigation

It is the aim of this thesis to demonstrate that Tasmania is ill-equipped, and poorly prepared to deal with the environmental challenge posed by ORVs. There is no consolidated policy, nor is there an institutional framework capable of dealing with the problem. Tasmania can learn from the experience of other Australian states, some of which have reacted with greater despatch in establishing policy strategies and in putting in place appropriate institutional arrangements.

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For instance, on the Tasmanian Central Plateau the Lands Department Crown land warden co-operates with the HEC in ensuring that vehicle related offences do not occur on HEC land.

A number of specific objectives will be pursued. These are:

- (a) to briefly examine broad leisure and recreational trends and to consider what influence these may have for ORV activities and the natural environment;
- (b) to review literature detailing the impacts of ORV use;
- (c) citing specific examples, to demonstrate the existence of ORV-related problems in Tasmania, and to attempt some assessment of the magnitude of these problems.
- (d) to examine various approaches to the management and control of ORVs in some other Australian states and, briefly, overseas (particularly the USA), the specific objective being to determine the effectiveness of those policies;
- (e) to examine government policy with respect to ORVs in Tasmania. The existing Tasmanian institutional framework will be investigated and its capacity to deal with and control various aspects and problems associated with off-road recreational vehicle use will be analysed;
- (f) to determine policy needs in respect of ORVs in Tasmania. If there is perceived to be a problem (or potential problem) with ORVs it could be expected that government would have formulated a policy outlining its goals and a broad plan of response. The question arises: how can government authorities attempt to deal with the problem if they have little information on its nature and extent? The quality and extent of data available to the government thus also needs to be assessed;
- (g) to evaluate lessons to be learned from the examination and to outline the various courses of action open to Tasmania.

1.4 Structure and Methodology

In addressing these objectives the investigation utilises literature review, interviews and discussions with personnel involved in public lands administration and management, and observation in the field.

Broad trends discerned in leisure and recreation studies are examined in Chapter 2 in the context of recreational use of ORVs. Although it is accepted by the writer that there can be no long term success without substantial changes in community attitudes and values, it is nonetheless proposed that government has a key role in moulding community attitudes and values. Accordingly reference is made to some imperatives advocated by environmentalists (specifically, the need for a 'conservation ethic' or 'land ethic').

Impacts associated with ORV activities are reviewed in Chapter 3. These are gathered from the literature and from unpublished reports and other investigative accounts. Where possible such impacts are discussed in an Australian and/or Tasmanian context. To determine the magnitude of the problem in Tasmania, personnel closely associated with land management, research and administration in Tasmania have been consulted (viz. Lands Department, Forestry Commission, NPWS, Department of Agriculture, Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Municipal Government).

In Chapter 4 the policy, statutory, regulatory, administrative, planning and enforcement frameworks of some other Australian states, are examined. By comparing and contrasting various state approaches, and through discussion with various officers involved in land management, policy implementation and enforcement, the study evaluates the effectiveness of these state control mechanisms and strategies.

The Tasmanian institutional framework, especially relevant legislation, is reviewed in Chapter 5. Inconsistencies, inadequacies, limitations and weaknesses are discussed and evaluated. Pertinent legislation is examined since it is evident there exists a difference

of opinion as to whether or not this legislation provides sufficient control.

Chapter 6 draws together the various themes. Weaknesses inherent in present Tasmanian policy, and the perceived limitations in some mainland strategies, are indicated. Hardin's seminal thesis of 1968, "The Tragedy of the Commons", is utilised to assist understanding of the inevitable outcome of uncontrolled vehicular use of the commons. Precautions and planning to avoid the tragic consequences predicted by that writer seem necessary for environmental, social and economic reasons. Accordingly, the options open for implementation of a co-ordinated policy in Tasmania are identified and various recommendations made.

The final chapter, Chapter 7, summarises and reviews the complete investigation and suggestions are proffered for a more positive response to vehicular use off-road.

1.6 Limitations in Scope

This study does have limitations. These are that:

- (a) no first-hand analysis of the physical impact of ORV activities in Tasmania has been conducted (apart from trips to two problem areas, viz. the Arthur-Pieman and Central Plateau Protected Areas) - the validity of findings by investigators elsewhere is assumed; the purpose is rather to analyse policy options on the basis of those findings;
- (b) no survey of attitudes, motivations, needs, desires and concerns of either non-ORV recreationists, or ORV enthusiasts has been attempted. In undertaking this study however the writer has contacted persons involved in various ORV pursuits in order to gain some knowledge of their attitudes, requirements, and activity experiences and the issues and problems have been discussed at

length with many land managers and administrators;

- (c) neither assessment nor inventory of areas suitable as special ORV areas has been considered. That task, vital for planning and accommodating ORVs in the recreational spectrum, is a mammoth one, beyond the scope of this study, and is perhaps a task only the respective land managing agencies and local government authorities are equipped to consider. Hence particular emphasis has been placed upon legislative aspects rather than on such land use planning matters as the designation of appropriate areas for ORV use;
- (d) the study has been confined to consideration of recreational ORV use on Crown lands where public access is not prohibited (as it is in defence establishments and Tasmanian forestry concession areas). Consideration of private landholdings is thereby excluded;
- (e) the non-recreational use of ORVs has not been considered in the study. This is no admission, however, that ORVs used in such diverse activities as mineral prospecting, exploration, surveying, forestry operations, and various land management functions do not have significant environmental impact;
- (f) comprehensive statistical information is lacking. For proper planning purposes it is necessary to have accurate figures on the number of off-road recreation vehicles in Tasmania. Statistical information revealing ORV recreation participation is likewise necessary, but presently unobtainable. Local trend data, if they were available, would facilitate predictions of future demand for recreational activities, and thereby assist recreation planners and land managers alike in undertaking the appropriate recreational planning.

CHAPTER 2: LEISURE AND RECREATION IN MODERN SOCIETY: OFF-ROAD VEHICLES AND THE NEED FOR PLANNING AND CONTROL

It would appear, in short, that the rudimentary grades of outdoor recreation consume their resource base; the higher grades, at least to a degree, create their own satisfactions with little or no attrition of land or life. It is the expansion of transport without a corresponding growth of perception that threatens us with qualitative bankruptcy of the recreational process. Recreational development is a job not of building roads into lovely country, but of building receptivity into the still unlovely human mind (Leopold 1949 : 176-7).

2.1 Introduction

Gilpin (1980 : 121) has pleaded for greater environmental awareness and consciousness in the mind of bureaucratic decision makers in the context of a broader reassessment of responses to land, its use, and development. It is the objective of this study to examine the land-use ethos of the Tasmanian government and its bureaucracy in respect to the management of the ORV problem.

ORVs by virtue of their versatility and manouvability, pose a significant threat to natural areas (see Chapter 3). A vehicle dominates a larger area than does a pedestrian. By its speed, area traversed and evidence of its presence, an ORV has a far greater capability to damage the environment than a recreationist seeking similar experiences on foot. Beginning with the premise that damage is occurring to natural and wilderness areas from the increasingly common ORV excursion, the intention of this chapter is to examine more closely the broader context of this recently identified problem.

Environmental damage and social problems are indications of conflicting values in regard to 'land ethics'. Problems stem from the

diverse attitudes, perceptions and values held by each member of our society. While a small number of people apply a 'biocentric' or holistic viewpoint to human relations with the natural world, most follow a more 'anthropocentric' or human-centred viewpoint.¹ Fundamental changes in environmental awareness and attitudes have been suggested by some writers as the means of minimising environmental problems. In the case of recreational vehicles this means changing public perceptions and stimulating an ecologically responsible approach to land and its recreational use.

If resolution of problems attributable to inconsiderate ORV use rests heavily on changing social values the question arises: how may this be brought about? Changes may be effected through education as well as by legislation, administrative control and regulation. Since, however, the educative process is slow, the legislative and administrative processes must be utilized in the interim. Recreation planning is imperative in order to maximise wise use of the finite and increasingly threatened recreation resource base, and, in addition, to maximise the recreation experience whilst minimising recreation conflicts. Recent leisure and recreation studies reveal broad social changes and these are likely to have more than a little bearing on the problem.

2.2 Recreation and the Environment

Since the end of World War II the importance of leisure and recreation in western industrialised societies has risen significantly (Kraus 1984 : 10; Pigram 1983 : 9). While it has been predicted in the USA

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The word 'biocentric' is a term recently coined and used by eco-philosophers to refer to the viewpoint in ethics that non-human lifeforms have an inherent or intrinsic value (that is, value in their own right), as opposed to and irrespective of any value conferred on those non-humans by humans. In the antithetical 'anthropocentric' position the non-human world is considered of value only by virtue of its use value accruing to humans.

that total participation in outdoor recreation will treble by the year 2000 (Gold 1980 : 164), Jubenville (1976) estimated that wilderness recreation will increase over eight times by the turn of this century¹. Increased leisure time and changing social patterns have influenced recreation activities with, at times, deleterious consequences for the environment. Recreation itself is said to pose a serious threat to natural areas (Kraus (1984 : 389). The use of ORVs, however, is not the only threat to natural ecosystems. Wall and Wright (1977), for example, have collated data and material on the impacts of a range of recreational activity on such biophysical components of the environment as soil, vegetation, water quality, and wildlife.

2.3 ORV-Based Recreation and Management: A Question of Values

It is contended here that not only is the physical impact of ORVs a hindrance to the best management of 'natural' areas but that, in the words of Leaver and Turner (1983 : 155), there is:

the predominant expectation in Australian society that natural resources should be made available to the point of exhaustion in order to satisfy current social needs. Australians do not seem to see conservation management as something concerned with processes stretching beyond their own life span.

The situation appears no different in North America. Describing the prevailing land "ethic", Douglas (1976 : 37) said (emphasis added):

Our ethic has become the automobile, the bulldozer, the industrial plant. The growth factor in gross national product is the controller before which all must give way. The meadow, the swamp, the wooded alcove and their inhabitants must surrender. Commercial and mechanical recreational use and productive use come first; conservation use is low on the totem pole.

1

This forecast may be overly optimistic. Peterson (1981) has determined that recreational use of national forest wilderness in the USA increased 82% over the 15 years from 1965, representing an average annual increase of over 4% per annum. Extrapolation of those figures, assuming a constant 4% annual increase, indicates a less than threefold increase in usage by the year 2000.

Some believe that the 'conservation ethic' can be promoted by changing individual attitudes and promoting an environmental awareness. Writing in the Foreword to Gilpin (1980 : xii), Sir Garfield Barwick, then Chief Justice of Australia, suggested this fundamental solution:

What is required...is education in the family, by precept and by example, so that the care of our surroundings becomes second nature to the individual and inbuilt restraints are accepted from childhood, restraints which do not require the stimulus of penalty to ensure their performance.

Nonetheless, Barwick also saw a vital role for government in safeguarding the environment, wisely noting that restraints, to be enforceable, must be acceptable to the general public. This note of caution and common sense lends support to the vital need for government intervention in the formulation of appropriate policy and regulation.

As ORV usage is a land-use problem of growing importance, policy guidelines should be formulated, and consideration given to a whole range of stratagems - legislative, regulatory, managerial, educational, and above all, as Kockelman (1983c : 499) suggests, at the point of enforcement. The experience of inter-state and overseas ORV policy and management may be relevant for consideration in the Tasmanian context.

The predominant values complained of above by Douglas and by Leaver and Turner are precisely the reason for calls for more careful recreation planning and land allocation. Writing of the problem specifically in respect of arid lands, Webb and Wiltshire (1983 : viii) claimed that:

The environmental effects of ORVs...are potentially so severe, and the incompatibility of mechanical recreation with passive recreation so universal, that special planning and regulatory considerations must be applied if ORVs are to be accommodated.

In the USA, Shay (1978) argued that "reactive" ORV management ignores planning. There, the management prescription in the 1970's was to repair, rather than reduce the environmental damage through land use planning and education of ORV users. That evaluation of the former US situation is applicable to the situation in Tasmania in the mid-1980's.

In Tasmania the problem is perceived as having no easy solution, and there the response has been ad hoc and unco-ordinated. The relevant departments have not bridged the inter-departmental chasms and sought an answer in terms of a consolidated approach.

It therefore seems obvious that a planning perspective should be taken (cf. Steely 1984; Thompson 1984; Thompson 1985; Webb and Wiltshire 1983, and especially Kockelman 1983b). In recent years planning has been increasingly recognised as having a crucial role in resolving conflicts between the needs of development and the need to protect and improve the environment (Gilpin 1980 : 120). "Long-range environmental planning" has been called for in the USA by Kraus (1984 : 390) as a means of satisfactorily merging "economic, ecological, and leisure-related interests".

The Australian literature supports the contention that problems associated with increasing use of ORVs are similar to those of many affluent western industrialised nations (cf. Wood and Robertson 1976). What differs is the level of response to the problem in each nation and in individual states of Australia.

Despite this wide acceptance of the importance of planning in land-use decisions, the Tasmanian government and its bureaucracy is yet to confront the problem of the impacts of increased ORV usage with a co-ordinated 'planning approach'. Before examining Tasmanian ORV data a brief review of the broad trends and social factors affecting recreation trends is required.

2.4 Social Factors, Recreation Trends and ORVs

2.4.1 Trends in Recreation Participation and ORVs

Continual monitoring of recreation trends is imperative for proper planning and allocation of resources. As Mercer (1981 : 39) cautions, trends do not continue forever, nor are participation rates consistent between Australian states, so data gathered must be current and related directly to the area to be managed. Using data presented by Greig and Chalmers (1980), Mercer (1981 : 39-42) reviewed some of the factors influencing changes in the popularity of specific activities. Those factors include opportunities provided for involvement; substitution effects; population increase; and changing tastes and preferences. These factors are now related to ORV usage.

Firstly, it is obvious that opportunities are provided for ORV use by the countless roads, tracks and trails which now penetrate many unpopulated areas - this is certainly the case in Tasmania, for example, and seems common elsewhere as well. Secondly, though substitution effects are possible in response to a decade of petrol price increases, countervailing factors must be proving more significant if we are to account for the upsurge in sales of vehicles having ORV capabilities, especially four wheel drive (4WD). With recent technological innovations, notably by Japanese car manufacturers, it is possible that car owners are substituting second and even first family vehicles with vehicles having ORV capabilities. Technological change may, however, still work to reduce ORV activities by substitution. If it is anticipated that home audio-visual sets will increasingly be used in simulation of the traditional Sunday afternoon drive in the countryside (Mercer 1981 : 41), it is conceivable that the same might occur for ORVs outings as well, although there is little evidence of this to date. As to the factors of population expansion and changing tastes and preferences, Mercer (1981 : 42) reported that "virtually all outdoor pursuits have been growing; and continue to expand, at a faster rate than that of the population at large". The relative effect of each factor varies

between activities, however, and the connection between these factors and ORV usage is unknown.

2.4.2 Social Factors Affecting Recreation Trends

Some of the broad social forces identified (Mercer 1981 : 33-34) as influencing recent leisure and recreation trends are: increasing population, and the spatial distribution and demographic structure of that population; variations in wealth and income; educational attainment; the economic climate; increasing proportion of time available for leisure and recreation pursuits; and increased mobility brought about by recent technological advances. Improved mobility and awareness combined with technological innovation have widened opportunities for recreational participation (Pigram 1983 : 11). Patterns of social behaviour have been affected by the rapid rise in fuel costs since the early 1970's. The energy situation, therefore, has had an effect on recreational trends - but the precise effect is unknown. For instance, the impact of fuel price rises on weekend recreation trips in urban NSW in the two years of the study by Holsman et al (1982) indicated that while the effect on recreation behaviour was minor, there had been some decline in the frequency (but not duration) of such trips.

The impact of some factors identified in recent leisure and recreation studies on natural areas is fairly clear and predictable, but other emerging social patterns tend to complicate the issue for recreation planners. For instance, our society is entering the post-industrial era and unemployment at previously unacceptable levels is now predicted. Consequently, it is predicted that leisure time will increase, as will that component of spare time devoted to recreation. Thus Mercer (1981 : 49) has referred to an "enforced leisure class" comprising "unskilled labourers, young school leavers, many graduates, women, and the young-old". Those in this category may not necessarily have the disposable income, however, to undertake outdoor recreational pursuits.

However the literature overseas, and to a lesser extent elsewhere in Australia, indicates that ORV problems are increasing as a result of changing social factors. An observed (but yet unproven) increase in ORV numbers in Tasmania may indicate that similar problems have arisen here. To counteract these problems, land managers and recreation planners should have access to 'hard' local data and be aware of local recreation trends. These trends should be utilized by recreation analysts and land managers for recreation planning and land management purposes.

In summary, it is obvious that various social factors affect leisure and recreational patterns and, although the precise effects are not measurable, if data are collected regularly and analysed, trends may be monitored. The work of Park (1986 : 22) and Nichols (1985 : 18) suggest that with these data collected, it should then be possible to implement sound recreational planning and at the same time mitigate the adverse impacts and consequences of unrestricted ORV use. It is appropriate now to review the Tasmanian recreation data in so far as such data involves ORVs.

2.5 ORV Participation in Tasmania

Information collected in April-May 1978 during the Tasmanian Recreation Land Use Study (TRLUS) (n.d.) indicated that ORV participation was not then a major recreational activity. In the twelve months preceeding the study approximately 7% and 4% of the 751 Tasmanian households sampled possessed and used trail/mini bikes or undertook 4WD excursions respectively. At the time of the study, ownership and use of trail/mini bikes in off-road recreation exceeded that of 4WDs.

A number of significant study findings related to 4WDs in particular. Firstly, a large proportion of participants did not belong to an ORV club. If that situation remains unchanged then suggestions that a control mechanism include self-regulation should be very carefully considered or, perhaps, even rejected. Secondly, while most

participating households undertook only a small number of trips, a minority undertook a large number of trips to a variety of locations. That finding in particular has implications in light of another: specifically, that most participants expected to maintain or increase their existing level of involvement in the future. A logical conclusion is that, considering those already involved in 1978 were planning to increase their level of participation¹, and with the hypothesised increase in vehicles with ORV capability, there must now be significantly more ORV excursions made in this state. More hard and current data are required for proper planning purposes.

That the data still remain uncollected and unquantified is one of the major limitations of this study, and one of the major obstacles to more determined attempts to redress the issues involved.²

1

A net 14% of TRLUS sample households intended increasing future levels of participation in 4WD activities (Tasmania, Southern Metropolitan Planning Authority 1980 : 14).

2

This information is not provided by the national recreation survey (Australia, Department of Sport, Recreation and Tourism 1985-86) and surveys by the Australian Bureau of Statistics (1975-76 and 1984) of household expenditure provide details on a broad spectrum only and contain no relevant information for purposes of this study. The survey in May 1975 of leisure activities away from home (Australian Bureau of Statistics 1978) similarly provides little useful information. Of persons aged 15 years and over, only an estimated 0.65% of the Australian population engaged in mini-bike or trail-bike riding (although 1.16% of males were involved). No reference was made in the survey questionnaire to other ORV activities (such as 4WD, beach buggy and all-terrain vehicular recreation usage). Hence it would seem that those activities were not perceived to be commonly undertaken in the early to mid-1970's. Personal observation plus the recent spate of literature describing the upsurge in popularity and adverse impacts now indicates otherwise.

Recent longitudinal surveys commissioned by the Australian Department of Sport, Recreation and Tourism (October/November 1985; February, May and July 1986) indicate that only a small proportion of the Australian population (aged 14 years and over) engages in off-road driving/trail-bike riding. Participation rates vary seasonally with a decline in popularity noticable during the winter period (refer Table 1, Appendix A). Participation rates appear highest in the male age categories of 14-19 and 20-34 years (refer Table 2, Appendix A).

The impossibility of determining Tasmanian participation rates in off-road recreation, short of specific and time-consuming survey, is corroborated by Malcolm Wells, Assistant Director - Recreation, Department of Sport and Recreation.¹ Nonetheless, Mr Wells (pers. comm.) is convinced that Tasmania has the highest per capita rate of participation in ORV recreation of any Australian state. Justification for that opinion is based on the diversity of major population centres which, invariably, are located in close proximity to locations favoured for these activities. Due to the minimal distances and relative ease in exiting population centres, the recreational opportunities are widespread and hence utilized. Extrapolation of state participation rates from total ORV club memberships would be unreliable since, according to Mr Wells, only a small proportion of total users are affiliated with clubs.

The observed (but not demonstrated - in the absence of statistical information) upsurge in 4WD popularity suggests that the statistics gathered by the TRLUS may be outdated, and it seems certain that participation rates have significantly altered in the 8 years since the TRLUS.

The consequences for state and local government land managers, recreation planners, and enforcement agencies (Tasmania Police

A survey commissioned by the Australian Recreational Fishing Confederation revealed that 550,000 Australian households (12%) in July 1984 owned or had access to 4WDs/utilities/trucks (PA Management Consultants 1984 : 35). Note that Hobart households had a marginally higher ownership/access rate (13%) than the national average. The problem with these figures is, however, that there is no distinction made between 4WDs, utilities and trucks.

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The data are no more readily available in other states. During research for the preparation of South Australian government policy on ORVs (now shelved), Peter Green (pers. comm.) was similarly frustrated by the lack of reliable data.

and Transport Tasmania) are serious. Yet current statistical information (regarding ORV numbers and types) is unavailable. The inadequacies in Transport Tasmania registration data collection are detailed in Section 5.2.

Vandenberg (1984) has produced the most recent Tasmanian data relevant to ownership and use of ORVs. A survey of 136 households in the municipalities of Burnie, Penguin, Ulverstone, Devonport, Latrobe, and Kentish, revealed that 20 households (14.7% of the sample, an increase of almost 4% on 1978 figures) owned one or more ORVs. Of the population sampled, 6% and 6.5% participated in the respective activities of "4WD touring" and "trail bike riding" in the prior twelve months.

Since there is no official statistical information on ORV numbers in Tasmania, Vandenberg's data must be used in a crude attempt to extrapolate estimated state numbers. A rough estimate is derived by applying the value 14.7% to the estimated 136,268 Tasmanian households (Australian Bureau of Statistics 1982), to derive a figure of approximately 20,031 ORVs (this figure must be treated with caution since Vandenberg's sample was very small - there may be regional bias toward ORV ownership in the North-West, for example). Even assuming an approximate statewide total of 20,031 vehicles with ORV capability, there is still no ready information on the numbers actually used off-road.

Since information on ORV participation and vehicle numbers in Tasmania is not sufficient to enable reliable usage figures to be calculated at this stage, a major deficiency in Tasmanian ORV control is apparent at the outset of this review.

2.6 Conclusion

Rather than permit further environmental and social damage it may well be that government intervention is the only way to offer speedy protection to a threatened and very valuable resource, the land. The other alternative, to wait for changing community attitudes and values, may be too slow.

In the words of (Gilpin 1980 : 121-122):

It must now be generally accepted that land is one of Australian society's important resources, and that planning and management for its protection and enhancement implies accepted goals for all levels of government. However, present approaches remain uncoordinated ad hoc responses to short-term economic and political pressures. Therefore it is necessary to develop more comprehensive land use policies to ensure that economic, social, and environmental considerations are appropriately reconciled in all instances, and that diverse and changing community needs are identified and met efficiently and equitably within the context of financial, social, and land resources.

The question which government should address is how to harmonise various recreational pursuits with each other and with the integrity of the natural environment. This is a problem of increasing urgency for, in the decades ahead, with increased leisure time predicted, recreational pursuits will provide a significant component of the economy.

In promoting recreational activity, government must thus consider the destructive elements of certain of our activities otherwise those pursuits will ensure diminished values in natural areas for future generations. Central to these considerations must be governmental approaches to regulation of ORVs, for, of all recreational demands currently being made upon natural areas, these have perhaps the greatest potential for conflict with other recreational pursuits and with the integrity of the natural environment.

CHAPTER 3: OFF-ROAD VEHICLE IMPACTS

3.1 Introduction

Although dilapidated 'old bombs' have for decades hurtled down rough bush tracks, along quiet country roads and deserted beaches, and around short circuits, the alarm signals were not recognised, or certainly not acted upon by the authorities, until the late 1960s and early 1970s, when the proliferation of recreation and motorised off-road recreation vehicles became most apparent. That concern has been expressed at parliamentary level in Australia, in the form of a number of inquiries and top level government and inter-governmental meetings (Council of Nature Conservation Ministers 1976; House of Representatives Standing Committee on Environment and Conservation 1977; NSW State Pollution Control Commission 1979).

Nowhere is the recreational use of ORVs more obvious than in Australia and North America, where widespread ownership, vast distances, relatively cheap fuel and sparsely populated terrain have encouraged ORV use for both recreational and business purposes (Gilbertson 1981 : 97). On both continents widespread use of ORVs has given rise to environmental problems with economic and social consequences. In North America and elsewhere, a mass of literature has emanated over the past decade detailing the impact of ORV use (cf. Baldwin and Stoddard 1973) and reporting results of detailed experimental work (cf. Hosier and Eaton 1980; Grant et al 1977 among many others). In the Australian context, although ORV impacts have received some attention (cf. Welsh 1976 and other papers presented in Wood and Robertson 1976), few detailed studies have been conducted apart from those of Garretty (1974), Makhdoum (1980) and Dellora et al (1984). The Tasmanian situation was reviewed by Davies (1978) but scant attention has been accorded to his recommendations.

This chapter reviews some of the perceived impacts, both deleterious and beneficial, and an account of some of those factors which have been identified as contributing to biophysical and geomorphic impacts, concentrating particularly on the situation in an Australian and, where possible, Tasmanian context. Track proliferation is seen to be an environmental problem of considerable importance, as is damage rendered in the more fragile coastal and alpine landforms. Finally, it should be indicated that critical examination of the literature detailing environmental impacts attributed to ORV use has not been attempted herein: the validity of reported findings is taken as given.

3.2 Factors Affecting Geomorphic Impact

The severity of environmental impact is determined by a number of variables. The capacity of an ecosystem to withstand the onslaught of off-road vehicular use depends upon the particular sensitivity of the area; the nature, frequency, time and volume of traffic; and the manner in which vehicles are operated (Department of Environment, Housing and Community Development 1976 : 11).

It is noteworthy that the various types of ORVs present their own particular type and scale of geomorphic impact. According to Dixon et al (1976 : 77), when considering the environmental impact of ORVs, vehicles should first be categorised into broad groups and consideration given to the impact of vehicles in each group on specific components of the environment.

Climate and altitude are other significant factors influencing physical impact (Dixon et al 1976 : 77). The elements of wind, heavy rain, and sometimes frost (depending upon the altitude), contribute to the process of erosion. In coastal regions, wind plays a significant role in the geomorphic process, with sand-dunes being particularly susceptible to undermining, 'blows' (extensive wind-caused breaches in seaward dunes), and transmission downwind with resultant encroachment

on consolidated dunes and benches and stabilized vegetation climaxes ('climax' being the stage in vegetation succession reached). For example, on the northwest coast of Tasmania, where the influence of the "roaring forties" is strongly felt, prevailing winds are predominantly from the north-west to south-west quadrants. There, seaward sections of coastal foredunes are particularly susceptible to wind erosion following disturbance "by burning, grazing and above all by vehicle tracks" (Macphail et al 1975 : 54 emphasis added). The processes leading to formation of unconsolidated dunes have been described by Macphail et al (1975 : 59):

This process starts usually with fire damage to the vegetation on the front of the foredune, or from damage by vehicles or cattle to the base of the dunes. Removal of sand undercuts the vegetation higher up the dune, with consequent slumping and removal of the unconsolidated sand by wind funnelling. Sand moved from the dune front is deposited on the lee of the front dune, burying the heath and scrub. Eventually a break in the front is established and the wind funnelling through the gap moves the sand landwards, covering extensive areas of consolidated dune and bench (Macphail et al 1975 : 59 emphasis added).

A good example of vehicle associated wind erosion is shown in Plates 1 and 2.

The contribution by vehicles to the process and sequence of erosion in Australian alpine and sub-alpine areas has received less attention in the literature. Nonetheless, Pemberton (1986) has recently and succinctly described the contribution of vehicles in the processes leading to land degradation on the Tasmanian Central Plateau. Peat soils on the Central Plateau are most susceptible to sheet erosion. There, sheet erosion is precipitated by the action of grazing, vehicles, fires (set intentionally, inter alia, for pasture improvement, and accidentally), frost heave, strong winds, and the abrasive action of heavy droplets of rain and particle erosion

Plate 1**Vehicle Track Scoured by Wind Erosion**

Old vehicle track on top of the hillock featured in Plate 2 and now scoured by wind erosion (Arthur-Pieman Protected Area)

Plate 2**Excessive Tracking and Severe Wind Erosion**

A well-tracked low sandy hillock between Big Eel and Little Eel Creeks (Arthur-Pieman Protected Area). There are another two tracks to the left of those shown in this photograph - the wind eroded track featured in Plate 1 is the track on the crest second from the left.

(M. Pemberton, pers. comm.). The threat posed by ORVs to the fragile ecology of the Plateau was considered in a paper presented at a symposium on ecological management conducted by the Ecological Society of Australia (Shepherd et al 1975). Although no documented evidence was presented, the authors of that paper were critical of the situation where one resource, namely the trout fishery, was regulated and protected, whereas the other resource, the fragile alpine landform, was left virtually unprotected from deleterious ORV activities¹.

Different users of the same type of vehicle also create differing geomorphic impacts (Gilbertson 1981 : 97), since the severity of impact depends upon the attitude of each user and how that user operates the particular vehicle (Department of Environment, Housing and Community Development 1976 : 11). When considering the nature of environmental damage caused by ORVs, the House of Representatives Standing Committee:

...stressed that use of an ORV is not necessarily damaging to the environment. Damage is caused by a combination of the way and the particular area in which the vehicle is used (House of Representatives Standing Committee on Environment and Conservation 1977 : 15-16).

The assertion quoted above is clearly contestable. What if a vehicle has never been into a particular area before? A vehicle which transgresses a 'virgin' area will have some effect, however minimal. For instance, soils and vegetation disturbed by the passage of a single vehicle may eventually recover, although the tracks indicating

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In a submission to the Tasmanian House of Assembly Freshwater Sport Fishery Select Committee (Inland Fisheries Commission 1985 : 38), off-road vehicle use was said to detract from the sport fishing value of the Central Plateau Protected Area and required enforcement and protection. A significant number of submissions "given in public" to the Committee (House of Assembly 1985) expressed concern at the environmental effects of vehicles and indicated alarm at suggestions reportedly stemming from the Minister of Inland Fisheries (Hon. Neil Robson) that increased access was required.

passage may remain obvious for years to come (Plate 3). The reader is referred to the process of track creation and proliferation which follows in a later section within this chapter. Also relevant is the process where the 'unlawful' creation of a new track on some Crown land in Tasmania may act to legitimise the later presence of all other vehicles. This will also be examined, but in a later chapter (Chapter 5).

3.3 Environmental Impact of ORVs: Discussion

A detailed account of the environmental impact, problems, and recreational conflict caused by unrestricted use of ORVs in Australia was presented in the detailed submission to the House of Representatives Standing Committee on Environment and Conservation by the Department of Environment, Housing and Construction (1976), and the reader is referred to that submission for a consideration which, in its treatment, goes beyond the scope of this review. The following overview of the environmental impacts of ORVs is based on the comprehensive 'check list' of negative impacts prepared by Wood and Robertson (1976) in summary of the proceedings of the 1976 National Symposium of ORVs in Australia. That 'check list' is as follows:

(a) Social impacts:

- . interference with other ORVs users;
- . interference with other recreationists;
- . interference with other land uses;
- . injuries, vandalism, theft, trespass, disruption of domestic life.

(b) Physical impacts:

- . soil compaction, soil erosion;
- . destruction of vegetation;
- . disturbance of wildlife, destruction of animal habitat;
- . generation of fires.

(c) Hydrological impacts:

- . disturbance of drainage patterns, lowering water quality by generation of turbidity;

(d) Pollution:

- . generation of noise, oil, fumes;

Plate 3 Old Vehicle Tracks still Evident



Plate 3a: Recovery following vehicular disturbance of soil and vegetation - the scene revisited six months later by the driver (Mt. McCall, Franklin-Lower Gordon Wild Rivers National Park).



Plate 3b: Visited again - eighteen months after vehicular incursion. The passage of one vehicle has left an 'indelible print' in the flora (photographs per courtesy Tim Kingston).

(e) Weeds and pests:

- . spread of weed species and fungal and bacterial pathogens;

(f) Economic:

- . disturbance of stock, resulting in loss of productivity,
- . damaged property, fences and gates;

(g) Aesthetic:

- . impairment of 'wilderness experience' of other recreationists, leaving evidence of having been present - litter;

(h) Cultural:

- . damage to historic and pre-historic sites.

(Wood and Robertson 1976 : 14-15)

Particular note will be taken here of such Tasmanian evidence that has been gathered and reported. It should be noted that, to date, this evidence is not very extensive.

3.3.1 Social

Unrestricted use of ORVs on public land poses a variety of social problems. ORV users are not a homogeneous group endowed with identical concerns and desires. Using many different types of vehicles they express preferences for different activities and landscapes. Peine (1973) has indicated the diversity of needs, attitudes, motivations and preferences amongst ORV users. His study highlighted at least three major ORV user groups which he described as "vehicle oriented", "activity oriented" and "landscape oriented". Whilst there is potential for conflict between these categories, there is a considerable degree of movement from one category to another, by ORV enthusiasts pursuing different activities at various points in time (Dixon et al 1976 : 82). For instance, the ORV user may be "activity oriented" one weekend whilst engaging in pursuits such as gemstone or rock prospecting, or trout fishing. The following weekend that person may be solely interested in testing the vehicle over challenging and rugged terrain; at which time leisure is better described as "vehicle oriented" (Plates 4 and 5).

Plate 4

Bogged in a Swamp...."Vehicle oriented" ORV Recreation



(3 km west of Adamsfield in the Ragged Range; just east of the Gordon Dam. Photograph per courtesy an anonymous ORV enthusiast)

Plate 5

"Vehicle oriented" use of Sandy Cape sand dunes



An activity permitted of registered vehicles - either fully registered or recreation vehicles - provided a permit is obtained from the Crown land warden (Arthur-Pieman Protected Area).

Noe et al (1981-83) have identified the existence of a role and interpersonal conflict situation between the ORV and non-ORV user. Cases of interference with non-ORV recreationists are well documented. In studies of people engaging in a variety of recreational pursuits in some Victorian forests, Dellora et al (1984 : 26, 27) concluded that:

...vehicle noise is a major source of conflict between motorised and non-motorised forms of recreation in some forest areas...and...that recreationists have characteristic and identifiable attitudes, perceptions, motivations and site requirements which are essentially similar within user groups but may be different between user groups.

Other social impacts involve "deliberate harrassment of pedestrians and picnickers" (Garretty 1976 : 125), vandalism and deliberate, unnecessary destruction of the environment, and danger to pedestrians, beach users and sunbathers. In 1985, for instance, there was an incident at a popular beach close to Hobart involving a two year old child struck by a dune-buggy (Mercury 29 January 1985 : 1), whilst at the popular Tahune Forest Reserve on the Huon River in southern Tasmania, a Boy Cubs pack was terrorised and threatened with violence by a group of ORV enthusiasts (Mercury 10 April 1985 : 3). In another Tasmanian example of the danger posed to pedestrians, a three year old Hobart boy was run over by a trail bike whilst riding his tricycle in a suburban playground and only a metre away from the safety of his parents' backyard (Mercury 28 April 1983 : 1). Commenting on the incident a Glenorchy City Council spokesman later indicated that there had been a "high level of abuse of the law regarding trail bikes" in that area in the preceding six years (Mercury 28 April 1983 : 1).

Some of the vandalistic acts attributed to ORV users in Tasmania have been recorded by Frampton and Steane (1976 : 106) and include "indiscriminate shooting of wildlife", "serious damage...from shooting out insulators on HEC [Hydro-Electric Commission] transmission lines", "wilful damage to gates, bush shelters and fire towers", and "theft of and damage to forest equipment". The same authors indicated the use of ORVs in facilitating trout poaching, and the "littering of picnic sites and trial control points [presumably vehicle trials]" (Frampton

and Steane 1976 : 107).

Interference with other land users has been well documented. Extensive newspaper coverage has been given to the nuisance caused by under aged children riding trail and mini bikes in bushland close to suburban residential areas (cf. Mercury 11 August 1983 : 5; Kentish 1985 : 1; Mercury 22 May 1985 : 27). There is also the danger that people will take the law into their own hands (House of Representatives Standing Committee on Environment and Conservation 1977 : 23). At least one newspaper has reported the possibility of serious injury resulting from conflict between ORV users and local residents annoyed and frustrated by incessant use of ORVs (mainly trail bikes) in their neighbourhood (Mercury 8 September 1983 : 5). Such conflict mainly arises over noise disturbance, though this is just one aspect of the inconvenience endured by residents in areas troubled by trail bikers.

Some ORV enthusiasts have articulated a sense of diminished wilderness experience when confronted with other ORV users. This aspect, mentioned by Gilbertson (1983), is discussed in greater detail in the context of track creation and proliferation (refer section 3.4 of this chapter). The reality is, however, that vehicle based "excursion and adventure in the natural environment" requires vast areas of land (Dixon et al 1976 : 13).

3.3.2 Physical

Widespread use of ORVs in the arid regions of the USA has caused considerable alarm, and there is, in consequence, a proliferation of literature detailing the deleterious consequences of that very popular activity (cf. Webb and Wiltshire 1983; Eckert et al 1979; Vollmer et al 1976; Rowlands 1980 amongst many others). This concentration of attention has not been matched in other environments and in other countries, but some studies of greater relevance to the situation in Tasmania have been conducted. These suggest, on the subject of soil compaction and soil erosion, that normal recreational use of

motorcycles is sufficient to cause significant impact on soil properties and growing conditions (refer Figure 3.1 from Garretty 1976 and adapted from Liddle 1975). Griggs and Walsh (1981) claim that although erosion is accelerated by ORV use, the severity of impact is dependant upon local physical conditions and the intensity of usage. Wiltshire (1983 : 493) has stated that a motorcycle "directly impacts 1 ha of land for each 80km or less of travel (Geological Society of America 1977)". Observation of the passage of one hundred motorcycles over a test site in New Zealand revealed a tendency for soil compaction and a consequent reduction in infiltration capacity (Crozier et al 1978). Liddle and Greig-Smith (1975a) similarly found that vehicle traffic compacted sub-surface layers in sandy soils.

Death and reduction in growth of large trees has been attributed to the effects of soil compression caused by camp ground trampling (Settergren and Cole 1970). They found that soil compaction reduced water infiltration, impeded soil moisture recharge to surface soils, and hindered root development in the hardened surface soils. Grant et al (1977) have also suggested that soil compaction has long term implications of a most serious nature. A situation arises where there is potential for hydrological changes to a catchment area; soil erosion may be precipitated and wheel ruts may assist overland water flow (Plate 6). Vegetation removal in friable and unconsolidated soil, sand or peat may accelerate the processes of wind and water erosion.

Few detailed studies on destruction of vegetation have been conducted in Australia although disturbances caused to vegetation are well documented in North America (cf. Baldwin and Stoddard 1973; Hosier and Eaton 1980; Liddle and Greig-Smith 1975b) and elsewhere. In the oft-quoted example of the Panoche Hills area of California, approximately 60 per cent of the vegetation within a 1200 acre area was destroyed, due to intensive use of motorcycles (Baldwin and Stoddard 1973 : 15-16). The study undertaken in New Zealand by Crozier et al (1978) reported a high correlation between slope angle and degree of vegetation removal in uphill travel.

Figure 3.1

Ecological Effects of Trailbike Activity
(Redrawn from Garretty 1976 : 124)

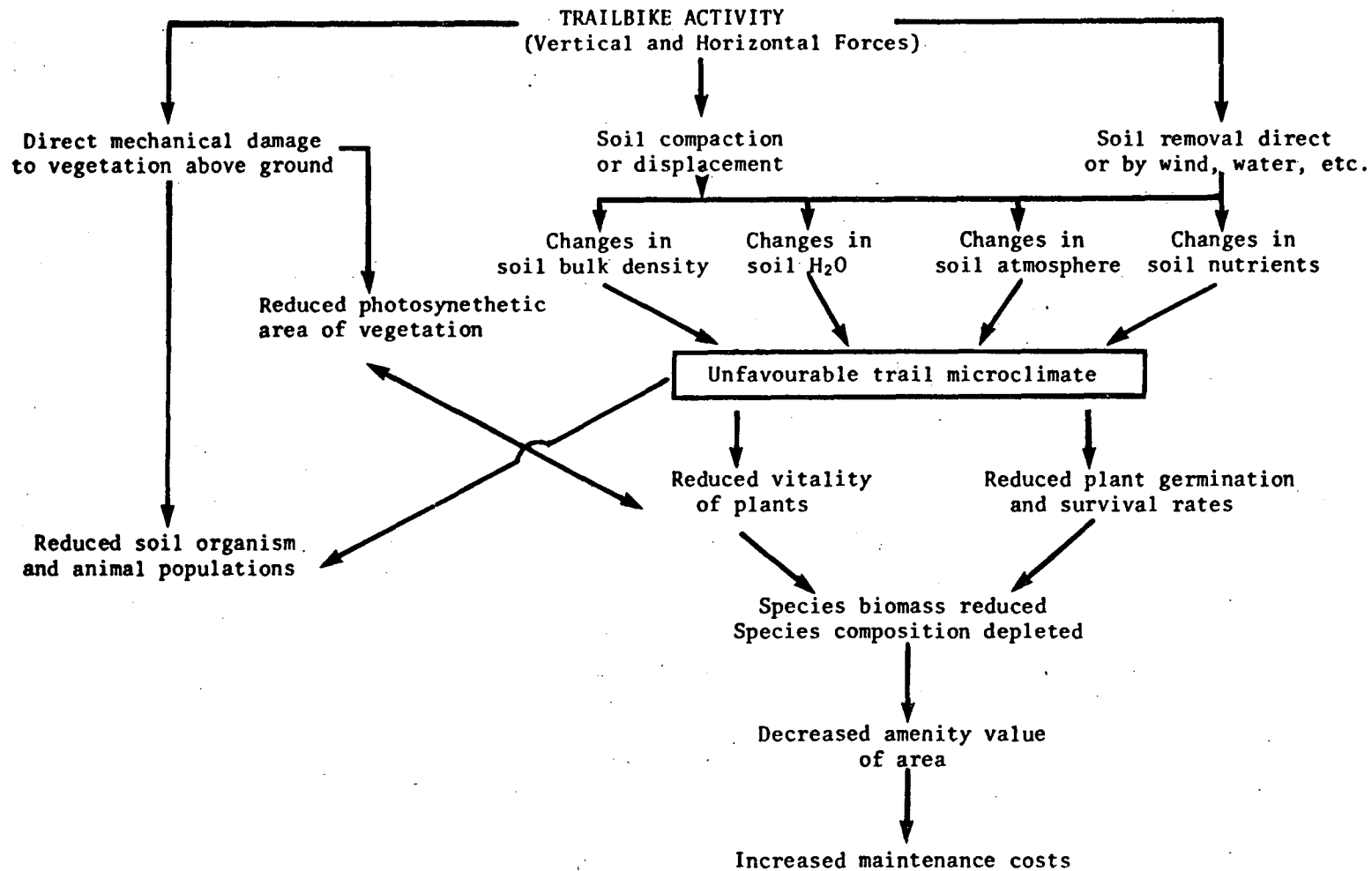


Plate 6**Vehicle Tracks Alter Drainage Patterns**

Deep rutted wheel tracks form a drainage rill - as well as causing erosion to the vehicle tracks surface water runoff is now diverted directly to the low-lying area at the bottom of the track and thus forming an impassable bog (Track to Lake Fergus, Central Plateau Protected Area).

Where sections of trail in coastal dunes are used repeatedly by motor bikes there is "a rapid loss of sensitive species from the trail zone" (Garretty 1976 : 123). Structural complexity and diversity of plant communities may be adversely affected (Gilbertson 1983 : 370; Liddle and Grieg-Smith 1975b). Not suprisingly there is a reduction in surface vegetation cover (Liddle and Greig-Smith 1975b; Garretty 1976 : 123) as trail cross-sections increase in width, and even the frequency of less sensitive species declines (Garretty 1976 : 123). Other effects of increased vehicle presence include decline in vegetation height (Gilbertson 1983; Liddle and Greig-Smith 1975b) and loss of surface plant litter (Gilbertson 1983 : 370) vital for soil fauna and nutrient recycling. From observations made by Garretty (1976 : 122-125) it seems that plant reproduction abilities are affected. Seedlings of tree species have "very low survival rates" (Garretty 1976 : 123). Species on damaged trail sections were observed to have reduced flowering capabilities and even then "reproduction was only possible in those species exhibiting growth of rhizomes" (Garretty 1976 : 123).

Some work on specialised environments has been done. Vehicles using dry lake and swamp beds exposed during summer and periods of drought may have an impact on the normally precise vegetation zonation of those environments (Gilbertson 1983 : 370) though the exact effects of vehicles on lake and swamp grasses, algae and burrowing lake fauna remains unknown.

Only Davies (1978), and he but briefly, has considered the impact on vegetation from a Tasmanian perspective. Though not a scientific study, he noted that in certain situations, particularly in exposed alpine and coastal regions, the vegetation exists in precarious equilibrium. ORV activities, in addition to the climatic extremes experienced in those regions, may disturb the equilibrium. Wind (Plate 1) and water erosion which may follow is often a cause for alarm on the part of various public land managing authorities.

On the question of disturbance of wildlife and destruction of small animal habitat the picture is again a piecemeal one, with some specialised studies having been done, though no comprehensive treatment is thought to exist. Although further work is required it seems that some forms of wildlife react more adversely to noise than other species. For instance, elk in North America quickly exhibit shock conditions when subjected to the nearby operation of snowmobiles (Baldwin and Stoddard 1973 : 20-27). A study by Burger (1986 : 128) of the response of shorebirds to human activity (including ORV use), revealed that "as a minimum, only 30 per cent of the birds remained undisturbed on a beach when there is human interference."

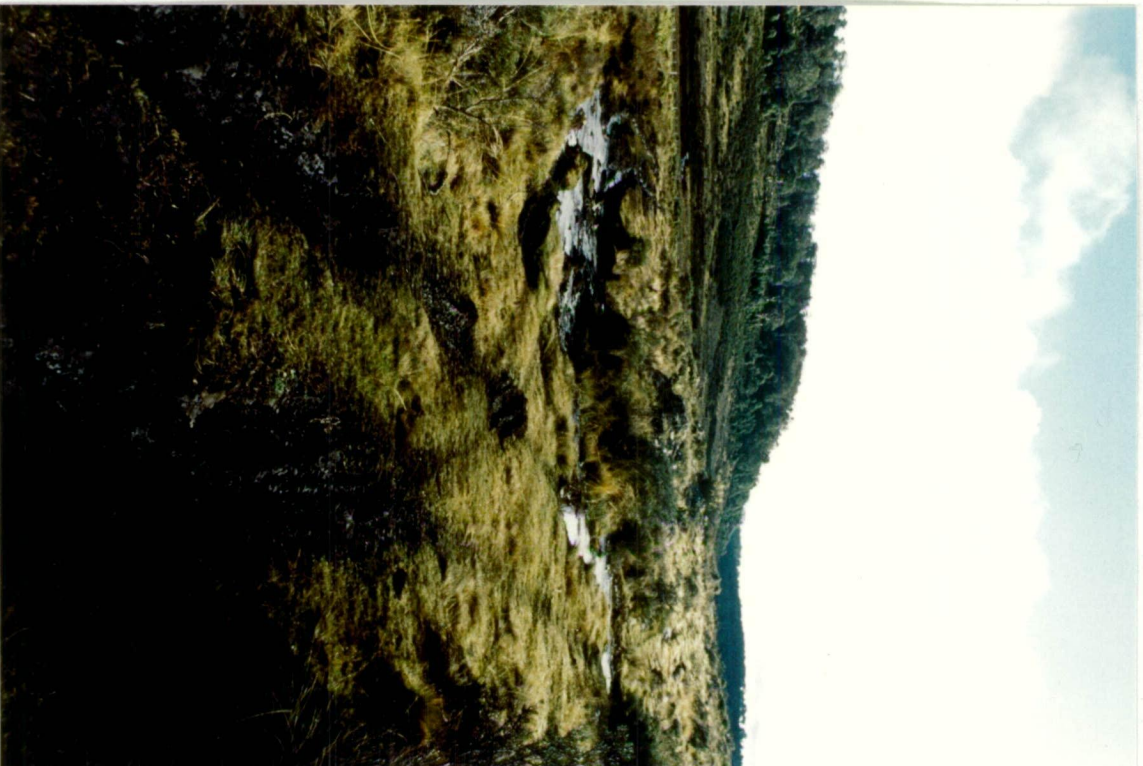
Invertebrates living on or near the soil surface in plant litter or in low vegetation are somewhat sensitive to trampling and would seem particularly susceptible to the impacts of ORVs (Duffey 1975). The precise effect of ORVs on frog, lizard and snake faunas thus require detailed study. Some rare and endangered species of birds are also known to be threatened through noise and loss of and destruction to habitat (cf. Gilbertson 1983 : 371).

The impact on water channels and streams is potentially a most serious ORV consequence. Vehicles fording water channels create water backwash, undermining streambanks and accelerating the erosion process. At entry to streams and upon disembarkation, vehicles may cause further deterioration of the stream bank (Plate 7). Stream boulders may be disturbed. The erosion process results in increased stream sediment load and downstream siltation with the potential for habitat disruption of river-dwelling and riparian flora and fauna.

Finally, numerous writers have warned of the potential for additional fire frequency following increased access of ORVs to fire susceptible areas (cf. Dixon et al 1976; Department of Environment, Housing and Community Development 1976). In Tasmania ORVs have been associated with the "increased potential for unauthorised fires, either accidental or deliberate" (Frampton and Steane 1976 : 106-107). That fire incidence is "invariably accentuated" through the increased

Plate 7

Erosion and Track Divergence at a Stream Crossing



Interplay of the processes of erosion and track divergence at a small stream crossing - erosion at the exit points occurs until the crossing is virtually impassable and the cycle is repeated (Track to Lake Fergus, Central Plateau Protected Area).

access provided by ORVs (Davies 1978 : 18), is a proposition which is virtually unchallengable. The proverbial 'cigarette butt', unstubbed and carelessly thrown from a vehicle window, has been the cause of many a bushfire in Australia and Tasmania. Fire does not necessarily need as its 'spark', a carelessly disposed cigarette butt. The US Forest Service has stated that the hot exhaust pipe of a vehicle is, under dry conditions, capable of igniting grass (Davies 1978).

3.3.3 Hydrological

In a paper presented at the National Symposium of ORVs, F.D. Runge, from the Victorian Soil Conservation Authority warned of the consequences of unplanned roading and tracks. Haphazard unplanned roading can change the natural surface drainage pattern and cause increased channel water flow with resultant soil erosion and deterioration in water quality (Runge 1976 : 201). Changes in water hydrology and erosion due to surface soils compaction were mentioned in the previous section detailing physical impacts.

Investigation of sediment generation from roads in selected test sites in water catchment areas (Catchment Hydrology Research Co-ordinating Committee, Melbourne Metropolitan Board of Works 1980 : 24) has revealed "...that permanent roads are a major potential source of suspended material and sediment." The Board (1980 : 22) reported preliminary data from one study area indicating that "...unsealed road surfaces generate some 40,000 kg/ha/annum of sediment compared to less than 500 kg/ha/annum from undisturbed forested catchments, that is an increase in the sediment production of 80 times. Comments accompanying the abovementioned data are also noteworthy:

Permanent roads, which remain a source of sediment long after the forest on the harvested areas has recovered, have the potential to increase the levels of suspended material and sediment in streams by several orders of magnitude. Overseas research has also shown that roads are the major source of persistent increases in suspended material in streams draining harvested catchments" (Melbourne Metropolitan Board of Works 1980 : 22).

3.3.4 Pollution

Grandage (1976 : 130) has identified noise as being "the factor that most bushwalkers find more objectionable than anything else." Noise created by ORVs can also cause significant disturbance to wildlife. Noise is not, however, the only form of pollution and it is perhaps unfortunate that most studies have concentrated on this aspect of ORV use, whilst studies of the effects of such factors as oil and exhaust fumes on the environment go begging (cf. Baldwin and Stoddard 1973 : 19). Noise emanating from ORVs in the natural environment constitutes a much more pervasive presence than more subtle physical impacts, and it is thus natural that the former factor should have attracted most attention.

Formerly noise pollution was almost solely an urban problem (Baldwin and Stoddard 1973 : 8), but noise created by ORVs is an offensive intrusion for all those people desiring privacy, quietness, solitude and physical comfort (whether they be in suburbia, rural backwaters or bushland settings). Many people feel that ORV noise in the natural environment is intrinsically offensive (California Department of Parks and Recreation 1975 : 12).

Research undertaken in Victorian forest areas on the interactions between recreational user groups revealed "that vehicle noise is a major source of conflict between motorised and non-motorised forms of recreation (Dellora et al 1984 : 26). In wilderness areas, the acoustic impact of ORVs is extensive. Rennison and Wallace (1976 : 169) have developed a theoretical model which suggests that, in open areas where there is little shielding by hills or structures, the use of ORVs can, under average conditions, create noise disturbance for up to 4 kilometres. The House of Representatives Standing Committee on Environment and Conservation (1977 : 23) was told by one witness that under normal conditions in open country, a trail bike could be heard for a distance up to 2 kilometres away and 10 trail bikes could be heard up to 4 kilometres.

3.3.5 Weeds and Plant Pathogens

The proliferation of roads in rural areas presents a number of problems to land managing authorities (Edwards 1972) and it has been suggested that these apply also to trails made by or for ORVs (Dixon et al 1976 : 78). Of particular concern is the spread by vehicles of noxious and exotic weeds and fungal pathogens. For instance, Donaldson (1972 : 24) has warned of the consequences in Victoria of the spread of boneseed (Chrysanthemoides monilifera), into areas where preservation of the native vegetation is desired: "disturbance of native vegetation allows boneseed to gain a foothold". Since it is a prolific seed producer it has the capacity to spread quickly and dominate the native vegetation. The initial disturbance may be due to road or track creation. Dixon et al (1976 : 79) have also implicated ORVs in the spread of boneseed and other weeds. Boneseed is established in Tasmania and appears to be increasing its coverage (A.R. Harradine, pers. comm.).

Vehicles are capable of carrying significant quantities of soil on tyres and various parts of the bodywork. In the course of time this soil falls or is washed, jolted, brushed or scraped off. Propagules of soil-borne plant pathogens, as well as seeds of weeds and exotic species, may be spread over long distances in this way. A study of sludge tanks at a Canberra automatic car-washing establishment (Wace 1977) revealed an extensive car-borne flora of native and exotic weed species, derived from a range of widely dispersed habitats. Wace (1977 : 186) warned of the potential for the ubiquitous "4-wheeled motor vehicle" to assist in the "process of potential and actual rearrangement of plants...in Australia".

Phytophthora cinnamomi, a root-rotting fungus which has seriously affected forests and heaths in various parts of Australia is now established in a number of localities in Tasmania (Podger and Brown, cited in Jarman et al 1984). P. cinnamomi occurs as a soil-borne fungus in warm, wet soils where its autonomous transmission is slow.

The most rapid method of natural transmission is along gullies, creeks and drainage channels (Wace 1972 : 27). The wider dispersal of P. cinnamomi appears to be due to the activities of man (Podger and Brown, cited in Jarman et al 1984). Widespread distribution of new centres of infection have been established by various vectors which include heavy earth-moving equipment, vehicles, and the introduction of exotic plants, while other agents of transmission include animals, birds and the boots of bushwalkers, hunters and fishermen (F.D. Podger, pers. comm.). The potential hazard posed by P. cinnamomi in Tasmania is greatest in perhumid heathland and rainforest recovering from fire (F.D. Podger, pers. comm.). ORVs, whether used for commercial purposes or for recreation, are of particular significance in their capacity to introduce P. cinnamomi and weeds to remote areas not exposed to the more common vectors. The probability of ORVs picking up infected soil is increased by the attraction to recreation drivers of visiting widely dispersed and new localities at each outing.

3.3.6 Economic

Bury et al (1976 : 32) have identified the three broad groups affected by ORV use as being:

- (a) operators and owners of resources traversed by ORVs,
- (b) operators and owners of ORVs, and
- (c) society in general.

It is not the intention here to investigate in any detail the economic impact associated with ORV activities. Since, for purposes of this study, all consideration of private landholdings has been avoided, the only land owning or land administering persons or organisations in Tasmania are the government land managing agencies (that is, Lands Department, NPWS, Forestry Commission, and the HEC) and municipal authorities. It should be recognised that there is a cost incurred by

those agencies in relation to ORV activities on their lands. This is not to say, however, that the actual costs have ever been calculated. As an example let us consider the Lands Department. These costs could be said to include a proportion of the wages paid to the Crown land warden in relation to time spent enforcing departmental regulations pertaining to ORVs; the same proportion of vehicle running costs; and in providing upkeep of roads, service tracks and fire trails utilised by ORVs. Such costs are met out of general departmental budget allocations and currently owners and operators of ORVs are not required to make any contribution. At present it is society, or more specifically the taxpaying community, which funds the activities of the minority who utilise public lands for motorised recreation. While it is true that the taxpaying community funds the activities of all people who use public lands for recreation, the motorised recreationist imposes a far greater cost burden on the land managing agency (in terms of trail maintenance and erosion control) than the more passive user (for example, bushwalker). An as yet unquantified cost is that incurred in relation to water runoff from and erosion of unsealed tracks causing problems of siltation and sedimentation in streams, dams and estuarine areas.

3.3.7 Aesthetic

Aesthetic values are often diminished through ORV use. The 'wilderness experience' of other recreationists may be impaired through the ORV enthusiast leaving evidence, such as litter, of having been present (Wood and Robertson 1976 : 15, House of Representatives Standing Committee on Environment and Conservation 1977 : 23-24). Other obvious signs of intrusion, repugnant to non-motorised recreationists, are the proliferation of tracks and wheel ruts which become major bogs after heavy rainfall, and crushed vegetation. "Lack of evidence of man is the most important characteristic [of wilderness]" (Grandage 1976 : 131), a place where the visitor can feel isolated from all of man's activities and where:

The most unwelcome intrusions are roads, vehicular tracks, vehicles, forestry activities and buildings...In particular, vehicular access tends to be incompatible with wilderness values. Even a proliferation of walking tracks is undesirable (Grandage 1976 : 131).

Aesthetic values are not only valued by non-ORV recreationists. A survey of NSW south coast trailbike club members (Garretty 1976 : 119-120) noted that "quality of scenery" was the fourth most important factor bearing on the selection of a particular area in which to ride. In seeking a riding locality it seems that the type of vegetation cover and its contribution to the aesthetic appeal of the area is as important as the degree of riding difficulty. If it can be accepted that the desire for 'isolation' is one of the components constituting aesthetic value, then another revelation from the study by Garretty (1976 : 120) is of particular relevance. "Isolation" is one of the attributes constituting an "ideal riding area", though it is low on the list of important factors affecting the location decision (Garretty 1976 : 120). As the study by Garretty (1976 : 120) has revealed, ORV enthusiasts have a genuine desire for isolation and a need to visit aesthetically appealing areas. This is partly an indication of the earlier mentioned tendency (Section 3.3.1) identified by Peine (1973) for some ORV users to be "landscape oriented". Proliferation within natural areas of ever increasing numbers of ORVs must surely be making this desired condition progressively more difficult to obtain. The 'dismal cycle' identified by Dunn (1975) is repeated as some wilderness explorers experience diminution of their experience and, confronted with signs of overuse by other ORVs users, set out once again in search of more isolated areas, only to be driven from those in turn (Gilbertson 1981; Gilbertson 1983)

Another problem which may become more pronounced with the passing of time stems from the potential for the creation of "instant junkyards" when ORVs break down in remote wilderness areas and are abandoned when retrieval may be virtually impossible (Baldwin and Stoddard 1973 : 20). Frampton and Steane (1976 : 107) have cited the abandonment of

unservicable dune buggies on the north-west coast of Tasmania.

3.3.8 Cultural

There is sufficient evidence to associate ORVs with damage to historic and prehistoric sites (cf. Frampton and Steane 1976). ORVs provide access to fragile archaeological and scientific reference sites where damage may be caused either unintentionally (Plates 8, 9) or even deliberately (Plate 10).

Spread along the western coastline of Tasmania are a great many aboriginal middens, valuable 'rubbish dumps' of bones, shells and perhaps even skeletal remains of immense archaeological significance. According to Tasmanian National Parks and Wildlife Service archaeologist, Don Ranson (pers. comm.), this stretch of coastline comprises, along with those in Peru and California, one of the world's richest coastal midden sites; an archaeological heritage which should be preserved. The cultural significance of this coastline was communicated to Macphail et al (1975 : 100-102) by a former archaeologist with the Tasmanian Museum, H. Lourandos:

...a chain of unique archaeological coastal sites extending from the Rocky Cape area down into the unexamined areas of the south-west... The sites...combine a unique complement of extraordinary preservation with peculiar historical occurrence. They have been detected nowhere else in Tasmania nor on the mainland of Australia... My own investigations in the east and south-east verify both the superior value of these sites and their peculiarity to this one region. This evidence points to a marked difference between the way of life of the West Coast Aborigine to that of the easterner...

This region provides attractions to ORV enthusiasts. One of the most popular areas in Tasmania for the use of ORVs is the Arthur-Pieman Protected Area, an area managed with multi-purpose objectives by the Lands Department. In many localities within the Protected Area vehicle tracks have dissected the pre-historic middens and thereby rendered useless the possibility of future scientific investigation (Plates 8, 9 and 10) and damaged valuable cultural resources.

Plate 8

Vehicle Track through Aboriginal Midden, Sundown Point (N.W. Tas.)



Plate 9

Track Divergence on Aboriginal Midden, Sundown Point (N.W. Tas.)



Plate 10 Signs of Illegal Vehicular Use of an Aboriginal Site



Tracks indicating illegal vehicular use of Green's Creek midden, in direct contravention of the prominent warning sign (Arthur-Pieman Protected Area). According to the local Crown land warden, this midden was pyramid shaped and twice the height approximately 10 years ago. Vehicles have undoubtedly had some role in the diminution in size of the midden.

At another locality, Greens Creek, in blatant contravention of obvious warning signs, the activities of ORV riders have contributed significantly to the desecration of a huge aboriginal midden. According to the Crown land warden responsible for the area, Jack Hanson (pers. comm.), this midden was pyramid shaped and significantly higher only ten years ago. Strong westerly winds have removed the sand first loosened by motor bikes. Motor bike tracks and a warning sign are clearly visible in the photograph (Plate 10), and it seems unlikely that desecration has occurred accidentally or through ignorance of effects of the riders' actions.

3.4 Track Creation and Proliferation

One of the most worrying factors associated with ORV activities is that of track widening and proliferation (Plates 2, 11 and 12).

The pattern identified in the Coorong dune and lake complex of South Australia (Gilbertson 1983) reveals a diversity of users, each with differing requirements. Track proliferation begins with the blazing of new tracks by individual explorers who may create completely new tracks or reopen old tracks used decades previously by homestead-pastoralists (refer Figure 3.2 redrawn from Gilbertson 1983). Upon opening, more and more individuals discover and use the track in long distance exploration activities until the track is readily recognisable to groups of gregarious ORV users. The pattern of abuse continues and the cycle is completed and reinstigated, when the original lone wilderness explorer, horrified by the intensity of use, sets out once again to discover further 'unexplored' areas. For example, in the context of trail bike activity on the New South Wales south coast, it has been suggested that a "feed back mechanism" operates where "increasing use of an area frequently reduces the appeal of that area to additional riders" (Garretty 1976 : 120).

Many remote areas of Tasmania and, almost certainly, elsewhere, viewed from an aircraft, reveal the omnipresent tell-tale sign of vehicular intrusion, that is, track proliferation. The landscape below appears

Plate 11

Track Divergence at a Peat Bog



A low-lying area now virtually impassable - vehicles climb the low ridge to the right in the photograph to avoid this bog (Track to Lake Fergus, Central Plateau Protected Area).

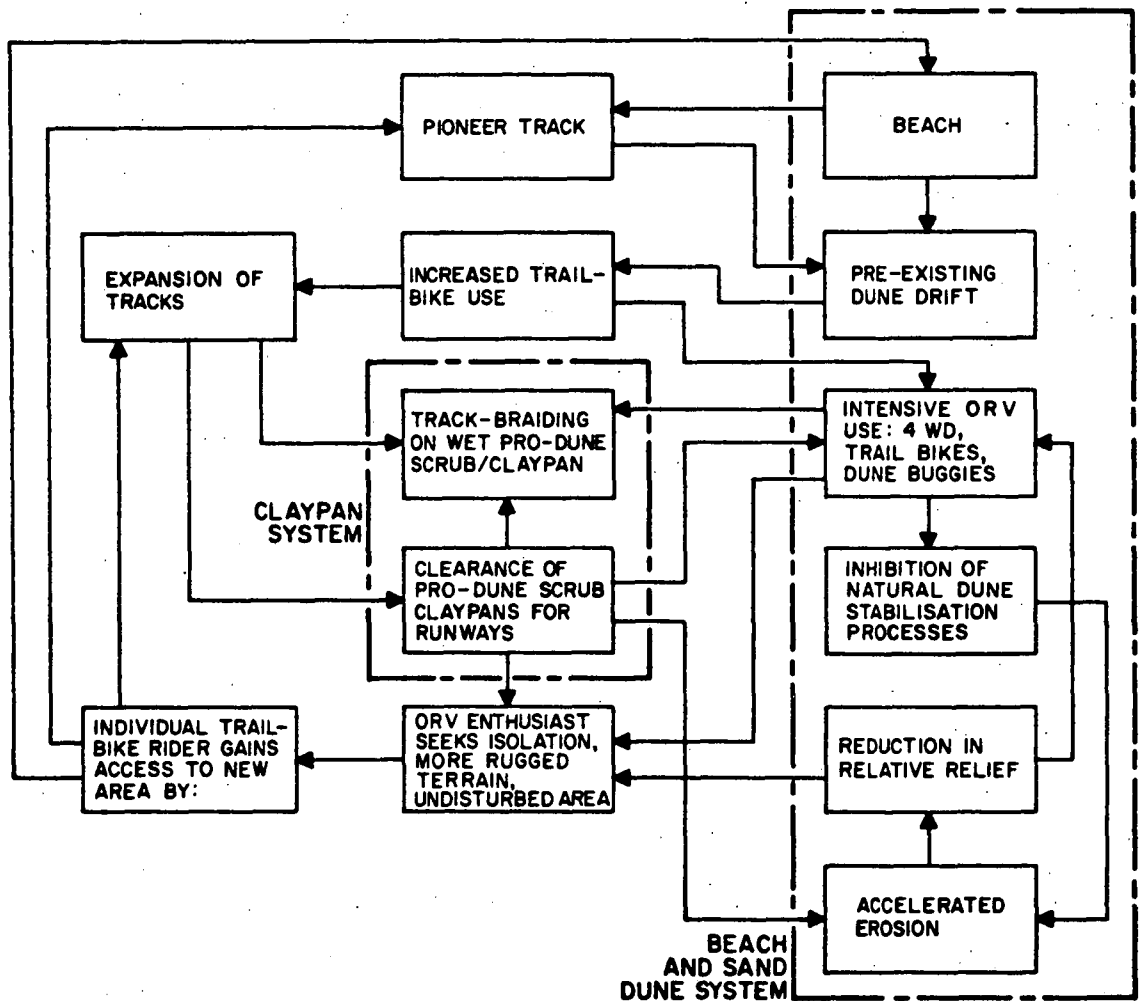
Plate 12 Aerial View of Braided Vehicle Tracks



Numerous diverging and converging tracks in the centre-right of this photograph give an indication of the extent of tracking of the low sandy hillock represented in Plates 1 and 2 - main track leading south of Temma, Arthur-Pieman Protected Area (photograph per courtesy Lands Department).

Figure 3.2

**A Model of the Interaction between ORV Users, and
between ORV Users and Geomorphic Change on the
lower Coorong, South Australia**
(Redrawn from Gilbertson 1983 : 362)



as a maze would to a giant; a 'willy nilly' of tracks. Some tracks have obvious destinations. Others appear vital in the network of tracks servicing commercial activities on public land, such as forestry and mining operations. Many are seen to provide access on, and to, private land (as an aid to agriculture, for instance). Others, however, appear to go nowhere. They simply peter out with no obvious purpose or destination.

Each year integrated forestry operations extend further into the natural forests of Tasmania. In the ensuing operations extensive roading occurs as tracks are pushed for the forestry surveyors and timber contractors, snig tracks are scoured and roads bulldozed so that log trucks may cart the felled trees and forest residues away to railyard and mill. Other tracks are created to service HEC installations and in the course of mineral prospecting and exploration company activities.

Roads and tracks, whether of the random sort described above or "whether built for logging or fire control or other necessitous purpose", mark "the beginning of the end of the wilderness" (Douglas 1965 : 7). If the road or track is to provide improved access, it is the vehicle which brings the 'cairns', in the form of litter, to mark man's visitation and passage, a problem succinctly described by Douglas (1965 : 8):

Along with the motor vehicles comes the debris of civilization - bottles, cans, tinfoil, rags, all the litter our machine age produces.

3.5 Positive Impacts

ORV impacts are not all negative. They have benefited mankind in many ways. The positive benefits arising from use of ORVs in Australia have been comprehensively stated by Wood and Robertson (1976 : 14):

There is an industry which relies on the sale of ORVs and spare parts to make a livelihood for thousands of people. The role of the ORV in exploration, agriculture, forestry, surveying,

bushfire control, rescue operations, beach patrol and general land management is well known. Indeed, many outback and northern settlers could not survive without them. As a source of enjoyment to a large number of recreationists and their families ORVs have considerable benefits. The Y.M.C.A. has even used mini-bikes as a point of contact with 'hard to reach' youth. In fact, young ORV users may develop skills which make them better drivers in later life. Many ORV users clear bush tracks and fire trails as well as partake in search and rescue operations when asked to assist. It is necessary to keep these and other positive impacts in mind when considering the negative ORV impacts.

It has been stated by Frampton and Steane (1976 : 105) that "use of go-anywhere vehicles allows the recreationist to experience the exhilaration, freedom and challenge of pioneer-type activity in remote, open air situations as yet relatively unspoiled by human activity." There is unintentional irony in the words "as yet relatively unspoiled by human activity" however, for they presage the likely destruction of that very attribute now so keenly sought.

3.6 Conclusion

The evidence summarised here suggests that capacity to withstand the impact of vehicular passage is dependent upon a number of factors, for some land systems are more fragile than others. For our purposes, it seems clear that a large portion of the Australian and Tasmanian coastline is in delicate balance even without the pressures exerted by man (Runge 1976 : 202). Destabilisation of sand dunes, for instance, is easily precipitated. This writer is not aware of any published results focusing specifically upon the impact of ORVs in Australian alpine areas. With respect to snowmobiles one could expect, however, that impacts are likely to be similar to those recorded in North America.

It has been the intention of this chapter to point to the existence of evidence to the effect that land systems can only withstand certain pressures before breakdown and that ORVs, in their increased use, threaten to seriously exacerbate these pressures. Certainly the community as a whole needs to develop an appreciation of the delicate

balance of nature if it wishes to avoid bearing the costs of environmental renovation and protection, costs which, under the user pays principle, may be more properly borne by the persons choosing to participate in ORV activities.

In addition to effects on the physical environment, ORV activities exert other pressures upon the community. These have also been summarised.

It has been stated that ORV activities apparently have the sanction of both society and government. Yet the deleterious effects of unrestricted use of ORVs are becoming increasingly well documented. It is a contention of this thesis that the problem should now be considered a land use planning and allocation problem and tackled along those lines. One option is for a concerted attempt to discern the land use requirements of recreational users; and after consideration of physical characteristics and other values of the land, identify sites where land degradation is or would be minimal, and allocate land for specific ORV use, thereby reducing the environmental hazards and the social conflict currently engendered. This theme is developed in the chapters which follow.

CHAPTER 4: OFF-ROAD VEHICLE CONTROL IN THREE EASTERN AUSTRALIAN STATES

4.1 Introduction and Overview

The fact that off-road recreational use of motor vehicles is a social phenomenon of only recent emergence was indicated in previous chapters. Official response to growing alarm at the deleterious consequences arising from indiscriminate and sometimes inappropriate use of ORVs has prompted official investigation at national level in Australia (cf. House of Representatives Standing Committee on Environment and Conservation 1977). Following that an inquiry was conducted in New South Wales (State Pollution Control Commission 1979) to examine aspects relating in particular to that state.

Within the states, official response has varied. Some states have recognised the need for more effective legislation than is provided by ad hoc controls scattered among various legislative and statutory rules. Victoria was the first to enact legislation dealing specifically with vehicles in off-road situations, and about the same time formed a police off-road pursuit squad (called the Special Solo Section). The states of Queensland and Western Australia introduced specific legislation in 1975 and 1978 respectively. Although New South Wales reacted quickly to the problem, the initial response differed from the Victorian strategy. Initial reaction in New South Wales accorded recognition to the vital need for effective policing, with the creation, in 1975, of the Police Trail Cycle Squad, whilst the existing legislative arrangements were maintained.

It is the intention in this chapter to review the methods of ORV control in three Australian states - a representative cross-section of existing state legislation (travel and consultation with appropriate

personnel in the other states was not practicable). In doing so it is anticipated that the different stratagems may reveal merits worthy of consideration in the Tasmanian context. Examination of the various intra-state arrangements and stratagems, and utilising the considerable advantage of hindsight, may reveal respective weaknesses and advantages. From this examination lessons will be drawn from which Tasmania may benefit.

Information sources upon which this chapter is based are the relevant statutes and regulations, published material in the form of reports of inquiries, and printed information disseminated by the appropriate authorities for public edification. Discussion with numerous officers working for the various public authorities contributed in no small part to the following review. It was through these discussions that an appreciation of the operational appropriateness of various policies was developed.

4.2 Victoria

4.2.1 Introduction

Two specific measures were introduced to regulate ORV activities in 1973. These were the Recreation Vehicles Act 1973 and the Land Conservation (Vehicle Control) Act 1972.

The Recreation Vehicles Act 1973 required all types of vehicles intended for use in public places other than highways (within the meaning of the Motor Car Act 1958), to be registered and insured for third party liability; contained provisions for safe driving and safety requirements; and prescribed certain conditions for use by children of ages 8 to 15 years. That Act has recently been repealed and re-introduced, with only slight modifications (basically variations in prescribed penalties), as a division concerning traffic regulation, registration and licencing within the Transport Act 1983.

The Land Conservation (Vehicle Control) Act 1972 confines the use of vehicles on public land to **roads formed for the passage of vehicles having four or more wheels** (regulations 2, 3). Before a vehicle is legally entitled to travel off-road, written permission must be obtained from the relevant land managing authority (regulation 4). The two objectives of this Act are reported by Davies (1978 : 24, quoting letter from Victorian Department of Conservation to Pottinger, former Director of Environmental Control in Tasmania; and a report by the Victorian Ombudsman) to be the prevention of, firstly, track proliferation and soil erosion leading to landscape degradation and water quality deterioration in water catchments; and secondly, excessive use of unsurfaced and inadequate roads and resultant increase in road maintenance costs.

4.2.2 Regulation and Control

4.2.2.1 Salient Features

The main features of the relevant Acts are as follows.

Transport Act 1983

The provisions relating to recreation vehicles (RVs) within this legislation, transferred virtually intact from the recently repealed Recreation Vehicles Act 1973, are distinguished by the following features:

- (a) All vehicles used in a public place must, unless registered under the Motor Car Act 1958, be registered as RVs (s 108). A vehicle driven on a "highway" (otherwise expressed as that area of a road being kerb-to-kerb) is subject to the provisions of the Motor Car Act. An RV driven on a highway is therefore used illegally - that is, unregistered, uninsured, and possibly by an unlicensed driver. Literally interpreted, the "public place" is, by the Transport Act [s 86(1)], that area extending from property-line to property-line, but excluding the highway (or kerb-to-kerb area).

Use of an RV in that area is subject to the provisions of the Transport Act;

- (b) Third party insurance is compulsory (s 99);
- (c) Number plates are required (ss 103-105). Certain penalties are prescribed for specific offences involving number plates, such as fraudulent use (s 105), while failure to display number plates or obstruct or render plates indistinguishable is an offence under the Act [s 108(2)].
- (d) Although the registered owner must be age 18 or over [s 100(3)], children 8 years and over may drive RVs subject to certain restrictions. Children between age 8 to 15 years are prohibited from driving in a public place a recreation vehicle - with 2 or 3 wheels and an engine capacity exceeding 80 cc; with more than 3 wheels having tyres with an outer diameter of more than 305 mm; or, at a speed exceeding 30 kph (s 111). Where a vehicle is driven in contravention of these requirements the registered owner and the driver may severally or each be liable. The owner is not so liable if the vehicle was driven without knowledge or consent (onus of proof upon him/her) (s 110);
- (e) Reckless or dangerous driving is an offence (s 112);
- (f) Motor cyclists must wear helmets (s 109);
- (g) Poorly constructed or mechanically faulty RVs are not registerable (s 102);
- (h) Driving under the influence of intoxicating liquor or any drug is prohibited (s 113);

- (i) Vehicles registered under this Act may not be driven on a public road (ss 108, 86).

Land Conservation (Vehicle Control) Act 1972

The Act contains provisions for:

- (a) The making of regulations prohibiting or regulating the use of vehicles on any public land. Pursuant to this provision vehicles are prohibited [regulation 3(1)] from the use of any public land apart from roads, parking areas, or in areas declared to be "free access areas";
- (b) The declaration of any public land to be an erosion hazard area (s 5). Except with the written permission of the proper authority, a person within an erosion hazard area shall not, inter alia, have possession or use of any motorised vehicle [s 5(5)];
- (c) In addition the Act amended s 197(1) of the Local Government Act 1958, by enabling local authorities to make by-laws to prohibit or regulate the use of vehicles for recreational purposes on public land controlled by the authority.

4.2.2.2 Enforcement

Authorised officers:

Transport Act 1983

Although administration of the Act lies with the Road Traffic Authority, for some provisions only members of the police force are empowered to enforce provisions (cf. ss 114, 115).

Land Conservation (Vehicle Control) Act 1972

Proceedings for breach of the regulations under this Act may be taken by a member of the police force; by the authority upon whose land the breach was committed; or by a bailiff of Crown lands (s 4).

Offences and Penalties:

Transport Act 1983

Maximum penalties for offences against the Act, set at the rates prescribed under the Penalties and Sentences Act 1981, range in severity from \$100 to \$1500. Driving under the influence of intoxicating liquor or any drug (s 113) carries the highest maximum penalty. From a land management perspective, penalties are substantial. For instance, the maximum penalty for driving in a public place is currently set at \$200 and \$500 for first and subsequent offences respectively.

Land Conservation (Vehicle Control) Act 1972

Persons convicted of an offence under the Act and regulations are liable to a maximum penalty of \$500 (s 5).

4.2.3 Comments

The weaknesses in the Victorian strategy seem to centre around two factors - policing and penalties.

Commenting on the limited effectiveness of the 2 Victorian Acts, the legal officer with the Dandenong Valley Authority stressed the concern the Authority and 6 local councils had for more stringent powers (Brian Henderson, pers. comm.). In a submission to government and the state Municipal Association, it was proposed that there be granted powers requiring suspected transgressors to identify themselves on

request, and for local government action to create RV areas.¹

Only police officers are authorised by the Transport Act 1983 to request the owner of an RV to provide information leading to the identification of the RV driver in relation to any matter (s 114) (cf. Working Party to the Minister of Forests 1983 : 15). Likewise, police are the only authorised officers empowered to stop an RV and request the name and address of the driver (s 115). Whilst it is appreciated by this writer that traffic control is basically a police responsibility, that arrangement, in the past, has lead to deficiencies in land management. The police do not monitor off-road situations as they do the roads and highways. It is the land management officer on patrol of his 'patch' who confronts the problem on a day to day basis. It is that officer who requires vehicle registration enabling vehicle identification. It is that officer who in reality requires the statutory backing to stop RVs and demand information.² Obviously it is not the police officer who has in mind, or is entrusted with, the ultimate responsibility of land protection. Without total police commitment to the enforcement of the provisions of this Act it is pointless to withhold this vital enforcement capability from land management authorities.

1

Some municipalities have, by use of by-laws under the authority of the Local Government Act 1958, attempted to do something about the problem; specifically by passing by-laws requiring a permit to use RVs within municipal boundaries, but deliberately refraining from the issue of such permits. While this may appear the ultimate way to control RV use, the experience is that RV offences are still prevalent in these municipalities, and remain as significant a problem as anywhere else.

2

This is an aspect in which the Tasmanian legislation is clearly superior. In that state officers have, under the National Parks and Wildlife Act 1970, and the Environment Protection Act 1973, the powers of police officers.

Use of unregistered vehicles on public land is comprehensively covered by legislation in Victoria. The use of unregistered vehicles on public land, not being land falling within the definition of "highway" under the Motor Car Act 1958, is an offence covered by s 108 of the Transport Act 1983.

Hall (1976 : 139) wrote that the Recreation Vehicles Act, 1973, had been "quite effective within the limitations imposed by its objectives and structure." A decade later others working in land management are less convinced of its suitability as a land management tool. According to Robert Saunders (one of the co-authors of Dellora et al 1984, and now with the Environment and Resources division of the Ministry of Conservation, Forests and Lands), that Act was a "white elephant" (pers. comm.). He observed that that Act (which as we have seen has virtually been reintroduced in the Transport Act) legally and administratively, but never effectively, banned all off-roading in Victoria, since without "free access areas", as were originally envisaged by the Act, all RVs were in reality legally confined to roads or private property and all RV registration did was provide cheap registration and insurance for vehicles used on private land. In that sense, as a land management mechanism, it may be judged a disappointing failure. Since the new Transport Act, as it relates to recreation vehicles, is in essence the same as the former Recreation Vehicles Act, there has, in effect, been no legislative upgrading!

Thus in Victoria, the authorities have been happy to accept money from people wishing to register RVs without providing "free access areas" in return. This may have generated a mistaken public belief that it is legal to drive on public land unless otherwise instructed. Thus Phillip Garth (pers. comm.), formerly prosecutions officer attached to the old Forests Department, criticised the former Act (that is, the Recreation Vehicle Act) for generating the misapprehension that RV registration gave permission to operate on public land. Not all have been fooled though: RV registrations have declined in recent years according to an officer in the registrations department of the Road Traffic Authority (John Byrnes, pers. comm.).

Actual powers exercised by police in relation to vehicles used on roads are required by those exercising land management functions - but these powers are denied the very officers who require them for effective exercise of their duties and functions. Despite the existence of direct legislation, ORV control is in fact limited by hindrance to and deficiencies in the enforcement process. The system of control is not working in Victoria.

4.3 Queensland

4.3.1 Introduction

A different approach has been implemented in Queensland. Examination of the central elements of that approach suggests that it cannot be entirely successful. For practical reasons (that is, limited travel opportunity) it has been impossible to gain first hand experience of the situation in that state.

4.3.2 Regulation and Control

4.3.2.1 Salient Features

In 1977 a regulatory mechanism, the Motor Vehicles Control Act 1975 was installed in Queensland, not for noise control or environmental considerations, but, according to Davies (1978 : 25) "...to afford protection to members of the public who might be involved in accidents..." involving ORVs. The Federal inquiry (House of Representatives Standing Committee on Environment and Conservation 1977 : 37) reported that, prior to the new legislation, there was government concern that unregistered and unsound vehicles were being used to convey tourists, and that, in the interests of public safety, safety standards were necessary.

Control of ORVs is effected through the Main Roads Act 1920-1979, the Traffic Act 1949-1975, and the Motor Vehicles Control Act 1975 (henceforth referred to as the Control Act).

The Main Roads Act provides for the registration of vehicles used on any road [a "road" (s 2) includes ...any track used by the public through any vacant Crown land, any pastoral holding or any reserve, the boundaries of such track not being defined by survey and the area occupied by such track not being especially dedicated for public use as a road...].

The Control Act provides for the registration and control of vehicles used in any public place. Without quoting the exact definition, "public place" is a place of public resort open to or used by the public as of right, but does not include a place that is a road within the meaning of the Main Roads Act 1920-1972, or of the Traffic Act 1949-1975.

Registration of vehicles under the Control Act is handled by the Department of Main Roads. Control and regulation (including prohibition) of vehicles in "declared areas" and public places, and the performance of the basic day to day powers and functions of administering the Act, is largely a responsibility of local government (House of Representatives Standing Committee on Environment and Conservation 1977 : 38). By the Control Act (s 35), local authorities may make by-laws, inter alia, requiring a permit to be obtained (by payment of a fee) for use of a vehicle on land under the control of the particular council.

4.3.2.2 Enforcement

Some basic features of the Control Act are as follows:

- (a) Use of a vehicle in a public place is prohibited unless it is registered (either under the Traffic Act or the Control Act) and number plates attached and unobscured. Annual registration costs

are currently \$16 for new business or \$13 for renewal, plus \$3 Nominal Defendant's fee and compulsory Third Party insurance (at one-half the rate of vehicles registered for road use).

- (b) It is an offence to drive an RV on a public road (s 12).
- (c) Children over age 8 years and less than age 17 years are permitted to drive, with some restrictions, in a public place (but not on a public road).
- (d) There is no licence required for the driving of RVs in public places.
- (e) Offences against the Act may result in licence disqualification under the Traffic Act 1949-1975 or lead to prohibition from further using RVs in public places.
- (f) The Governor-in-Council may declare any part of the state a "declared area" upon satisfaction that vehicular use within that area should be regulated or prohibited.
- (g) Dangerous driving in declared areas or public places is prohibited.
- (h) Upon conviction, a Court may order the forfeiture and disposal of a vehicle used to commit the offence.
- (i) Authorised officers include members of the police force and officers of public and local authorities so appointed. One notable feature is the power of an authorised officer to seize and impound any vehicle used to commit an offence.

4.3.3 Comments

Whilst the Control Act appears designed to effect regulation of vehicular use off-road, the reason appears to be public safety considerations, not concern for environmental values. Pragmatic considerations have been effected - provision is made for the driving of vehicles by children in off-road situations and third party insurance is compulsory. Although local government is considered the administering level, it is stressed here that local government has authority only over land within its control. Transport regulation and enforcement is a police duty, a duty which that Department may or may not choose to undertake. Unless public safety is involved other issues such as environmental considerations must wait down the pecking order of enforcement priorities. In a state the size of Queensland, to leave ORV enthusiasts to their own devices may simply be the most convenient thing to do. What is out of sight, is out of mind.

An officer in the registration section of the Main Roads Department (P.J. Grant, pers. comm.) maintained that the Control Act has largely been ineffectual of late, with few people bothering to register RVs. Reasons for this may be partly due to a recent decision by a magistrate that any beach is a road within the meaning of the definition in the Main Roads Act and therefore use of that formerly popular destination is now precluded to vehicles not fully registered (that is, for use on roads). Some local authorities which previously allowed use of RVs on land within the control of that authority have refused to issue permits. The authorities administering Crown lands, NPWS and Forestry prefer to control vehicles through the regulatory provisions in their own Acts (P.J. Grant, pers. comm.) since these land managing authorities are the departments requiring day to day control of vehicles for environmental considerations. The consequence is that the public remain confused by the lack of consistency (different requirements and varying penalties) of various Acts.

4.4 New South Wales

4.4.1 Introduction

A succession of government instigated inquiries and reports (House of Representatives Standing Committee 1977; Land Conservation Study Group 1978; New South Wales State Pollution Control Commission 1979), expressing concern with the effects of unrestricted use of ORVs, have resulted in the formulation of a strategy for control of the recreational use of ORVs within the state.

According to the State Pollution Control Commission (SPCC) (1978 : 31, 85), of the four recommendations relating directly to ORVs in the report presented by the Land Conservation Study Group in 1978, three have been incorporated in current strategy. The Group recommended that:

- (a) earlier recommendations of the House of Representatives Standing Committee (1977), where relevant to the New South Wales situation, be effected;
- (b) a special registration system for ORVs, providing third party insurance and suitable silencing of noise, be effected;
- (c) a special system of licencing children aged 8 years and over be adopted (similar to Victoria).
- (d) National Parks be made more available to recreational use of vehicles. This suggestion has, to date, been resisted (cf. CONCOM press statement dated 13/8/76, in: Wood and Robertson 1976 : 260).

In formulating recommendations appropriate to the New South Wales situation, the SPCC inquiry (1979 : 5) accorded acknowledgement to the earlier findings of the Federal inquiry, and these were accepted and

synthesised in drafting appropriate policies for the control of ORVs, though not immediately. The reason why new legislation was delayed so long remains unclear (perhaps the snail's pace is indicative of the complexities of determining practical solutions) but it is apparent that there slowly developed a realisation that the existing legislative arrangement was incapable of dealing effectively with the steadily rising use of ORVs. Examination of the historical sequence of reports and inquiries indicates continual 'advice' to implement specific legislation.

The final recommendation of the SPCC (1979), the formation of a Task Force comprising representatives from government departments, the public and local authorities, was duly adopted. Although the findings of this group were never made public, it seems obvious that the Task Force, in considering the earlier recommendations of the SPCC inquiry, and engaging in consultation with various interested individuals and organisations, provided the final synthesis of policy considerations leading to the new Act.

Prior to the introduction, in October 1985, of the Recreation Vehicles Act 1983, there was no legislation directed specifically toward control of ORVs. Controls were imposed under a number of Acts (as still is the case in Tasmania) such as those dealing with Crown land, Forestry, National Parks, Local Government, and Motor Traffic.

4.4.2 Regulation and Control (Recreation Vehicle Act 1983)

To assuage community concern regarding ORV noise and environmental damage, two essential requirements were identified by the 1979 ORVs inquiry (SPCC 1979 : 34-35). Those requirements were:

- (a) the establishment of suitable areas of land where ORVs could legally be used (and especially by children less than the minimum driving age); and

- (b) the designation of environmentally sensitive areas as "no access areas".

This two strand policy is the essence of the new Act. The main features of this Act are provision for:

- (a) the exclusion of all vehicles from "restricted land" (where this is desired by the land occupier);
- (b) the establishment and operation of Recreation Vehicle Areas (RVAs);
- (c) a system of vehicle registration and insurance for vehicles used in RVAs;
- (d) the driving and/or riding in RVAs without need of a licence;
- (e) the appointment of authorised officers with powers to control vehicle use on RVAs and restricted land; and
- (f) indemnity for public authorities against accident claims arising from vehicle use on RVAs.

4.4.2.1 Restricted Land (s 31)

Prohibition on the use of vehicles on restricted land is achieved through s 31 whereby a person shall not drive a motor vehicle upon restricted land, or cause or permit a motor vehicle to be driven upon restricted land, in wilful contravention of a direction given (in whatever manner) by the occupier of that land. Penalty: \$500. The term "restricted land" is defined [s 4(1)] as land which is neither (a) a public road; nor (b) a recreation vehicle area, and may be private property or public land. If the owner or occupier of restricted land or an authorised officer gives a direction not to drive on that land, it is an offence not to comply with that direction. The direction may be given verbally or in the form of a

permanent notice.

4.4.2.2 Recreation Vehicle Areas (s 10-14)

Designation of land as an RVA (s 10) may occur following application to the Director of the SPCC. Such application must be accompanied by the prescribed fee and evidence that any necessary development consent under the Environmental Planning and Assessment Act, 1979, has been obtained in relation to the use of that land for the purposes of a recreation vehicle area. The public is to be informed of such designation by notice in the Government Gazette.

No indication is given in the Act as to the criteria for rejection by the Director of any such application, save that where it appears to the Director that use of the land as an RVA contravenes or will contravene provisions of the Environmental Planning and Assessment Act, 1979, or any environmental planning instrument in force under that Act, the Director shall not give approval [s 11(2)].

Recision or variation at the request of the occupier, of land already designated as an RVA, is provided [ss 12, 13].

Where the Director is of the belief that an area previously designated as an RVA contravenes, or will contravene, provisions of the Environmental Planning and Assessment Act 1979 or any environmental planning instruments thereunder, he may use discretionary power to vary or rescind that previous designation (s 14).

4.4.2.3 Registration and Insurance for Vehicles on RVAs (s 15-22)

Detailed provisions for the regulation of RVs are set out in ss 15-22, the main provisions being that:

- (a) a register of such vehicles will be maintained by the Commissioner for Motor Transport [s 16(1)];

- (b) persons applying to register vehicles as RVs must be at least 16 years and 9 months (the minimum legal driving age) and must present a declaration that the vehicle is in registerable condition. Compulsory third party insurance is included in the registration fee;
- (c) registration renewal takes effect on the 1st of October each year [s 17(3)]. The registration plate must be properly displayed. A different coloured registration plate is issued each year. In addition to enabling identification of vehicles without current registration, this provision may contribute to resolution of one of the greatest enforcement problems; that is, the problem of identification of offenders.

Within 3 days of cessation of registration, identification plates must be surrendered to the Commissioner of Transport (s 22). The penalty for failure to do so is \$500.

4.4.2.4 Controls on the Off-Road Use of Vehicles

Age and Licence Conditions: Vehicles registered under either this Act or the Motor Traffic Act 1909 can be driven in RVAs by persons over 8 years of age, irrespective of whether that person holds a valid driver's licence or not. A parent causing or permitting a child less than the age of 8 years to drive within an RVA is liable to a penalty of \$500 (s 25).

Unregistered Vehicles: The driving of unregistered vehicles within RVAs is expressly prohibited. All vehicles must be registered under either this Act or the Motor Traffic Act 1909 [s 24(1)]. Section 24(2) makes it an offence for a parent to cause or permit a child to drive an unregistered vehicle in an RVA. The prescribed penalty for either infringement is \$500.

Registration Plates: Vehicles driven in RVAs must, at all times, have a properly displayed registration plate attached in the prescribed

manner (s 26). The penalty in contravention, once again, is \$500.

Vehicles in Unregisterable Condition: Vehicles driven in an RVA must be maintained in a registerable condition, with the prescribed penalty again \$500 (s 27).

Authorised officers have certain powers (s 28) to confiscate registration plates and issue "default notices"; specifically where the vehicle is not in registerable condition. The Act prescribes the procedure for retrieval, by the registered owner, of the registration plate so removed.

4.4.2.5 Powers of Authorised Officers (ss 6-9,33-40)

Authorised Officers, appointed by the Director of the SPCC, must be officers of either (s 6):

- (a) the State Pollution Control Commission, or
- (b) another public authority.

Such appointment ceases upon termination of employment with either of the above. Police officers are ex officio authorised officers (s 8).

An authorised officer of a public or local authority may only exercise the functions conferred by this Act on land within the jurisdiction of that authority (s 9). There is no such restriction imposed on the members of the Police Department or SPCC - Police or Commission officers could enter any land for the purpose of exercising their authority but would generally only do so at the request of the land occupier.

Of the powers conferred upon authorised officers, some of the more noteworthy are the following. An authorised officer may:

- (a) ...inspect and test a motor vehicle which is in a recreation

vehicle area [s 33(1)(a)];

(b) direct a driver in an RVA or restricted land to remove the vehicle, or to provide the name and address of the driver and owner [s 33(1)(b)];

(c) enter any RVA or restricted land and stop, seize, enter and drive a motor vehicle in an RVA or restricted land [s 33(2)].

Obstruction (s 36) of an authorised officer in the exercise of functions conferred by statute and/or the giving of false or misleading information is an offence (s 37). The penalty for either offence is \$500.

Police officers are empowered to request of the registered owner, the name and address of persons suspected of offending against the Act or regulations (s 35).

4.4.2.6 Indemnity for Public Authorities (s 39)

Liability for accidents occurring on land under the control and management of public and local authorities is indemnified (s 39). The liability of public authorities for loss or damage occurring to authorised officers in exercise of their duties is not, however, excused [s 39(2)].

4.4.2.7 Other Provisions

There is provision under the Act for the making of Regulations pertaining to the administration of the Act.

4.4.3 Comments

Although there exists no published government policy in New South Wales concerning ORVs, a recently issued publication (SPCC 1985 : 2) containing a message from the Minister for Planning and Environment

reveals something of government intentions. The Minister, whilst acknowledging the popularity of off-roading, indicated the concern of government for "proper controls" in order to minimise noise and other environmental problems. He suggested that the Recreation Vehicles Act "...allows councils and other land owners and occupiers to designate certain lands as Recreation Vehicle Areas, and ban vehicles completely from other areas." Therein lies a radical directional change: local government and private land owners and occupiers are encouraged to provide council or private land for various ORV activities. There is no mention in that message of moves for the provision of RVAs on public land. There is discernible a subtle official intention to channel ORV users from the vast public lands to areas considered suitable by each local government authority under local environmental plans. This seems entirely logical. Local governments have the advantage of familiarity with local conditions, knowledge of the extent of popularity of ORVs in the local area, and can utilise their council officers as authorised officers.¹ A cynic might accuse the government of passing the buck. Indeed the attitude of one officer at the Shires Association of New South Wales was that the Act and its obvious intention is an example of governmental abrogation of responsibility by passing additional responsibility to local government without also making provision for financial assistance (Stephen Alchin, pers. comm.). From another perspective, however, it may be considered as empowering local government to overcome problems that they have, and there is no obligation to use the RVA Act if they can find another way to overcome the problems caused by vehicles (such as by passing by-laws).

The appointment of local government employees as authorised officers should prove beneficial in the sense of extending the range and number

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Nonetheless, of the 3 RVAs established to date, 2 have been set up on Crown land. The experience has been that councils generally seek Crown land for RVAs (Phillip Gray, pers. comm.). The 3 RVAs are located in the Wentworth and Crookwell shires, and Stockton Beach at Newcastle (Port Stephens Shire).

of officers capable of enforcing the legislative provisions.

Provisions for compulsory registration and identification by number plate should provide authorised officers with greater opportunity to apprehend offenders.

Judicial erring in favour of juveniles may lessen the effectiveness of the quite severe penalties (maximum \$500). One social benefit may result. Children and adults may come to learn that illegal driving of ORVs on public land is no longer condoned, as it has been, in effect, by administrative default in not initiating effective regulations, control and enforcement procedures at an earlier stage.

Further evaluation of this Act is difficult because it has not long been operational. Its success should be judged in terms of actual noise minimisation and avoidance of environmental degradation, which will in turn depend upon widespread statewide endeavours to provide RVAs. Without the latter this Act, also, is likely to fail.

4.5 Conclusion

Conclusions drawn from this review are:-

- (a) there is a noticeable deficiency in knowledge, appreciation and understanding of the need for controls on ORVs. The public needs to be properly informed of the registration conditions, where they can go, and the conditions of use. The law needs to be made explicit for the better understanding of all concerned, and a programme of public education would seem imperative if progress is to be made on this matter (this apparently is the direction to be recommended by a working party to the government in South Australia; P. Green, pers. comm.).
- (b) there must be RVAs (and these must be accessible to major centres of population). These areas must be made available on land considered capable of withstanding heavy impact (for example -

pending consideration of safety aspects - derelict quarries and mining sites). Whilst only one component of a total strategy they should assist the diversion of vehicles away from the more fragile areas which would otherwise be utilized illegally.

- (c) there should be an adequate number of authorised officers (suitably empowered) so legislation can be effectively enforced and administered. Since a high proportion of ORV use occurs on weekends it is important to consider the resources available for policing at those times. One means of overcoming this weakness would be to empower the appropriate personnel to act in relation to ORV offences, wherever they occur and irrespective of which agency is vested with actual control.¹
- (d) enforcement must be diligently carried out.
- (e) penalties for offences must be appropriately high to have a deterrent value.²
- (f) it is evident that police co-operation is necessary. Without it, administrative control (and the furthering of land management goals and objectives) is doomed to languish.

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At the time of writing the NSW Recreation Vehicles Act is being amended to give the Director of SPCC discretionary powers to appoint anyone, for just this reason (Phillip Gray, pers. comm.).

2

The cost of catching, charging and completing litigation against offenders is inordinately high and time consuming. Since few offenders are caught and fewer brought to court by agencies uncertain of successful conviction, it is obvious that the prescribed punishment is ineffectual as a remedy. There is a "catch-22" situation involved - magistrates, in court proceedings, tend to favour the offender, since the penalty is frequently discounted. If the maximum penalties were set significantly higher, magistrates would have no option but to direct heavier punishments than those levied in the past. Penalties need to be higher for there to be any impact - certainly for those agencies to consider prosecution.

(g) the respective states have taken differing approaches in the application of direct legislation. The Victorian legislation prohibits vehicle use in all areas of Crown land except in defined areas. Queensland legislation takes an opposite approach. Vehicle use is permitted on all areas except declared areas where use may be prohibited and restricted. The more recently enacted legislation of New South Wales takes a similar line to the Victorian approach, channeling RV use to those areas deemed suitable.¹ In addition local government and private operators are encouraged to provide the land required for ORV activities. An enlightened approach is applied in the normally contentious area of enforcement. Actual enforcement is not restricted by adherence to rigid delineation of enforcement parameters - a land occupier can call on either a police officer or an authorised officer of the local council to take action against persons using vehicles on his/her land. This requires, of course, that the local council has appointed an authorised officer.

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Under NSW legislation it is legal to drive or ride anywhere in the state unless prohibited by the land occupier - there is no general off-road ban.

CHAPTER 5: CONTROL OF OFF-ROAD VEHICLES IN TASMANIA

5.1 Introduction

Russell et al (1979 : 91) cited continued forestry operations, in conjunction with "extensions to forest road systems", hydro-electric projects and mining as serious threats to the future of wilderness in Tasmania. These activities and others, such as Telecom installations, of necessity often involve lengthy road and track creation, and are an obvious attraction for ORV users because potential new destinations are thereby made suddenly accessible.

The biophysical impacts of vehicle intrusion in natural settings were outlined in Chapter 3. Modern man has no yardstick with which to measure his intrusion into natural areas save the knowledge that once new roads and tracks are created another natural area loses some of its integrity. Some measure of this could be gained if statistics were available on the total kilometres of roads constructed yearly in this state. What then is the yearly extent of road and track creation on public land in Tasmania? Personal inquiry of a Forestry Commission officer on the subject elicited the comment: "no such information is compiled!", though another source, the Report of the Tasmanian Parliamentary Legislative Council Select Committee on State Forests (1984 : 27), indicates that some information is gathered on the subject.

Information provided to the Legislative Council inquiry into State Forests revealed that in the year 1982-83 the Forestry Commission constructed 72 kms of road and maintained another 1746 kms. According to the same report the private concession holder, Associated Pulp and Paper Mills Ltd, has constructed roads totalling 2034 kms on public land in Tasmania. The same information is not readily available for

roads constructed on public land held by the other concession holders (Australian Paper Manufacturers Ltd, Australian Newsprint Mills Ltd, and Tasmanian Pulp and Forest Holdings Pty Ltd).

Likewise, neither the Department of Environment nor the Mines Department have any practical means of monitoring the statewide extent of annual road and track creation associated with commercial prospecting, exploration and drilling ventures. Despite attempts to enforce stringent licence conditions (incorporating such environmental considerations as the requirement that the operator restore land after use in order to retrieve the restitution bond lodged with the Mines Department¹), it is obvious that the restitution of access tracks is accorded little priority. Past mining operations, particularly the abandonment of mine-sites without taking appropriate measures to facilitate rehabilitation (Singline 1985 : 28) indicate an inability to guarantee environmental protection on the part of the departments of Mines and Environment. The proliferation of mineral exploration tracks and the neglect of required rehabilitation is a major problem, and the unsympathetic use of derelict mining access tracks needs to be curtailed, which requires guidelines and supervision by the appropriate authorities.

This chapter examines current legislative and regulatory control mechanisms in an attempt to reveal the strengths and weaknesses of

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Both Mines and Environment Departments are able to exercise some control over the operators of a mine (that is, those who hold and work a mineral lease - a "scheduled premises"). Plans must be submitted with the application for mineral leases (to the Mines Department) and Department of Environment licences, thus providing both authorities with opportunities to comment on required road standards and rehabilitation requirements. In practice the situation has not been amenable to satisfactory management. In addition, neither department has formal guidelines for mandatory restoration of 'worked areas', including tracks. The bond is used to fund rehabilitation if the operator does not do so (but whether it would cover all estimated costs is doubtful). Upon return of the bond the liability for restoration passes and it is eventually the taxpayer who incurs the cost.

the situation. Sources of information for this chapter have been legislation enacted by the Tasmanian Parliament and statutory regulations thereunder, information presented in a Parliamentary Select Committee report, annual reports tabled in Parliament by the Motor Accidents Insurance Board (MAIB) and various departmental information sources, including personal communication with departmental officers involved in land management and vehicle control.

5.2 Mechanisms of Control: The Institutional Framework

5.2.1 ORV Statistics

The authority responsible for registering vehicles, Transport Tasmania, does not keep a specific register of ORVs. Such information is not considered necessary by the Department (Mark Holliday, pers. comm.) and it is therefore not possible to determine how many vehicles are registered in Tasmania having off-road capability. There is a hidden cost which land managing authorities are forced to meet and which eventually the public pays for - through taxes. A more equitable system would see ORV users contribute substantially to land restitution costs. Vehicles having off-road capability are included in the other registration classes of Motor Car (class 1), Light Goods Vehicle (class 2) and Off-Road and Recreational (class 18).

5.2.2 Legislation, Statutory Regulations and Administrative Control

Unlike other Australian states (NSW, Queensland, Victoria, and WA), Tasmania and South Australia¹ have not introduced legislation specifically designed to regulate ORV activities (see Table 5.1). To

¹

The shortcomings of legislation and regulatory control were recently the subject of review in South Australia - other strategies, in addition to direct legislation, are now under consideration (refer Chapter 4, p. 73).

Table 5.1

**Some Statutes and Regulations applicable to Vehicles used Off-Road in
Eastern Australian States**

NEW SOUTH WALES

Environment And Planning Assessment Act 1979

Motor Traffic Act 1909

Recreation Vehicles Act 1983

QUEENSLAND

Beach Protection Act 1968

Motor Vehicles Control Act 1975

VICTORIA

Land Conservation (Vehicle Control) Act 1972

Motor Car Act 1958

Transport Act 1983

TASMANIA

Aboriginal Relics Act 1975

Aboriginal Relics Regulations 1978

Crown Lands Act 1976

Crown Lands (Public Reserves) Regulations 1979

Environment Protection Act 1973

Environment Protection (Noise) Regulations 1977

Forestry Act 1920

Forestry Regulations 1976

Local Government Act 1962

Motor Accidents (Liabilities and Compensation) Act 1973

National Parks and Wildlife Act 1970

National Parks and Reserves Regulations 1971

Police Offences Act 1935

Traffic Act 1925

date the relevant authorities and governments have considered there to be sufficient powers and provisions in a plethora of legislation concerned with the diverse activities of land management (vis. Crown land management, forestry, and national parks), environmental protection and regulation, vehicle regulation and control, and local government administration.

In the following review of that legislation, attention will be given to the statutory obligations of ORV users; the powers vested in administrative authorities; the behaviour which constitutes offences under various Acts; and identification of the "authorised officers" responsible for ensuring the statutory requirements are enforced.

In the following sub-section (5.3) the plethora of legislation and statutory regulation will be reviewed and evaluated.

ABORIGINAL RELICS ACT 1975

Under this Act an authorised officer is a police officer or warden [s 2(1)] appointed in respect of a specific protected site (s 15).

The term "conveyance" means any vehicle...intended for the carriage of persons...over land.

The Director of the National Parks and Wildlife Service is vested with the duty to manage and protect all protected sites (s 8). Pursuant to this responsibility he can cause the erection of notices on the site [s 8(3)(b)].

The protection of protected sites is provided for [s 9(a)] so that no person shall destroy, damage, disfigure...or otherwise interfere with a protected object or [s 9(b)] ...carry out an act likely to endanger a protected object. The maximum penalty upon conviction for this offence is \$500 or 6 months imprisonment or both (s 20).

Refusal or failure to supply the correct name and address constitutes an offence (s 17). In the event of that occurring the authorised officer is vested with power of arrest [s 18(7)].

Regulations prohibiting or controlling the use of conveyances on protected sites may be made in accordance with s 25(3)(e). Persons who unknowingly interfere with a relic are saved by s 21(3): It is a defence in any proceedings for an offence against this Act in relation to a relic that the defendant did not know, or could not reasonably be expected to have known, that it was a relic.

ABORIGINAL RELICS REGULATIONS 1978

Definitions of relevance [regulation 2(1)] are-

"road" means a road with a made up surface that is suitable for the use of four-wheeled motor cars...;

"vehicle" means a vehicle within the meaning of the Traffic Act 1925.

Apart from the specific regulations affecting vehicle control, there are general provisions relating to the protection of protected sites; namely the prohibition on-

(a) interference with and digging up of earth, rocks or other natural substances [regulation 3(1)(c)]; and

(b) making or marking out a track or route [regulation 3(3)(c)].

Offensive behaviour or causing annoyance to another person is prohibited (regulation 4).

There is provision under the regulations for the display of notices prohibiting access (regulation 9).

Authorised persons have the power to refuse admission to, and remove persons from protected sites (regulation 12).

Contravention of the regulations and resisting or obstructing an authorised person exercising any power conferred by the regulations constitutes an offense, with a maximum penalty of \$500 (regulation 17).

Restriction on the use of conveyances on protected sites is effected under regulation 6. The principle control is effected [regulation 6(1)] so that **...no person shall take or drive a vehicle in a protected site, except on a road.** The power to erect notices for purposes of **giving directions prohibiting or restricting the use of that road by vehicles, or giving directions as to the use of that road by vehicles** is provided by regulation 6(2).

CROWN LANDS ACT 1976

This Act clearly states the circumstances relating to use of motor vehicles on Crown land. Section 46(3) provides that **no person shall, without lawful authority-**

- (a) **drive or park any motor vehicle...on any Crown land or assigned land where the driving or parking of a motor vehicle...is prohibited by means of a sign or otherwise; or**
- (b) **drive any vehicle on a part of any beach or foreshore that is being used by people for bathing, playing or other recreational purposes.**

It would appear that a duty of environmental protection was envisaged when the Act was drafted. Regulations may be made (s 69) which **may prescribe-**

- (a) **the care, protection, and management of Crown lands and of public reserves and places of public recreation which are reserved to Her Majesty, and of which the care and control are not by law vested in some local body, and for the preservation of good order and decency therein;**
- (b) **conditions under and subject to which Crown land...or any public reserve, or any track...on Crown land, may be used; and may prohibit or regulate the doing of specified acts upon or in**

relation to any Crown land or specified class of such land;
 (e) conditions under which motor vehicles may be driven or used on any Crown land including any foreshore reservation, land occupied by or on behalf of the Crown, and assigned land.

Another provision of this Act [s 46(1)], although not specifically mentioning motor vehicles, clearly provides against the abuse to vegetation which could occur through improper vehicular use. Section 46(1)(e) states that no person shall, without lawful authority cut, remove, take, or damage any trees or vegetation thereon.

Section 69(d) permits the making of regulations which specify the cases in which and conditions under which any person may be arrested if found committing a breach of any specified regulation.

Persons capable of enforcing the provisions of this Act are termed **"bailiffs of Crown lands"** [s 11(1)]. In addition, every police officer is automatically a bailiff of Crown lands [s 11(1)] and thereby capable of enforcing the Act and regulations thereunder.

CROWN LANDS (PUBLIC RESERVES) REGULATIONS 1979

The regulations drawn up in accordance with the powers outlined in s 69 of the Crown Lands Act, technically allow wide control of vehicles on public land.

Unless permission is obtained, vehicles are confined [regulation 4(1)] to tracks. A **"track"** (regulation 3) is defined as a road with a made-up surface that is suitable for the use of four-wheeled vehicles or an area set aside by an authorised person as a parking place for vehicles. The description **"made-up surface"** would imply a prepared road surface. In the bush, many roads and tracks, if not most, have little resemblance to being prepared. They are there because that is the path followed by more than one vehicle. It is obvious then, that the person suddenly going off the **"made-up surface"** and thereby creating a new track is in contravention of regulation 9(2).

Use of a vehicle on a track closed by a barrier erected by an authorised person is prohibited unless permission has been obtained [regulation 4(5)].

The powers of authorised persons are specified in regulations 4(2) and 4(3). Such a person may erect signs regulating and restricting the use of certain tracks [regulation 4(2)]. For the purposes of regulating the use of tracks or for the purpose of avoiding public inconvenience or danger, an authorised person may give directions to drivers or persons in charge of vehicles [regulation 4(3)].

Other regulations of relevance to persons using vehicles, inter alia, on Crown land are specified in regulation 9(1)(a), where **except with the permission of an authorised person, a person shall not remove, damage, deface, or disturb an object of historical, archaeological, architectural, or scientific interest (not being a natural substance) in a reserve.**

The 'blazing' of new tracks is specifically prohibited in regulation 9(2)(c) where **except with the permission of an authorised person, a person shall not, in a reserve make or mark out a track or route.**

An authorised person may request the name and address of a person who has committed or is suspected of committing a breach of these regulations [regulations 16(1), 16(2)]. Failure to comply or provision of a false name and address constitutes an offence.

The maximum penalty prescribed for breach of the regulations is \$200 upon summary conviction [regulation 17(2)].

ENVIRONMENT PROTECTION ACT 1973

This legislation appears little concerned with environmental protection and conservation in a wide sense, being concerned almost exclusively with prevention of pollution and noise minimisation (minor

exceptions to this are to be found in ss 3 and 5). So it is with those sections of the Act pertinent to motor vehicles, such as s 16 which pertains to vehicle emission. Elsewhere "noise", defined in s 2(2) is, by s 2(5), deemed to be a pollutant where such noise is capable of either directly or indirectly prejudicially affecting the health of or occasioning offence, distress, or irritation to man... .

According to s 2(1) "motor vehicle" has the same meaning as in the Traffic Act 1925.

Under section 51(1) of this Act it is an offence to emit or cause...noise which is harmful to, or offensive to the senses of, any person-

- (a) who is not on the land from which the noise is emitted; or
- (b) who is in a public place.

Penalty: \$500 and a daily penalty of \$50.

ENVIRONMENT PROTECTION (NOISE) REGULATIONS 1977

Section 55 of the previous Act provides for regulations to be made, inter alia, for the setting of standards regarding motor vehicle use. Whilst permissible noise levels for ORVs are specified (regulation 7), the principal regulation here is an attempt to restrict the use of vehicles within the immediate vicinity of residential premises, where noise is the main complaint. Regulation 8(1) provides that ...a person shall not, within 500 metres of domestic premises, operate-

- (a) a recreation vehicle; or
- (b) a motor vehicle for pleasure or recreational purposes if that motor vehicle is powered by an internal combustion engine.

Regulation 8(3), however, provides for situations when regulation 8(1) is inoperative; specifically ...if the vehicle is being-

- (a) operated on a road;
- (b) taken directly to or from a road;
- (c) taken directly to or from a site that is further than 500 metres from any domestic premises; or

(d) moved to or from any place for the purpose of cleaning, maintenance, refuelling, or effecting repairs.

According to regulation 8(2), sub-regulation (1) does not apply if the vehicle is operated by or with the consent of the occupier of the domestic premises.

The maximum penalty for contravention of the regulations is \$500 (regulation 22).

FORESTRY ACT 1920

The Forestry Commission is given wide powers under s 60(1)(zd) of the Act to regulate vehicles (termed "conveyances") in forest reserves, State forests, or land where forest management plans apply. The term "conveyance" according to s 60(2A) means any vehicle...or any other contrivance intended for the carriage of persons...over land... ..

Under s 60(1)(zd)(i), the Forestry Commission is empowered to prohibit or control the entry of vehicles into land within its control. The Forestry Commission can discriminate for the exclusive use of roads by such persons or conveyances, or such classes of persons or conveyances... as the Commission sees fit [s 60(1)(zd)(ii)]. The Commission is empowered to regulate the conduct of the public [s 60(1)(zd)(iv)]; regulate for the ...preservation or protection of fauna and flora [s 60(1)(zd)(v)]; and, prevent ...damage or injury to land within its control [s 60(1)(zd)(vi)].

Section 60(1)(ze) provides for the making of regulations pertaining to the powers of forest officers or other prescribed persons. Regulations may be made authorising a forest officer or other prescribed person who finds a person offending against the provisions of the regulations made for the purpose of paragraph (zd) to require that person to leave that forest reserve, other land within a State forest, or land to which a forest management plan applies in which he is so found offending and providing that, if such a person refuses to

do so, or does not do so with reasonable expedition, he is guilty of an offence against those regulations.

Section 60(2B) provides for a maximum penalty of \$500 for an offence against the regulations.

FORESTRY REGULATIONS 1976

The term "conveyance" carries, under regulation 2(1), the same meaning as under the principle Act and under other Acts (cf. Aboriginal Relics Act 1975; National Parks and Wildlife Act 1970). Provisions specifically affecting the use of conveyances are found in regulations 60 and 61. The Forestry Commission has by regulation 60(1) complete power to regulate the use of conveyances (or vehicles) in forest reserves. Where the Commission desires restriction on the use of certain forest roads, or the persons or conveyances (or classes of persons or conveyances), or deems it necessary to prescribe restrictions or conditions on use of forest roads, the public is to be informed by appropriate signs or notices displayed within the forest reserve [regulation 60(2)].

Offensive behaviour or the annoying of other persons is prohibited (regulation 61) and provision is made for the preservation and protection of flora and fauna (regulation 62).

LOCAL GOVERNMENT ACT 1962

The legislation enabling municipal control of vehicles in local government areas stems from ss 176 and 188. Section 188 provides that every municipality may...make by-laws as provided in this Part-

- (c) for the prevention and suppression of nuisances in its municipal district or any part thereof;
- (e) so far as they are not within any preceeding paragraph of this section, for any of the purposes set forth in Schedule 4.

The reasons for local by-laws pertaining to vehicles are set out in Part I of Schedule 4 of the Act. By-laws may be passed (pursuant to s 188) for the purposes, inter alia, of-

- (a) Regulating, controlling and protecting from injury or abuse...foreshores, gardens...parks, reserves and other... lands belonging to, or under the control of, the corporation, and any...vehicles...on such lands (Regulation 10); and
- (b) Prohibiting the use in any public recreation ground or pleasure resort or on any esplanade or foreshore within the municipality of vehicles...or allowing such use subject to restrictions to be specified in the by-law (Regulation 13).

Use of the Local Government Act as a solution for ORV regulation is limited since it can only be applied to land owned or leased by the municipal council (such as parks, reserves, and in some instances, coastal foreshores).

MOTOR ACCIDENTS (LIABILITIES AND COMPENSATION) ACT 1973

Under this Act the terms "motor vehicle" and the "public street" have the same meaning as under the Traffic Act 1925. The provision of relevance to the regulation of vehicles, including ORVs, is s 29(1): no person shall use, or cause or allow any other person to use, a motor vehicle in a public street unless a premium has been paid for its use at the time, and in the circumstances and under the conditions, in which it was so used.

Penalty: \$500 or 6 months' imprisonment, or both.

NATIONAL PARKS AND WILDLIFE ACT 1970

The provisions of the Act are sufficient to enable effective control and regulation of vehicles within land administered by the National Parks and Wildlife Service. The basic power to control vehicles is given under s 29(1)(d) whereby regulations made for the care, control, and management of any area of reserved land may prohibit ...or control...the bringing into, or over, or the use or possession in or

over, that area of land of any conveyance or thing.

The term "conveyance" means any vehicle...or any other contrivance intended for the carriage of persons...over land...[s 3(1)].

Other powers incidental to vehicle control but capable of application to vehicular activity are found in s 29(1) and allow regulation with respect to-

- (a) the preservation or protection of the fauna or flora thereof, or of any living things kept therein;
- (b) the prevention of damage or injury thereto...or other things therein;
- (e) the conduct of persons therein;
- (f) the exclusion or ejection of persons from the area or any part thereof.

Authorised officers have strong powers at their disposal when there is suspicion that an offence has occurred (cf. s 39(1)). An officer has the power to request that the offender leave the reserved land [s 39(2)]. Where a person found offending refuses to give a full name and address (or gives a name and address which the authorised officer has reason to believe false) the authorised officer has power to arrest without warrant (s 43). Penalties for these offences can amount to a fine of \$1000 or 6 months imprisonment or both (s 44).

NATIONAL PARKS AND RESERVES REGULATIONS 1971

In these regulations [2(1)] unless the contrary intention appears-

"drive" includes ride;

"road" means a road with a made up surface that is suitable for the use of four-wheeled motor cars...;

"vehicle" means a vehicle within the meaning of the Traffic Act 1925.

The regulations pertaining to vehicles are substantial and are as repeated below.

Pursuant to regulation 5F-

- (1) The Director may display signs or notices on any reserved land prohibiting or restricting the taking, driving, using, or leaving of vehicles on that land.
- (2) A person shall not take, drive, use, or leave a vehicle on reserved land in contravention of a prohibition or restriction contained in a sign or notice displayed pursuant to sub-regulation (1).
- (3) Except with the permission of the managing authority, a person shall not take, drive, or use a vehicle on a road or track on any reserved land that has been closed by a barrier erected by or under the authority of the managing authority.

General limitation of personal activities is provided under regulation 5G such that a person shall not-

- (b) ...damage, deface, or disturb any...Aboriginal relic or any object of...archaeological, historical or scientific interest in any reserved land;
- (e) interfere with...any sand, gravel, clay, rock...timber... humus, or other natural substance in any reserved land.

By regulation 6(2)(c) a person shall not, in a state reserve make or mark out any track or route. By this regulation the initial creation of new tracks is an offence.

According to regulation 9-

- (1) ...a person shall not take, drive, or use any vehicle in a State reserve except on a road;
- (2) The managing authority may display signs or notices on or near a road in a State reserve prohibiting or restricting the use of that road by vehicles, or giving directions as to the use of that road by vehicles;
- (3) An authorised person may, for the purpose of regulating the use of

any road within a State reserve or for the purpose of avoiding inconvenience or risk of danger to persons resorting to a State reserve, give directions to any person driving or in charge of a vehicle prohibiting its being taken or being allowed to remain on any road, or any part of a road, in a State reserve, or requiring its removal from any such road or part thereof;

(4) A person driving, using, or in charge of a vehicle in a State reserve who contravenes or fails to comply with-

- (a) a prohibition or restriction contained in a sign or notice displayed pursuant to sub-regulation (2);
- (b) any directions contained in a sign or notice so displayed; or
- (c) any directions given by an authorised person pursuant to sub-regulation (3), is guilty of a contravention of these regulations.

By authority of regulation 15 an authorised person may exclude or eject from a State Reserve...any person who, in the opinion of that authorised person...is committing or has committed a breach of these regulations in that reserve....

For contravention and/or failure to comply with the above regulations, a maximum penalty of \$2000 is prescribed [regulation 21(1)]. There is, nevertheless, a problem of application since the provisions are not normally applied unless deliberate contravention of warning signs, vandalism and damage to property is involved.

POLICE OFFENCES ACT 1935

Opportunity for further police involvement in ORV control is provided under the Police Offences Act 1935 in relation to the police duty to maintain the peace. Section 13(1) provides that no person, in any public place, shall [inter alia]-

- (b) disturb the public peace;
- (d) jostle, insult, or annoy any person;

(e) commit any nuisance.

Penalty: \$40, or 3 months imprisonment.

Under this Act [s 3(1)] "public place" includes, inter alia, any park, garden, reserve, or other place of public recreation or resort. The definition of "vehicle" under this Act includes every description of wheeled vehicle. That definition appears wide enough to be applied to ORVs operated in natural areas.

Under s 36(1) no person in charge of any...vehicle shall, by wanton or furious...driving or racing or other wilful misconduct or wilful neglect, cause any bodily harm to any other person. The prescribed penalty upon conviction under s 36 is 2 years imprisonment.

TRAFFIC ACT 1925

Basic regulation and control of vehicles is effected by Transport Tasmania and Tasmania Police under the provisions of the Traffic Act 1925, which specifies that all vehicles using the "public street" be registered [s 14(1)(c)(ii)] and driven by a licenced driver [s 14(4)(a)]. The definition of "motor vehicle" [s 3(1)] appears wide enough to cover most contemporary ORVs since that definition refers to any motor car, automobile, motor carriage, traction engine...motor cycle, or other carriage propelled...by means of an engine powered...by any volatile spirit...oil, or electricity... .

Conviction for infringement of ss 14(1) or 14(4)] carries a maximum penalty of \$200 for a first offence [s 52(2)]. Otherwise the Court may disqualify a driver from driving for such period as it may specify [s 34(1)].

Driving on a public street negligently is an offence [s 32(2)] carrying a prescribed penalty of \$500 for a first offence. Of importance here is ...the nature, condition, and use of the public street and the amount of traffic that actually is at the time or that might reasonably be expected to be on the public street... .

"Public street" is defined [s 3(1)] as any street, road, lane, thoroughfare, footpath, bridge, or place open to or used by the public, or to which the public have or are permitted to have access, whether on payment of a fee or otherwise. In theory that definition is wide enough technically to apply to all situations on public land and therefore to be enforceable by the police force.

5.2.3 Administrative Regulation: Government and Bureaucratic Initiatives for the Regulation of ORVs

In 1978, with the problem of ORVs of growing concern to various Tasmanian land managing and local government authorities, an Inter-Departmental Committee was established to consider the need for specific legislation enabling control of ORVs. The committee recommended that there was no overwhelming need for specific legislation, the general conclusion being that there were sufficient provisions and powers embedded within the various acts and regulations. The solution to the problem was considered to be through enforcement of the provisions in existing legislation (Mark Holliday, pers. comm.). In addition, the committee suggested measures which culminated in initiatives taken by a number of government departments and authorities (Transport Tasmania, Forestry Commission, Lands Department, and the then Division of Recreation) which saw the implementation of a two part scheme comprising:-

- (a) Restricted registration for recreation vehicles (RVs); and
- (b) State land areas set aside for recreation vehicles (SLARVs).

Restricted Registration for Recreation Vehicles (RVs)

In recognition that some vehicles are used by owners, not for transport in the normal fashion, but for recreation purposes in a variety of environments, Transport Tasmania introduced in late 1978 a special class of registration for vehicles not used on the road.

This special registration (Class 18: Off-Road and Recreation Vehicles) is available to vehicles otherwise incapable of meeting the standards set for normal road use. Eligible under this system and legally covered by 'no-fault' third party insurance are 'stripped-down' motor bikes, dune buggies, 'hot-rods', farm tractors, tractors used for launching boats, and farm vehicles.

State Land Areas for Recreation Vehicles (SLARVs)

Twenty areas of Crown land administered by the Forestry Commission and Lands Department in various parts of the State (refer Map: Figure 5.1) were set aside in 1981 as suitable for the use of recreation vehicles. Since inception of the scheme, a number of these SLARV's have been withdrawn as approved areas while one new area has been added to the original list. A schedule of SLARVs as at June 1985 is presented as Appendix B.

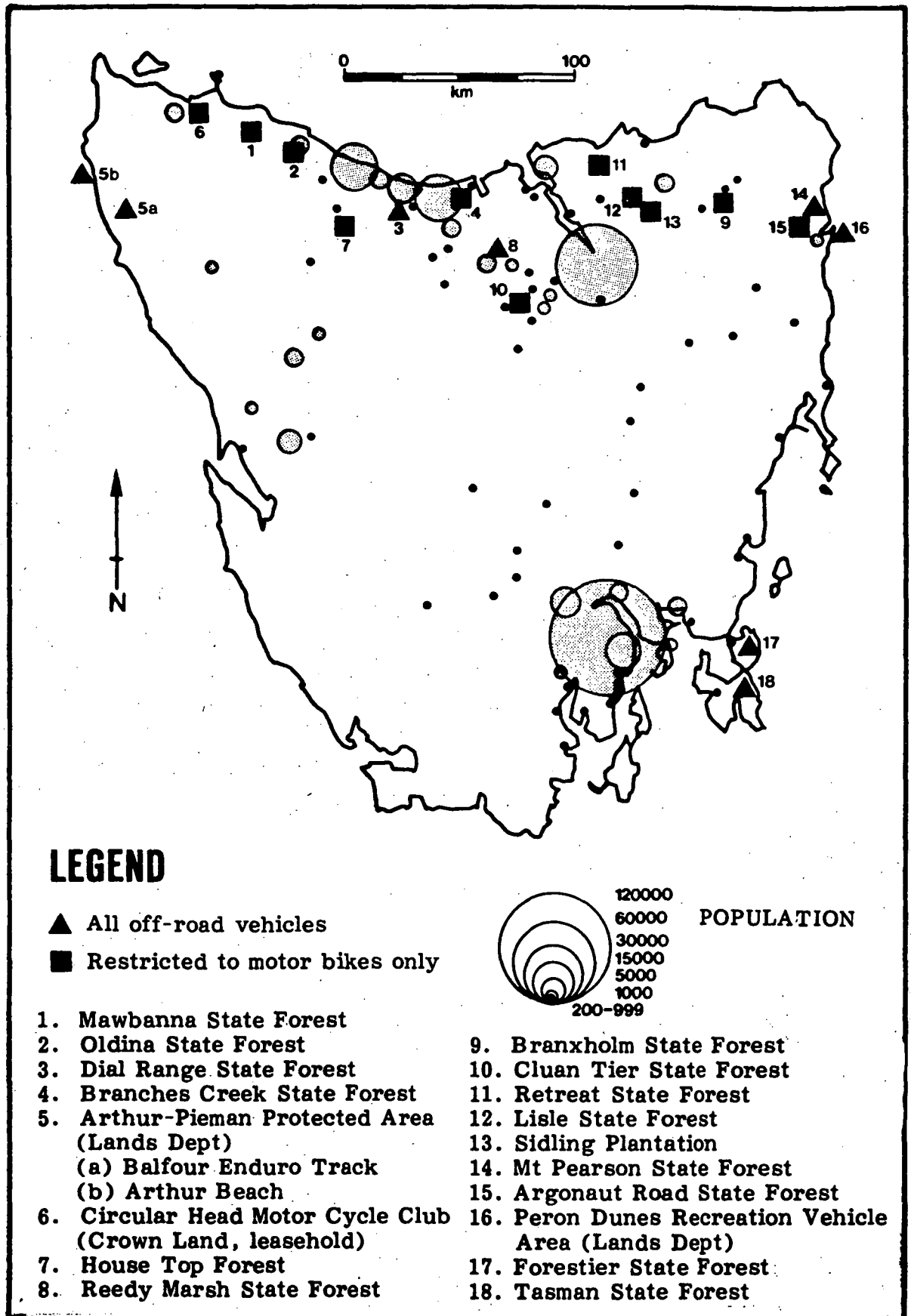
Use of these areas, however, is not exclusive to vehicles registered under the RV category. Fully registered vehicles are also allowed, as are other non-vehicle oriented recreational activities, such as picnicing, bushwalking, and horse riding.

The general conditions of use applicable for RVs are indicated in the schedule reproduced in Appendix B. Maps and local conditions and restrictions applicable in respect of each particular SLARV are available through contact with the relevant land managing authority's local representative (the Crown land warden or district forester).

5.3 Critical Evaluation

The preceding review has revealed abundant legislation and statutory rules, all capable of application to the land management and social problems created by unrestrained ORV use. Nonetheless, existing legal controls suffice only as long as they are actively and effectively policed, a conclusion earlier reached at the meeting of the

Map of State Land Areas for Recreation Vehicles and Populations of Urban Centres



(Source: Tasmania Year Book 1985 and Forestry Commission and Lands Department information.)

Inter-Departmental Off-Road Recreational Vehicles Committee (1983). This deficiency has, however, long been recognised as a limiting factor in Tasmania (cf. Inter-Departmental Off-Road Recreational Vehicles Committee 1978). At an Inter-Departmental Committee meeting (1985) comprising representatives from various government agencies, the ORV situation was once again discussed. The notes of that meeting indicate a general consensus, contra to the 1983 meeting, that present legislation is ineffective; while the issue of effective enforcement is barely mentioned in the record of the 1985 meeting.

Examination of the records of these meetings indicates an inherent problem; namely the inconsistency of recognition of the problem. The current legislation is by consensus at one meeting considered adequate whilst at the next, considered inadequate. With such confusion and inconsistency of opinion, how can effective resolution of land management and social problems ever be achieved?

It is apparent that neither the Traffic Act 1925 nor the Police Offences Act 1935 give any guidance as to the proper use of vehicles on all areas of public land. Other statutes have been enacted, either specifically mentioning the conditions applicable to vehicle use, or with provision granted to the administering authority to make regulations thereunder for the proper use and control of vehicles on land within the jurisdiction of that authority.

Since the question of enforcement is a difficult one, co-operation between land managing authorities has been suggested (cf. comments by Mr Crooks in Inter-Departmental Off-Road Recreational Vehicles Committee 1978 : 3). Obviously police co-operation would also seem desirable. That department appears reluctant to assist land managing authorities. While cognisant of the problems faced by the land managing authorities, and not unwilling to assist in specific cases when required, Tasmania Police has the attitude that ongoing ORV control is the responsibility of the individual land managing authority via its regulatory provisions, or by local government through by-laws (Superintendent T. Hoodless, pers. comm.). According

to Supt. Hoodless, current financial resources and manpower are not sufficient to regularly patrol in off-road situations where the lives of innocent third parties are less threatened than is the case on the roads. Apparently the authorities concerned with transport regulation and control (Transport Tasmania and Tasmania Police) do not see their duty to include 'policing' vehicles used on beaches and other places of public resort until an innocent third party is injured. An example of police unwillingness to co-operate with land managing authorities is noted in the discussion of policing and enforcement (sub-section 5.3.6).

It follows from the above that the vehicle related provisions of various Acts and Statutory Regulations share common deficiencies and these form the basis of the discussion in the following sub-sections.

5.3.1 Interpretation of Offences: ORV User Confusion

The free range ability of a motorcycle is theoretically restricted on certain public lands [cf. Aboriginal Relics Regulations 1978; Crown Land (Public Reserves) Regulations 1979; and National Parks and Reserves Regulations 1971] where vehicles are confined by statutory rules to roads or tracks, being roads **...with a made up surface...suitable for the use of four-wheeled motor cars...** Such vehicles are thereby precluded from using narrow, single lane tracks. The term "made up surface" does not result in a clear interpretation. For instance does this include graded dirt roads? The definition of "road", that is, a road is a "made up surface suitable for use of four-wheeled" vehicles results in differing interpretations among those involved in enforcement in the various land managing authorities. For instance, an NPWS senior ranger (who wished to remain anonymous) interprets the statutory definition to mean a prepared or artificial surface. By his understanding a sand track is therefore not a made up surface. Interpretation of the same definition with respect to the Crown Lands Act results in a different opinion by officers of the administering department. On lands managed by that authority it seems that once a sand track capable of being

traversed by a four-wheeled vehicle is created, there is nothing unlawful in another vehicle later following that track. The confusion suffered by the public is understandable.

Persons engaged in non-vehicle related activities in remote natural areas have no respite in the case of noisy ORVs operated nearby. Noise related offenses are not provided for in the Crown Lands Act 1976 and Regulations. The Environmental Protection (Noise) Regulations 1977 only apply in residential areas, but even then may be ineffectual, due to the provisions of sub-regulation (3).

5.3.2 Penalties

Although provided for under all Acts and Regulations there is no uniformity or consistency in application. A breach of the Crown Lands (Public Reserves) Regulations 1979 can possibly result in imposition of the maximum penalty of \$200, whereas conviction for a similar offence on National Park or Reserve land carries a maximum penalty of \$2000 or 6 months imprisonment, or both.

The driver of the dune buggy which struck a 3 year old child in the incident noted earlier at Seven Mile Beach in early 1985 (cf. Kentish 1985; Mercury 29 January 1985) was charged under s 36(1) of the Police Offences Act; ss 14(1)(c)(ii) and 32(2) of the Traffic Act; and, s 29(1) of the Motor Accidents (Liabilities and Compensation) Act. The case was finally heard at Hobart Magistrates Court on 23 May 1986 when the following convictions were recorded respectively for the above charges:-

- (a) one month's imprisonment and a probation order of 12 months [s 36(1) Police Offences Act 1935- causing bodily harm - prescribed penalty 2 years imprisonment];
- (b) a fine of \$40 [s 14(1)(c)(ii) Traffic Act 1925 - unregistered vehicle - max fine \$200];

(c) disqualification from driving for 6 months [s 32(2) Traffic Act 1925 - negligent driving - prescribed penalty for 1st offence is \$500]; and

(d) a fine of \$50 [s 29(1) Motor Accidents (Liabilities and Compensation) Act 1973 - uninsured vehicle - 3rd party - Max fine \$500].

The point raised in relation to the above case is that although the penalties handed down appear severe in total, it would seem that the punishment errs on the lighter side in relation to the maximum penalties permitted - although a deterrent penalty appears to have been set in relation to the negligent driving conviction. It is interesting to note that convictions were successfully recorded under the Traffic Act in relation to the "public street". Doubts that "beaches" form part of the "public street" should now no longer arise and the conviction also suggests a clear obligation to police some aspects of ORV behaviour.

5.3.3 Powers and Duties of Authorised Officers

Although the authorised officers of some authorities (notably NPWS) appear suitably empowered to control and regulate the movement of vehicles, apprehension of the offender remains a significant problem. The 'paper tiger' does not match the reality of application in the field. Rules and regulations become useless if an offender (especially one on a motorcycle) chooses to flee. Identification may be possible if a vehicle regulation label is properly displayed but many ORVs operating in remote areas of public land are unregistered and therefore unidentifiable (Plate 13).

One statutory limitation common to those exercising land management functions is the lack of authority to stop vehicles and request information (commonly referred to as 'special constable powers'). At present an authorised officer can only stop a vehicle when that officer has reasonable grounds to believe an offence has been

Plate 13

Unregistered and Unauthorised Motor Bikes



(Arthur-Pieman Protected Area)

committed.

5.3.4 Definition of "public street"

The definition given in the Traffic Act 1925 is open to interpretation in its present form (that appears to be the attitude of Tasmania Police according to some legal interpretations), and perhaps requires further specification to include "beach" and other public areas. The police may then accept the duty of regulating the activities of vehicles on beaches and other public places. Some do argue that the interpretation of the "public street" as any place the public is entitled to be is already clear. On this basis beaches and sand-dunes are already clearly part of the "public street".¹ The police, however, choose not to patrol this area of the public domain with the same diligence that they regulate other areas of the "public street" (that is, formed roads) due to the day-to-day constraints imposed by limited staff and resources. It is obvious from review of the legislation that the police have the statutory backing; what is lacking is the will and motivation, possibly reinforced by political unwillingness - it is perhaps an impediment to satisfactory resolution of the whole question that more than one Tasmanian Minister of the Crown is an ardent ORV enthusiast.

5.3.5 No Fault Insurance

For a number of years the MAIB, in Annual Reports tabled in Parliament (cf. 1981, 1982, 1983, 1984), has drawn attention to the anomaly whereby it is obliged to pay No Fault Insurance benefits to people injured in accidents involving unregistered ORVs. While this situation continues, the owners of other types of vehicles will

1

Recent judgement from the NSW Court of Appeal may provide pervasive authority for the same point in law in Tasmania. In considering the definition of "public street" in Boyton v. Nominal Defendant [1980] 2 N.S.W.L.R. 509, the court determined that a beach can be held to be a "track" and part of the public street.

continue to subsidise ORVs registered in the RV category. Similarly, some registrations within the RV category, such as those for use in timber working, as farm equipment and snowmobiles, will likewise continue to finance the premiums of the recreational ORV user. The following point has ramifications for an equitable no fault insurance scheme. In a report to the Tasmanian Parliament (1981 : 7) the Premiums Board stressed the increased incidence of injury arising from motorcycle accidents as against four wheeled vehicle accidents. In addition, the Board indicated the significant proportion of motorcycle accidents involving injury without the involvement of other vehicles.

5.3.6 Policing and Enforcement

The major conclusion drawn from this review is the inadequacy of enforcement.

Because of the small scale of government in Tasmania, and particularly its revenue base, administrative resources are often thinly spread. Assistant to the Director-General of Lands, Ray Thompson (pers. comm.), has advised that statewide there are 84 "bailiffs of Crown land"; 60 of whom are employed by the Lands Department with an estimated 38 of those regularly in the field. Lest that 'paint the situation overly bright' it must be said that within Lands Department Protected Areas, day to day land management functions are exercised by only 9 Crown land wardens. It is too optimistic to expect these few officers to satisfactorily ensure that all vehicles are confined to the legally usable tracks and that other legislative provisions remain unbreached. A threefold increase in the number of Crown land wardens would undoubtedly relieve the overstretched nature of their duties. Alternatively, temporary wardens could be appointed specifically for peak periods when ORV infringements are most prevalent.

It was noted earlier that every police officer is a "bailiff of Crown lands" under the Crown Lands Act [s 11(1)] and thereby empowered ex officio to exercise any of the powers vested in authorised officers. Despite this statutory power Tasmania Police is unwilling, as we have

seen, to co-operate with various land managing authorities. Police disinterest in co-operation with other government departments experiencing problems with ORV activities is reflected in the following example. The short Easter holiday break normally takes large numbers of ORV enthusiasts to the Arthur-Pieman Protected Area. Over the years this period has come to be regarded as the last good opportunity (before the onset of colder and wetter conditions) to engage in ORV activities within the Protected-Area (Rex Singline, Land Management Officer, Lands Department, pers. comm.). Lands Department personnel and resources do not permit adequate supervision of those ORV enthusiasts (one Crown land warden only is stationed in this area). An attempt to moderate the behaviour of those flouting the conditions regulating vehicles in the area was planned by the Lands Department. To be successful, though, the 'blitz' required police co-operation. Although the initial request for police assistance had elicited the promise of co-operation, the eventual outcome was a notification that police resources over the period were best concentrated on "more pressing" matters (Rex Singline, pers. comm.). The police attitude to inter-departmental co-operation is perhaps reflected in the final advice to Singline (pers. comm.) - "Its your [Lands Department] problem...not ours [police]!"¹

5.3.7 ORV Statistics

The need (for planning, management and control purposes) to distinguish vehicles with off-road capability from ordinary vehicles, was indicated by Wood and Robertson (1976 : 23). It seems that the Tasmanian authorities have never perceived the need. This is just one example of the lack of inter-departmental co-operation in resolution of the ORV problem.

1

The NSW and Victorian police forces have specialised ORV squads. Tasmania Police has no such group, nor is there any intention to form same.

5.3.8 Summary and Critique of the Initiatives for RVs and SLARVs

The system of SLARVs is also an ineffective management tool. ORVs are not in practice exclusively confined to the designated areas: these are under-utilised, whilst more sensitive and inappropriate areas are being used in preference. Some reasons advanced for the limited appeal of SLARVs are suggested as being:-

- (a) vehicles registered as RV are not registered for general road use - they are only legally permitted to be used on SLARVs. Accordingly they must be conveyed by some means (for example, on trailers) to the special land areas (SLARVs). They must not be driven on the open road. This constitutes user inconvenience in terms of additional investment in vehicles, trailers and annual registration costs.
- (b) as can be appreciated by reference to the Map (Figure 5.1) the areas are not always readily accessible to major population centres or, as is the case with areas near Hobart, are in close proximity to each other. There are only 2 areas in the south, located virtually adjacent on the Tasman and Forestier peninsulars. The distance to the nearest SLARV can be considerable, and thus not considered worth the time, cost and effort required. The siting of SLARVs thus shows no consideration for the spatial distribution and concentration of the Tasmanian population.
- (c) in selecting the SLARVs, no consideration seems to have been given to the preferences and requirements of ORV enthusiasts, and trail bikers in particular. Compliance with conditions and requirements stipulated by the relevant land managing authorities for each particular area requires that users keep to formal routes (or only leave those routes when permission has been obtained).

- (d) the increasing cost of RV registration is generally felt to deter registration of some vehicles. RV registration has increased from \$15 at inception of the scheme to \$97 in years 1984 and 1985, with the current premium now set at \$71. In response to the rapid rise in RV registration premiums, total vehicle registrations have declined (Table 5.2). At present it is cheaper to fully register a small motorcycle (not greater than 100 cc) for unrestricted road use. The rapid rise in RV premiums represents attempts by the Motor Accidents Insurance Board to match total premiums collected with annual third party insurance claims from within the RV class.
- (e) some SLARVs are restricted to use by motorcycles only and other vehicle types, such as 4WDs and dune buggies are not permitted (refer map: Figure 5.1; and, conditions applicable to each area: Appendix B). Areas set aside for motorcycle use are tracks suitable for motorcycles only, and where there would be, because of the narrow tracks, a chance of collision between motorcycles and 4WDs. The opportunity for legal off-road use of 4WDs is thus even further reduced.
- (f) only fully registered vehicles or those registered as RV may use SLARVs.
- (g) children less than the minimum driving age are precluded from the use of SLARVs due to the requirement that all users must have a current driver's licence.

In summary, the increasing costs of restricted registration in comparison with full (unrestricted) registration, and the lack of convenient SLARVs, ensures that RV registration is only worthwhile if the vehicle can be used regularly. There is an apparent lack of commitment to the RV/SLARV scheme (by all participating departments) - certainly it is not considered the solution.

Table 5.2

**Motor Accidents Insurance Board (MAIB) Annual Premiums and Off-Road
and Recreational Registrations (Class 18) and including Restricted
Vehicles (RVs)**

	Year Ended 30 June								
	1978	1979	1980	1981	1982	1983	1984	1985	1986
RV Premium (\$)	\$16	\$15	\$15	\$35	\$64	\$86	\$97	\$97	\$71
Off-Road & RV)									
(class 18) Nos.)	35	220	329	338	295	133	107	63	73

NOTE:

First RV Registration Certificate issued 1 Dec. 1978.

Note the decline in registrations as premiums increase.

Note that the numbers are total vehicles registered under

Class 18 and include farm tractors and vehicles, logging
vehicles, snowmobiles and other vehicles not used for
recreational purposes.

Registration premiums effective 1st December yearly and
includes \$2 stamp duty.

Premiums exclude Transport Tasmania vehicle registration
costs (currently \$18 for motor vehicles and dune buggies;
\$12 for motor-bikes).

Source: Information supplied by Transport Tasmania and extracted from
Table 1 of the Annual Reports of the Motor Accidents Insurance
Board of Tasmania.

5.4 Conclusion

Although further recommendations will be made in the ensuing chapters, the following recommendation is made concerning the existing legislation. Because of the duplication of legislation and regulations involving vehicles, it is suggested that, at the very least, vehicle related regulations be streamlined and rationalised. ORV users are ignorant of the rules and regulations and are therefore unable to conform to what is required of them. The formulation of standardised regulations with identical penalties would clarify the situation for ORV users. Those concerned with enforcement, especially the police, who are presently required to have working knowledge of numerous regulations, would also be assisted.

There are three options:-

- (a) Maintain existing legislation and regulations BUT enforce more rigidly than at present (obviously on the basis of the argument presented here, this is unlikely to be a satisfactory option);
- (b) Streamline the vehicle related provisions of current legislation AND rigidly enforce;
- (c) Implement new legislation so that all ORVs are dealt with under the one Act and enforced by the appropriate land managing authority WITH police co-operation.

CHAPTER 6: EVALUATION OF DIRECT AND INDIRECT LEGISLATION REGULATING ORVs IN FOUR AUSTRALIAN STATES: SOME LESSONS FOR TASMANIA

6.1 Introduction

Some direct and indirect methods of legislating for control of ORVs were examined in the previous two chapters. In particular some of the problems inherent in the Tasmanian situation were identified. In this chapter the various strategies will be reviewed. The components considered essential for effective legislation will be indicated, the objective being the development of recommendations for consideration in the Tasmanian context.

6.2 Strategies and Policy Direction in Four States: A Brief Review

Although the majority of Australian states have some form of ORV legislation, the different statutes vary in comprehensiveness. Examination of four state strategies revealed that each state has a separate and distinct control mechanism, the essence of which is summarised below. Those control mechanisms range from the comprehensive, as in New South Wales, to the diffuse and ineffective, as is the case in Tasmania.

Victoria: 'direct' legislation

Despite there being a basis for direct regulation and control in Victoria, the policy and administrative effectiveness is weakened through ineffectual enforcement. Only one "Free Access Area" has ever been designated. The control mechanism is poorly applied.

Queensland: 'laissez-faire' legislation

So long as a vehicle is registered, there is virtually no prohibition on where that vehicle can be taken on public land. ORV use is lawful on all public land except where specifically prohibited or regulated.

New South Wales: 'direct' legislation

With comprehensive and direct legislation now applying in New South Wales, use of ORVs on public land is prohibited, except in specified areas.¹ Vehicles registered either for general road use, or as RVs, may use only those areas of public land officially designated as RVAs. While the approach in NSW may seem appropriate, the possibility exists that policy and strategy implementation may fall short due to neglect in ensuring that specific use areas (that is, RVAs) are ultimately set aside. Also, it should be noted that policing and enforcement are the key to effective regulation - a lessening of commitment here will result in loss of ORV control.

Tasmania: ad hoc, 'indirect' controls

In Tasmania, ad hoc vehicle related provisions in various statutes comprise the full extent of regulation. As Rosenberg (1976 : 191) argues in an American context, a more detailed, rationalised approach is necessary for effective ORV control and to achieve reasonable levels of environmental protection.

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The Motor Traffic Act 1909 has always required motor vehicles used in public places to be registered and carry third party insurance (that is, with respect to vehicles registered for normal road use).

6.3 Preventing the "Tragedy of the Commons": Possibilities of the New South Wales Strategy

The rationale underpinning changes in NSW indicates that recognition has finally been accorded the "tragedy of the commons". The intention appears to be to preclude the use of vehicles on public land and thence to encourage the allocation of private and local government land deemed suited for such activity. Local government, possessing the advantage of local knowledge of conditions, problems, and perhaps user needs, is left to decide whether a particular area is suitable.

The use of ORVs on public land is yet another instance of tragedy befalling the 'commons'. That tragedy is inevitable whilst the users of the commons are unfettered in their selfish pursuits. Hardin argued that the "fundamental error of the sharing ethics is that it leads to the tragedy of the commons" (1974 : 562; see also 1968). Using the analogy of herdsmen sharing a common pasture, he illustrated how each individual would operate to maximise personal gain, whilst collectively, to their mutual ruin, they inevitably overload the system. As Hardin (1974 : 562) said: "...mutual ruin is inevitable in the commons" since "it takes only one less than everyone to ruin a system of voluntary restraint."

While some contribution to resolution of the 'commons' problem can be expected of science, it is denying reality to suggest (as does Crowe 1969) that science, or more precisely, technology, can provide the ultimate answer to the tragedy of the commons. The technological innovations which now enable vehicles to travel off-road with ease, attest to the accuracy of Hardin's thesis. Since, as Hardin (1974 : 562) noted, the right to use the commons "is not matched by an operational responsibility to take care of it", protective measures should be adopted. Solutions must be legislative in nature and properly enforced but also part of a bundle of strategies utilising the 'carrot and the stick' approach and based on a realisation that the "optimum net gain to all commons users is a function of sensible (and compromising) patterns of behaviour by all users of the resource"

(Park 1986 : 24).

Recent legislative innovation in New South Wales is deserving of further discussion because the approach in that state is clearly superior to that of the other states examined - provided enforcement procedures are followed and the intended free access areas are eventually set up. Such a radical change in policy direction indicates that politicians are finally taking the tragedy of the commons thesis seriously - at least in some areas. Favourable note has already been made of the move in New South Wales toward provision of private land for the various ORV activities presently utilising public land.

In an apparent effort to channel ORV use toward private lands, the NSW strategists have built upon the first two recommendations of the National ORV symposium (Wood and Robertson 1976 : 7). Nonetheless, while recommending the need for control and close supervision, these mid-1970s recommendations fell short of recommending the utilization of private land for this purpose:

The use of vehicles off the road is a valid recreational pursuit which has to be planned for and strictly managed and controlled in defined areas.

The legitimacy of ORV activity is acknowledged in both recommendations though within a framework of concern that such activities should be controlled in natural areas:

The use of roads for motorised recreation is a legitimate pursuit which should be permitted in some natural areas, subject to special controls.

These recommendations are not far removed from Rosenberg's suggestion (1976 : 195-6) that the "method of presuming land closed except where able to withstand ORV activity is the best means of ensuring protection of environmental interests (short of prohibiting all ORV use on all lands)." The reality is, however, that a decade lapsed from recommendation to specific legislation; and the question still

remains: "How long before results become obvious?"

If the consequences of ORV use are as serious as has been suggested (refer Chapter 3), then total prohibition should be recognised as the most extreme tool available to management for the curtailing of deleterious impacts. This might be the answer if a fully-fledged land use ethic were the underlying policy rationale. However, other moral, social and equity issues have to be considered in a democratic society. Hence it is suggested that although the extreme position be adopted as a general rule, ways and means of providing areas for ORV pursuits should be examined.¹ Hence the role of land use planning in the allocation of specified areas for ORV activities. The "tragedy of the commons" would in this way be averted, since, as Hardin convincingly argued, individual conscience cannot be relied upon to prevent the tragedy. "Carefully biased options" and "coercion", not "prohibition", are recommended (Hardin 1968 : 1247).

6.4 Advantages of Direct Control

Direct legislation is far preferable for the control of ORVs than the indirect means exerted through a plethora of legislation.² A number of reasons are used to support this contention.

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An important philosophical question arises. Given the complex demands (economic and recreational) for use of scarce land resources, can the appropriate authorities justify the provision of land to each recreational demand for it? Or should some activities, by virtue of their destructive nature, be considered unworthy of consideration, and accordingly not be provided?

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It is noted that as well as recommending specific legislation for the control of vehicles off-road, the National ORV Symposium called also for uniform Australian Acts and Regulations embracing a "common nomenclature" (Wood and Robertson 1976 : 21).

Impossible to Educate users without specific legislation

Such an array of rules and prohibitions exist under 'indirect' legislation that the public is inevitably confused. The confusion caused to both land managers and ORV users was noted in the proceedings of the National ORV Symposium (Wood and Robertson 1976 : 19): "Land managers and ORV users alike...have great difficulty in ascertaining which law or regulation pertains to which situation at what time." This is the current situation in Tasmania. The bulk of this confusion could be avoided if direct legislation was effected, for the public would then know precisely where to turn for guidance regarding the legal aspects of ORV use.¹ Rather than the present multitude of Acts, only one (or possibly two) would be required. An effective educative campaign embracing environmental and social considerations could be mounted and based upon the context of that direct legislation. Illegal or inappropriate vehicle use could then be regarded as an infringement against a specific ORV Act.

The relationship between inefficient and inept legislation and the confusion caused to both land managers and ORV proponents requires further investigation. Responsible ORV enthusiasts recognise that their activities often have an ecological impact. For example Rasor's (1977) study reported that in the USA motor-cyclists agree that motor-cycle use in some areas should be prohibited.

Indirect legislation frustrates enforcement

Doubts about the effectiveness of indirect legislation as a regulatory mechanism are often expressed by those in land management (cf. comments by Mr Crooks, Inter-Departmental Off-Road Recreational

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It was stated in summary of the National Symposium of ORVs (Wood and Robertson 1976 : 20) that specific legislation in both Victoria and Queensland has "...resulted in a better understanding of the law by ORV users... ."

Vehicles Committee 1978). This was attested to during field observations in the Arthur-Pieman Protected Area with Lands Department representatives, Jack Hanson and Rex Singline (pers. comms.). For instance, on more than one occasion those officers complained of the problems of enforcement stemming from the extreme difficulty of identifying offenders not displaying registration numbers (little attention to this problem is accorded by officers in other relevant authorities, such as the Police). Wood and Robertson (1976 : 19) argue similarly: "...indirect forms of legislation provide no real support for land managers trying to cope with ORV use." Irrespective of massive funding and resources the land managers would be hard pressed to cope with the few serious offenders since it is commonly agreed that regulations of any sort merely control those already under control. Difficulties arise because the main focus of the various pieces of legislation is not directed toward protection of environmental values, but exists primarily for other purposes.

The impact of a multiplicity of Tasmanian authorities, each enforcing the ad hoc provisions of their own statutes, was examined in Chapter 5. It is evident that the various authorities apply the law "with varying degrees of enthusiasm"; a conclusion also drawn at the National ORV Symposium (Wood and Robertson 1976 : 19). This also applies to the courts. A common complaint among those responsible for land management is that, invariably, the offender is let off with a warning, or at worst, with a minimal fine. The deterrent effect of adverse publicity is foregone in the desire to prevent at all costs the offender gaining a court record. Wood and Robertson (1976 : 19) suggest that the deterrent effect of legal action via the provisions of indirect legislation is minimal and "more often than not results in antagonism between land managers and ORV users without causing the miscreant to adapt a less carefree attitude - it's only bad luck if he's caught."

If one consolidated ORV Act was proclaimed, the consequences of infringing against it could be more effectively publicised (through media reporting and court notices) than is the case with the

obscurities of indirect regulation. With direct legislation, people would be prosecuted in accordance with the direct purpose of the Act and magistrates may be more inclined to convict.

Standardised penalties most easily obtained under direct legislation

The penalties for infringement may be standardised under one Act (as opposed to a range in severity of penalties for similar offences under various indirect Acts). An off-road vehicle infringement is considered an offence against the Crown Lands or National Parks and Wildlife Acts, for instance, but not considered for what it really is; namely, a vehicle-related offence within those managed areas. The seriousness of such offences is usually lost within the 'enormity' of those 'all-embracing' Acts. An Act devoted specifically to vehicle offences off-road would promote an awareness of the seriousness of such offences, and appropriate publicity given successful prosecutions would provide an educational aspect to the total control 'package'.

Land use designations and restrictions facilitated by direct legislation

Direct legislation enables better regulation of the areas where vehicles may or may not go. This is the thrust of recent moves in New South Wales and a proposition favoured by Rosenberg (1976 : 177). This strategy has also been tried in Victoria although the system has apparently functioned unsuccessfully due to deficiencies in the enforcement process. As was noted above, restriction on the use of ORVs, apart from in "defined areas" and "subject to special controls", was suggested at the National ORV Symposium (Wood and Robertson 1976 : 7). A more difficult task is, however, to determine those areas which should be 'closed' to ORV use, and the criteria by which such decisions should be made. An alternative viewpoint may be to adopt the philosophy that all public land be closed until ORV activity is proven compatible with environmental considerations. As Rosenberg (1976 : 196-7) noted in the USA, in those states with limited land use restrictions, ORVs operate subject only to the weak operating

regulations in force. Direct legislation would encompass regulations specifying where vehicle use is prohibited and areas where vehicles are specifically allowed (as is envisaged in recently enacted legislation in New South Wales).

Compulsory registration, third-party insurance and identification of offenders

Ad hoc or indirect legislation may provide no mechanism for compulsory registration of vehicles. Acts primarily concerned with land management in Tasmania, such as the Crown Lands, Forestry, and National Parks and Wildlife Acts, not being Acts related specifically to vehicle control, contain no mandatory requirement for vehicle registration.

Vehicle registration, and hence control, is primarily the responsibility of traffic enforcement agencies (that is, in Tasmania, the police and Transport Tasmania). And here is the problem. Enforcement is the essential factor in both vehicle control and land management. Vehicle control is a task which transcends specific land management agencies and precise land boundaries. With direct legislation it is possible to implement a system of compulsory registration and third party insurance for vehicles used in off-road situations on public land.

Nonetheless, proper land management (even under indirect legislation) can only ensue if the traffic authorities (Tasmania Police and Transport Tasmania) consider the wider ramifications of current policies. One means of overcoming this is to ensure that policy formulation and implementation have a firm basis of inter-departmental co-ordination. At present departmental decisions are often made without recognition that decisions affect other departments. For example, Tasmania Police ignored the request (noted earlier) from the Lands Department for assistance in apprehension of ORV offenders. One of the major problems encountered by land management authorities is the identification of offenders whose vehicles do not carry

registration plates. As identification of unregistered vehicles is very difficult, so too is apprehension. The Police and Transport Tasmania, by not ensuring that all vehicles used on public land (including RVAs) are registered, are in effect hindering land managing authorities.

Mandatory vehicle registration facilitates the identification of offenders. As was indicated above regarding compulsory registration, land management agencies are reliant upon the traffic enforcement agencies' response to the registering of all vehicles used on the public domain. It was previously noted that vehicle registration is effected and administered under the Tasmanian Traffic and Police Offences Acts. The Acts administered by the land managing authorities do not contain provisions requiring that vehicles be registered, and to do so would fragment and complicate enormously the process of control of vehicles.

Operating regulations

Operating regulations governing speed, brakes, mufflers, and emission levels are generally not specified in indirect legislation. It is through direct legislation that more stringent and uniform rules (than those currently in effect in Tasmania), are made possible.

6.5 The Provision of Free Access Areas: A Necessary Concomitant of Direct Legislation

Despite the abovementioned advantages the experience in Victoria and NSW suggests that specific legislation is unsatisfactory if such systems are enacted without the provision of "Free Access Areas" (Victoria) or RVAs (New South Wales)¹. Both states have, unfortunately, collected registration revenues without setting aside

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These areas are sometimes referred to in the American literature as "sacrifice areas" (cf. Kockleman 1983b).

such areas, as was originally intended.

As mentioned in Chapter 5, a small number of RVAs have been provided in Tasmania, mostly in the north of the state. While only fully or specially registered vehicles are entitled to use such areas, there is nothing to prevent unregistered vehicles from using those areas at present. A 'blind eye' is turned by the authorities administering the areas.

6.6 Components Considered Essential for Effective ORV Regulation

It is here concluded that for an effective control strategy, the following elements are essential:-

Operating Conditions

Maximum engine size, roadworthy inspections, speed restrictions, age and licence requirements, specified engine noise and exhaust emission levels, regulation of reckless and dangerous driving and driving under the influence of intoxicating alcohol and other drugs, driving or riding on private property without the owner's permission, harassing wildlife or causing other environmental damage, and litter controls, all need to be part of an effective consolidated system of legislation.

Registration and Identification

Mandatory registration and compulsory third party insurance should be adopted and strictly enforced. Appropriate and easily recognisable registration numbers should be displayed in prominent positions.

Land use zoning

The problem is one of inappropriate use of land resources. Because of the mobility of ORVs and the environmental consequences stemming from their use, it is necessary that activities involving ORVs be confined

to certain areas considered to be suited to such activities and zoned accordingly. In inappropriate areas, zoning restrictions should apply.

Executive Order 11644 (1972) issued by the US President demonstrates the gravity of the problem in that country. The Federal/State relationship there, as in Australia, makes a co-ordinated and uniform national policy extremely difficult to implement. Nonetheless, that order, and as modified by the later Executive Order 11989 (1977), required that all Federal land managing agencies adopt a land zoning policy which specified designated areas where ORVs may be used.¹ The impact of land use zoning in Australia would depend upon the resolve of enforcing departments. Properly enforced, it would serve to restrict vehicles to areas judged suited to ORV use, permitting compatible recreational and other land use activities to continue, but excluding those of an incompatible nature. This is, however, not a suggestion for provision of vehicle areas in National Parks and Reserves.

The following quote sums up the reactive way in which land management agencies respond when confronted by ORV problems:

As demands on our public lands have increased the trailbike rider has become a victim of negative actions. Management has leaned toward closure and prohibition rather than positive, constructive techniques (Rasor 1977 : v).

This type of management response is of doubtful effectiveness. Rather than antagonise the ORV user through closure and prohibition,

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A proposed amendment to close Federal lands temporarily to ORV use was interpreted as an attempt to ban, permanently, ORV use on all Federal land. Since future policies and issues may be influenced by the intervention of affected citizens and pressure groups, land managers should consider beforehand the involvement of ORV proponents and environmental groups in strategies to develop more acceptable and pragmatic land use policies (Bury and Gustke 1979). In the interests of developing more workable land use policies, pressure groups should be consulted and integrated in the policy development process (Bury and Gustke 1979 : 283).

satisfactory resolve may be achieved through utilizing the user's perception of the problem; that is, tapping his/her goodwill. Another practical solution may be to restrict ORV use by area and by season (Griggs and Walsh 1981 : 239).

Penalties

Inconsistencies and disparities between Acts, especially with respect to penalties, should be eliminated. An appropriate penalty in accordance with the severity of infringement needs to be set and enforced. Penalties need to be reasonably severe. False name and address provisions should be embodied in the legislation. Consideration should be given to making parents responsible for the acts of children under the legal driving age. If direct legislation is not implemented, the wording of similar provisions in the various Acts should be identical, thereby serving to lessen public confusion.

Forfeiture of the confiscated vehicle, after a certain number of infringements, and eventual sale to secure a fine is another avenue worth consideration by the authorities. Such a 'dramatic' provision should demonstrate a determination to effect control.

Powers of authorised officers

Powers to arrest offenders, seize and confiscate ORVs and the authority to stop and request information should be given consideration in the formulation of any new strategy. The provision of information on the request of an authorised officer should be mandatory.

Enforcement

Commitment to enforce the provisions and regulations pertaining to vehicle control is a key consideration. Police and inter-departmental co-operation is required. The incentives to 'cop out' which currently

pertain thus need to be eliminated. Rosenberg (1976 : 200) has also emphasised the importance of this aspect of the problem:

Requirements of registration and easily identifiable numbers become valueless where enforcement is unrealistic or non-existent.

6.7 Conclusion

As was concluded at the National ORV Symposium, ORV recreation "requires a reasoned approach from land managers rather than an emotive reaction" (Wood and Robertson 1976 : 25). Since "responsible ORV users are amenable to management and control and recognise the need to minimise the impacts resulting from their activity" (cf. Rasor 1977 : v) it follows that the various government agencies should "move toward a more reasoned approach to ORV use in Australia" (Wood and Robertson 1976 : 25). This would seem an especially compelling necessity in Tasmania where the regulatory framework is disjointed and ad hoc. With the growth in use of vehicles with ORV capability, a co-ordinated framework is vital.

Inappropriate ORV use will not be resolved solely through resort to specific legislation and enforcement. Land use designations and an educational campaign have a vital role in increasing public awareness. A concerted attempt to educate people about impacts of unrestrained ORV use may go some way toward reducing the problem. Use of the 'stick' will contribute to the process of education and heightened public awareness. As the present situation exists, by turning a 'blind eye', environmental disregard is further promoted and engendered. Further, the processes identified by Hardin (1968) and described as the "tragedy of the commons", may be averted by substituting private land for the common (this appears to be a significant element in recent legislative moves in NSW).

Despite mounting evidence of the deleterious impacts of ORV use, very little is positively being done to control the situation in Tasmania. This state of inactivity continues despite interstate and overseas moves to exert more effective regulatory control and active planning for accommodation of ORVs in designated areas (cf. NSW, Soil Conservation Service 1985; Lacey et al 1982; Ball et al 1985; and Metropolitan Council of Governments 1981).

It is apparent that Tasmania, at present, has no ORV control and management mechanism. The appropriate agencies in Tasmania have not provided environmentally sound and effective ORV regulatory schemes. Even if they were to do so, a variety of strategies would be confusing to the public. Suggestions, therefore, that management procedures be strengthened and followed are inappropriate without some consideration being given to a co-ordinated control and management policy for the state. Once such a policy is determined procedures can be implemented. Co-ordinated planning is required: the authorities must recognise the problem for what it is - uncontrolled use of vehicles on the 'public street'. A co-ordinated strategy would incorporate uniform and comprehensive legislation and regulation of all ORVs (and if the present legal definition of the "public street" is not legally precise, clarification should be sought through the Solicitor-General and legislation amended accordingly). Suggestions for such a comprehensive strategy, including policy considerations and other strategy components, are elaborated in the final chapter.

CHAPTER 7: CONTROL AND REGULATION OF ORVs IN TASMANIA: A PERSPECTIVE

This thesis examined the proposition that existing ad hoc legislation is ineffective and that consideration should be given to implementing laws and policy which are more conducive to off-road vehicle control and environmental protection.

But legislative overhaul is only one part of a comprehensive strategy, for specific legislation is just as impotent as ad hoc indirect legislation, unless accompanied by a commitment to the policing of statutory provisions. Kockelman (1983c : 499) has argued that enforcement strategies and the handing down of vigorous penalties are the vital cog in any strategy for effective ORV control. Of paramount importance is the overall policy through which an administrative framework would derive direction. It follows that any effective strategy must take into account both ends of the policy process - policy generation and policy implementation.

Review of existing Tasmanian legislation in Chapter 5 revealed that while there is sufficient legislation available to enforce ORV control, the problem is the actual application of legislative provisions. While variance in wording and intent between the several acts may be cause for ORV confusion, the major problem is to achieve more effective control. Impetus for improvement can only be initiated through formation of a specific government policy which, ideally, should consider the costs associated with ORV use and reflect also a determination to enforce legislative provisions (whether those of existing or specific legislation).

7.1 Policy Direction

There is no co-ordinated bureaucratic approach in Tasmania. Infrequently convened Inter-Departmental Committee Meetings are ad hoc, reactive and unwieldy, and, possibly because of the diversity of departmental representation¹, have achieved nothing of consequence. Given that this structure has proven so inappropriate, it is suggested that a 'Task-Force' approach be adopted with specified objectives and terms of reference. A Task-Force should be more than another Inter-Departmental Committee in composition and nature - it would involve a sub-committee mechanism incorporating specific aims and objectives and utilize a formal structure. Regular reporting back and working to a deadline for final Task-Force resolution should be seen as imperative. It is obvious that any move in this direction must come from the government.

Formation of various specialised sub-committees to consider specific issues, such as the impacts of ORVs in Tasmania and associated land management problems, user needs and attitudes, ORV registration, current statutory deficiencies, vehicle control and enforcement, and recreation and land use allocation, may help overcome the disarray evident at previous Inter-Departmental Committee Meetings.

7.2 ORV Costs

As an adjunct to policy formulation, consideration should be given to the costs of ORV activity, and efforts made to ensure that those responsible for causing such costs make some contribution to meeting them. That is, a considerable proportion of such costs should be internalised (cf. Rosenberg 1976). Thus the 'user pays' principle, which may be effected through mandatory vehicle registration fees,

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All of whom, reflecting the separate ideologies of their various departments, have differing views of the land resource and its appropriate use.

petrol tax revenue (the case in some north-western American states), ORV licence fees, ORV dealer registration fees (as suggested by Baldwin and Stoddard, 1973 : 56), or other appropriate fiscal measures, should be seriously considered.

Other alternatives should also be considered. For instance, appropriate areas could be leased to legally constituted ORV clubs, provided later reclamation of the site is technically and economically feasible.¹ The legal requirements for such arrangements should include a binding guarantee to provide labour and finance for restoration, upon termination of lease of the land. A sizable bond should be lodged with the appropriate authority. The agreement could also require the lessee to undertake periodic restorative measures; say annually. In the case of 4WD clubs which undertake tours or outings along management trails and old tracks, some self-regulatory measures are possible. Permits and keys to gates could be obtained through ORV club officials. These trips would be officially sponsored by the club concerned and available only to club members. Lodgement of a bond with the appropriate managing authority may be desirable. Club officials could likewise require lodgement of bonds from those trip-participating members.

The unsatisfactory situation whereby unregistered vehicles are, in effect, allowed to use the 'public street' was analysed in Chapter 5. Third party insurance claims arising from accidents involving unregistered vehicles (often driven by unlicensed drivers) are paid by the Motor Accidents Insurance Board. Such a situation casts an unfair burden on all citizens who have registered vehicles and have paid the prescribed fee. The 'free rider' principle operates, there being no incentive to register and thereby insure vehicles against third parties. In addition, due to inadequate policing and enforcement, the deliberate flouting of rules and regulations is encouraged, thereby

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If eventual reclamation is not considered feasible, then the land management agency should not permit ORV use in the first instance.

leading people to believe that they have a right to drive through the bush unrestricted by the need to register the vehicle so used. One option is to remove the third party benefit for those driving uninsured vehicles - thereby requiring those who engage in such dangerous activities to bear the cost of injury to themselves and others and encouraging them to take out personal liability insurance.¹ A second option may be to raise RV premiums to a rate sufficient to cover third party insurance claims. Either proposal is certain to stir public outcry and awaken more political interest in the issue than is currently the case. A further option is for a determined crack down on those persons driving unregistered vehicles. This option would necessitate far greater police involvement than has been the case in the past.

With more strenuous efforts taken to ensure that all vehicles (especially motor-cycles) are registered and therefore identifiable, control of current registration would be facilitated if registration was effective as at a common date and different coloured registration plates issued yearly. This suggestion is especially relevant to registrations under Class 18.

It is obvious that any commitment to effective enforcement will cause increased departmental administrative costs. This is far preferable to the incurring of future restitution costs as environmental damage becomes more pronounced and repairs necessary.

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A mandatory requirement that individuals, as drivers, carry liability insurance - rather than under current procedure whereby the registered vehicle is covered - could be investigated. The driver's licence renewal system could be utilised as the mechanism for ensuring compliance. In addition, regulations could be effected which require mandatory registration of vehicles at point of sale and/or resale (with special exemptions provided for farm vehicles). Alternatively, regulations could require the sighting of a valid driver's licence and third party insurance policy before legal transfer of vehicle ownership. This later proposal could be modeled along the lines of a scheme believed operative in Portland, Oregon (USA).

7.3 Enforcement

The necessity for direct legislation was demonstrated in the previous chapter and will be discussed no further here. Nonetheless it is apparent that legislation of any sort, whether it be direct or indirect, is rendered ineffectual if enforcement procedures are lax. To this end, policy makers should commit further resources to ensure more strenuous and effective enforcement.

Of consideration should be the formulation of a special off-road motor-cycle pursuit squad comprising police and/or Transport Tasmania vehicle inspectors. Perhaps the temporary recruitment of retired police officers over the hectic summer months (when ORV activities appear most prevalent and police manpower is required elsewhere) could compensate for the allocation of officers to ORV control activities.

Another consideration might be for the co-ordination of regular inter-departmental enforcement campaigns, or 'blitzes', in a number of problem areas throughout the state. Wide publicity of that intention, followed by secretly arranged blitzes and then wide media publicity of the outcome (with respect to the persons apprehended, circumstances of infringement and the penalties applied) should be considered. Without even equipping a special ORV squad, Tasmania Police could utilise the trail bikes normally maintained for search and rescue duties.

In the event of government formulating a policy, additional control will be achieved if a framework is adopted which includes consideration of the interests and circumstances of individual departments, environmental factors, recreation planning and land use allocation, an appropriate authority to oversee policy implementation, channeling activity to private land or 'sacrifice areas', continual monitoring, user needs and public involvement, and a process of community education. Further, it has been shown that a change of focus of ORV land use from public land to private landholdings is increasingly prevalent elsewhere and should be considered by land managers and departmental policymakers in the Tasmanian context.

A note of caution however. Many users are not affiliated with ORV clubs. Furthermore, organised clubs do not necessarily wish to be emburdened with the more irresponsible and uncontrollable enthusiasts. Therefore attempts to curtail the activities of the irresponsible and uncontrollable fringe should not be so restrictive as to be unfair to the club user.

7.4 Departmental Frameworks

This investigation has revealed that actual procedures for ORV management are virtually non-existent. "Management is restricted to following existing ORV routes looking for problems", concluded Shay (1978 : 314) in criticism of the US Forest Service. That criticism is equally applicable in the Tasmanian context. There is little prospect of real change unless there is a broad reappraisal of policy and a management framework set in place.

A further avenue open to the authorities is the development of departmental administrative frameworks for specifying areas and tracks on all public lands within respective departmental custody and upon which ORV travel may or may not be permitted. This approach, similar to that initiated in the USA through Presidential Orders 11644 (1972) and 11989 (1977) (these orders were previously outlined in Chapter 6), would, in effect, require each public land managing authority to formulate ORV policy, publicise it widely, incorporate it in management prescriptions, and apply it in practice. Whilst this suggestion runs counter to two other prescriptions - namely, to centralise control via direct legislation, and to shift the use over to private land - it is made here as a secondary consideration (that is, a lower level alternative to total ORV rationalisation). As an alternative this departmental reappraisal could be co-ordinated through the Task Force and sub-committee process suggested earlier.

It is essential that the provision of ORV recreation opportunities be guided by clear and concise management objectives. Without such objectives it is difficult to avoid incremental changes that may influence the entire recreational character of an area and at the same time introduce undesirable ecological and environmental changes of the type reviewed in Chapter 3. The Arthur-Pieman Protected Area is an obvious example of an area where insufficient attention has been accorded to land degradation associated with inappropriate vehicle use and the control of those activities. In that so-called 'Protected Area', the Lands Department has specified three areas where ORV activity is permitted (subject to certain conditions). This so called 'protection', is, in reality, non-existent, as ORVs are used in the area in contravention of all directions. The management philosophy is obscure and the management prescription is non-existent. Management inaction leaves the issue clouded and unresolved - what else is the public to think but: 'We may as well continue to do what we have always done!'

7.5 Environmental Considerations

The extensive intrusion of roads and tracks into previously remote and inaccessible coastal, forest and highland areas proceeds inexorably. The literature reviewed in Chapter 3 provides ample evidence of the compelling necessity for careful recreation planning and regulatory considerations, as called for by Webb and Wiltshire (1983 : viii). The situation and need is no different in Tasmania. It is necessary that a process be set up to assess the unique attributes of certain public lands and afford those lands protection from ORV use. That ORV use in such areas will adversely affect natural, aesthetic or scenic values is a question which may have to be determined in each instance by the particular land managing agency (in accordance with the co-ordinated policy direction of the Task-Force).

Government, through its land administering authorities, could set aside more areas for specific use of ORVs. Currently there are 17 areas throughout the state for the specific use of ORVs. Ways should

be considered of making available public land for use by ORV enthusiasts; for example, by lease or outright freehold title granted to organised clubs and organisations. Such arrangements should be quid pro quo - in return for these land areas effort should be made to prevent use of other areas. The restricted registration system introduced some years ago has not worked to the satisfaction of all concerned. Reasons for this have been suggested in Chapter 5. Likewise, land managing authorities have great difficulty in enforcing control of ORVs on Crown land.

7.6 Recreation Planning and Land Use

Land use zoning and recreation planning are major considerations necessary for satisfactory accommodation of ORVs and the environment within the spectrum of recreational activities. Steely (1984) called (in the UK) for "experiment with practical solutions", the suggestion being for development of "a properly managed leisure policy of trail parks and way marked routes for motorcyclists." Evaluation of sites suited to ORV activities and associated planning seems to be the best method whereby the various ORV activities may be accommodated and managed. Experiment with practical solutions in Tasmania, specifically SLARVs and restricted registration, now nearly a decade old, has been largely unsuccessful. Once these solutions were instituted virtually no subsequent follow up occurred and further refinements were neglected.

In order to plan carefully for ORV recreation activities, land managers and recreation planners should determine the availability, suitability and relative popularity of alternative sites. Although planning along this line may be necessary as a directive through the Task-Force and sub-committee process, it would seem that the appropriate departments are best equipped to provide information about these localities and implement the actual planning arrangements.

The tendency inherent in ORV use to monopolise whole areas (Rosenberg 1976 : 176) precludes adherence to the traditional land management concept of 'multiple use' (Kockelman 1983a : 409-10, 423). Another concept, that of the 'carrying capacity' of land, is a more appropriate criterion for determining questions of ORV access to given areas. This investigation should be undertaken by the appropriate land management agency in relation to each area used by ORVs. Kockelman (1983b : 491), emphasising the vital role of the land managing agency (see Section 7.7), suggests that the best ORV management strategy would depend upon:

...accurate and adequate scientific information that can be used to make resource inventories, select sites, designate or zone areas, design and construct facilities, manage facilities and events, and monitor, close, and reclaim sacrifice areas.

The literature abounds with references to conflict between ORV and non-motorised recreationists. According to (Kockelman 1983a : 410):

...the issue becomes one of an intensive consumptive exclusionary use verses extensive nonconsumptive multiple uses. If conflicts with other uses are to be avoided, ORV use must be separated from them. Areas specifically selected and managed for ORVs cause the fewest user conflicts.

The incompatibility of ORV activities with the recreational concept of 'multiple use', further underscores the need for co-ordinated policy.

Defining the criteria to be considered in designating land as open or closed to ORV use should not present any problem. The lead of US Executive Order 11644 (1972) could be followed for instance - that Order directed land designations to consider environmental attributes, potential wildlife disruption, and compatibility with other land uses. Other criteria of importance for the selection of ORV sites should involve recreation use compatability and trail development (Lacey et al 1982). Specific guidelines for the selection, establishment, management and maintenance of RVAs are available in NSW (cf. Soil Conservation Service 1985), the UK (cf. Ball et al 1985), and the USA (cf. Lacey et al 1982; Rasor 1977; Griggs and Walsh 1981) and may

prove beneficial in the development of suitable RVAs in Tasmania.

Recently developed recreation planning techniques, namely the Recreation Opportunity Spectrum (ROS) and, the Limits of Acceptable Change (LAC) system, have become popular in recreation land use planning, and may have application as planning techniques in the case of ORVs.

The ROS system, an improvement on the 'carrying capacity' concept, is based on the principle that recreation areas are recognised by users as leisure settings rather than specific activity sites. While ROS may be suitable for recreation planning for non-ORV activities (that is, those activities compatible with the concept of 'multiple use'), it is apparent that ORV recreation often does occur at specific activity sites rather than in leisure settings.

The Limits of Acceptable Change (LAC) process provides a framework for dealing with the dilemma faced by land managers of having to accommodate human use yet preserving an area's wilderness quality (Stankey et al 1985 : 2). This planning system may be rather more applicable, since the technique emphasises the conditions desired in a certain area, rather than how much diverse use an area can tolerate. Although developed primarily for wilderness, which by most definitions precludes the intrusion of motorised vehicles, LAC may be suited for adaption to planning for ORVs in remote areas.

With the recent increase in sales of vehicles with 4WD capability, it is desirable that public lands be temporarily closed. Then, after assessment of the available sites via use of land designating techniques, those areas where use will not be socially or environmentally detrimental could be proclaimed open to ORV use. As we have seen, this is the apparent direction taken in recent New South Wales legislation and planning. There are still limitations in this suggestion however. A notice in the paper will not necessarily stop the ORV enthusiast - this type of management suggestion is likely to reinforce the us/them syndrome. Once again the enforcement process is

deficient. For this reason an approach which includes ORV users in the environmental assessment and regulatory framework, and having responsibility for certain areas, would be fruitful. This would give policy makers and land managers a lever with which to educate users about the damage ORVs may do, while at the same time move toward a lessening in harmful impacts from inappropriate ORV use. The objective would be to tap the goodwill of ORV users. The necessity for public involvement is further discussed in Section 7.10.

7.7 Implementing ORV Policy and Legislation: The Appropriate Authority

While it is recommended that a Task-Force investigates all aspects associated with achieving better control of ORVs in Tasmania, it would be inappropriate to suggest the creation of a specific agency for overseeing implementation of directives.

Task-Force directives should be implemented by each land managing agency. That suggestion is made since each department is undeniably the most knowledgeable regarding the physical and specific characteristics and attributes of land within its jurisdiction. It follows that each department should therefore exercise ORV management functions in relation to land it controls and administers, but under the co-ordinated policy direction of the Task-Force.

The recommendation that specific ORV legislation be implemented would require an extension of existing administrative functions. The departments currently administering vehicle related legislation, Tasmania Police and Transport Tasmania, are the most appropriate to administer similar provisions of specific ORV legislation. Other administrative functions of an environmental and social nature could be assumed by the Department of the Environment - although this would necessitate expansion of that department's jurisdiction from its present focus upon noise-related matters.

7.8 Private and Municipal Land

Numerous authorities and commentators have recommended that encouragement and financial support be given for the development of private or municipal facilities for ORV use (cf. Baldwin and Stoddard 1973 : 43-4; Ball et al 1985; Metropolitan Council of Governments 1981 : 22). This approach has recently been adopted in new legislation in New South Wales where the intention is for local government to accommodate such interests within local land use zoning. In the UK a number of 'trail parks' have been created on derelict local government land (cf. Ball et al 1985; Thompson 1984) and because of the shortage of suitable land for ORV activities, the creation of more 'trail parks' and 'adventure circuits' is advocated (Steeley 1984; Thompson 1985 : 141).

The lesson to be learned from overseas experience is that municipal and other government authorities are in a good position to initiate developments. For instance, local government can utilise land use planning techniques for the selection and approval of appropriate lands and ensure environmental controls are considered.

7.9 Monitoring

A policy of effective regulation and enforcement and environmental management involves careful monitoring (cf. Kockleman 1983a : 434; Wood and Robertson 1976 : 21). This is necessary if land managers are to be provided with feedback concerning the effectiveness of management practices. Yet within Tasmania's land managing agencies this management technique remains largely unutilized. For instance, the Lands Department has made no baseline survey of ORV impact in the Arthur-Pieman Protected Area, yet the intention is soon to implement a management plan for the area and continue to permit ORV use. In the light of deleterious impacts reported elsewhere, that Department should not permit further usage without first initiating quantitative studies so that future review of the situation is possible.

7.10 Educational Campaign and Public Involvement

In conducting this investigation it became obvious that there is substantial public concern and confusion about the use of ORVs in Tasmania. Many ORV enthusiasts are not sure where they stand and what they may do; though they want to do the correct thing. Wood and Robertson (1976 : 20) assert that specific ORV legislation in both Queensland and Victoria has resulted in better user knowledge of the law although they do not explain how this 'better knowledge' is manifested.

Within the preliminary research to determine an overall policy there is a need to determine the attitudes, motivations, preferences and opinions of ORV enthusiasts. This may require extensive survey work. It is also desirable to encourage public participation in the drafting of regulations and the designation of suitable areas ('sacrifice areas') and trails. This could be achieved by a process of consultation with ORV clubs and other ORV enthusiasts and by allowing an opportunity for comment before land use designations and restrictions are set.

A process of public consultation has obvious benefits. From discussions with members of the user public it is obvious that there is a need for tightening control but, nonetheless, the public wants to be informed of 'what it can and cannot do, and where'. This reinforces the argument made earlier for consistency and uniformity in regulations, and the need for a properly conducted publicity campaign and dissemination of information.

With numerous ORV clubs scattered throughout the state, the process of dissemination of information and of consultation between government departments and users would be facilitated if the latter were represented by an umbrella organisation. While determination of an effective structure is a matter entirely for the users, this step is imperative for there to be effective communication and liason with the

land managing and regulatory departments.

According to Shay (1978 : 316), "one of the key variables in 'carrying capacity' for ORV use, and one of the greatest potential sources of increasing 'carrying capacity', is the attitude, knowledge and responsibility of the ORV user." Appropriate consideration of this factor by land managers should take place in conjunction with efforts to direct ORV activity to appropriately designated 'sacrifice areas'.

It is desirable that, with the introduction of legislation relating specifically to the use of vehicles off-road, an effective advertising campaign be conducted. Educational literature should be prepared so that the public is informed of the exact situation regarding use of vehicles off-road. Obviously it is imperative that policy and objectives are first established. It may be possible to change the nature of the problem by educating people of the environmental damage caused by ORVs.¹ Resources may thereafter be concentrated upon environmental renovation. At present, by tolerating environmental disregard via insufficient regulation and attention to enforcement, damage will inevitably continue and future costs will be incurred.

7.11 Conclusion

Annual penetration of roads and tracks into hitherto remote or inaccessible areas may be imperceptible to the casual observer over the short period. With our increasingly sophisticated technology and rising recreational demands, land deterioration is inexorable over the longer term. Social impacts must also become more pronounced. Given this, the authorities should recognise the compelling necessity to act to minimise the ORV impact. ORVs are a problem of increasing complexity which must be tackled now, before further exacerbation of

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An ORV "code of behaviour", of relevance to Tasmanian conditions, should be produced and widely disseminated through ORV clubs, petrol outlets, motor-bike and 4WD vehicle dealerships, and via Transport Tasmania, the police, land managing authorities and field officers.

damage. Assessment of ORV use by the authorities should involve consideration of the land available and deemed suitable for such activity, as well as the considerable literature cataloguing the deleterious impact of vehicles off-road.

While environmental policies cannot simply be transferred with similar success from one country to another (Formby 1986 : 184), nonetheless, the lessons of overseas and even interstate experience should be considered in formulating appropriate land management techniques. In the US, where recreational impact management is accorded higher priority than appears the case in Australia, and where recreational management techniques and strategies are therefore more sophisticated, the guiding philosophy owes much to people such as Stankey et al (1985 : 1) who regard the land management challenge as "...not one of how to prevent any human-induced change, but rather one of deciding how much change will be allowed to occur, where, and the actions needed to control it." Issues are confronted rather than avoided. The same approach, long advocated in Australia (cf. Wood and Robertson 1976), but neglected, is necessary in Tasmania.

Control and management of vehicles off-road is no easy matter since various land management agencies and vehicle control and regulatory authorities are involved. Resolution or even curtailment of the problems cannot therefore be considered as straight forward. As vehicles used on the open road are strictly controlled by specific legislation, so too should be vehicular use in off-road situations. The present plethora of applicable legislation, dependant upon actual land tenure, is unworkable. Precise land boundaries and parochial departmental responsibilities should be transcended in attempts to deal with the problem, via greater co-operation of all authorities (including police) and co-ordination of their currently separate and distinct efforts.

This investigation has demonstrated the need for improvement in Tasmanian land management techniques, at least insofar as ORV use is concerned. The problem should be treated on an overall state basis rather than in the present haphazard fashion. This calls for the determination and co-ordination of a state policy, within which inter-departmental co-operation and a public education programme are essential. Although comprehensive legislation aimed specifically at ORVs seems the best approach, it is recognised that enforcement efforts are often time consuming and non-productive (cf. Metropolitan Washington Council of Governments 1981 : 21). Specific use or 'sacrifice areas' should be promoted as a means of directing activities to places where environmental, social and other repercussions are not considered overwhelmingly deleterious and where the difficulties of enforcement may be rendered manageable.

The solutions recommended here involve a two-tier process. Firstly, there should be reappraisal of the Tasmanian situation and development of a state policy with specified objectives and reflected in specific legislation. Then, the second tier proposals could be implemented: sophisticated management techniques encompassing detailed recreational land use planning, public education, and participation by the public in the process. The experience elsewhere in Australia (notably NSW) and overseas is that appropriate control and planning policies are imperative.

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Table 1

National Participation Rates in Off-Road Driving/Trail Bike Riding by Sex - 1985/86
(for population of 14 years and over)

Survey	Participation Rate (%)		
	Male	Female	TOTAL
Oct/Nov 1985	2.1	1.6	1.8
Feb 1986	4.1	.5	2.3
May 1986	2.8	.8	1.8
July 1986	1.9	.3	1.1
Seasonal Average	2.7	0.8	1.8

Source: Table 1, Participation in Social/Leisure/Recreational/Sports Activities as percentages of all Activities by Sex
National Recreation Participation Surveys (Department of Sport, Recreation and Tourism 1985-86)

Table 2

National Participation Rates in Off-Road Driving/Trail Bike Riding by Age and Sex - 1985/86
(for population of 14 years and over)

SURVEY	Participation Rates (%)					
	14-19 male female	20-34 male female	35-39 male female	40-54 male female	55+ male female	TOTAL male female
Oct/Nov 1985	7.3 3.5	4.6 2.5	1.4 1.5	.5 1.2	- .6	2.1 1.6
February 1986	10.9 .5	8.0 -	2.8 .6	2.9 .7	1.2 .5	4.1 .5
May 1986	4.6 3.7	6.9 .7	3.4 .5	1.5 .6	- -	2.8 .8
July 1986	4.6 .7	5.8 -	1.7 .6	.4 -	.3 -	1.9 .3
Seasonal Average	6.85 2.1	6.32 .8	2.32 .8	1.32 .62	.37 .27	2.72 .8

Source: Table 6, Participation in Recreational Activities Away from Home by Age and Sex
 National Recreation Participation Surveys (Department of Sport, Recreation and Tourism)

STATE FORESTS

PROHIBITED ACCESS AREA: MOTORISED RECREATION VEHICLES NOT PERMITTED

NORTH-WEST

1. Dempster Plains; Julius River Forest Reserve; Lake Chisholm Forest Reserve; Rapid River-Lamprey Creek Picnic Site; Wes Beckett Forest Reserve; Balfour Track Forest Reserve; Milkshake Hills Forest Reserve; Mawbanna State Forest*.
2. Olinda State Forest*; Dial Range State Forest*.
3. Isandula State Forest; Paradise Picnic Site; Stoodley Picnic Site; Dalgarth Forest Reserve.
4. Macquarie Heads Camping area.
5. Henty Dunes Picnic area.
6. Swan Basin Picnic area.
7. All unsurfaced (sand) roads within Strahan and Swan Basin Plantations.
8. Ocean Beach Foredunes (State Forest Section).

NORTH

9. Mersey White Water Forest Reserve; Meander Forest Reserve; Liffey Forest Reserve; Drys Bluff Forest Reserve.
10. Retreat Plantation; Hollybank Forest Reserve; Mt. Maurice Forest Reserve; Tombstone Creek Forest Reserve.
11. Sidling Picnic Area.
12. Griffin Forest Reserve; Mathinna Falls Forest Reserve; Evercreech Forest Reserve.
13. Mt. Victoria Forest Reserve.

SOUTH

14. Fortescue Forest Reserve.
15. Wedge Forest Reserve; Stringback Forest Reserve; Boyd Forest Reserve.
16. Tahune Forest Reserve; South Weld Forest Reserve.
Eastern bank of Picton River; Huon track from Tahune Park to Picton River; Farmhouse Creek track; Kermadie to Hartz Mountain track; Tahune to Judbury track.

* except for zoned areas set aside for motorised recreation vehicles.

Please Remember:

- that only fully registered or restricted registered recreation vehicles may use these planned use areas.
- that the users obey instructions from management authorities, all signs, all restrictions and keep within the boundaries of the area.
- to keep to formed routes and only leave them when permission has been obtained.
- to avoid wildlife and easily damaged natural areas.
- to help keep the environment clean by removing all rubbish.
- to follow fire restrictions and extinguish all fires before leaving the area.
- to recognise the rights of other people to use the area for other outdoor recreation activities.
- to report any acts of vandalism or misuse of the area to the land managing authority or nearest Police Station.
- that it is your responsibility to ensure that you are working to the latest Bulletin. (The Bulletin may be amended each 6 months).

A. B. CAUDELL, Government Printer, Tasmania

State Land Areas for Recreation Vehicles



This pamphlet is for the assistance of owners of recreation vehicles that are fully registered or covered under the restricted registration scheme.

Prepared by:
Transport Tasmania
Forestry Commission
Lands Department
Division of Recreation

JUNE 1985

90244 OSK-3759

APPENDIX B: INFORMATION SUPPLIED TO PERSONS INQUIRING ABOUT
RESTRICTED VEHICLE REGISTRATION AND CONDITIONS

NORTH-WEST

	LOCATION	AREA
1. Mawbanna State Forest	20 km East of Smithton 30-40 km West of Burnie	3,450 ha
2. Olinda State Forest (Southern Section only)	10 km from Wynyard 25 km from Burnie	910 ha
3. Dial Range State Forest	2 km South of Penguin 15 km East of Burnie	3,050 ha
4. Branches Creek State Forest	15 km East of Devonport	5,450 ha
5. Proposed Arthur-Pieman Protected Area: (a) Balfour Enduro Track (b) Arthur Beach	13 km South of Arthur River 2-6 km South of Arthur River	
6. Circular Head Motor Cycle Club-Briant Hill leasehold site	3 km East of Smithton	
7. House Top Forest	24 km South of Burnie	1,410 ha

NORTH-WEST—CONTACT FOR INFORMATION

1. A— District Forester Police Station	Smithton Wynyard Smithton Stanley	(004) 52 1317 (004) 42 3552 (004) 52 1961 (004) 58 1104
2. A— District Forester Senior Forest Ranger Police Station	Burnie Wynyard Wynyard	(004) 30 2314 (004) 42 3136 (004) 42 3552
3. A B— District Forester Forest Ranger Police Station	Burnie Penguin Penguin Ulverstone	(004) 30 2314 (004) 37 2480 (004) 37 2160 (004) 25 1522
4. A— District Forester Forest Ranger Police Station	Devonport Devonport Port Sorell Latrobe	(004) 24 0216 (004) 24 0248 (004) 28 6137 (004) 26 1021
5. A— Crown Land Warden A B— Police Station	Smithton Redpa	(004) 52 1631 (004) 57 1210
6. A— Membership Enquiries—	Miss C. B. Saville, P.O. Box 64, SMITHTON, Tas. 7330	
7. A— District Forester Forest Ranger	Burnie Upper Natone	(004) 30 2314 (004) 36 2244

NORTH

	LOCATION	AREA
1. Reedy Marsh State Forest	15 km North of Deloraine	8,640 ha
2. Branhholm State Forest	3 km South of Branhholm	22 ha
3. Claun Tier State Forest	10 km South-East of Deloraine	6,500 ha
4. Retreat State Forest	30 km North-East of Launceston	2,530 ha
5. Lisle State Forest	20-30 km West of Scottsdale	6,370 ha
6. Sidling Plantation	20 km West of Scottsdale	60 ha
7. Mt. Pearson State Forest	5 km North of St. Helens	10,100 ha
8. Argonaut Road St. Forest	5 km West of St. Helens	1,880 ha
9. St. Helens Pt. State Recreation Area: Peron Dunes Recreation Vehicle Area	10 km East of St. Helens	

NORTH—CONTACT FOR INFORMATION

1. A B— District Forester Police Station	Deloraine Deloraine	(003) 62 2388 (003) 62 2015
2. A— District Forester Police Station	Scottsdale Derby Ringarooma	(003) 52 2466 (003) 54 2370 (003) 53 2141
3. A— District Forester Police Station	Deloraine Deloraine Westbury	(003) 62 2388 (003) 62 2015 (003) 93 1111
4. A— District Forester Forest Ranger Police Station	Launceston Retreat Lilydale George Town	(003) 41 5357 (003) 95 6131 (003) 95 1221 (003) 82 1566
5. A— District Forester Police Station	Scottsdale Lilydale Bridport	(003) 52 2466 (003) 75 1221 (003) 56 1102
6. A— District Forester Police Station	Scottsdale Scottsdale St. Leonards	(003) 52 2466 (003) 52 2333 (003) 39 1323
7. A B— District Forester Police Station	Fingal St. Helens	(003) 74 2102 (003) 76 1122
8. A— District Forester Police Station	Fingal St. Helens	(003) 74 2102 (003) 76 1122
9. A B— Crown Land Warden	St. Helens St. Helens	(003) 76 1550 (003) 76 1122

SOUTH

	LOCATION	AREA
1. Forestier State Forest	5 km North of Eaglehawk Neck	6,570 ha
2. Tasman State Forest	Tasman Peninsula, East of Taranna	8,250 ha

SOUTH—CONTACT FOR INFORMATION

1. A B— District Forester Forest Ranger Police Station	Triabunna Taranna Dunalley Sorell	(002) 57 3243 (002) 50 3241 (002) 53 5202 (002) 65 2404
2. A B— District Forester Forest Ranger Police Station	Triabunna Taranna Dunalley Nubeena	(002) 57 3243 (002) 50 3241 (002) 53 5202 (002) 50 2100

A = Trail Bikes permitted
B = Four Wheel Drive Vehicles permitted